MP 2555/3055/3555/4055/5055/6055
Machine Code:
D284/D285/D286/D287/D288/D289
Field Service Manual
Ver 1.02

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Revision Lists

Ver.	Revision Date
1.01	21.11.2016
1.02	30.11.2016

Installation

Ver.	Section	Item	Note
1.02	Main Machine Installation	Accessory Check	Contents in the table are revised.
1.02	Main Machine Installation	Attaching the Decals	The image is revised.
1.02	1 Bin Tray BN3110	Installation Procedure	The procedures are revised.

System Maintenance

Ver.	Section	Item	Note
1.01	Firmware Update (SD Card)	Firmware Types	Contents in the table are revised.

Important Safety Notices

Warnings, Cautions, Notes

In this manual, the following important symbols and notations are used.

⚠WARNING

- A Warning indicates a potentially hazardous situation. Failure to obey a Warning could result in death or serious injury.

⚠CAUTION

- A Caution indicates a potentially hazardous situation. Failure to obey a Caution could result in minor or moderate injury or damage to the machine or other property.

Important

- Obey these guidelines to avoid problems such as misfeeds, damage to originals, loss of valuable data and to prevent damage to the machine.

Note

- This information provides tips and advice about how to best service the machine.

General Safety Instructions

For your safety, please read this manual carefully before you use this product. Keep this manual handy for future reference.

Safety Information

Always obey the following safety precautions when using this product.

Safety During Operation

In this manual, the following important symbols and notations are used.

[A]: ON

[B]: OFF

[C]: Push ON/Push OFF

[D]: Standby

Switches and Symbols

Where symbols are used on or near switches on machines for Europe and other areas, the meaning of each symbol conforms with IEC60417.

Safety

Prevention of Physical Injury

1. Before disassembling or assembling parts of the machine and peripherals, make sure that the machine and peripheral power cords are unplugged.
2. The plug should be near the machine and easily accessible.
3. Note that some components of the machine and the paper tray unit are supplied with electrical voltage even if the main power switch is turned off.
4. Always unplug the power cord from the power source before you move the product. Before you move the machine, arrange the power cord so it will not fall under the machine.
5. Disconnect all peripheral units (finisher, LCT, etc.) from the mainframe before you move the machine.
6. If any adjustment or operation check has to be made with exterior covers off or open while the main switch is turned on, keep hands away from electrified or mechanically driven components.
7. The machine drives some of its components when it completes the warm-up period. Be careful to keep hands away from the mechanical and electrical components as the machine starts operation.
8. The inside and the metal parts of the fusing unit become extremely hot while the machine is operating. Be careful to avoid touching those components with your bare hands.
9. To prevent a fire or explosion, keep the machine away from flammable liquids, gases, and aerosols.
10. Do not use flammable sprays or solvent in the vicinity of the machine. Also, avoid placing these items in the vicinity of the machine. Doing so could result in fire or electric shock.
11. To avoid fire or explosion, never use an organic cleaner near any part that generates heat.
12. Clean the floor completely after accidental spillage of silicone oil or other materials to prevent slippery surfaces that could cause accidents leading to hand or leg injuries.
13. Never remove any safety device unless it requires replacement. Always replace safety devices immediately.
14. Never do any procedure that defeats the function of any safety device.
15. Modification or removal of a safety device (fuse, switch, etc.) could lead to a fire and personal injury. Always test the operation of the machine to ensure that it is operating normally and safely after removal and replacement of any safety device.
16. For replacements use only the correct fuses or circuit breakers rated for use with the machine. Using replacement devices not designed for use with the machine could lead to a fire and personal injuries.
17. For machines installed with the ADF/ARDF:
    When a thick book or three-dimensional original is placed on the exposure glass and the ARDF cover is lowered, the back side of the ARDF rises up to accommodate the original. Therefore, when closing the ARDF, please be sure to keep your hands away from the hinges at the back of the ARDF.
18. When using a vacuum cleaner around the machine, keep others away from the cleaner, especially small children.
19. For machines installed with the anti-tip components:
    The anti-tip components are necessary for meeting the requirements of IEC60950-1, the international standard for safety. The aim of these components is to prevent the products, which are heavy in weight, from

toppling as a result of people running into or leaning onto the products, which can lead to serious accidents such as persons becoming trapped under the product. (U.S.: UL60950-1, Europe: EN60950-1) Therefore, removal of such components must always be with the consent of the customer. Do not remove them at your own judgment.

20. **NEVER touch** the AC circuits on the PSU board to prevent electric shock caused by residual charge. Residual charge of about 100V-400V remains in the AC circuits on the PSU board for several months even when the board has been removed from the machine after turning off the machine power and unplugging the power cord.

Health Safety Conditions

1. For the machines installed with the ozone filters:
   - Never operate the machine without the ozone filters installed.
   - Always replace the ozone filters with the specified types at the proper intervals.
2. The machine, which use high voltage power source, can generate ozone gas. High ozone density is harmful to human health. Therefore, locate the machine in a large well ventilated room that has an air turnover rate of more than $50m^3$/hr/person.
3. Toner and developer are non-toxic, but if you get either of them in your eyes by accident, it may cause temporary eye discomfort. Try to remove with eye drops or flush with water as first aid. If unsuccessful, get medical attention.

Observance of Electrical Safety Standards

1. The machine and its peripherals must be installed and maintained by a customer service representative who has completed the training course on those models with exceptions on some machines where the installation can be handled by the user.

Safety and Ecological Notes for Disposal

1. Do not incinerate toner bottles or used toner. Toner dust may ignite suddenly when exposed to an open flame.
2. Dispose of used toner, developer, organic photoconductors, and AIO unit in accordance with local regulations. (These are non-toxic supplies.)
3. Dispose of replaced parts in accordance with local regulations.
4. When keeping used lithium batteries in order to dispose of them later, do not put more than 100 batteries per sealed box. Storing larger numbers or not sealing them apart may lead to chemical reactions and heat build-up.
5. The danger of explosion exists if a battery of this type is incorrectly replaced. Replace only with the same or an equivalent type recommended by the manufacturer. Discard used batteries in accordance with the manufacturer’s instructions.

Handling Toner

- Work carefully when removing paper jams or replacing toner bottles or cartridges to avoid spilling toner on clothing or the hands.
- If toner is inhaled, immediately gargle with large amounts of cold water and move to a well-ventilated location. If there are signs of irritation or other problems, seek medical attention.
- If toner gets on the skin, wash immediately with soap and cold running water.

- If toner gets into the eyes, flush the eyes with cold running water or eye wash. If there are signs of irritation or other problems, seek medical attention.
- If toner is swallowed, drink a large amount of cold water to dilute the ingested toner. If there are signs of any problem, seek medical attention.
- If toner spills on clothing, wash the affected area immediately with soap and cold water. Never use hot water! Hot water can cause toner to set and permanently stain fabric.
- Always store toner and developer supplies such as toner and developer packages, cartridges, bottles (including used toner and empty bottles and cartridges), and AIO unit out of the reach of children.
- Always store fresh toner supplies or empty bottles or cartridges in a cool, dry location that is not exposed to direct sunlight.
- Do not use a vacuum cleaner to remove spilled toner (including used toner). Vacuumed toner may cause a fire or explosion due to sparks or electrical contact inside the cleaner. However, it is possible to use a cleaner designed to be dust explosion-proof. If toner is spilled over the floor, sweep up spilled toner slowly and clean up any remaining toner with a wet cloth.

Handling the development unit cooling system

For the machines installed the development cooling system:

1. The development unit cooling system circulates propylene glycol from a sealed tank through hoses that pass behind cooling plates on the sides of each development unit.
2. The coolant tank is located at the bottom of the cooling box on the back of the main machine.
3. Always obey local laws and regulations if you need to dispose of a tank or the propylene glycol coolant.
4. The tank must never be emptied directly into a local drainage system, river, pond, or lake.
5. Contact a professional industrial waste disposal organization and ask them to dispose of the tank.

Lithium Batteries for Taiwan

警告

本機器內的鋰電池如果更換不正確型號會有爆炸的危險。
只能使用相同或製造商推薦同等類型的電池進行更換。
請依製造商說明書處理用過之廢棄電池。

Laser Safety

The Center for Devices and Radiological Health (CDRH) prohibits the repair of laser-based optical units in the field. The optical housing unit can only be repaired in a factory or at a location with the requisite equipment. The laser subsystem is replaceable in the field by a qualified Customer Engineer. The laser chassis is not repairable in the field. Customer engineers are therefore directed to return all chassis and laser subsystems to the factory or service depot when replacement of the optical subsystem is required.

⚠WARNING

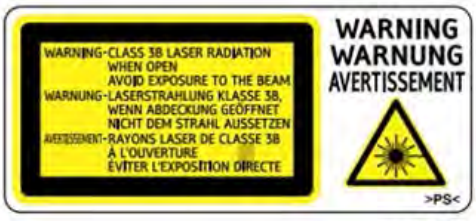
- Use of controls, or adjustment, or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

WARNING FOR LASER UNIT

WARNING:

Turn off the main switch before attempting any of the procedures in the Laser Unit section. Laser beams can seriously damage your eyes.

_safe006



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Safety Instructions for the Color Controller

Fuse

The color controller uses a double pole fuse. If this fuse blows, be sure to replace it with an identical fuse.

Batteries

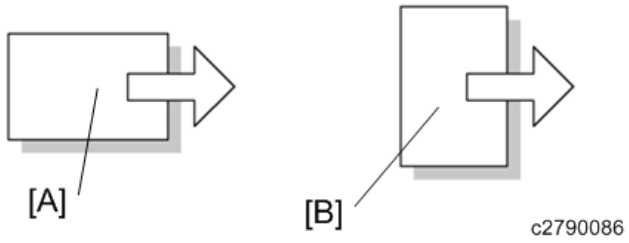
1. Always replace a battery with the same type of battery prescribed for use with the color controller unit. Replacing a battery with any type other than the one prescribed for use could cause an explosion.
2. Never discard used batteries by mixing them with other batteries or other refuse.
3. Always remove used batteries from the work site and dispose of them in accordance with local laws and regulations regarding the disposal of such items.

Symbols, Abbreviations and Trademarks

Symbols, Abbreviations

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

Symbol	What it means
	Clip ring
	Screw
	Connector
	Clamp
	E-ring
	Flat Flexible Cable
	Timing Belt
SEF	Short Edge Feed
LEF	Long Edge Feed
K	Black
C	Cyan
M	Magenta
Y	Yellow
B/W, BW	Black and White
FC	Full color



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

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- Windows® Internet Explorer® 7
- Windows® Internet Explorer® 8

The proper names of the Windows operating systems are as follows:

- The product names of Windows Vista are as follows:
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  Microsoft® Windows Vista® Business
  Microsoft® Windows Vista® Home Premium

Microsoft® Windows Vista® Home Basic

Microsoft® Windows Vista® Enterprise

- The product names of Windows 7 are as follows:

  Microsoft® Windows® 7 Home Premium

  Microsoft® Windows® 7 Professional

  Microsoft® Windows® 7 Ultimate

  Microsoft® Windows® 7 Enterprise

- The product names of Windows 8 are as follows:

  Microsoft® Windows® 8

  Microsoft® Windows® 8 Pro

  Microsoft® Windows® 8 Enterprise

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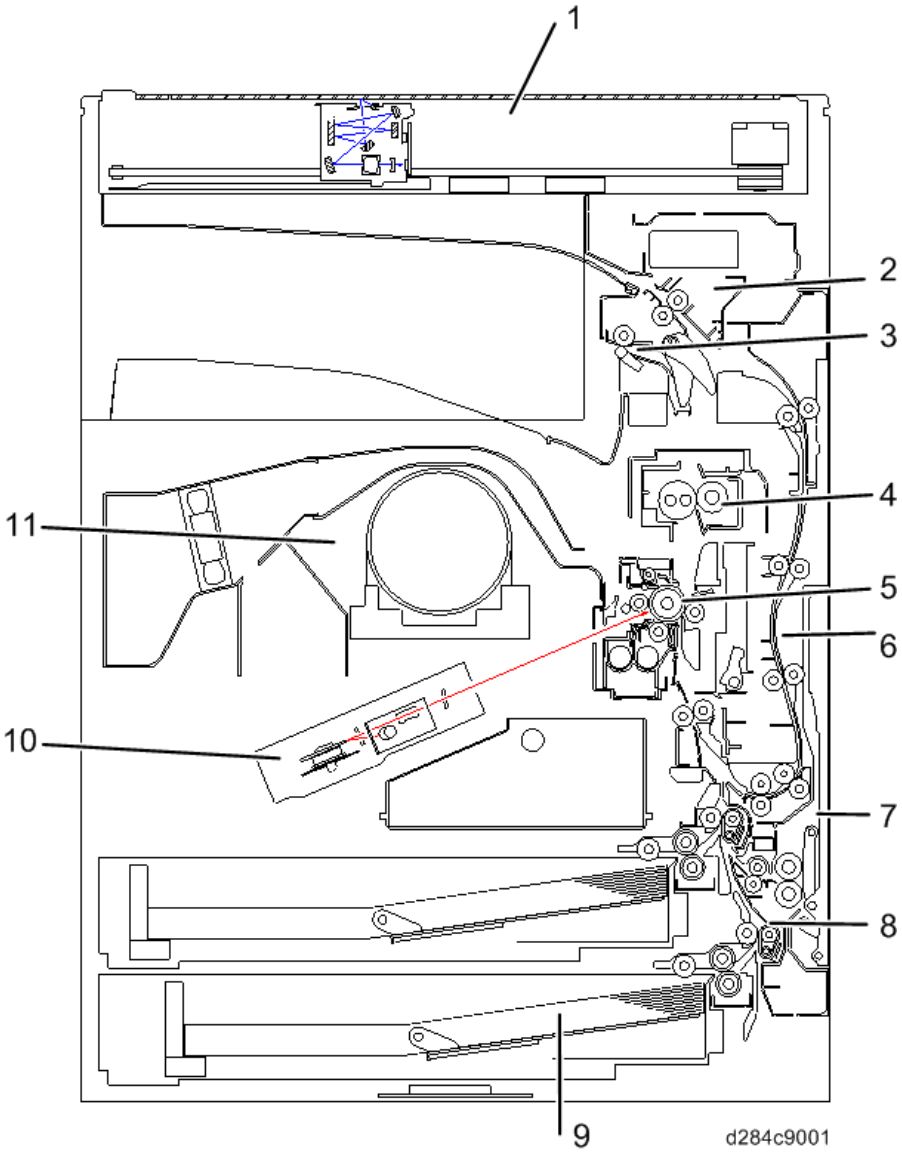
1. Product Information

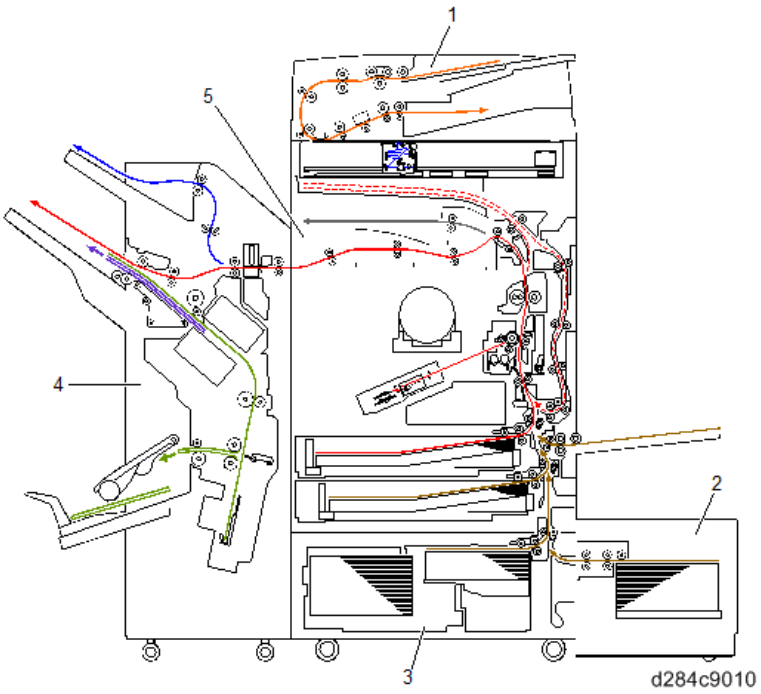
Product Overview

Component Layout

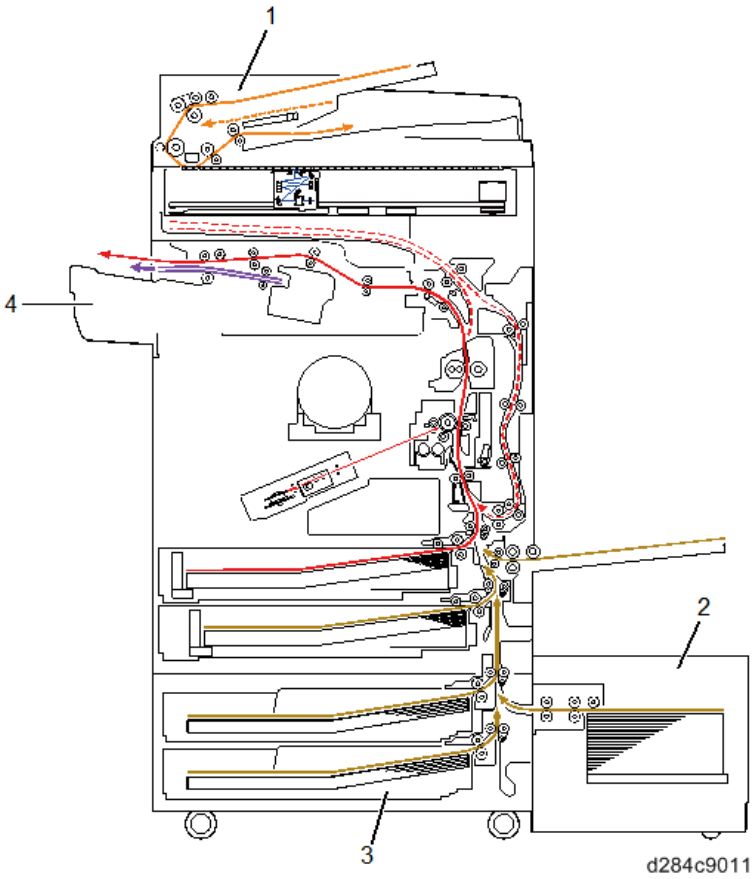


No.	Description	No.	Description
1	Scanner Unit	7	Bypass Tray Unit
2	Reverse Unit	8	Vertical Transport
3	Paper Exit Unit	9	Paper Feed Unit
4	Fusing Unit	10	Laser Unit
5	OPC Drum	11	Toner Supply Unit
6	Duplex Unit		

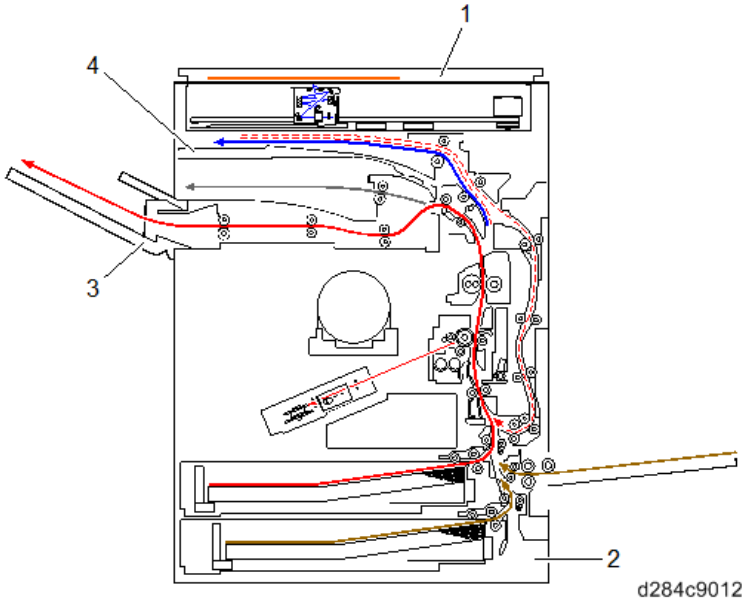
Paper Path



No.	Description	No.	Description
1	ARDF	4	Booklet Finisher
2	LCIT	5	Bridge Unit
3	LCIT (Tandem Tray)		



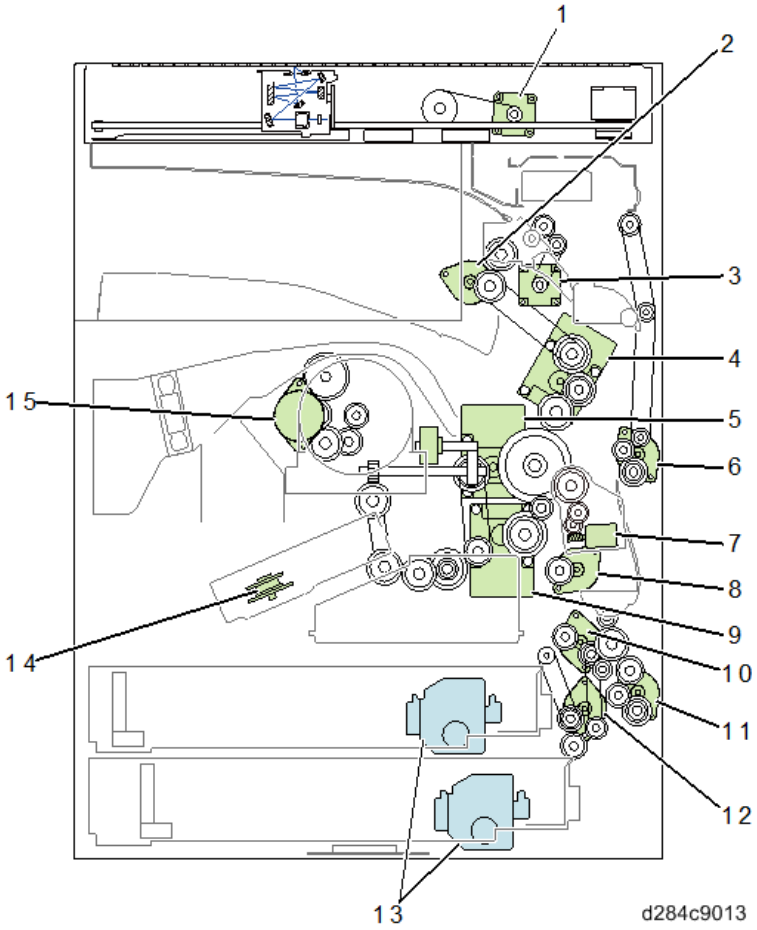
No.	Description	No.	Description
1	ARDF	3	Paper Feed Unit
2	LCIT	4	Internal Finisher



No.	Description	No.	Description
1	Platen Cover	3	Side Tray Unit

No.	Description	No.	Description
2	Paper Feed Unit	4	1 Bin Tray Unit

Drive Layout

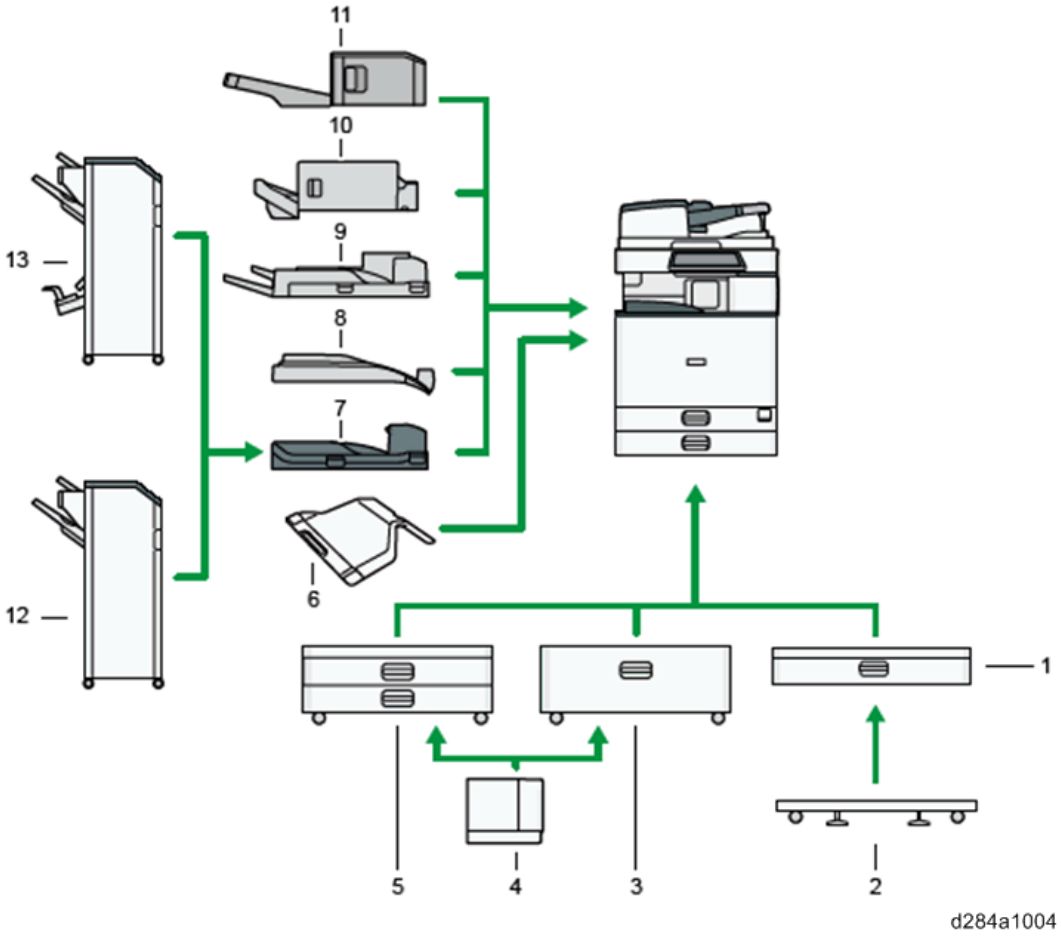


No.	Description	No.	Description
1	Scanner motor	9	Development motor
2	Paper exit motor (MP 4055 SP/5055 SP/6055 SP only)	10	Vertical transport motor
3	Reverse motor	11	Duplex/bypass motor
4	Fusing motor (MP 4055 SP/5055 SP/6055 SP only) Fusing/paper exit motor (MP 2555 SP/3055 SP/3555 SP only)	12	Paper feed motor
5	Drum/waste toner motor	13	Paper feed tray lift motor
6	Duplex entrance motor	14	Polygon motor
7	Transfer roller contact motor	15	Toner supply motor
8	Registration motor		

Machine Codes and Peripherals Configuration

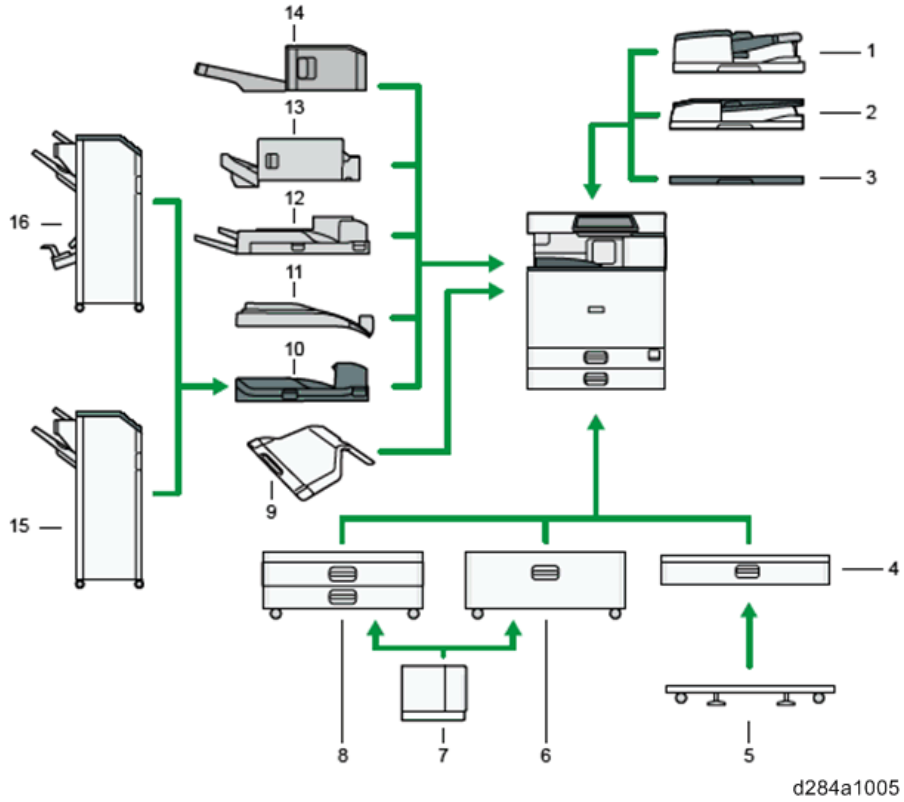
System Configuration and Options

External Options for MP2555/MP3055/MP3555 (mainly Europe)



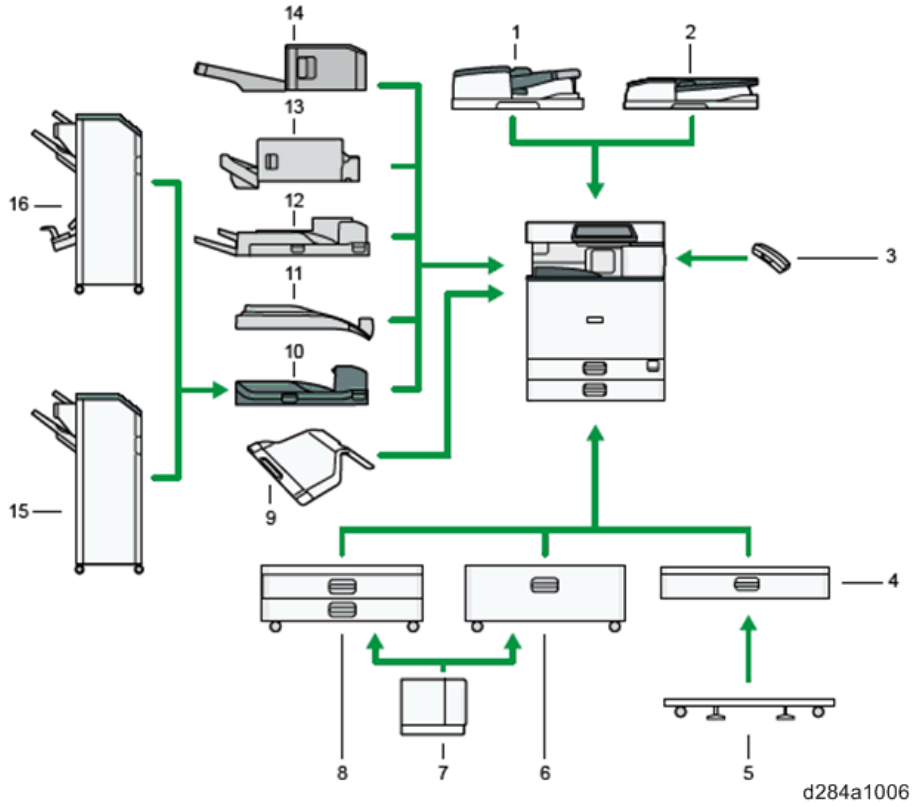
No.	Item	Machine Code
1	Paper Feed Unit PB3150	D694
2	Caster Table Type M3	D178
3	LCIT PB3170	D695
4	LCIT RT3030	D696
5	Paper Feed Unit PB3210	D787
6	1 Bin Tray BN3110	D3CQ
7	Bridge Unit BU3070	D685
8	Internal Shift Tray SH3070	D691
9	Side Tray Type M3	D725
10	Internal Finisher SR3130	D690
11	Internal Finisher SR3180	D766
12	Finisher SR3210	D3B8
13	Booklet Finisher SR3220	D3B9

External Options for MP2555/MP3055/MP3555 (mainly Asia)



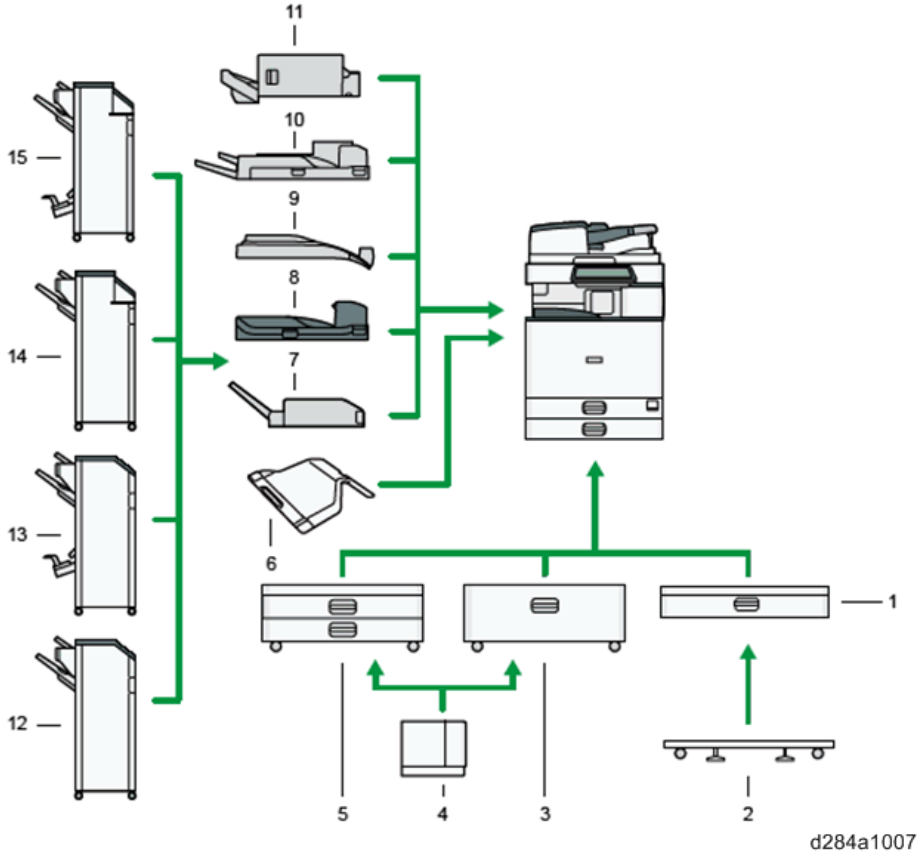
No.	Item	Machine Code
1	SPDF DF3100	D3B0
2	ARDF DF3090	D779
3	Platen Cover PN2000	D700
4	Paper Feed Unit PB3150	D694
5	Caster Table Type M3	D178
6	LCIT PB3230	D695
7	LCIT RT3030	D696
8	Paper Feed Unit PB3220	D787
9	1 Bin Tray BN3110	D3CQ
10	Bridge Unit BU3070	D685
11	Internal Shift Tray SH3070	D691
12	Side Tray Type M3	D725
13	Internal Finisher SR3130	D690
14	Internal Finisher SR3180	D766
15	Finisher SR3210	D3B8
16	Booklet Finisher SR3220	D3B9

External Options for MP2555/MP3055/MP3555 (mainly North America)



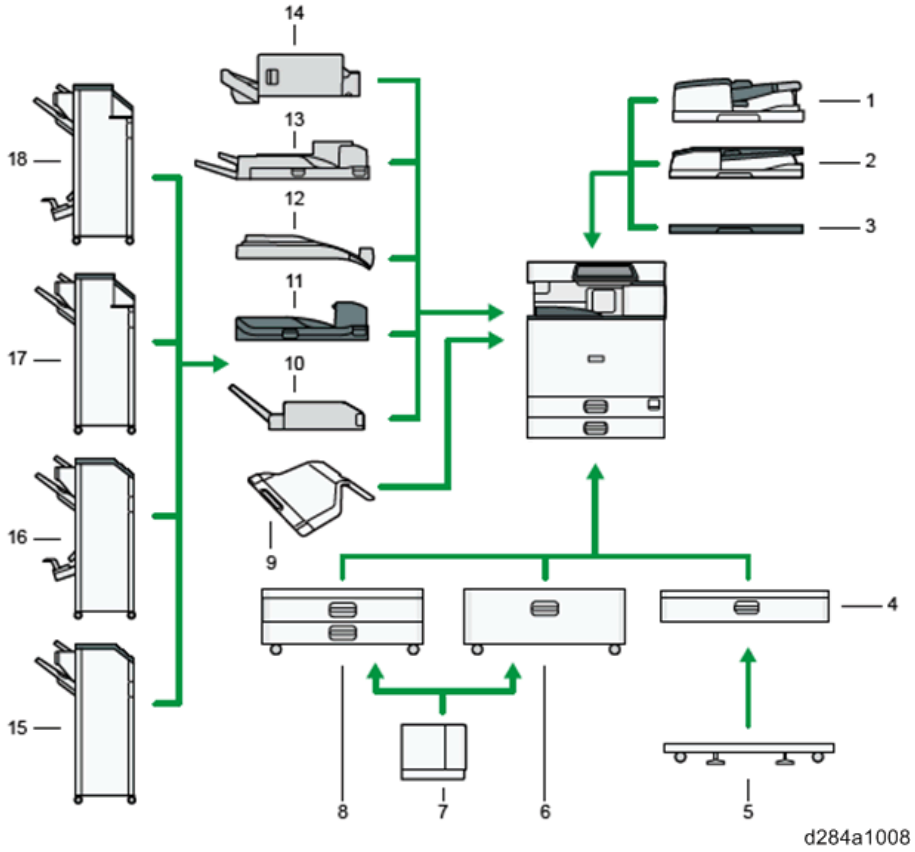
No.	Item	Machine Code
1	SPDF DF3100	D3B0
2	ARDF DF3090	D779
3	Handset HS3020	D739
4	Paper Feed Unit PB3150	D694
5	Caster Table Type M3	D178
6	LCIT PB3230	D695
7	LCIT RT3030	D696
8	Paper Feed Unit PB3220	D787
9	1 Bin Tray BN3110	D3CQ
10	Bridge Unit BU3070	D685
11	Internal Shift Tray SH3070	D691
12	Side Tray Type M3	D725
13	Internal Finisher SR3130	D690
14	Internal Finisher SR3180	D766
15	Finisher SR3210	D3B8
16	Booklet Finisher SR3220	D3B9

External Options for MP4055/MP5055 (mainly Europe)



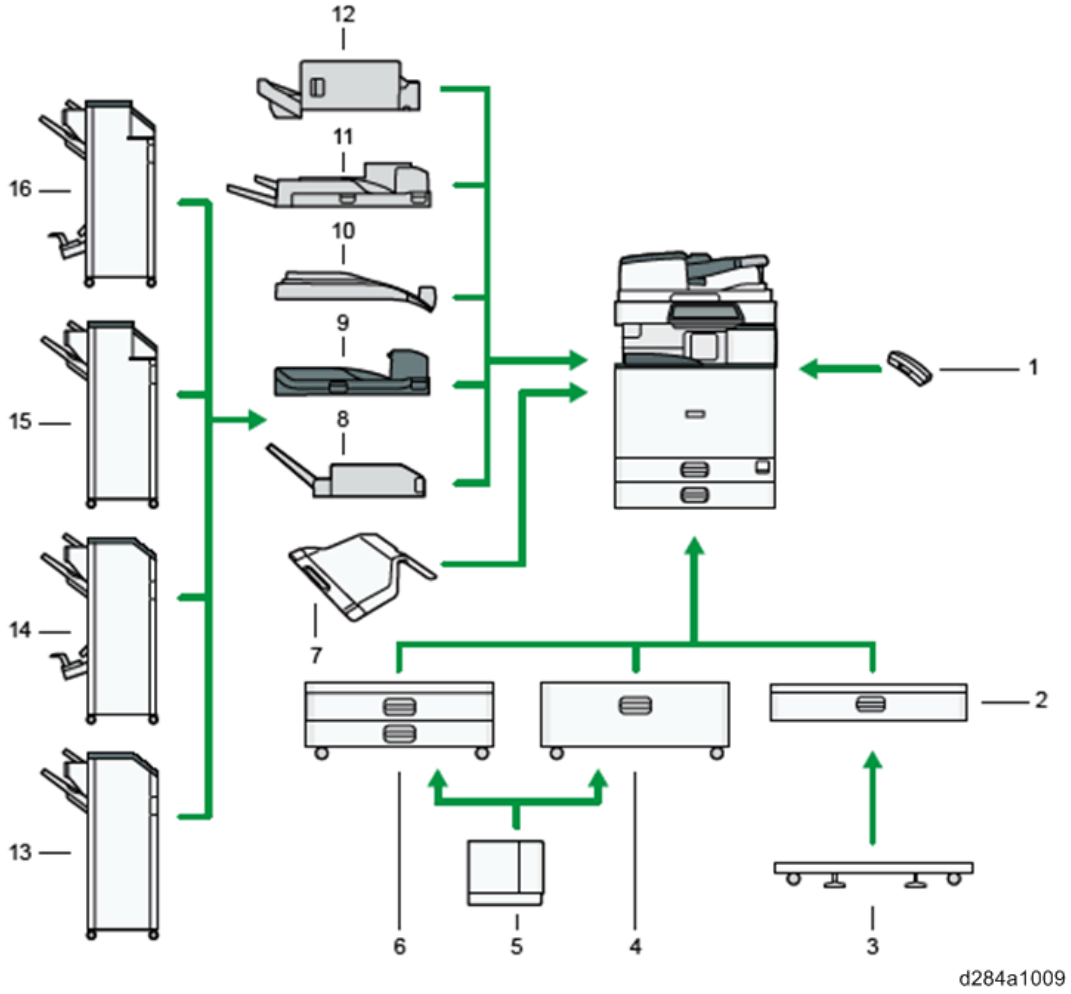
No.	Item	Machine Code
1	Paper Feed Unit PB3150	D694
2	Caster Table Type M3	D178
3	LCIT PB3170	D695
4	LCIT RT3030	D696
5	Paper Feed Unit PB3210	D787
6	1 Bin Tray BN3110	D3CQ
7	Internal Multi-Fold Unit FD3000	M482
8	Bridge Unit BU3070	D685
9	Internal Shift Tray SH3070	D691
10	Side Tray Type M3	D725
11	Internal Finisher SR3130	D690
12	Finisher SR3210	D3B8
13	Booklet Finisher SR3220	D3B9
14	Finisher SR3230	D3BA
15	Booklet Finisher SR3240	D3BB

External Options for MP4055/MP5055 (mainly Asia)



No.	Item	Machine Code
1	SPDF DF3100	D3B0
2	ARDF DF3090	D779
3	Platen Cover PN2000	D700
4	Paper Feed Unit PB3150	D694
5	Caster Table Type M3	D178
6	LCIT PB3230	D695
7	LCIT RT3030	D696
8	Paper Feed Unit PB3220	D787
9	1 Bin Tray BN3110	D3CQ
10	Internal Multi-Fold Unit FD3000	M482
11	Bridge Unit BU3070	D685
12	Internal Shift Tray SH3070	D691
13	Side Tray Type M3	D725
14	Internal Finisher SR3130	D690
15	Finisher SR3210	D3B8
16	Booklet Finisher SR3220	D3B9
17	Finisher SR3230	D3BA
18	Booklet Finisher SR3240	D3BB

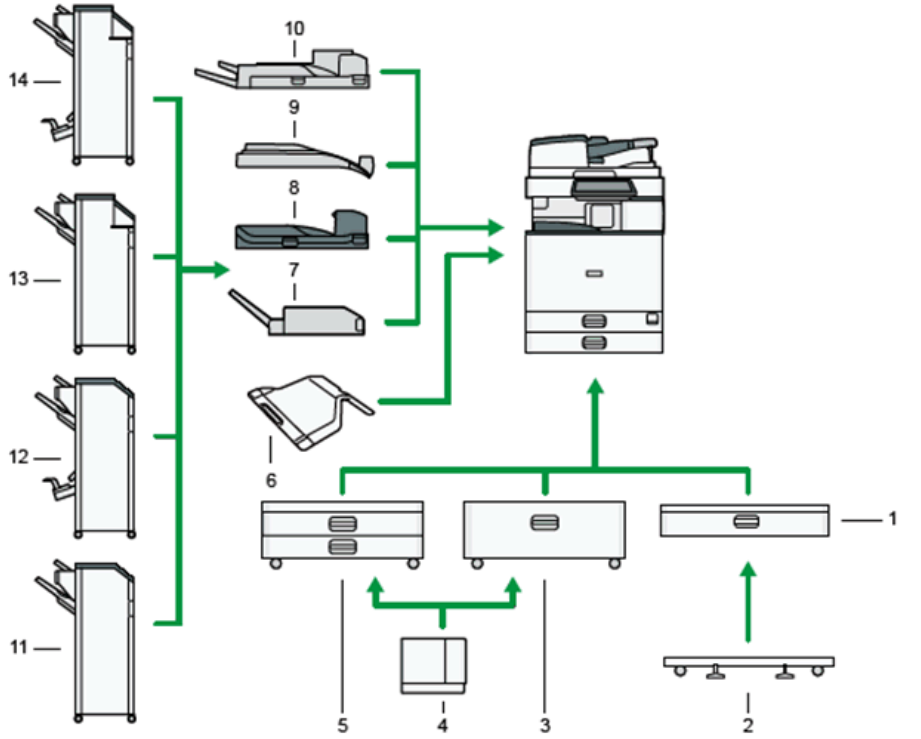
External Options for MP4055/MP5055 (mainly North America)



No.	Item	Machine Code
1	Handset HS3020	D739
2	Paper Feed Unit PB3150	D694
3	Caster Table Type M3	D178
4	LCIT PB3230	D695
5	LCIT RT3030	D696
6	Paper Feed Unit PB3220	D787
7	1 Bin Tray BN3110	D3CQ
8	Internal Multi-Fold Unit FD3000	M482
9	Bridge Unit BU3070	D685
10	Internal Shift Tray SH3070	D691
11	Side Tray Type M3	D725
12	Internal Finisher SR3130	D690
13	Finisher SR3210	D3B8
14	Booklet Finisher SR3220	D3B9
15	Finisher SR3230	D3BA

No.	Item	Machine Code
16	Booklet Finisher SR3240	D3BB

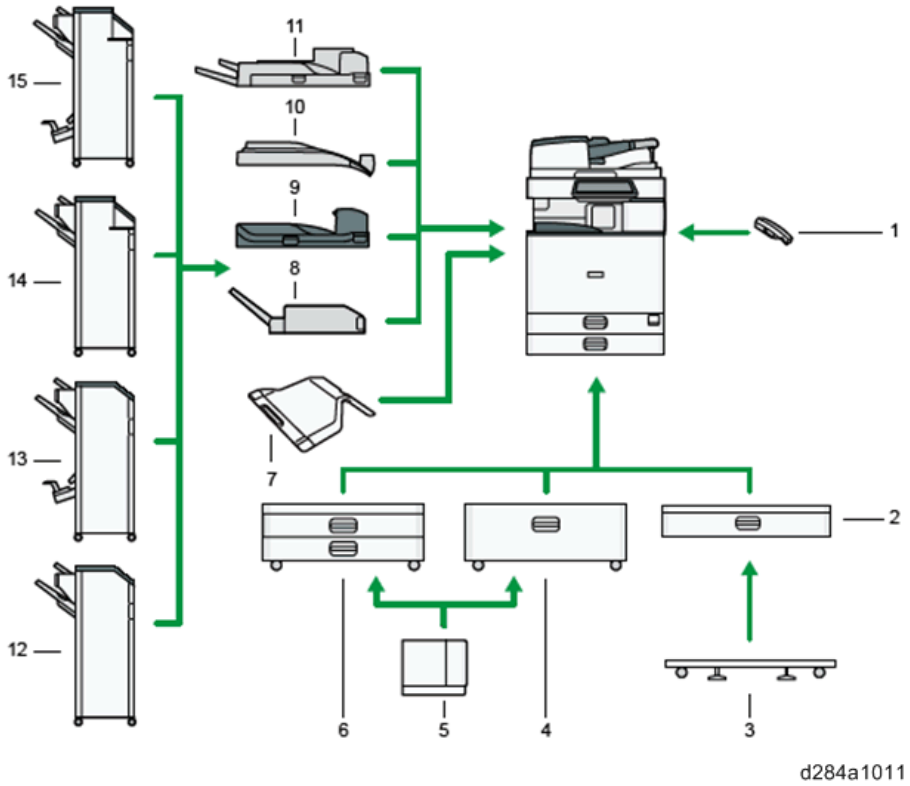
External Options for MP6055 (mainly Europe and Asia)



d284a1010

No.	Item	Machine Code
1	Paper Feed Unit PB3150	D694
2	Caster Table Type M3	D178
3	LCIT PB3170 (Europe) LCIT PB3230 (Asia)	D695
4	LCIT RT3030	D696
5	Paper Feed Unit PB3210 (Europe) Paper Feed Unit PB3220 (Asia)	D787
6	1 Bin Tray BN3110	D3CQ
7	Internal Multi-Fold Unit FD3000	M482
8	Bridge Unit BU3070	D685
9	Internal Shift Tray SH3070	D691
10	Side Tray Type M3	D725
11	Finisher SR3210	D3B8
12	Booklet Finisher SR3220	D3B9
13	Finisher SR3230	D3BA
14	Booklet Finisher SR3240	D3BB

External Options for MP6055 (mainly North America)



No.	Item	Machine Code
1	Handset HS3020	D739
2	Paper Feed Unit PB3150	D694
3	Caster Table Type M3	D178
4	LCIT PB3230	D695
5	LCIT RT3030	D696
6	Paper Feed Unit PB3220	D787
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9	Bridge Unit BU3070	D685
10	Internal Shift Tray SH3070	D691
11	Side Tray Type M3	D725
12	Finisher SR3210	D3B8
13	Booklet Finisher SR3220	D3B9
14	Finisher SR3230	D3BA
15	Booklet Finisher SR3240	D3BB

Specifications

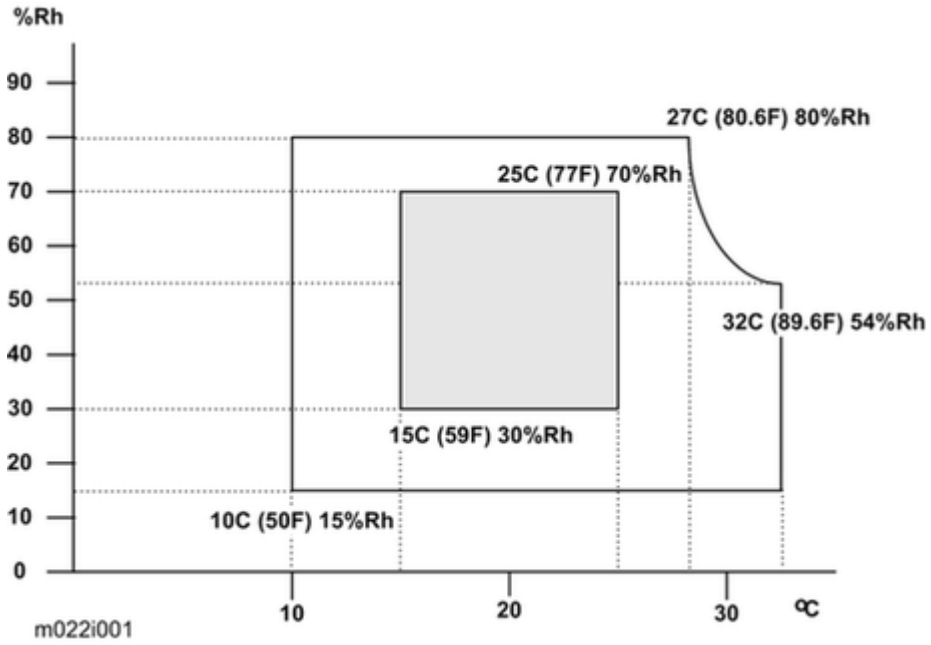
See “Appendices” for the following information:

- Machine Specifications
- Software Accessories
- Supported Paper Sizes
- Optional Specifications

2. Installation

Installation Requirements

Environment



1. Temperature Range: 10 °C to 32 °C (50 °F to 89.6 °F)
2. Humidity Range: 15% to 80% RH
3. Ambient Illumination: Less than 1,500 lux (do not expose to direct sunlight.)
4. Ventilation: Room air should turn over at least 3 times/hr/person
5. Ambient Dust: Less than 0.10 mg/m^3
6. Avoid an area which is exposed to sudden temperature changes. This includes:
   - Areas directly exposed to cool air from an air conditioner.
   - Areas directly exposed to heat from a heater.
7. Do not place the machine in an area where it will be exposed to corrosive gases.
8. Do not install the machine at any location over 2,000 m (6,500 ft.) above sea level. (In NA, it can be installed only up to 2,500m (8,202 ft.))
9. Place the copier on a strong and level base. (Inclination on any side should be no more than 5 mm.)
10. Do not place the machine where it may be subjected to strong vibrations.

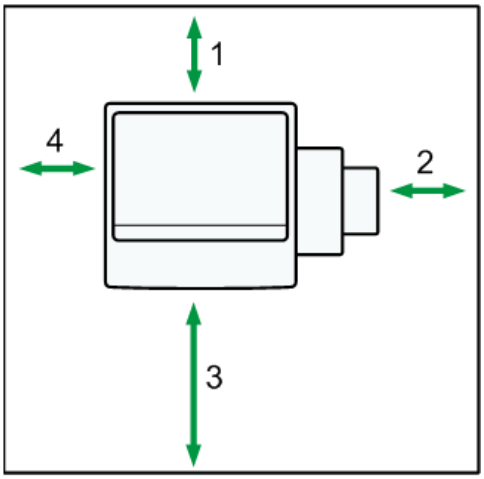
Minimum Space Requirements

Machine Level

Front to back: Within 5 mm (0.2") of level

Right to left: Within 5 mm (0.2") of level

Place the copier near the power source, and provide clearance as shown:



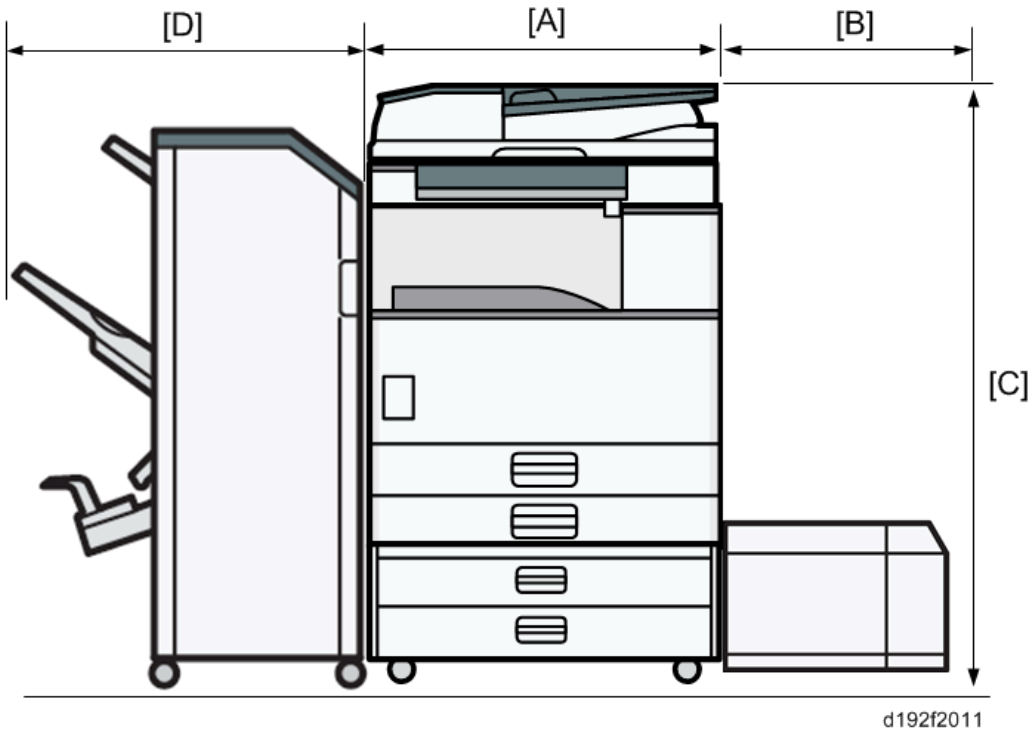
d1822005

1. Rear: Over 101 mm (4")
2. Right: Over 432 mm (17")
3. Front: Over 750 mm (15.8")
4. Left: Over 100 mm (4")

Note

- The 400 mm recommended for the space at the front is only for pulling out the paper tray. If an operator stands at the front of the copier, more space is required.

Machine Dimensions



d192f2011

[A]: 587 mm (23.1")

[B]: 340mm (with D696)

[C]: 1210 mm (with D3B0), 1160 mm (with D779)

[D]: 657 mm (with D3BA or D3BB)

Power Requirements

⚠CAUTION

- Make sure that the wall outlet is near the copier and easily accessible.
- Make sure the plug is firmly inserted in the outlet.
- Avoid multi-wiring.
- Be sure to ground the machine.

Input voltage level

- 120 V to 127 V, 60 Hz: More than 12 A: NA
- 220 V to 240 V, 50 Hz/60 Hz: More than 8A: EU/AP
- 110V, 60 Hz: More than 13.6 A: Taiwan
- 220V,60Hz More than 8A:KO

Voltage tolerance

- Voltage must not fluctuate by more than +8.66% or less than -10%.: NA
- Voltage must not fluctuate by more than 10%.: EU/AP

Main Machine Installation

Important Notice on Security Issues

In order to increase the security of the MFP, and to ensure that the customer sets the administrator password, an administrator set/change prompt display is shown up at the first power-up.

Overview

- The following Program/Change Administrator screen is displayed at the first power-up.

d176f2100

- When the customers set the administrator/supervisor login password, the display disappears and the home display will appear. The customers, however, can erase this screen with the following procedure in the case that they think there is no need to set the password.

1. On the Program/Change Administrator screen, press [Change] next to Supervisor and then touch [OK] without inputting any password.
2. Touch [OK] again when the Confirm password display shows up.
3. For Administrator 1, do the same procedure as steps 1 and 2.
4. Press the [OK] button, and then turn the power OFF/ON.

- SP5-755-002 (Display Setting: Hide Administrator Password Change Scrn) allows you to skip this screen temporarily and continue the installation procedure without setting an administrator password. However, the Program/Change Administrator screen appears every time you turn the power OFF/ON, if the password is not set.

Note

- For how to enter SP mode, see the note at the end of the Password Setting Procedure.

Password Setting Procedure

Note

- For more details about this security issue, see "Notes on Using Multi-Function Printers Safely" supplied with the MFP.

⚠CAUTION

- When Supervisor / Administrator 1-4 passwords are configured via network, the "Change Supervisor

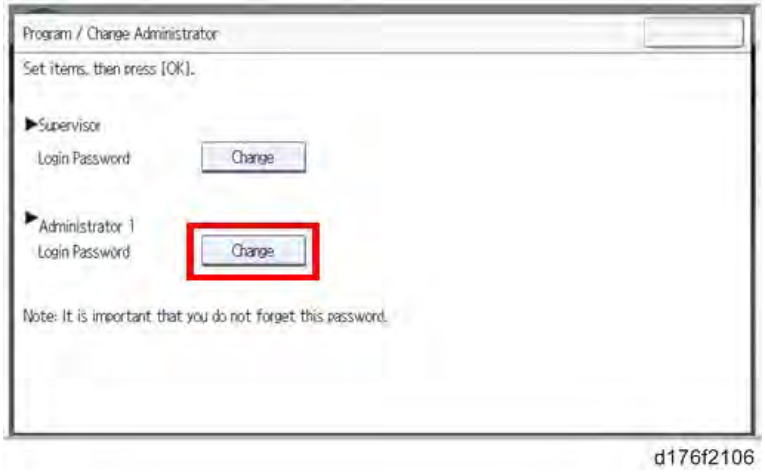
login password" window will not display.

- The passwords for Supervisor or Administrator 1 to 4 can be set via "System Settings". But the Program/Change Administrator screen appears every time the power switch is turned ON if the passwords are input this way. So we recommend the customers to set the passwords via network or the Program/Change Administrator screen.

1. Install the machine.
2. Turn ON the main power.
   Password change display appears.
3. Press [Change] and change the supervisor login password.

d176f2101

4. Input the password, and then press [OK].
5. Confirm the password, and then press [OK].
6. Change the administrator 1 login password.



d176f2106

7. Input the password, and then press [OK].
8. Confirm the password, and then press [OK].
9. Turn the main power OFF and back ON again.

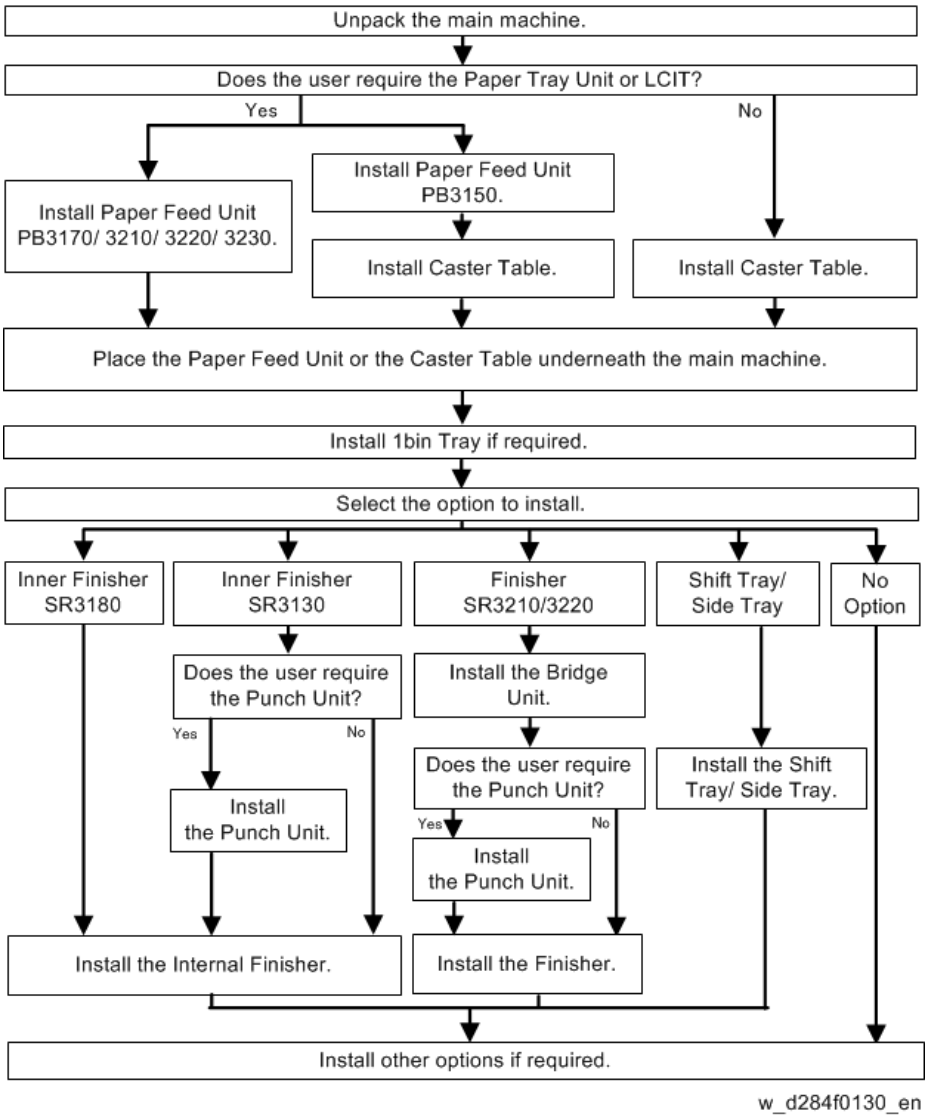
Note

- To enter the SP mode, there are two ways to display the number keyboard on screen;

1. Press the "Document Server" icon.
2. Press and hold the button [A] located at the left side of the operation panel and "Check Status [B]" at the same time.

Installation Flow Chart

MP 2555SP, MP 3055SP, MP 3555SP



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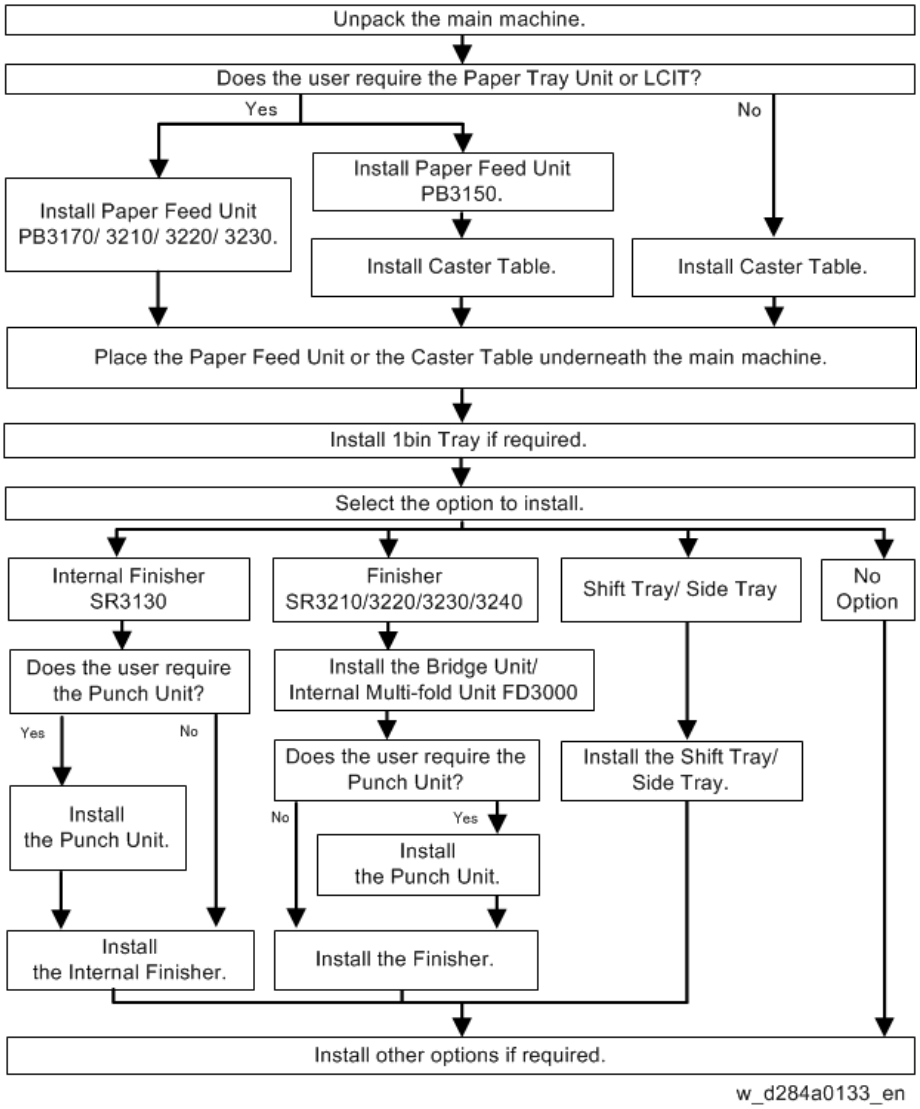
MP 4055SP, MP 5055SP, MP 6055SP



Accessory Check

Check the quantity and condition of the accessories in the box against the following list:

No.	Description	Q'ty	Remarks
1	Plate: Logo: RIC	1	
2	Sheet: Logo	1	
3	Rear Lower Gap Cover	1	
4	Cap Cover	2	
5	Stopper: Paper Exit Tray	1	
6	NFC Tag	1	
7	Decal: Paper Tray	1	
8	Decal: Bluetooth	1	
9	Original Caution Decal: English	1	EU Only
10	Original Caution Decal: Multi-Language	1	EU Only

No.	Description	Q'ty	Remarks
11	Power Supply Cord	1	
12	Cleaning Cloth	1	
13	Cleaning Cloth Holder	1	
14	Sheet: EMC address	1	EU Only
15	Caution: CE	1	EU Only
16	Caution: Smart Operation Panel	1	NA/AA Only
17	Caution: FCC	1	NA Only
18	Caution: FCC (for Canada)	1	NA Only
19	Sheet: Safety Information	1	EU Only
20	Sheet: Notes for Users (AIRPRINT)	NA/AA: 1 EU: 2	
21	Sheet: EULA (21 Languages)	1	
22	Sheet: Notes for Users (Security)	1	
23	Sheet: Start Guide	1	NA/AA Only
24	Caution: NFC Tag	1	
25	Seal: Caution (21 Languages)	1	AA Only
26	CD-ROM (Drivers)	1	
27	CD-ROM (OI)	1	AA Only
28	Manual: Read This First	1	NA/AA Only

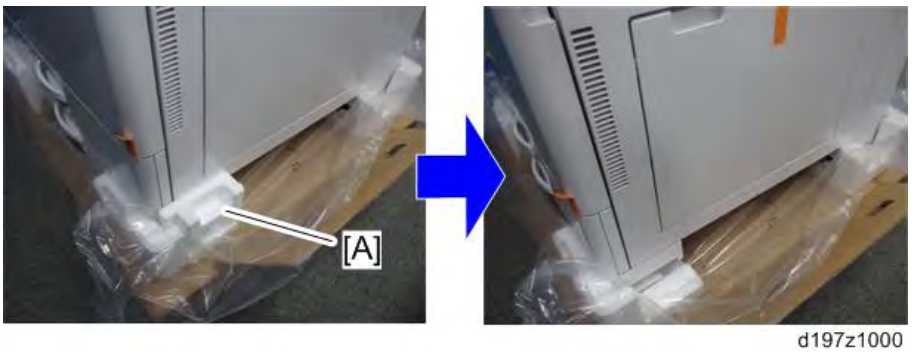
Installation Procedure

Removal of Packing Materials and Shipping Retainers

1. Remove the machine from the box, and check the items in the package.

Important

- Remove the retainer [A] at the lower front right before lifting up the machine, because the handle for lifting the machine is hidden by the retainer [A].

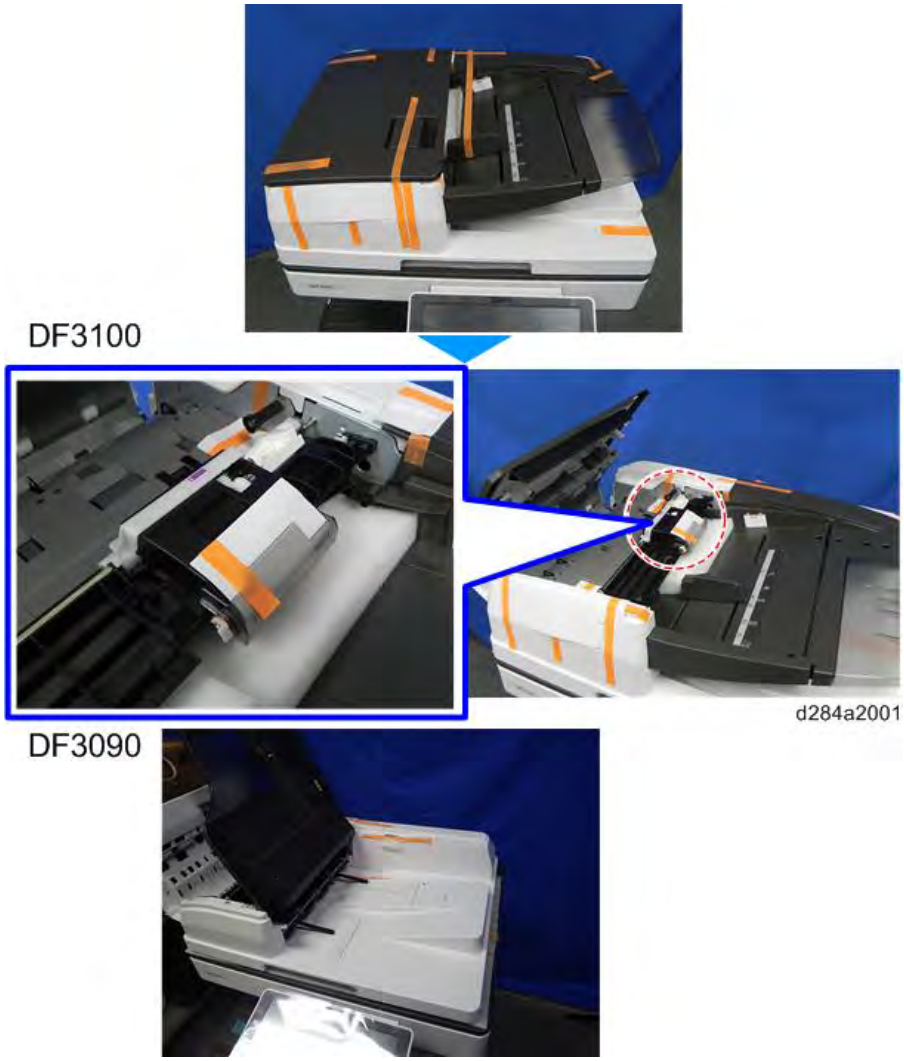


d197z1000

- When you lift the machine, hold the correct parts, as shown in the photo below. Do not lift by

holding the scanner unit, etc., because this might deform the machine or break the exterior covers.

2. Remove the tapes and retainers on the DF.



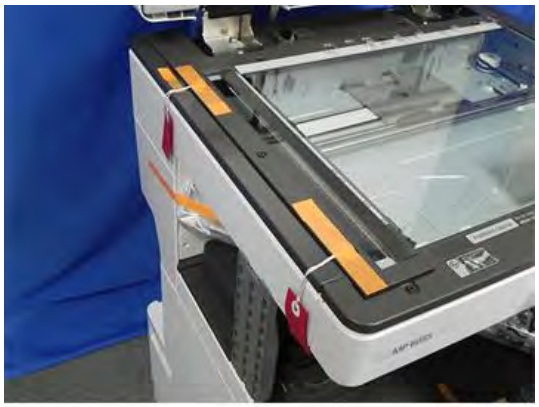
3. Remove the tapes on the exterior of the copier.

d284a2002

4. Remove the cushioning material [A] on the exposure glass.

d284a2003

5. Remove the orange tape on the scanner shipping locks.



d284a2004

6. Remove the two scanner shipping locks [A] by rotating them 90 degrees counterclockwise.

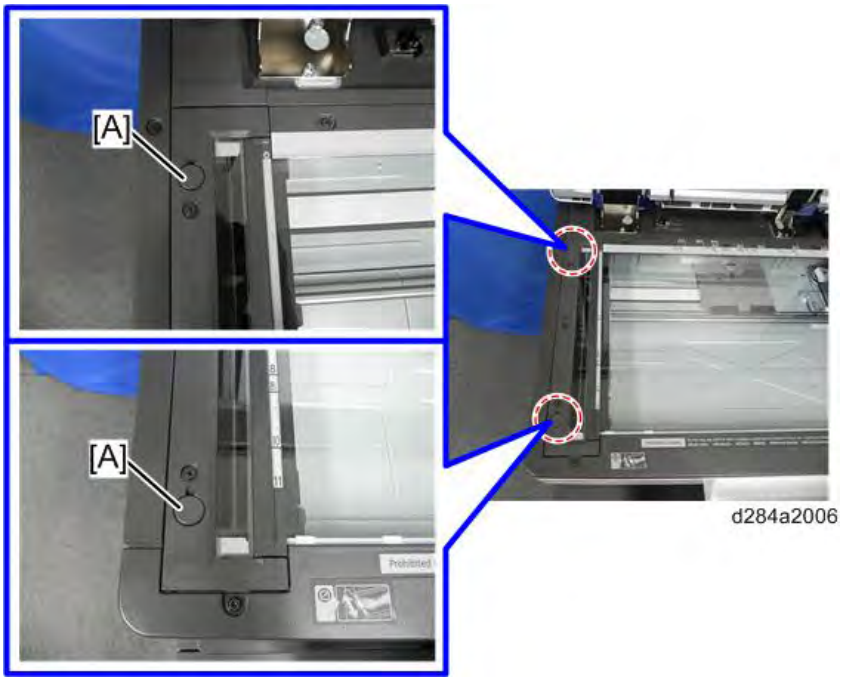
SC120 is displayed when the machine is turned ON with the shipping lock attached.

d284a2005

Note

- Keep the scanner shipping locks after installing the machine. The scanner shipping locks must be installed before moving the machine to a new location.
- Before moving the machine, make sure to move the scanner carriage to the correct position with SP4-806-001 (Super SP mode) and reattach the shipping locks (page 101 "Moving the Machine").

7. Attach the two caps [A] provided with the machine.



d284a2006

8. Pull out the 1st and 2nd paper feed trays and remove the tapes and accessories.

9. Remove the scanner support [A].

d284a2007

10. Open the front cover and store the scanner support [A] in the storage location.

d284a2008

Note

- The factory setting sheet is kept in the storage location.

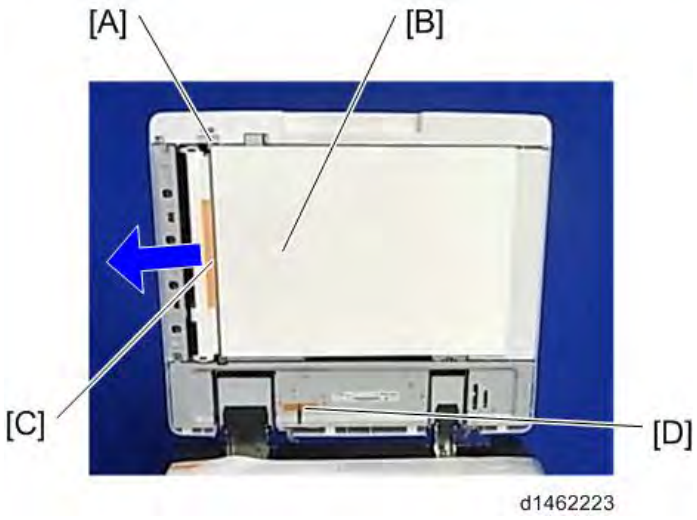
11. Close the front cover.

For Machines with Preinstalled SPDF: Removal of Protective Sheet

1. Open the DF.

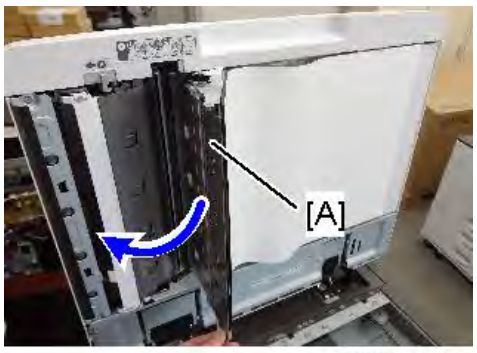
2. Release the lever [A], open the pressure plate sheet [B], and pull out the protective sheet [C] slowly.

3. Remove the filament tape [D].



d1462223

4. Close the pressure plate sheet [A].



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5. Close the DF.

Note

- If the protective sheet remains in the DF, a paper jam will be detected.

Attaching the Paper Exit Tray Parts

1. Attach the stopper [A] to the paper exit tray.

Important

- Before installing the stopper, move the bar inside the stopper in order to avoid damaging the bar.

Pulling out the Feeler for the Paper Exit Full Sensor

Note

This procedure is unnecessary when attaching the Bridge Unit or the Inner Finisher.

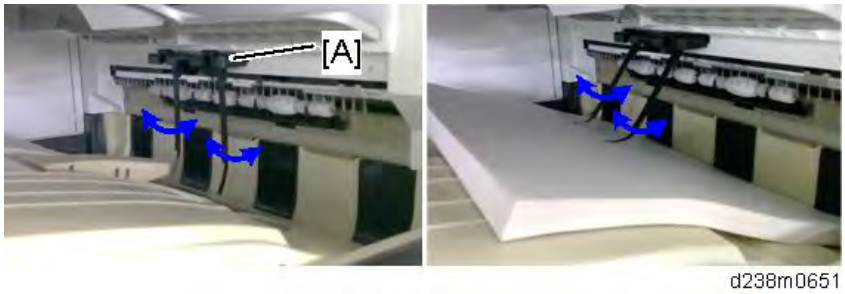
1. Pull the sensor feeler [A] out.

Checking the Position of the Paper Exit Feeler

Check the following points for the paper exit feeler [A] installed at the paper exit.

- It can move in line with the ejection of paper.

- It holds contact with the surface of the ejected paper and is still movable.



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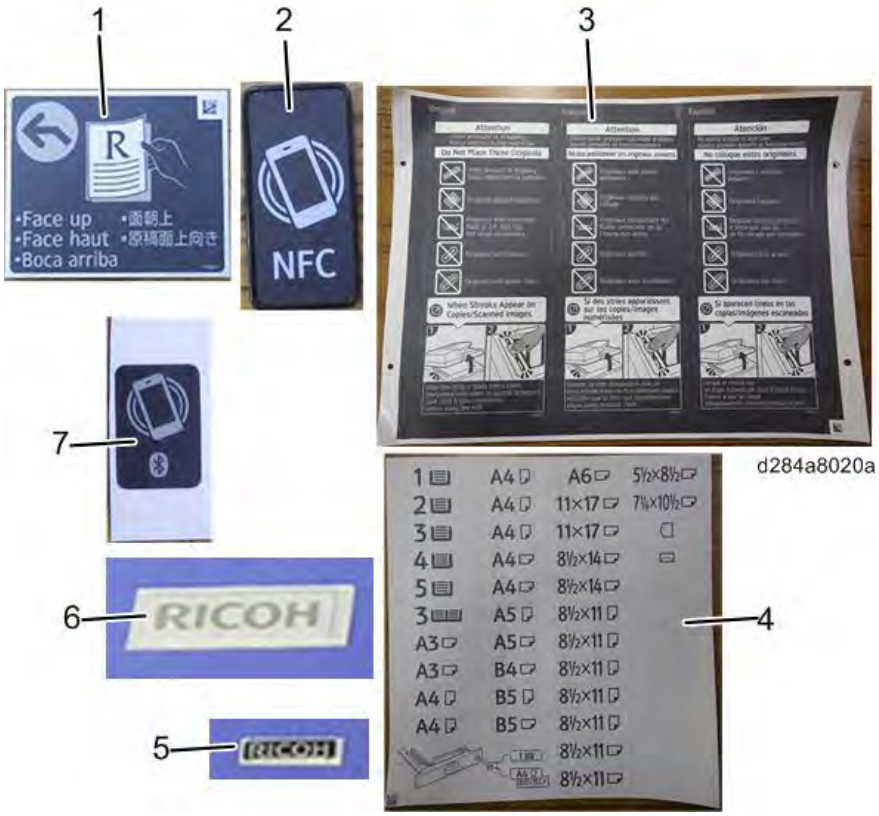
Paper will get jammed in the following cases.

- The paper exit feeler does not function due to obstacles (such as cables).
- The paper exit feeler does not function when the paper is pulled out and pushed back again.

d238m0652

Attaching the Decals

Attach the following decals provided with the machine accessories.



1: Original Set Decal

2: NFC Tag

3: ADF Caution Decal

4: Paper Size Tray Number Decal

5: Brand Logo for Smart Operation Panel

6: Brand Logo for Front cover

7: Bluetooth Decal

Location for each decal

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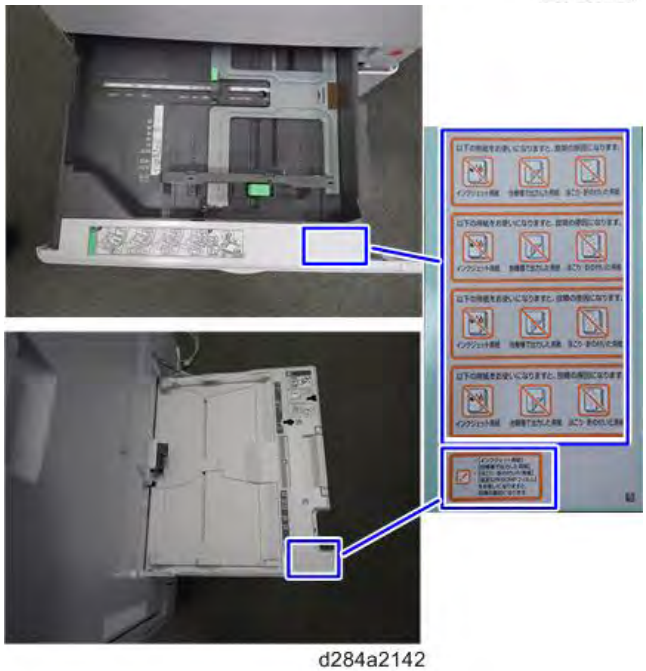
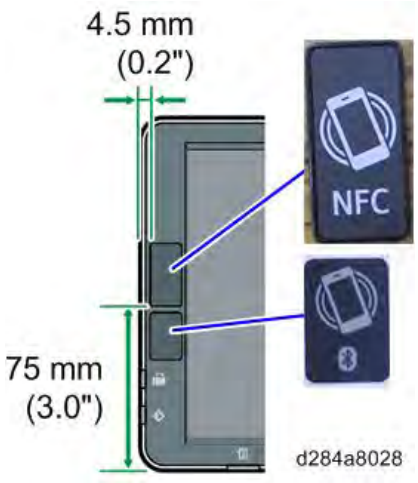


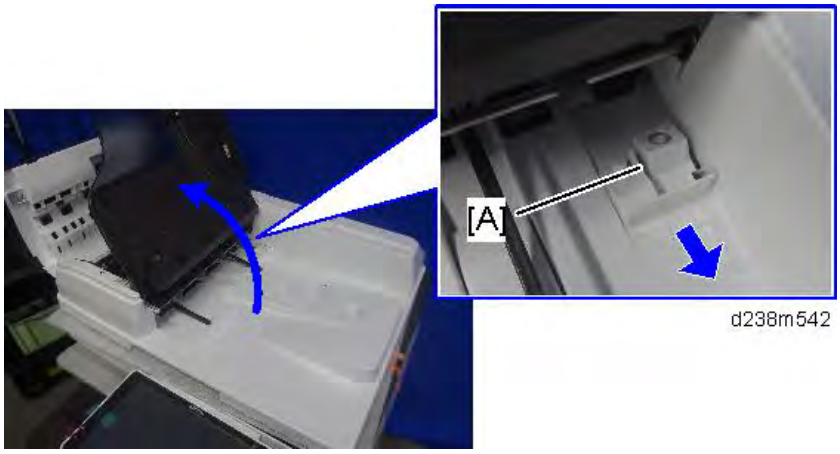
d284a2142



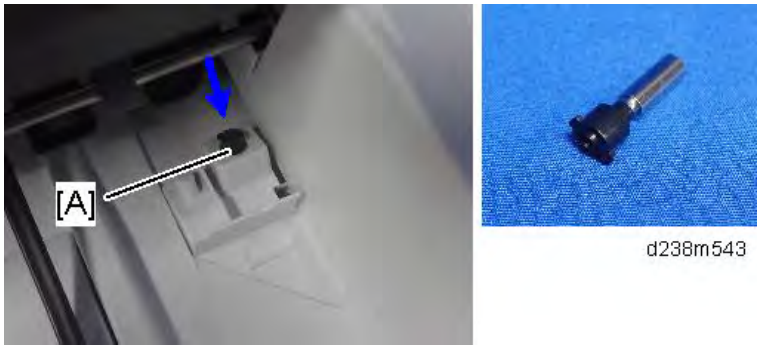
For Machines with Preinstalled ARDF: Fax Stamp Installation (Option)

This procedure is required for the machine which has the fax function installed as standard.

1. Open the ARDF original cover and stamp holder [A].

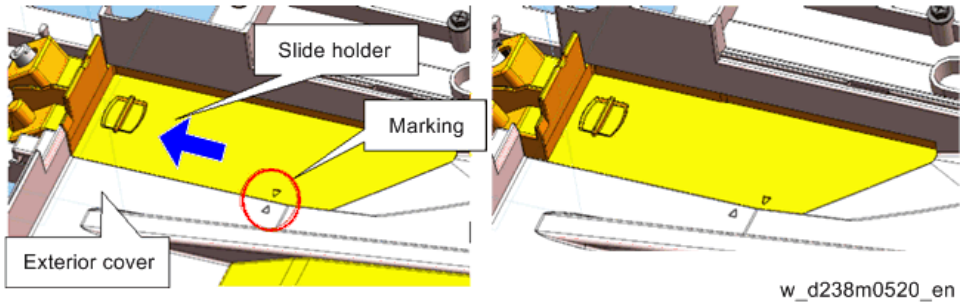


2. Install the fax stamp [A] provided with the machine.



3. Close the holder.

Make sure that it is pushed in to the position where the marks on the holder and the exterior cover face each other. If not, jam detection (001) will occur.



Toner Bottle Installation and Toner Initialization

Note

- This machine has toner bottle set detection and does not operate without the toner bottle.
- Print Cartridge MP 3554 is compatible with MP 4055SP, MP 5055SP, MP 6055SP. However, Print Cartridge MP 6054 is incompatible with MP 2555SP, MP 3055SP, MP 3555SP.

1. Open the front cover.

2. Make sure that the black cap of the toner bottle is firmly tightened, then shake the toner bottle up and down seven or eight times while the cap faces upward.

Note

- Shaking the bottle while the cap faces downward may cause a toner blockage.

3. Remove the toner bottle protection cap [A].

4. Push the toner bottle [A] into the machine slowly.

5. Connect the power cord to the machine.

d197f0603

CAUTION

Use the power cord that is provided with the machine. Do not use any other power cord. Also, do not use an extension cord.

6. While the front cover is open, turn on the main power switch.

Note

- If the front cover is closed when turning on the main power switch, the machine starts a normal toner supply.

7. Enter the SP mode, and then press [System Sp].
8. Set SP3-510-031 (ImgQltyAdj :ExeFlag: Init Toner Replenish: K) to “1”, and then press “#” on the operation panel.
9. Press [EXIT] to end the SP mode.
10. Close the front cover.
11. The machine automatically starts the initial toner supply. The initialization message appears.

CAUTION

- It takes about one to two minutes to finish the initial toner supply. If the toner has not been shaken well, it may take up to about 10 minutes.
- If a toner bottle has not been set, the machine does not work because there is a toner bottle set detection mechanism.
- If you turn on the machine without closing the front cover, the initial toner supply is not performed at installation, and the machine goes to the toner end condition even if the machine has plenty of toner in the toner bottle.

12. Enter SP mode again, and then press [System Sp].
13. Enter SP3-011-001 (Manual ProCon :Exe), and then press [Execute].

Note

- Be sure to do this procedure in the main machine installation. Otherwise, abnormal images may be developed until the next process control.

14. Press [Exit] when completed.
15. Press [EXIT] to end the SP mode.

Note if the initial toner supply has not been performed

If you start printing without executing the initial toner supply at installation, the machine goes to the toner end condition even if the machine has plenty of toner in the toner bottle. Do the following procedure to perform the toner end recovery if the machine has entered the toner end condition.

1. Open the front cover for five seconds or more.
2. Make sure that the toner bottle is set properly.
3. Close the front cover.
4. The toner end recovery automatically starts

Note

- MP 2555/3055/3555/4055/5055/6055 series models do not require resetting the counter, because the replacement year/date is updated automatically. (This is different from the MP 2554/3054/3554/4054/5054/6054 series.)

Check Image Quality / Settings

Loading Paper

When there are other options to be installed, install according to the procedure for each.

1. Connect the power cord to the machine.
2. Turn the main power ON.
3. Pull out the tray slowly until it stops, and then adjust the side fences and end fence to match the paper size.

   Note

   To move the side fences, first pull out the tray fully, then push down the green lock at the rear of the tray.
4. Check that the operation panel shows the following display.

   "Please supply the tray with paper."
5. Square the paper and load it print side up.
6. The paper size is basically detected automatically.

Checking the Copy Image with the Test Chart

Check the copy image with the test chart.

Paper Settings

If necessary, adjust the registration for the paper feed tray. (Registration - Leading Edge/Side-to-Side)

- SP1-002-002 (Side-to-Side Registration Paper Tray 1)
- SP1-002-003 (Side-to-Side Registration Paper Tray 2)

Security Function Settings

Perform the encryption and overwrite settings to protect the user information in the HDD as necessary.

Follow the instructions in Security Setting.

Settings Relevant to the Service Contract

Change the necessary settings for the following SP modes if the customer has made a service contract.

SP No.	Function	Default
SP5-045-001 Counter method	Specifies the counting method used in meter charge mode.	"0": 1 count
SP5-104-001 **(SSP)** A3/DLT double count	Specifies whether the counter is doubled for A3/DLT paper.	"1": Double counting
SP5-812-001 and -002 Service Tel: Telephone / Facsimile	-001: shows or sets the telephone number of the service representative. -002: shows or sets the fax number of the service station. The number is printed on the counter list when the "Meter Click Charge" is enabled. User can send a fax message with the counter list.	

Installation is now completed.

Auto Remote Firmware Update (ARFU) Settings

Specify ARFU settings as required.

Important

Operating Conditions:

- ARFU requires connection to the Internet. Be sure to get permission from the customer before setting ARFU up. Otherwise, it may cause an incident.
- ARFU is available only for machines that contain a HDD. If the machine does not have a HDD, an option HDD must be installed.

Note

- The connection is one-way, so the user's data cannot be accessed from the firmware server.

Procedure:

1. ARFU enable setting
2. Server connection check
3. Prohibited date and time setting

(1) Enable ARFU

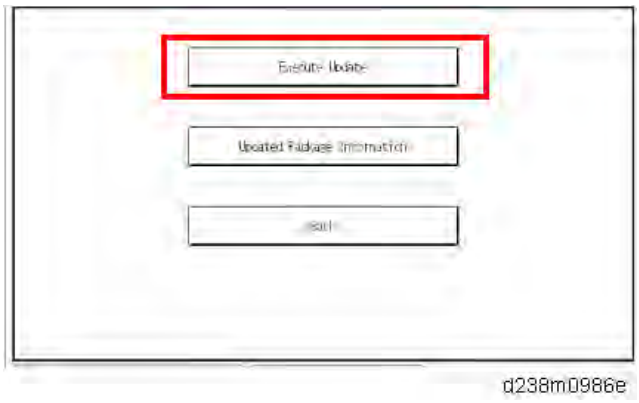
1. Set SP5-886-111 (Auto Update Setting) to "1 (ON)".
1: ON / 0: OFF (Default)

Note

To download the firmware only using SFU (Smart Firmware Update), and not by ARFU, specify the settings as follows:
- SP5-886-111(Auto Update Setting) to "0 (OFF)"
- SP5-886-115 (SFU Auto Download Setting) to "1 (ON)"

(2) Server connection check

1. Enter the SP mode.
2. Press [Firmware update] > [Update] > [Execute update].



3. Check if one of the following messages appears: "Will you download the latest package Ver *** and update?" or "The installed package is the latest version.".
   If the message appears, it is possible to execute ARFU. Press “No” and close SP mode to complete the configuration.

   Important

   The update will run immediately if you press “Yes” at the message "Will you download the latest package Ver *** and update?" The update cannot be canceled if it is run by SFU. (The update can be canceled if ARFU is used.)

   Note

   SP5-886-116 (Auto Update Prohibit Term Setting) displays the scheduled date and time of the next ARFU.
   If error code 71: [Network connection error] appears when you click “Execute update”, see troubleshooting below.

(3) Prohibited date and time setting

Ask the customer for the prohibited times and days of the week for ARFU execution and set the following as needed. The default prohibited time is from 9 a.m. to 5 p.m. and there is no prohibited day.

- SP5-886-112 (Auto Update Prohibit Term Setting) Default: 1 (ON)
- SP5-886-113 (Auto Update Prohibit Start hour) Default: 9
- SP5-886-114 (Auto Update Prohibit End hour) Default: 17
- SP5-886-120 (Auto Update Prohibit Day Of Week Setting) Default: 00000000 [00H]
  Set the bits for the days of the week to prohibit updating.
  Prohibited (Monday - Sunday): bit 7, Monday: bit 6, Tuesday: bit 5
  Wednesday: bit 4, Thursday: bit 3, Friday: bit 2, Saturday: bit 1, Sunday: bit 0
  e.g.) Prohibited on Mon., Fri., Sat., and Sun.: 01000111 [47H]

Note

They can be specified also via Web Image Monitor if logged in as the machine administrator from the device if SP5-886-111(Auto Update Setting) is set to "1 (ON)". For details, see Specifying the Time and Day of the Week to

Prohibit Updating via Web Image Monitor.

Troubleshooting: If error code 71: [Network connection error] appears

If error code 71: [Network connection error] appears when you click [Firmware update] > [Update] > [Execute update] in SP mode, check the following.

- 4-1. IPv4 address, Subnet mask of the machine and Gateway IPv4 address
- 4-2. IPv4 address of the DNS server
- 4-3. Proxy server settings
- 4-4. Encryption level setting SP

4-1. IPv4 address, Subnet mask of the machine and Gateway IPv4 address

Check the machine's IPv4 address, subnet mask, and gateway IPv4 address.

(In User Tools > Machine Features > System Settings > Interface Settings)

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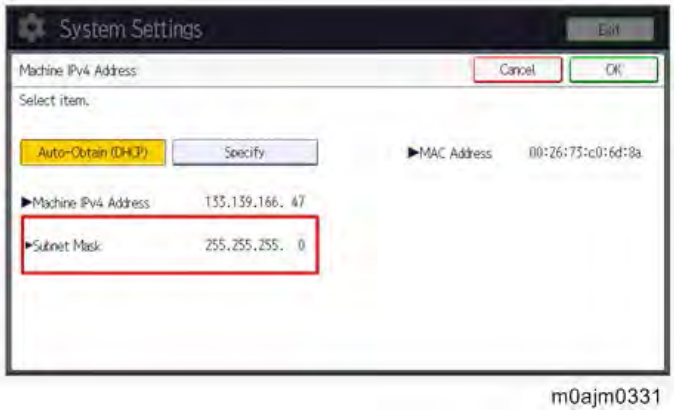

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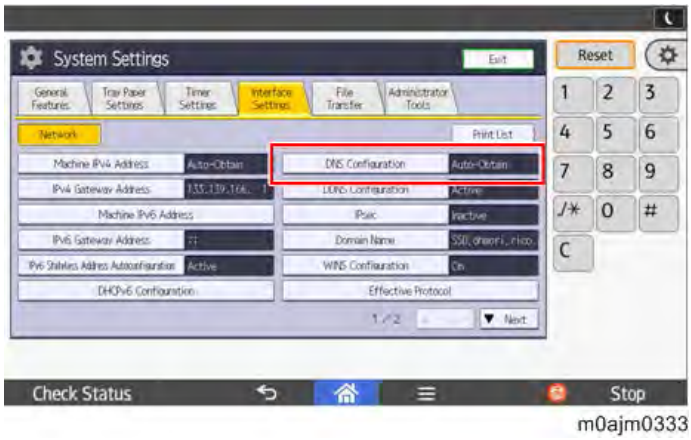
4-2. IPv4 address of the DNS server

Check the DNS IPv4 address and check the connection.

(In User Tools > Machine Features > System Settings > Interface Settings > DNS configuration)



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Note

How to find the IP address:

Ask the customer to tell you the IP address of the DNS server. If the customer does not know it, ask the customer to check the IP address by one of the following ways:

1. Run "ipconfig / all" at the command prompt on the computer, then check the IP address of the DNS server.

2. Open the IPv4 properties dialog box on the computer, then check whether the IP address setting of the DNS server is manual or automatic.

- If the setting of the DNS IP address is automatic, select [Auto-Obtain (DHCP)] at the MFP machine's DNS settings.
- If the setting of the DNS IP address is manual, select [Specify] and specify the DNS server 1 to 3.
- Press [Connection Test] to check the connection with the input address. Make sure that it is connected successfully.

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4-3. Proxy server settings

Check the user’s network environment and, as required, specify the proxy server settings in the following SPs:

- SP5-816-062 (Use Proxy)
  1: Used / 0: Not used
- SP5-816-063 (Proxy Host)
- SP5-816-064 (Proxy PortNumber)
- SP5-816-065 (Proxy User Name)

- SP5-816-066 (Proxy Password)

Important

If access to the external server is restricted, request the network administrator (customer) to permit the following FQDN name for communication.- FQDN: p-rfu-ds2.support.ricoh.com

Note

They can be specified also via Web Image Monitor if logged in as the machine administrator from the device if SP5-886-111(Auto Update Setting) is set to "1(ON)". For details, see Specifying the Time and Day of the Week to Prohibit Updating via Web Image Monitor.

4-4. Encryption level setting SP

Check SP5-816-087 (Remote Service: CERT:Macro Ver) and make sure the encryption level is [2]: 2048 bit.

Important

If SP5-816-087 is [1]: 512 bit, specify the settings as follows:

1. Initialize the encryption level by executing SP5-870-003 (Common Key Info Writing: Initialize)
2. Rewrite as 2048 bit in SP5-870-004 (Common Key Info Writing: Writing 2048 bit).
3. Turn the main switch off and on.

Note

Make sure to check the conditions before changing the encryption level and do the corresponding workaround. ARFU uses the same certificate as @Remote to communicate with the Global Server. This may cause failure in connecting with the Center Server, if the device is to be installed in the following conditions.

Conditions

1) Customer uses RC Gate Type BN1.

RC Gate Type BN1 does not support 2048 bit encryption level communication with Ricoh devices (HTTPS Managed device). Therefore, the device cannot be registered under RC Gate Type BN 1.

2) Ricoh device (HTTPS Managed) that supports only 512 bit encryption level is registered as an external appliance.

Only one encryption level can be set for an external appliance for its communication with imaging devices. If a 512 bit encryption level Ricoh device (HTTPS Managed) is registered, the external appliance as well as other devices must also use 512 bit encryption even if 2048 bit encryption is supported on those devices.

Workaround

For Condition 1:

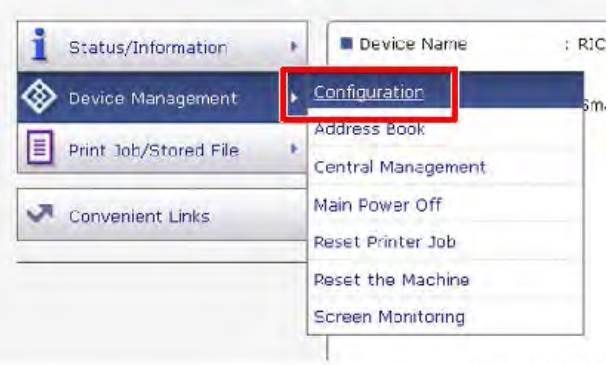
Advise your customer to change to the latest appliance that supports 2048 bit encryption level communication.

For Condition 2:

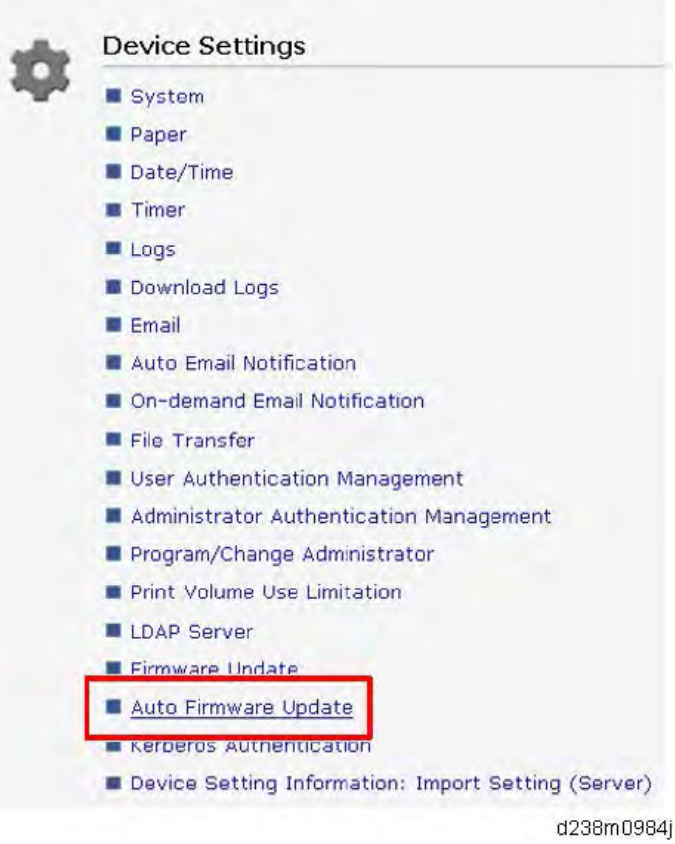
1. Manage the device with embedded RC Gate (2048 bit)
2. Exclude non-supported devices (i.e., those devices that cannot be changed from 512-bit to 2048-bit) from the external appliances, then change the encryption level of external appliances and all managed devices (from 512 bit to 2048 bit).

Specifying the Time and Day of the Week to Prohibit Updating via Web Image Monitor

1. Start Web Image Monitor.
2. Log in as the machine administrator.
3. Point to [Device Management], and then click [Configuration].



4. Click "Auto Firmware Update".



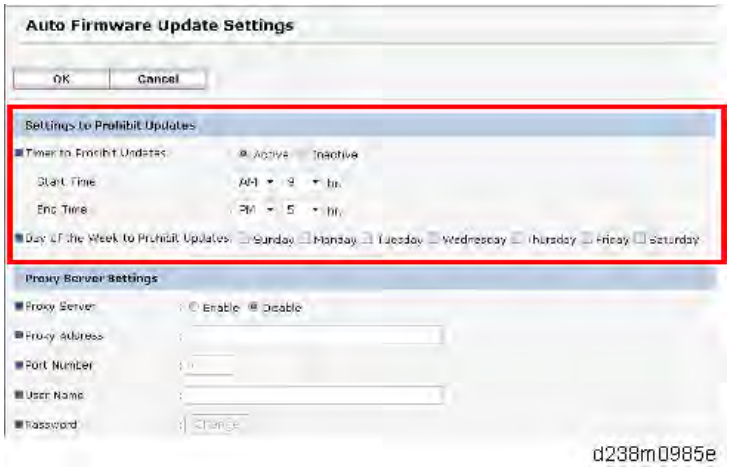
Note

Turn the main power OFF and back ON again after setting SP5-886-111 (AutoUpdateSetting) to "1 (ON)".

"Auto Firmware Update" will appear in the menu list of Web Image Monitor.

5. Specify the times and days of the week to prohibit updating.

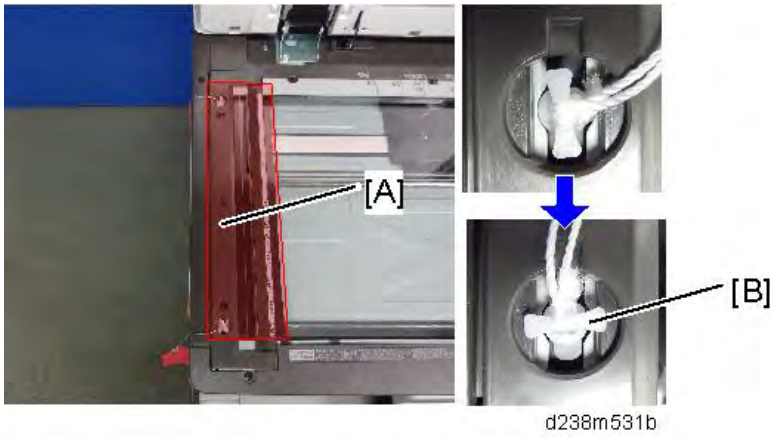
Select the check boxes of the applicable days of the week to prohibit updating on that day



Moving the Machine

This section shows you how to manually move the machine from one floor to another floor. Before turning off the main power, make sure 100% is shown as available memory on the screen if the fax option is installed.

- Move the scanner carriage to the correct position [A] with SP4-806-001 (Super SP mode), and reattach the scanner shipping locks at the lock position [B].



- Turn off the main power.
- Disconnect the power plug from the outlet.
- Close all covers and paper trays, including the front cover and bypass tray.
- Remove the optional feed tray when lifting the main machine for moving it to another floor.
- Keep the machine level and carry it carefully, taking care not to shake or tilt it, and protect the machine from strong shocks.

- When moving the machine, do not press against the ADF.

  Important

  - Do not push the center part of the rear cover. Do not hold the covers of the stabilizers.

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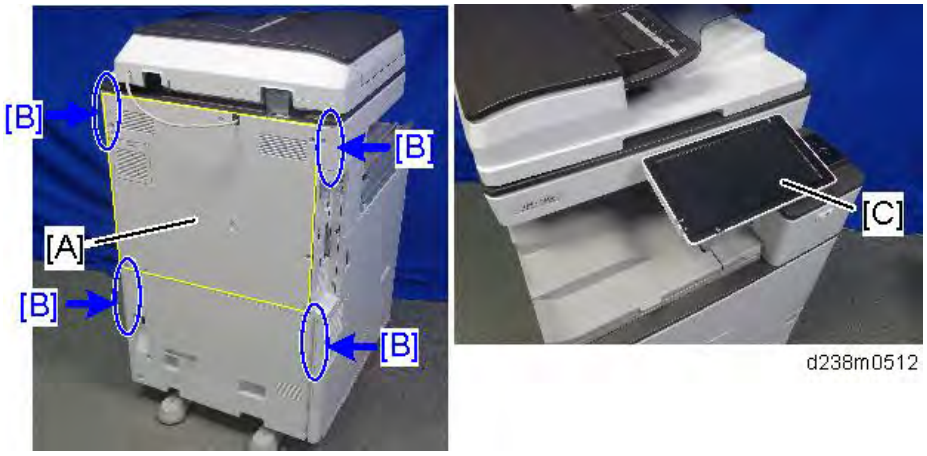
  - Do not put hard pressure on the rear cover [A] when moving or picking up the machine as it is fragile. This also applies to the operation panel [C]. Hold the areas [B] when moving the machine.



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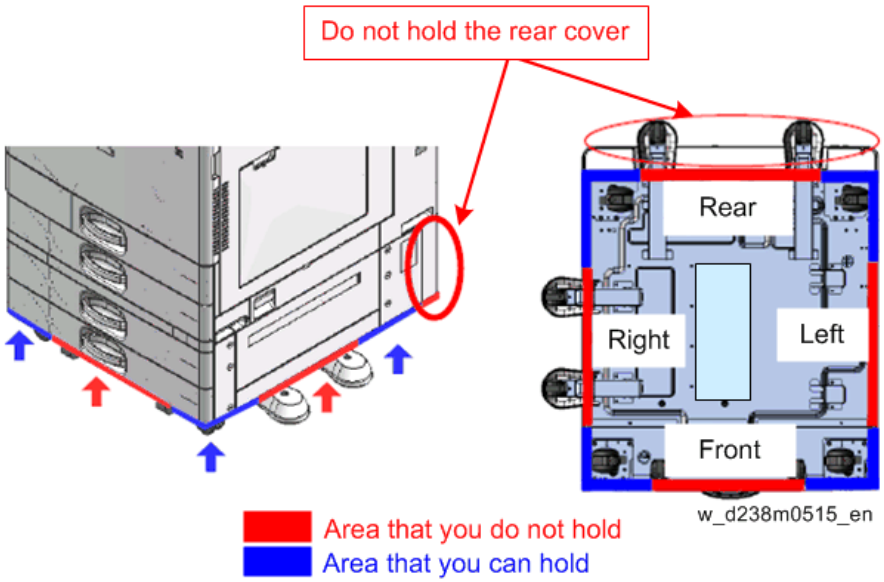
  - Hold 4 corners on the bottom base when holding the machine with the optional paper feeding tray

joined to the main machine. Do not hold any other parts.



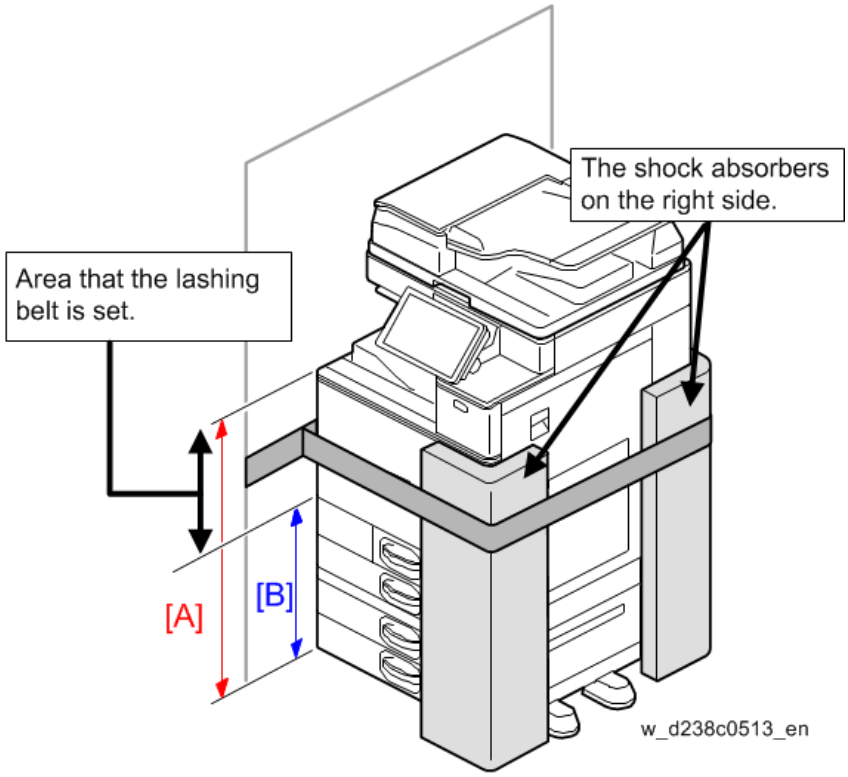
Transporting the Machine

1. Do SP4-806-001 (Super SP mode) to move the scanner carriage from the home position. This prevents dust from falling into the machine during transportation.
2. Remove the toner cartridges. This prevents toner leaks, which are caused by vibration during transport.
3. Make sure there is no paper left in the paper trays. Then fix down the bottom plates with a sheet of paper and tape.
4. Take out the scanner stay from inside the front cover and install the scanner stay.
5. Do one of the following steps:
   - Attach shipping tape to the covers and doors.
   - Shrink-wrap the machine tightly.

Cautions upon Lashing

1. Position the machine so that its left side faces the wall. Make sure to put cushioning in between.
2. Fasten the belt at the ridge line with cushioning.

3. Make sure that the belt is over the front cover (at 45 - 75cm height from the ground).

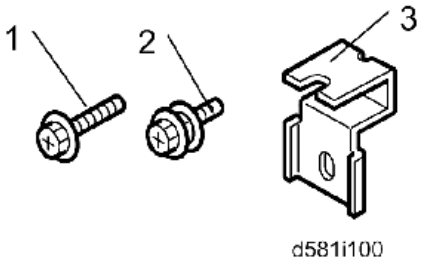


[A]: 75 cm/29.5" [B]: 45 cm/17.5"

Paper Feed Unit PB3210/ PB3220

Accessory Check

No.	Description	Q'ty
1	Screws (M4 × 10)	2
2	Screw with Spring Washer (M4 × 10)	1
3	Securing Bracket	2



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Installation Procedure

⚠CAUTION

- The machine should be held at the correct locations and lifted gently.
- If it is lifted without care, handled carelessly or dropped, it may result in an injury.
- When installing this option, turn the machine power OFF, and unplug the power supply cord from the wall socket.
- If this option is installed with the power on, it may result in an electric shock or a malfunction.
- Be sure to join the machine to the paper feed unit so as to prevent equipment from falling over.
- If they are not connected, they may move and fall over, resulting in injury.

1. Remove the orange tape and retainers.

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2. Remove the items provided (fixing screws, etc.) from the package.

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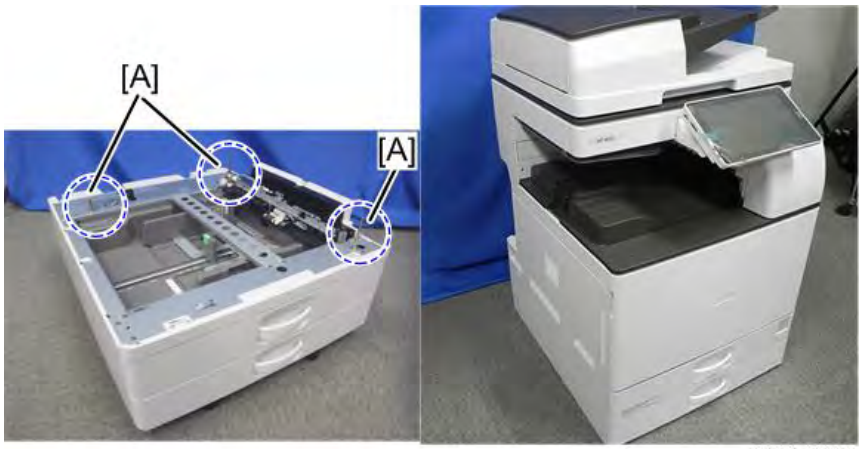
3. Holding the grips on the machine, align it with the locating pins [A], and place the machine on the paper feed unit.



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Note

- When you lift the machine, hold the correct locations.

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- Do not hold any other parts of the machine when lifting it, because this may cause the machine to deform.
- Do not put the machine down on the paper feed unit as a temporary resting place. This may cause the paper feed unit to deform. Always connect the machine and paper feed unit properly.

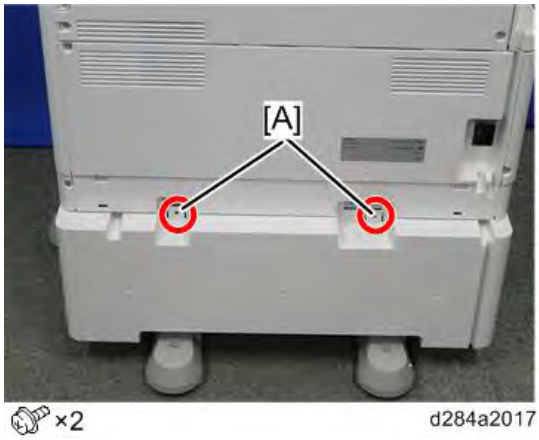
4. Pull out the 2nd paper feed tray.

5. Using a securing bracket as a screwdriver, fix the machine to the feed unit (spring washer: screw: M4×10: 1).

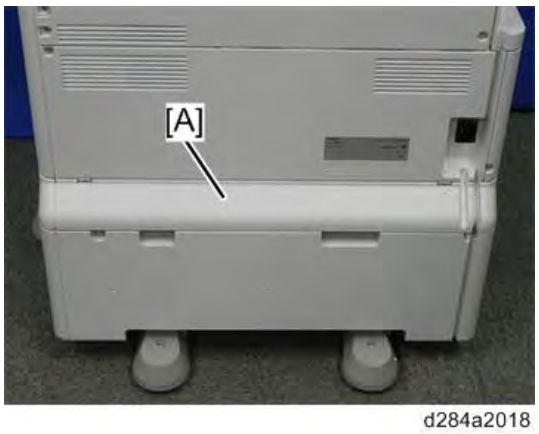
6. Attach the securing brackets [A] to two positions on the left and right at the rear of the machine (screws: 1 each).

Note

- If the anti-condensation heater for this optional tray is to be installed, connect its heater harness prior to this step (step 6) (Tray Heater for Paper Feed Unit PB3210 / PB3220).
- If “LCIT RT3030” is to be installed, connect its harness prior to this step (step 6) (LCIT RT3030 (D696)).

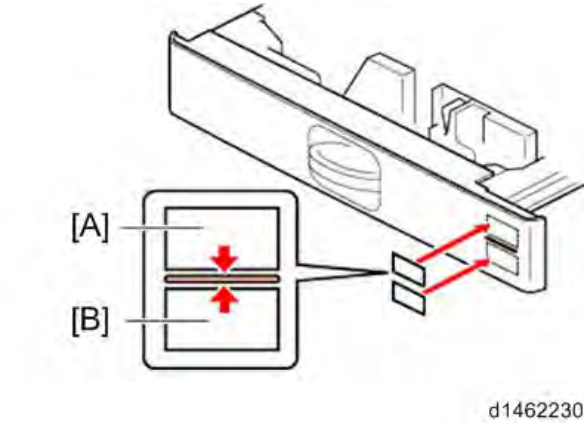


7. Attach the rear lower gap cover [A] (x 2)



8. Return the paper feed tray to the machine

9. Attach the decals as shown below.



d1462230

[A]: Tray number decal

[B]: Paper size decal

Note

- The tray number decal and paper size decal are packaged together with the machine.

10. Lock the casters of the paper feed unit.

d1462439

11. Connect the power cord to the machine.

Note

- Stabilizers are attached to the machine when it is shipped. Do not remove them.

d197f2003

12. Turn the main power ON.

13. Set the paper, and check that the paper size set in the paper feed tray is displayed on the operation panel.

- Paper size for the paper feed unit can be changed with following SPs.

  SP5-181-009 (0: A4 LEF or 1: LT LEF) for Tray 3

  SP5-181-010 (0: A3 or 1: DLT) for Tray 3

  SP5-181-011 (0: B4 or 1: LG) for Tray 3

  SP5-181-012 (0: B5 LEF or 1: Exe LEF) for Tray 3

  SP5-181-014 (0: A4 LEF or 1: LT LEF) for Tray 4

  SP5-181-015 (0: A3 or 1: DLT) for Tray 4

  SP5-181-016 (0: B4 or 1: LG) for Tray 4

  SP5-181-017 (0: B5 LEF or 1: Exe LEF) for Tray 4

14. Adjust the registration for the paper feed unit.

- For Tray 3

  SP1-001-0xx (Leading Edge Registration Tray 3)

-055	Tray3: Thin	-062	Tray3: Thin:1200
-056	Tray3: Plain	-063	Tray3: Plain:1200
-057	Tray3: Mid-thick	-064	Tray3: Mid-thick:1200
-058	Tray3: Thick 1	-065	Tray3: Thick 1:1200
-059	Tray3: Thick 2	-066	Tray3: Thick 2:1200
-060	Tray3: Thick 3	-067	Tray3: Thick 3:1200
-061	Tray3: Thick 4	-068	Tray3: Thick 4:1200

  SP1-002-004 (Side-to-Side Registration Paper Tray 3)

- For Tray 4

  SP1-001-0xx (Leading Edge Registration Tray 4)

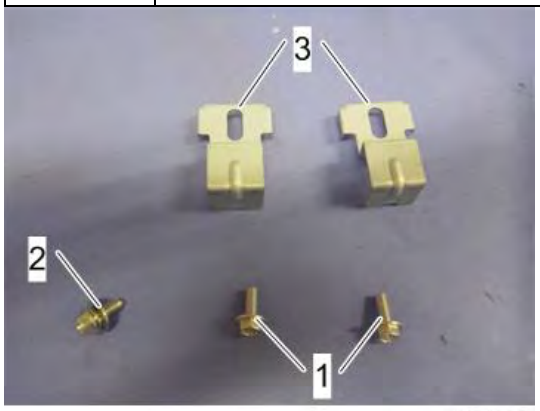
-069	Tray4: Thin	-076	Tray4: Thin:1200
-070	Tray4: Plain	-077	Tray4: Plain:1200
-071	Tray4: Mid-thick	-078	Tray4: Mid-thick:1200
-072	Tray4: Thick 1	-079	Tray4: Thick 1:1200
-073	Tray4: Thick 2	-080	Tray4: Thick 2:1200
-074	Tray4: Thick 3	-081	Tray4: Thick 3:1200
-075	Tray4: Thick 4	-082	Tray4: Thick 4:1200

  SP1-002-005 (Side-to-Side Registration Paper Tray 4)

Paper Feed Unit PB3150

Accessory Check

No.	Description	Q'ty
1	Screws - M4 × 10	2
2	Screw with Spring Washer - M4 × 10	1
3	Securing Bracket	2



d1462445

Installation Procedure

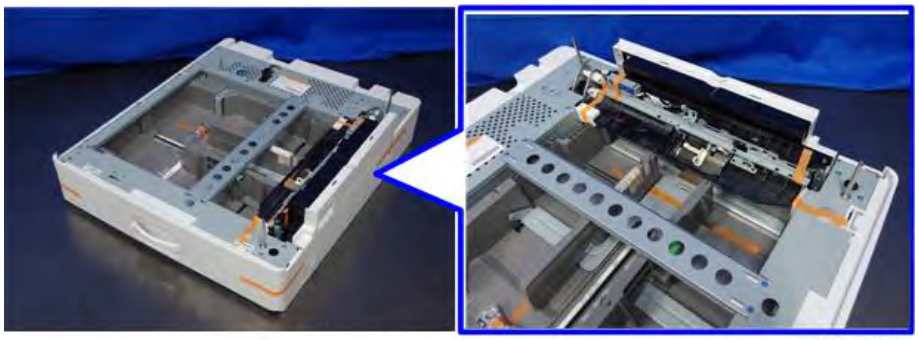
⚠CAUTION

- The machine should be held at the correct locations and lifted gently by two people.
- If it is lifted without care, handled carelessly or dropped, it may result in injury.
- When installing this option, turn the machine power OFF, and unplug the power supply cord from the wall socket.
- If this option is installed with the power on, it may result in an electric shock or a malfunction.
- Be sure to join the machine to the paper feed unit so as to prevent equipment from falling over.
- If they are not connected, they may move and fall over, resulting in injury.

Note

- The Paper Feed Unit PB3150 does not have casters. Attach the "Caster Table Type M3" under the Paper Feed Unit PB3150, if necessary. (Caster Table Type M3 (D178))

1. Remove the orange tape and retainers.

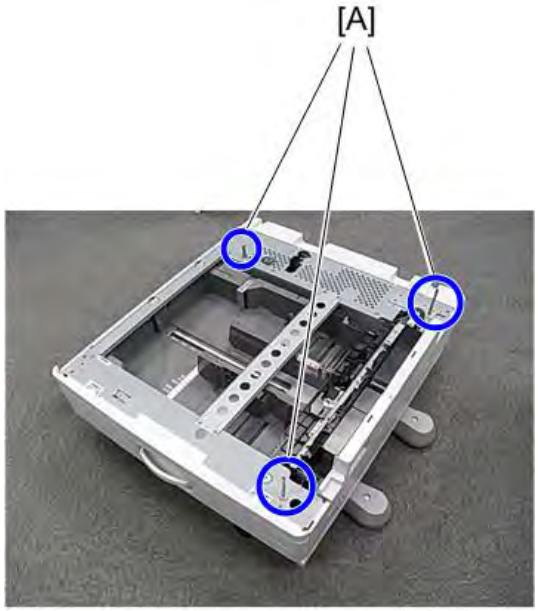

d197z1013

2. Remove the items provided (fixing screws, etc.) from the package.

d197z1014

3. Install this option on the Caster Table (Caster Table Type M3 (D178)).

4. Holding the grips on the machine, align it with the locating pins [A], and place the machine on the paper feed unit.



d197f0114

Note

- When you lift the machine, hold the correct locations.

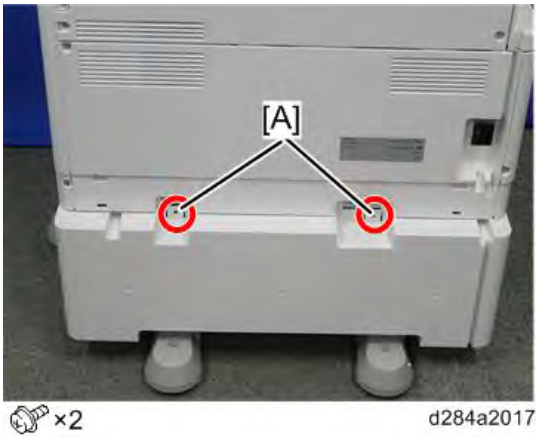
d284a2143

- Do not hold any other parts of the machine when lifting it, because this may cause the machine to deform.
- Do not put the machine down on the paper feed unit as a temporary resting place. This may cause the paper feed unit to deform. Always connect the machine and paper feed unit properly.

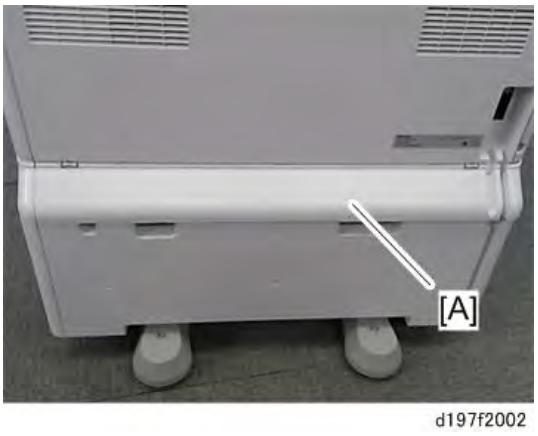
5. Pull out the 2nd paper feed tray of the main machine.

6. Using a securing bracket as a screwdriver, fix the machine to the feed unit (spring washer: screw: M4×10: 1).

7. Attach the securing brackets [A] to two positions on the left and right at the rear of the machine.

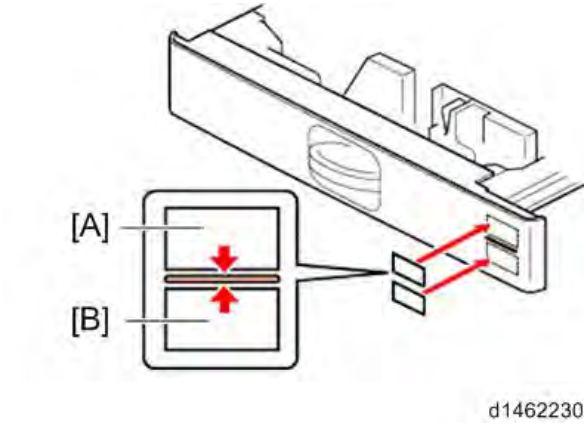


8. Attach the rear lower gap cover [A] (x 2)



9. Return the paper feed tray to the machine.

10. Attach the decals as shown below.



d1462230

[A]: Tray number decal

[B]: Paper size decal

Note

- The tray number decal and paper size decal are packaged together with the machine.

11. Lock the casters.

d1462439

12. Connect the power cord to the machine.

Note

- Stabilizers are attached to the paper feed unit when it is shipped. Do not remove them.

d197f2003

13. Turn the main power switch ON.

14. Set the paper, and check that the paper size set in the paper feed tray is displayed on the operation panel.

- Paper size for the paper feed unit can be changed with following SP.
  SP5-181-009 (0: A4 LEF or 1: LT LEF)
  SP5-181-010 (0: A3 or 1: DLT)
  SP5-181-011 (0: B4 or 1: LG)
  SP5-181-012 (0: B5 LEF or 1: Exe LEF)

15. Adjust the registration for the paper feed unit.

SP1-001-0xx (Leading Edge Registration Tray 3)

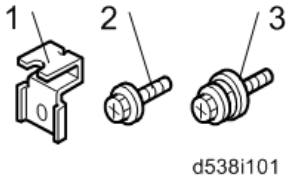
-055	Tray3: Thin	-062	Tray3: Thin:1200
-056	Tray3: Plain	-063	Tray3: Plain:1200
-057	Tray3: Mid-thick	-064	Tray3: Mid-thick:1200
-058	Tray3: Thick 1	-065	Tray3: Thick 1:1200
-059	Tray3: Thick 2	-066	Tray3: Thick 2:1200
-060	Tray3: Thick 3	-067	Tray3: Thick 3:1200
-061	Tray3: Thick 4	-068	Tray3: Thick 4:1200

SP1-002-004 (Side-to-Side Registration Paper Tray 3)

LCIT PB3170/ PB3230

Accessory Check

No.	Description	Q'ty
1	Securing Bracket	2
2	Screw(M4×10)	2
3	Hexagonal Bolt	1



d538i101

Installation Procedure

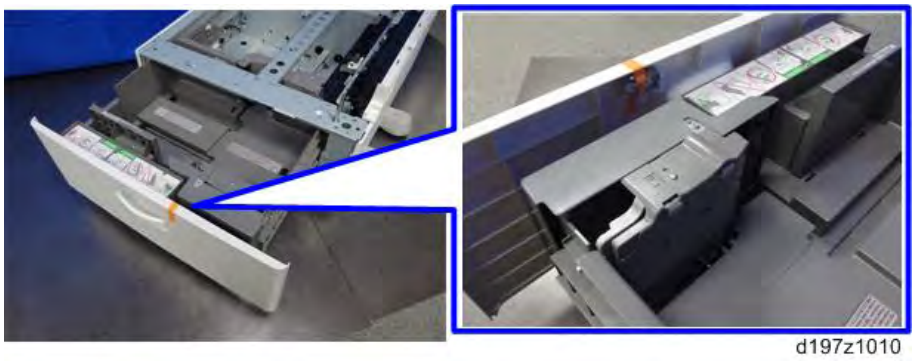
⚠CAUTION

- The machine should be held at the correct locations and lifted gently.
- If it is lifted without care, handled carelessly or dropped, it may result in an injury.
- When installing this option, turn the machine power OFF, and unplug the power supply cord from the wall socket.
- If this option is installed with the power on, it may result in an electric shock or a malfunction.
- Be sure to join the machine to the paper feed unit so as to prevent equipment from falling over.
- If they are not connected, they may move and fall over, resulting in injury.

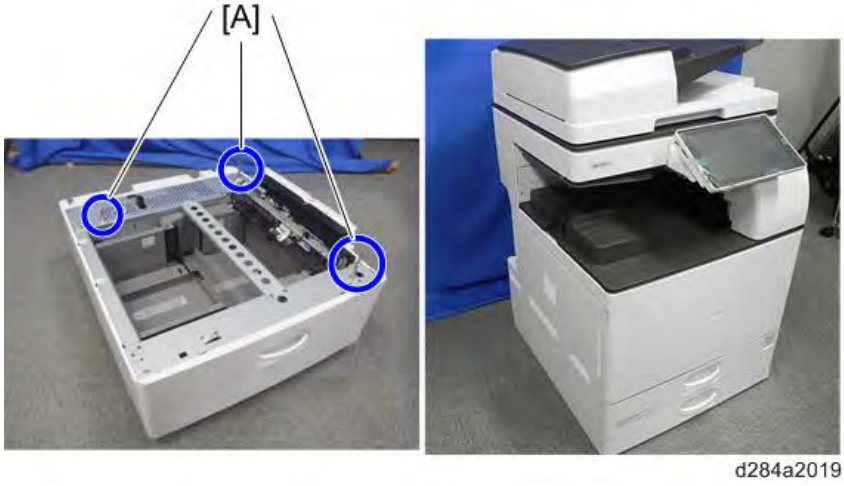
1. Remove the orange tape and retainers.

d197z1009

2. Remove the items provided (fixing screws, etc.) from the package.



3. Holding the grips on the machine, align it with the locating pins [A], and place the machine on the paper feed unit.

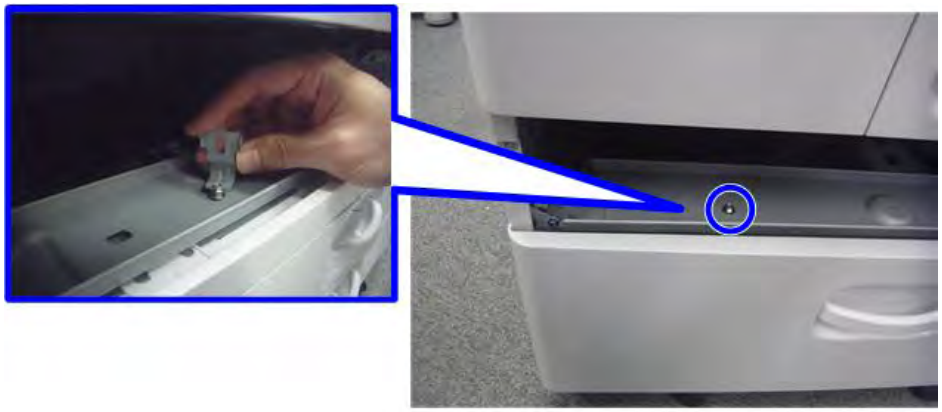


Note

- When you lift the machine, be sure to hold the grips on the machine.
- In particular, do not lift the machine by holding the scanner unit, etc., because this may cause the machine to deform.
- Do not put the machine down on the paper feed unit as a temporary resting place. This may cause the paper feed unit to deform. Always connect the machine and paper feed unit properly.

4. Pull out the 2nd paper feed tray of the machine.

5. Using a securing bracket as a screwdriver, secure the machine to the LCT unit (hexagonal bolt: M4×8: 1).

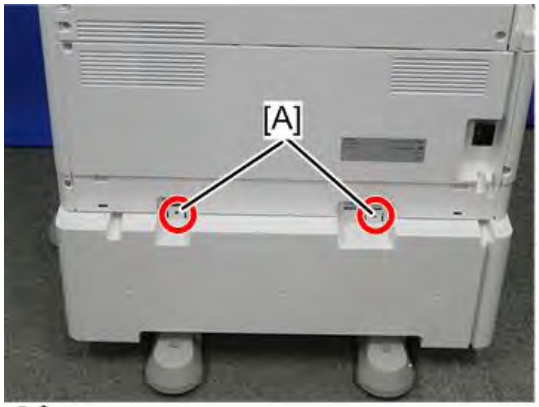


d1462453

6. Attach the securing brackets [A] to two positions on the left and right at the rear of the machine.

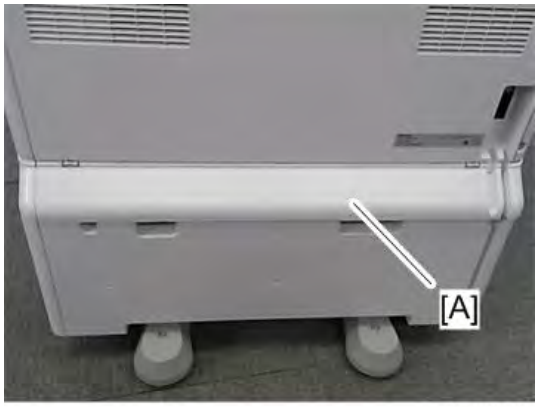
Note

- If the anti-condensation heater for this optional tray is to be installed, connect its heater harness prior to this step (step 6) (Tray Heater for LCIT PB3170/ PB3230).
- If “LCIT RT3030” is to be installed, connect its harness prior to this step (step 6) (LCIT RT3030 (D696)).



×2 d284a2017

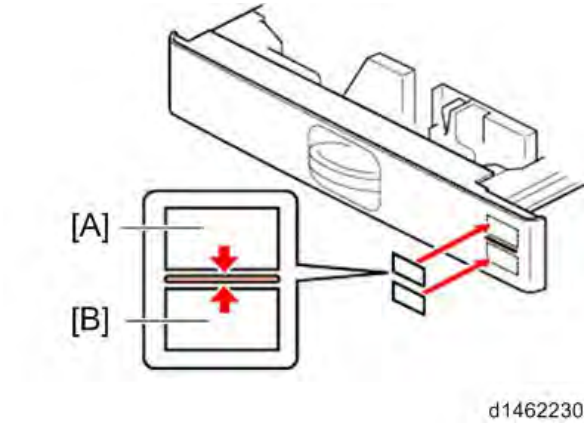
7. Attach the rear lower gap cover [A] (x2)



d197f2002

8. Return the paper feed tray to the machine.

9. Attach the decals as shown below.



d1462230

[A]: Tray number decal

[B]: Paper size decal

Note

- The tray number decal and paper size decal are packaged together with the machine.

10. Lock the casters of the paper feed unit.

d1462439

11. Connect the power cord to the machine.

Note

- Stabilizers are attached to the LCIT when it is shipped. Do not remove any of them.

d197f2003

12. Turn the power switch ON.

13. Set the paper, and check that the paper size set in the paper feed tray is displayed on the operation panel.

14. Adjust the registration for the paper feed unit.

SP1-001-0xx (Leading Edge Registration Tray 3)

-055	Tray3: Thin	-062	Tray3: Thin:1200
-056	Tray3: Plain	-063	Tray3: Plain:1200
-057	Tray3: Mid-thick	-064	Tray3: Mid-thick:1200
-058	Tray3: Thick 1	-065	Tray3: Thick 1:1200
-059	Tray3: Thick 2	-066	Tray3: Thick 2:1200
-060	Tray3: Thick 3	-067	Tray3: Thick 3:1200
-061	Tray3: Thick 4	-068	Tray3: Thick 4:1200

SP1-002-004 (Side-to-Side Registration Paper Tray 3)

Changing the Paper Size

Paper size is set as shown below when the machine is shipped from the factory.

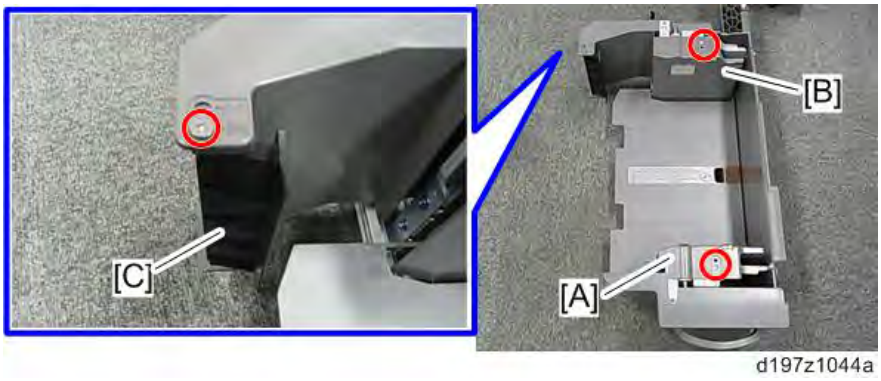
NA: LT LEF

EU.AA.CHN: A4 LEF

The paper size can be changed to A4 LEF or LT LEF.

1. Pull out the left tray and right tray.

2. Remove the right tray side fence (front) [A], right tray side fence (rear) [B], and right tray end fence [C] (×3).

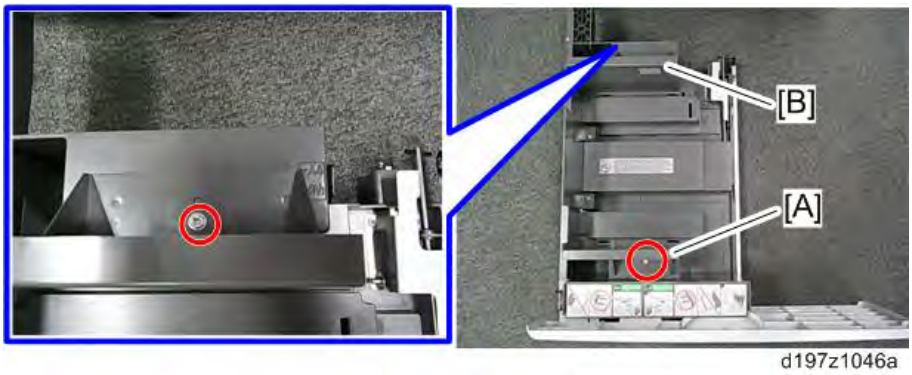


3. Attach the fences to the required position (A4 or LT) (×3).

Note

- Make sure that the spring [B] of the end fence [A] is attached

4. Remove the left tray side fence (front) [A] and the left tray side fence (rear) [B] (×2).



5. Attach the fences to the required position (A4 or LT) (×2).

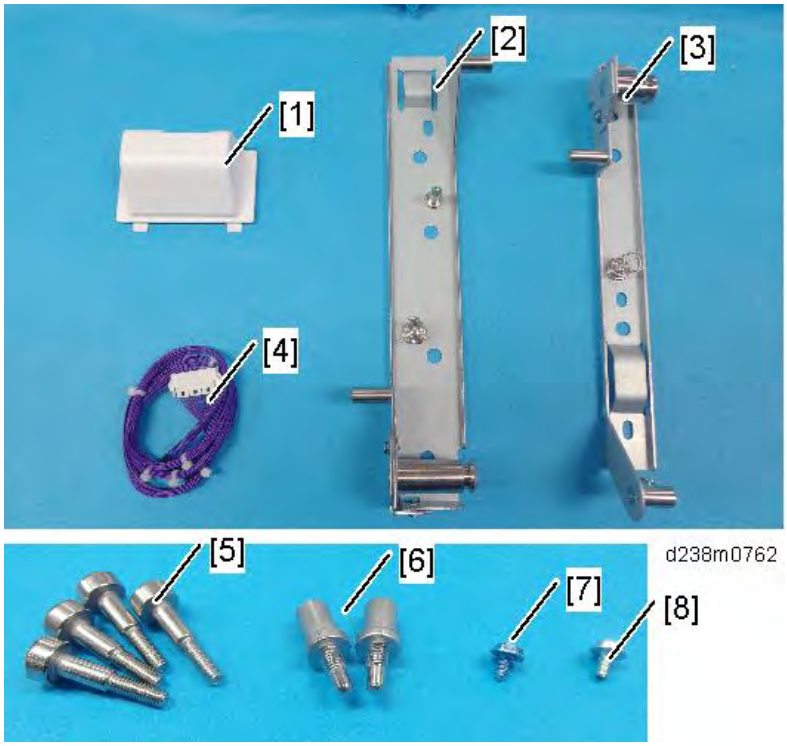
6. Set the paper size setting.

- SP5-181-009 (0: A4 LEF or 1: LT LEF)

LCIT RT3030 (D696)

Accessory Check

No.	Description	Q'ty	Remarks
1	Connector Cover	1	
2	Front Bracket	1	
3	Rear Bracket	1	
4	Harness	1	
5	Stud screw	4	
6	Joint Pins	2	
7	Tapping Screw – M3 × 6	1	
8	Screw – M3 × 6	1	



Installation Procedure

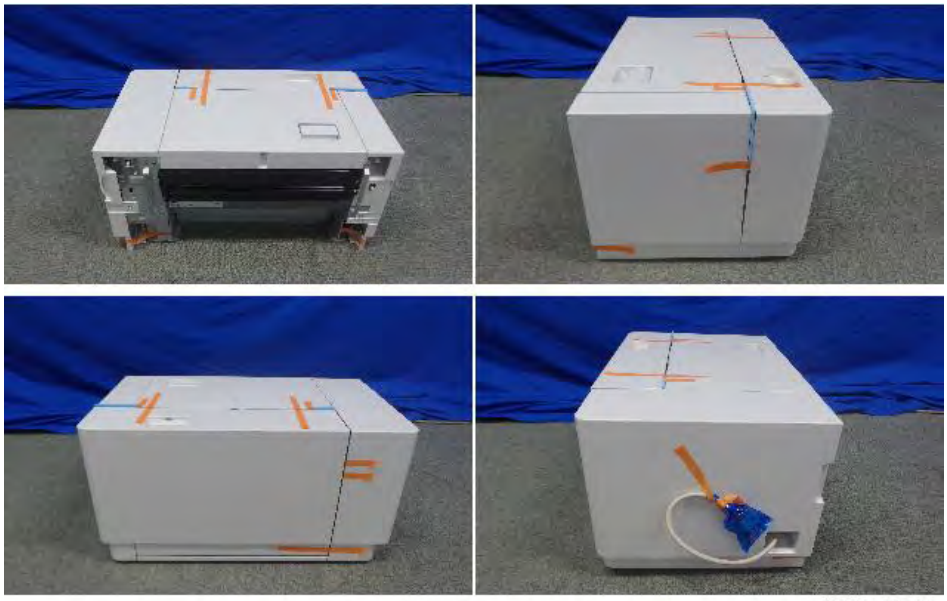
⚠CAUTION

- When installing this option, turn the power of the machine off, and unplug the power plug from the wall socket.
- If this option is installed when the power is on, it will result in an electric shock or a malfunction.

Note

- Before installing this option, first attach the "Paper Feed Unit PB3210/ PB3220" or "LCIT PB3170/ PB3230".

1. Remove the orange tape and retainers.

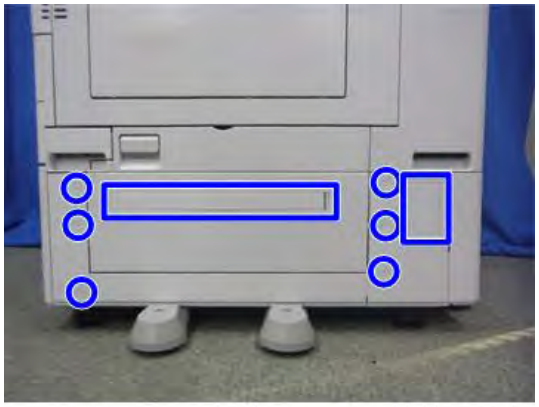


d238m0763

2. Remove the enclosed items (stud screws, etc.).

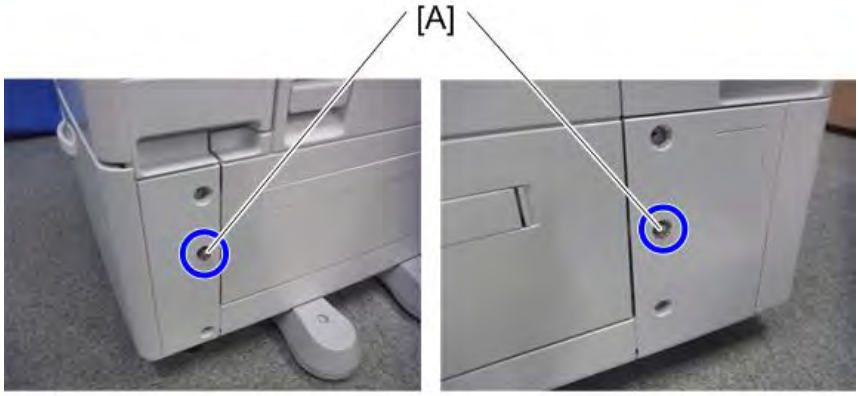
d238m0764

3. Remove the eight covers on the right of the paper feed unit.



d1462457

4. Attach the joint pins [A] to the front and rear on the right of the paper feed unit.

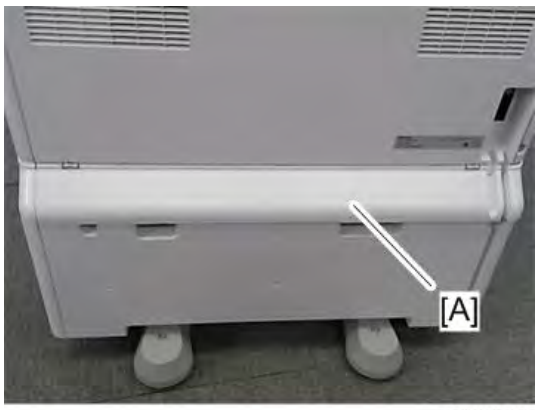


d1462458

5. Attach the brackets [A] and [B] at the positions of the joint pins (×4).

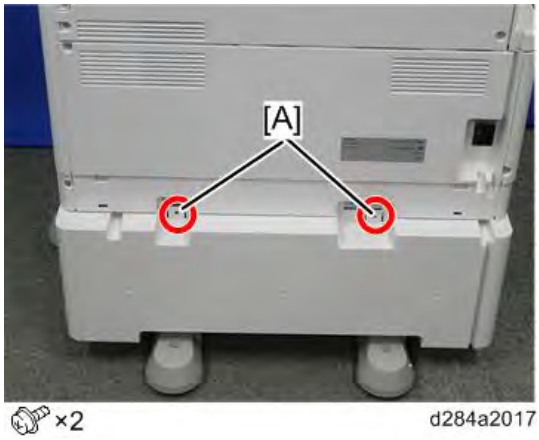
d146z2459

6. Remove the rear lower gap cover [A] (x2)

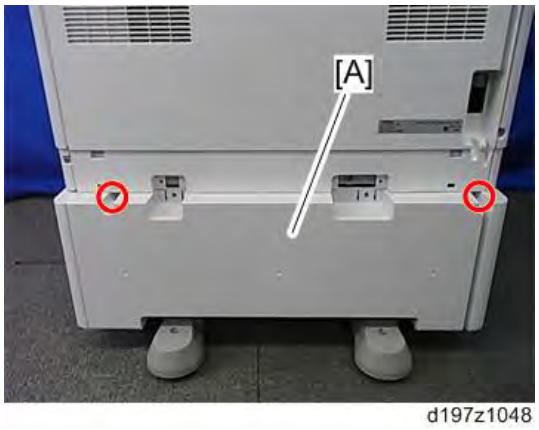


d197f2002

7. Take off the securing brackets [A] from the two positions on the left and right at the rear of the machine.

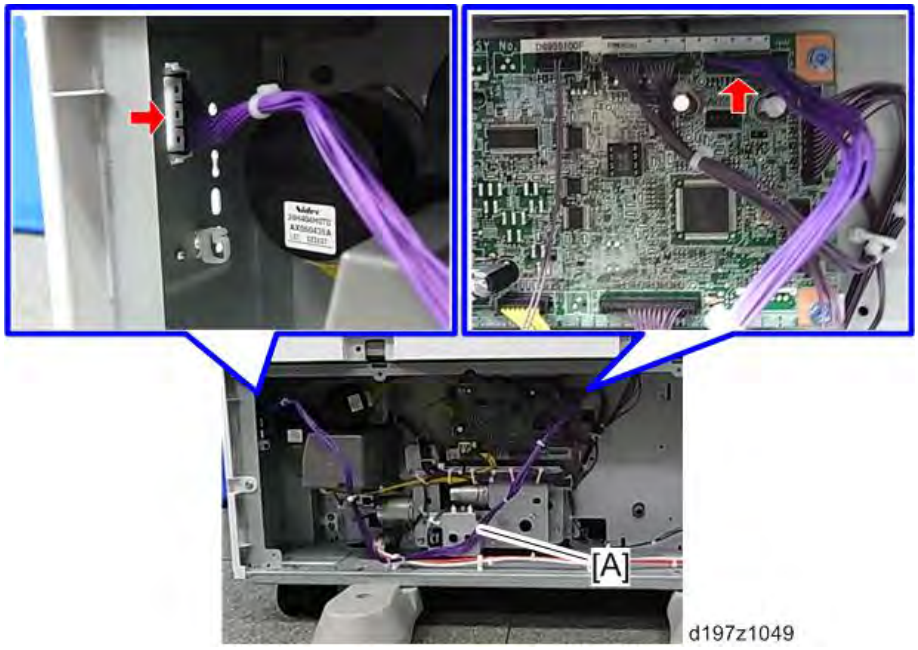


8. Remove the paper feed unit rear cover [A] (×2).

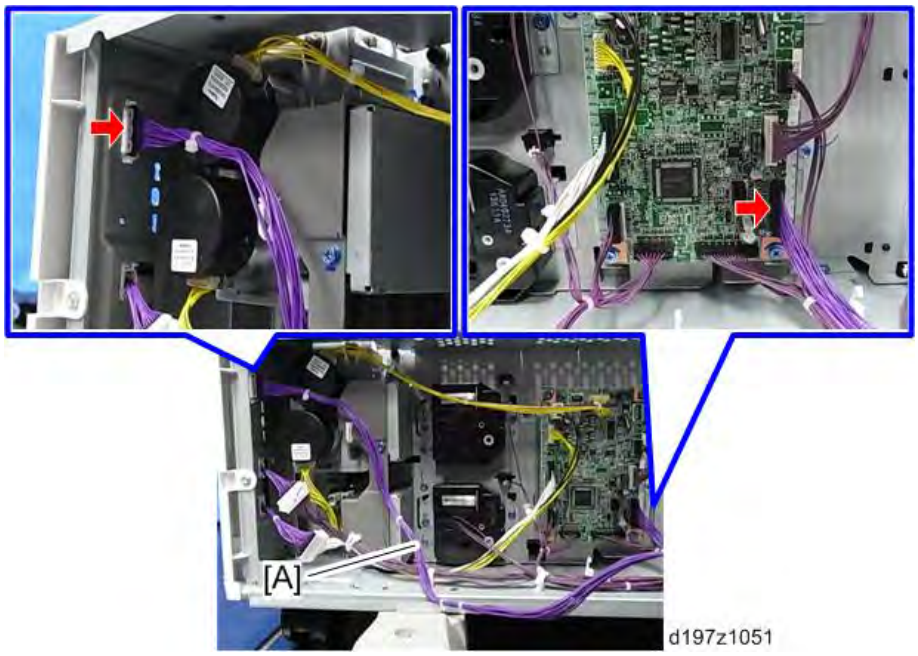


9. Connect the harness [A] (x2).

For the machine with Paper Feed Unit PB3170/ PB3230

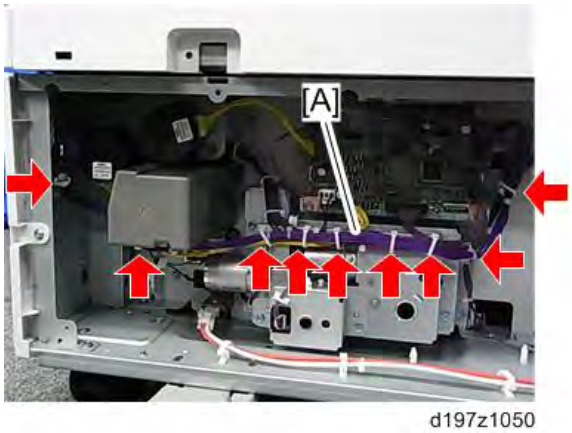


For the machine with Paper Feed Unit PB3210/ PB3220

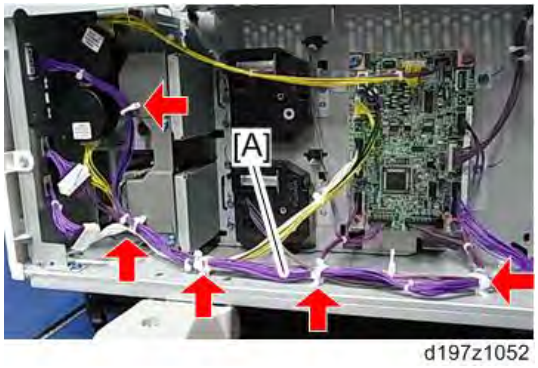


10. Clamp the harness (PB3170/ PB3230: ×9, PB3210/ PB3220: ×5).

For the machine with Paper Feed Unit PB3170/ PB3230

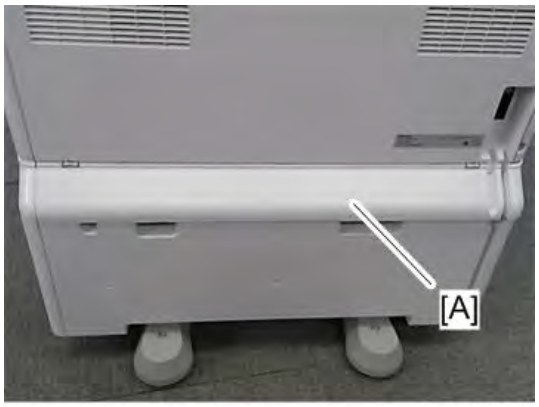


For the machine with Paper Feed Unit PB3210/ PB3220



11. Attach the paper feed unit rear cover.

12. Attach the rear lower gap cover [A] (x2).



d197f2002

13. Attach the hook of the side LCT to the bracket.

d1462462

14. Connect the cable [A] of the side LCT to the machine (×1).

d1462463

15. Attach the cable cover [A] (×1).

16. Push the side LCT towards the machine.

17. Turn the power switch ON.

18. Set the paper, and check that the paper size set in the paper feed tray is displayed on the operation panel.

19. Do the registration adjustment for the large capacity tray.

SP1-001-0xx (Leading Edge Registration Tray 5(LCT))

-083	Tray5(LCT): Thin	-090	Tray5(LCT): Thin:1200
-084	Tray5(LCT): Plain	-091	Tray5(LCT): Plain:1200
-085	Tray5(LCT): Mid-thick	-092	Tray5(LCT): Mid-thick:1200
-086	Tray5(LCT): Thick 1	-093	Tray5(LCT): Thick 1:1200
-087	Tray5(LCT): Thick 2	-094	Tray5(LCT): Thick 2:1200
-088	Tray5(LCT): Thick 3	-095	Tray5(LCT): Thick 3:1200
-089	Tray5(LCT): Thick 4	-096	Tray5(LCT): Thick 4:1200

SP1-002-007 (Side-to-Side Registration Large Capacity Tray)

Changing the Paper Size

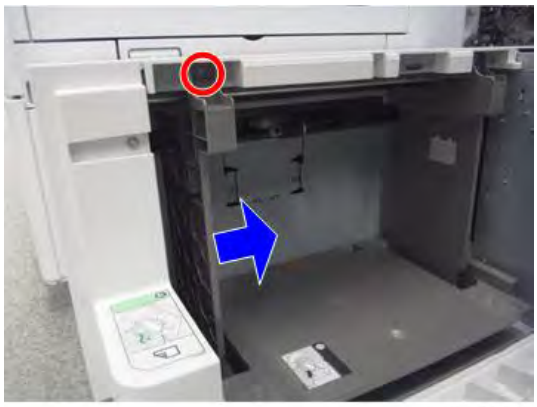
Paper size is set as shown below when the machine is shipped from the factory.

NA: LT LEF

EU.AA.CHN: A4 LEF

The paper size can be changed to A4 LEF, LT LEF, or B5 LEF.

1. Open the tray cover.
2. Remove the upper screw at the front side fence, and after setting the side fence to the position of the paper (outer: A4 LEF, center: LT LEF, inner: B5 LEF), tighten the screw that was removed(×1).



d1462466

3. Also change the rear side fence to the same size position(×1).

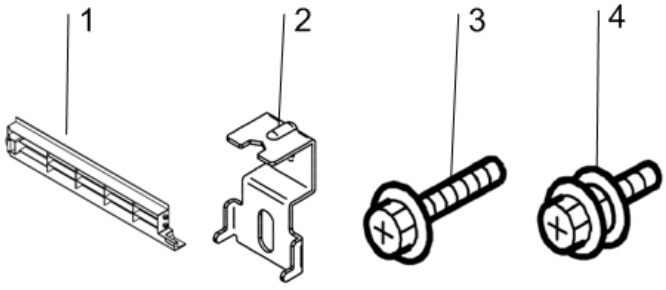
d1462467

4. Change the paper size according to the new side fence position.
   SP5-181-024 (Size Adjust LCT)
   0: A4 LEF, 1: LT LEF, 2: B5 LEF

Caster Table Type M3 (D178)

Accessory Check

No.	Description	Q'ty	Remarks
1	Right Lower Cover	1	Used when not installing the Paper Feed Unit PB3150.
2	Securing Bracket	2	
3	Screws (M4 × 10)	2	
4	Screw with Spring Washer (M4 × 10)	1	



d1465005

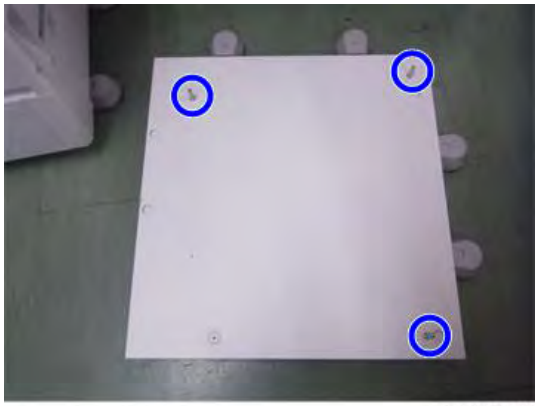
Installation Procedure

⚠CAUTION

- The machine must be held at the correct locations, and must be lifted slowly.
- If it is lifted with force, handled carelessly or dropped, it will result in an injury.
- If installing this option, turn the power to the machine off, and unplug the power plug from the wall socket.
- If this option is installed when the power is on, it will result in an electric shock or malfunction.
- Be sure to join the machine and caster table to prevent equipment from falling over.
- If it is not joined, the machine will move or fall over, which will result in an injury.

For Installing Directly under the Main Machine

1. Attach the 3 locating pins.



d1463030

2. Holding the grips on the machine, align it with the locating pins, and place the machine on the caster table.

Note

- When you lift the machine, hold the lifting handles.
- In particular, do not lift it by holding the scanner unit, etc., (as it may deform).
- Do not put the machine down on the caster table as a temporary resting place. This may cause the machine to deform. Always connect the machine and caster unit properly.

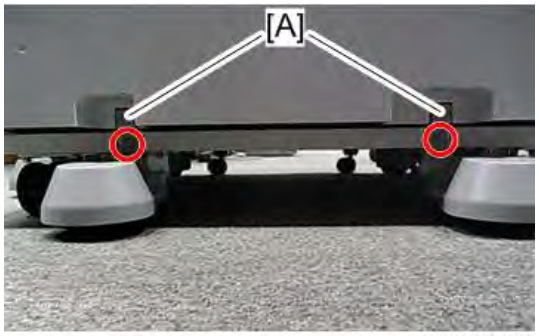
3. Attach the right lower cover between the right side of the main machine and the caster table.

4. Pull out the 2nd paper feed tray of the machine.

5. Using a securing bracket as a screwdriver, fix the machine or paper feed unit to the caster table (spring washer: screw: M4×10: 1).

d197z1027

6. Attach the securing brackets [A] at 2 positions to left and right at the rear of the machine or paper feed unit (screws: 1 each).



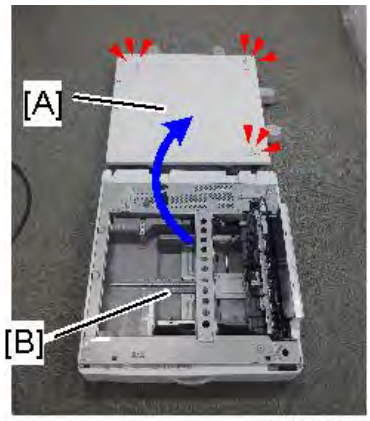
d197z1026

7. Attach the right lower cover provided with this option to the right lower side of the main machine.

8. Return the paper feed tray to the machine or the paper feed unit on the caster table.

For Installing under PB3150

1. Place the paper feed unit [B] on the caster table [A].



d238m552

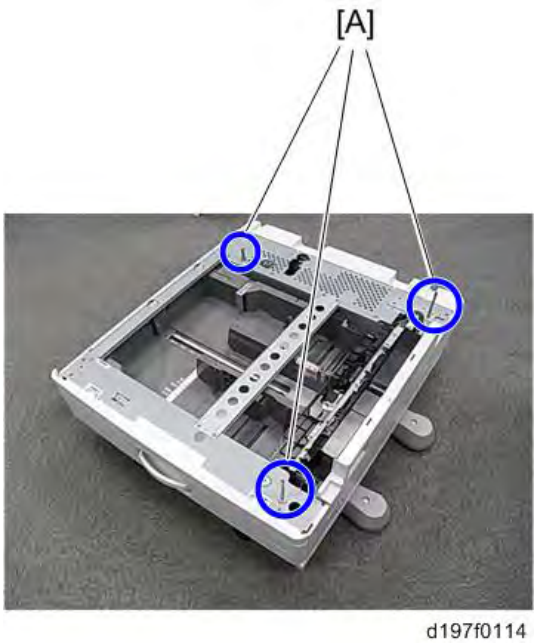
2. Pull out the paper feed tray of the PB3150.

3. Using a securing bracket, fix the caster table to the paper tray unit (spring washer: screw: M4×10: 1).

4. Attach the securing brackets at 2 positions to left and right at the rear of the machine (screws: 1 each).

5. Put back the tray of the PB3150 in place.

6. By holding the grips on the main machine, mount the main machine on the PB3150 while fitting it to the locating pins [A].



d197f0114

Note

- Be sure to use the specified grips on the main machine. Using any other positions may damage the

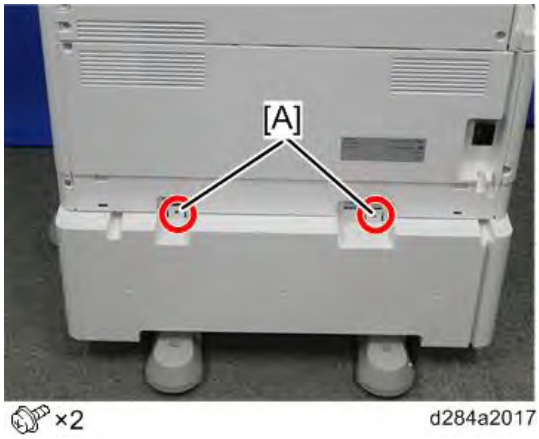
machine.

- Do not put the machine down on the PB3150 as a temporary resting place. This may cause the PB3150 to deform.

7. Pull out the 2nd paper feed tray of the main machine.

8. Using a securing bracket as a screwdriver, secure the main machine and the PB3150 (M4×10: ×1).

9. Attach the securing bracket [A] to the rear of the main machine.



10. Attach the rear lower gap cover [A] (×2).

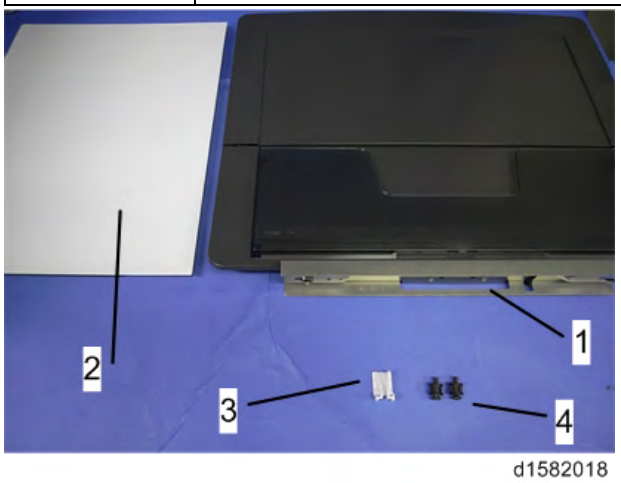
11. Return the 2nd paper feed tray to the main machine.

Platen Cover PN2000 (D700)

Accessory Check

Check that you have the accessories indicated below.

No.	Descriptions	Q'ty	Remarks
1	Platen Cover	1	
2	Platen Sheet	1	
3	Feeler Guide	1	
4	Stepped Screw	2	



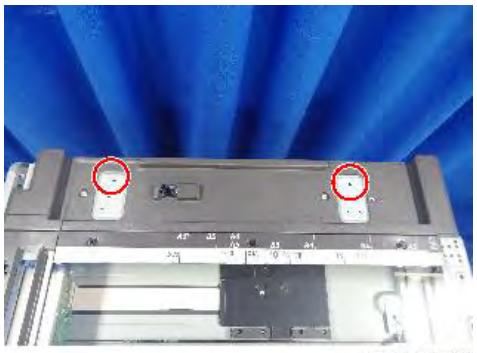
d1582018

Installation Procedure

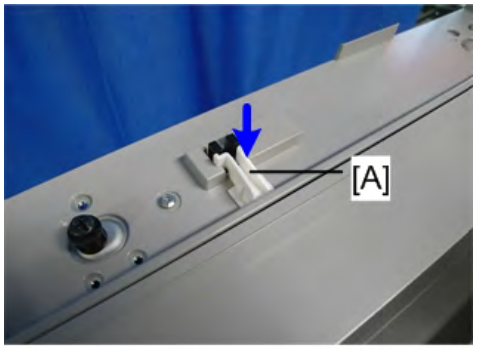
⚠CAUTION

- Unplug the machine power cord before starting the following procedure.

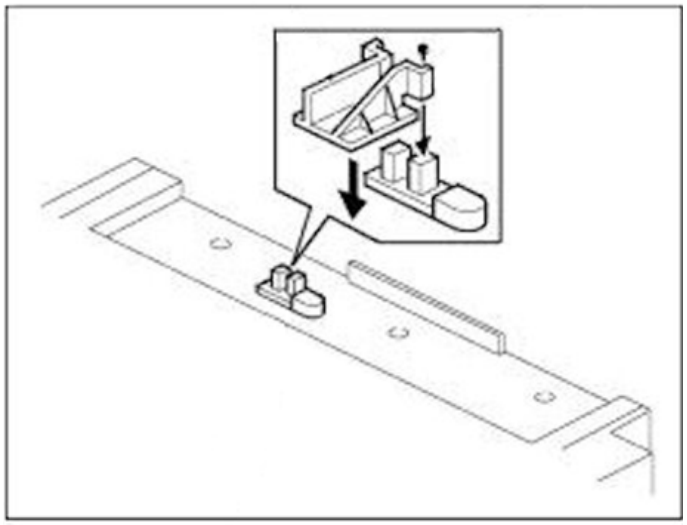
1. Install the stepped screws (× 2).


d238m0566

2. Install the feeler guide [A].

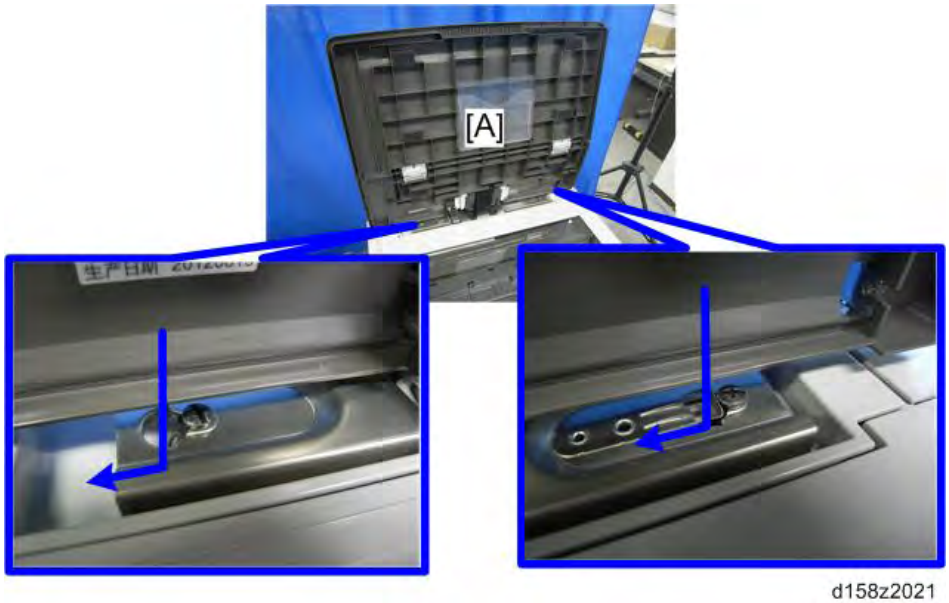


d1582020



d197f2001

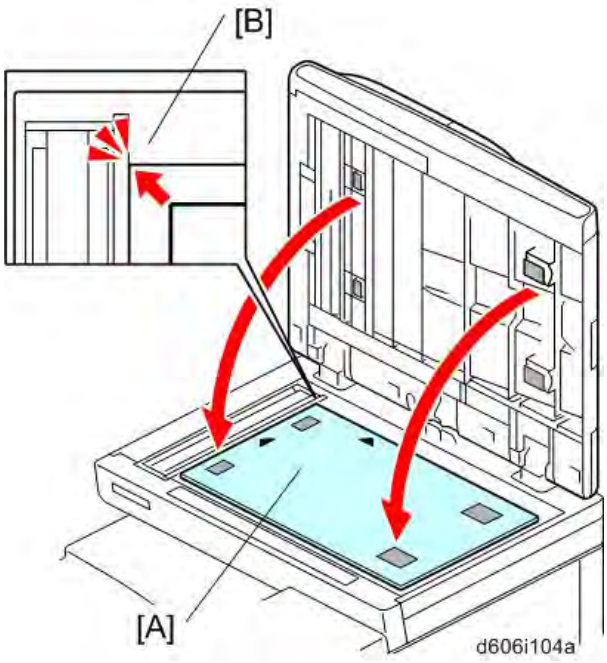
3. Install the platen cover [A].



d158z2021

4. Place the platen sheet [A] on the exposure glass.

5. Line up the rear left corner of the platen sheet flush against corner [B] on the exposure glass.



6. Close the platen cover.

7. Open the platen cover.

8. Press the surface of the platen sheet gently to fix it on the platen cover securely.

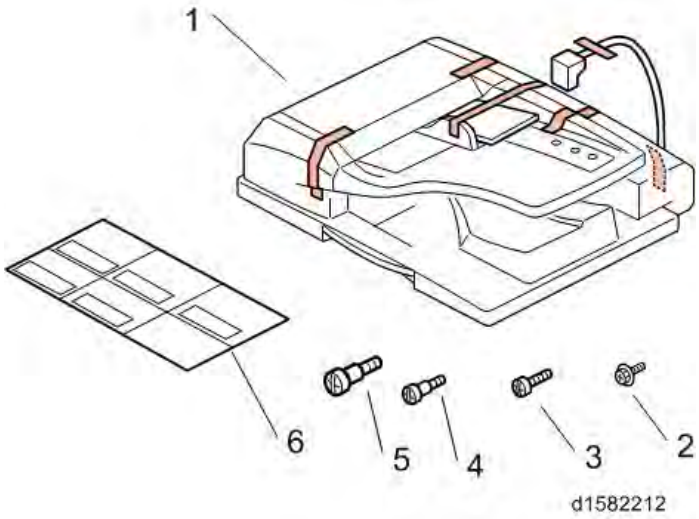
9. Connect the power cord and turn on the main power.

10. Place an original on the platen and make a copy to check the installation.

ARDF DF3090

Accessory Check

No.	Description	Q'ty
1	ARDF	1
2	Screw	2
3	Knob Screw	2
4	Stud Screw (Small)	1
5	Stud Screw (Large)	1
6	Attention Decal - Top Cover	1
-	Decal - Exposure Glass	1



Installation Procedure

⚠CAUTION

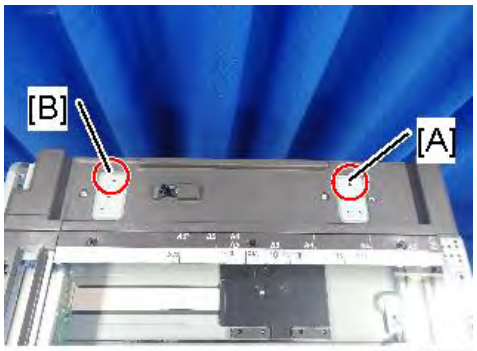
- Turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

Important

- Do not turn the power on until you perform "adjustment after installation," or it may not start normally.

1. Remove all tapes and shipping retainers.

2. Insert the two stud screws ([A] is the larger stud, [B] is the smaller stud).

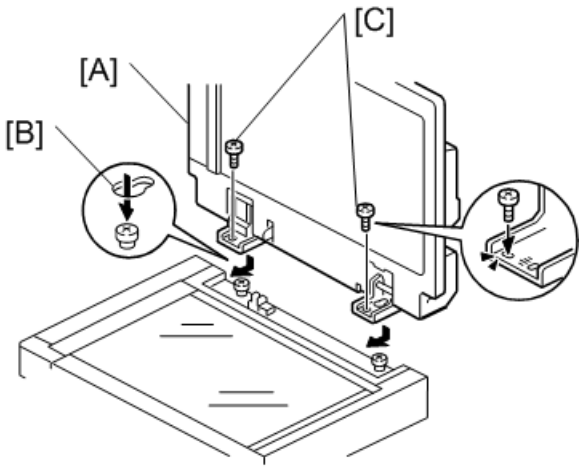


d238m0567

3. Mount the ARDF [A] by aligning the screw keyholes [B] of the ARDF support plate over the stud screws.

4. Slide the ARDF toward the front of the machine.

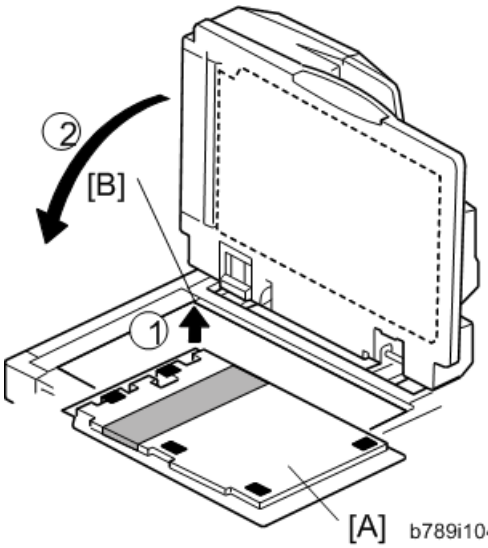
5. Secure the ARDF with the two knob screws [C].



b789i103a

6. Align the rear left corner of the platen sheet [A] with the corner [B] on the exposure glass.

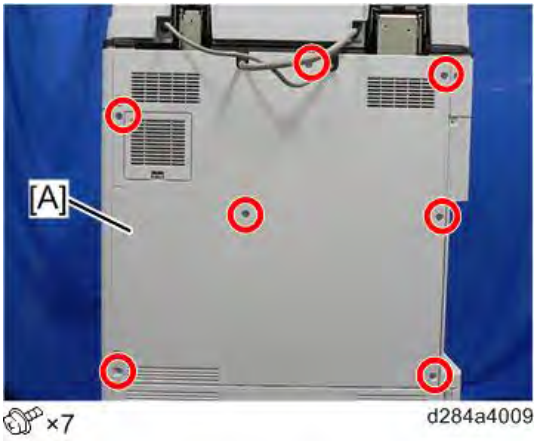
7. Close the ARDF.



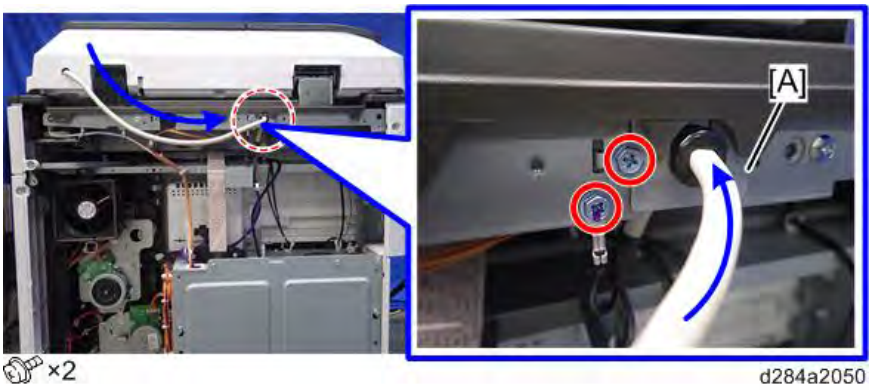
b789i104a

8. Open the ARDF and check that the platen sheet is correctly attached.

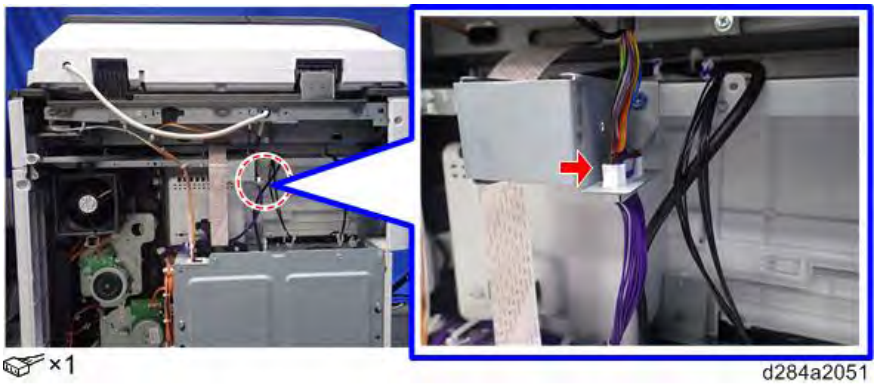
9. Remove the rear cover [A].



10. Connect the ARDF cable as shown and mount the bracket [A] on the machine's rear frame.
Make sure to connect the grounding wire.



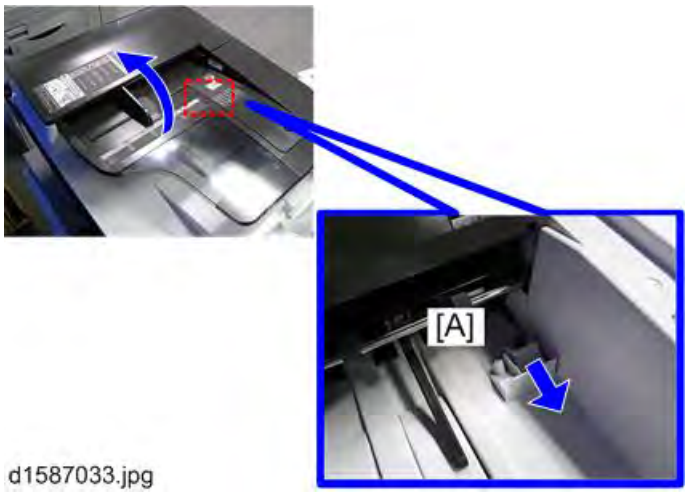
11. Connect the scanner cable to the connector at the machine's rear.



12. Reattach the rear cover.

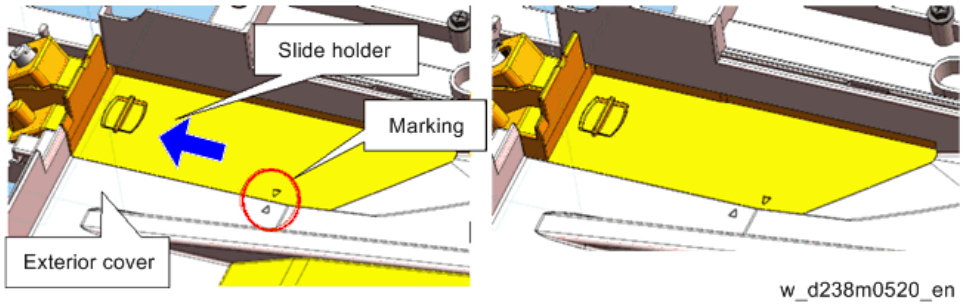
13. Lift the ARDF original tray.

14. Slide the stamp holder [A] out and install the stamp cartridge in it, if necessary.

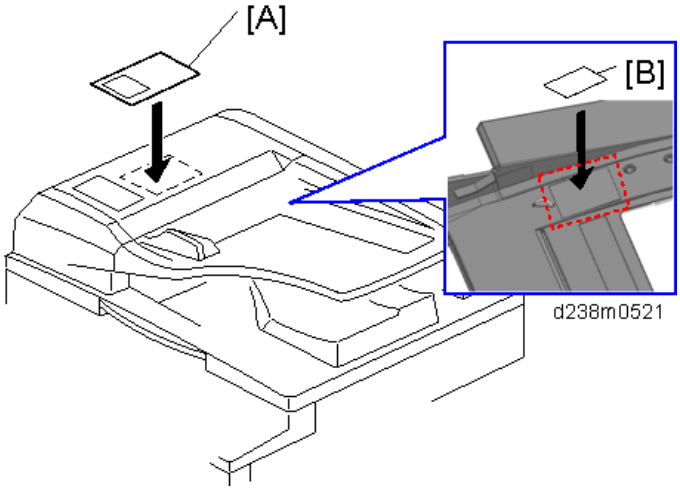


15. Close the holder.

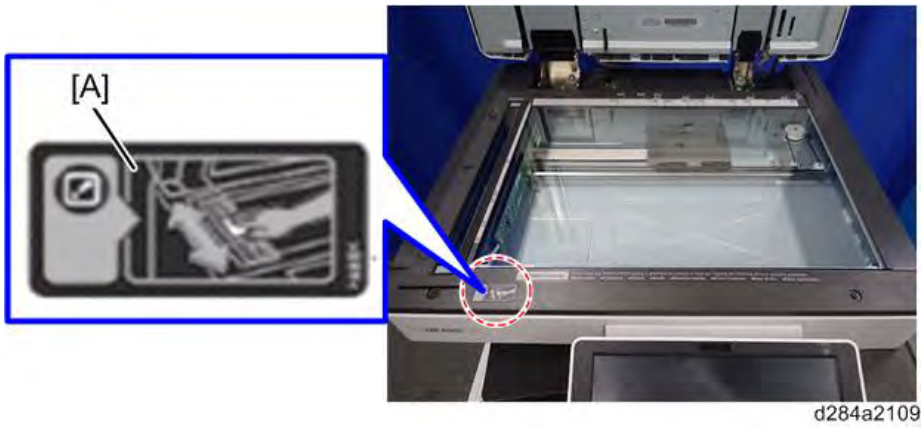
After the stamp installation, be sure to slide the holder in correctly. Make sure to slide it in thoroughly until the reference marks on the holder and exterior cover are aligned. If it is not mounted correctly, the machine detects a J001 paper jam.



16. Attach the decals [A] and [B] to the top cover as shown. Choose the language that you want.



17. Attach the decal [A] to the scanner front cover.



18. Plug in and turn ON the main power.

19. Set SP4-688-001 (DF Density Adjustment ARDF) to "106".

20. Check the ARDF operation, and make a full size copy. Check that the registrations (side-to-side and leading edge) and image skew are correct. If they are not, adjust the registrations and image skew. (ADF Image Adjustment)

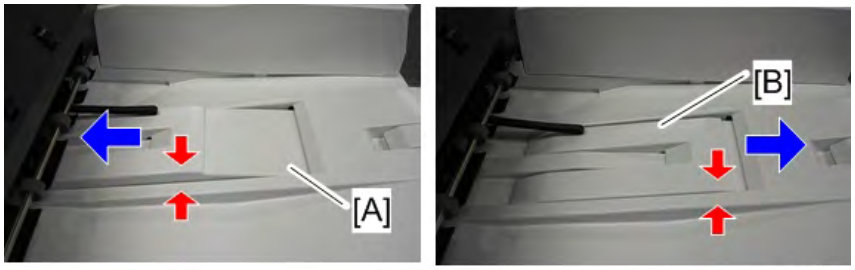
When feeding thin paper

When feeding thin paper, adjust the sliding tray to the point shown below [A].

When feeding normal paper, adjust the sliding tray to the point shown below [B].

If not, it may cause problems as follows:

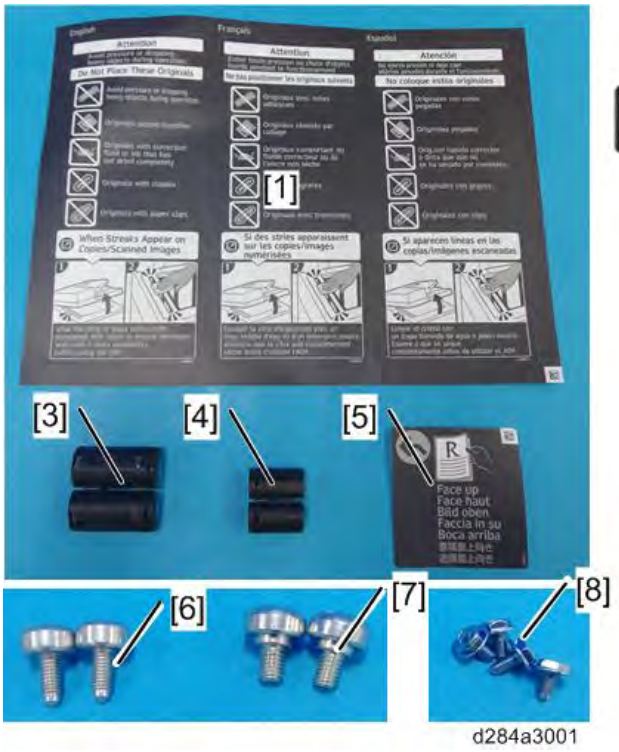
- Original jam
- Original curl
- Originals cannot be stacked neatly



SPDF DF3100

Accessory Check

No.	Description	Q'ty	Remarks
1	Attention Decal – Top Cover	1	
2	Decal – Exposure Glass	1	
3	Ferrite Core (L)	1	
4	Ferrite Core (S)	1	
5	Face-Up Document Decal	1	
6	Knob Screw	2	
7	Stud Screw	2	
8	Screw (3x6)	4	



Installation Procedure

⚠CAUTION

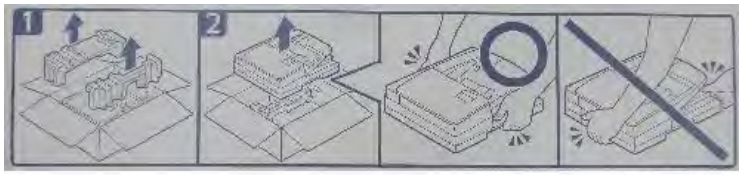
- Turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

Important

- Do not turn the power on until you perform "adjustment after installation," or it may not start normally.

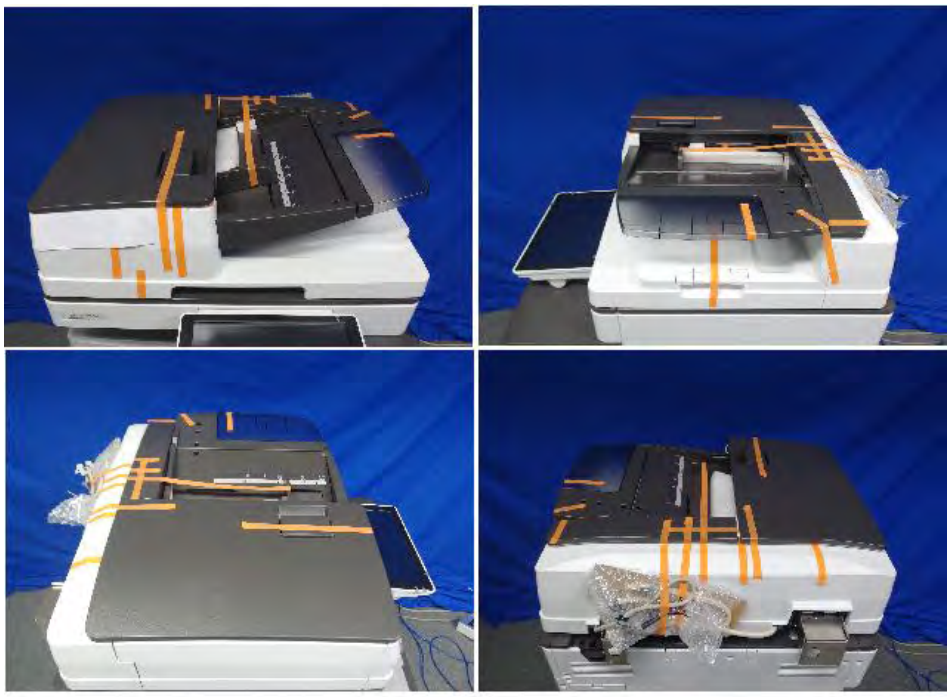
Attaching the SPDF

1. When unpacking, hold both sides of the SPDF and take it out of the box.



d238m0606

2. Place the unit on the machine temporarily, and remove the orange tapes and shipping retainers.



d238m0608

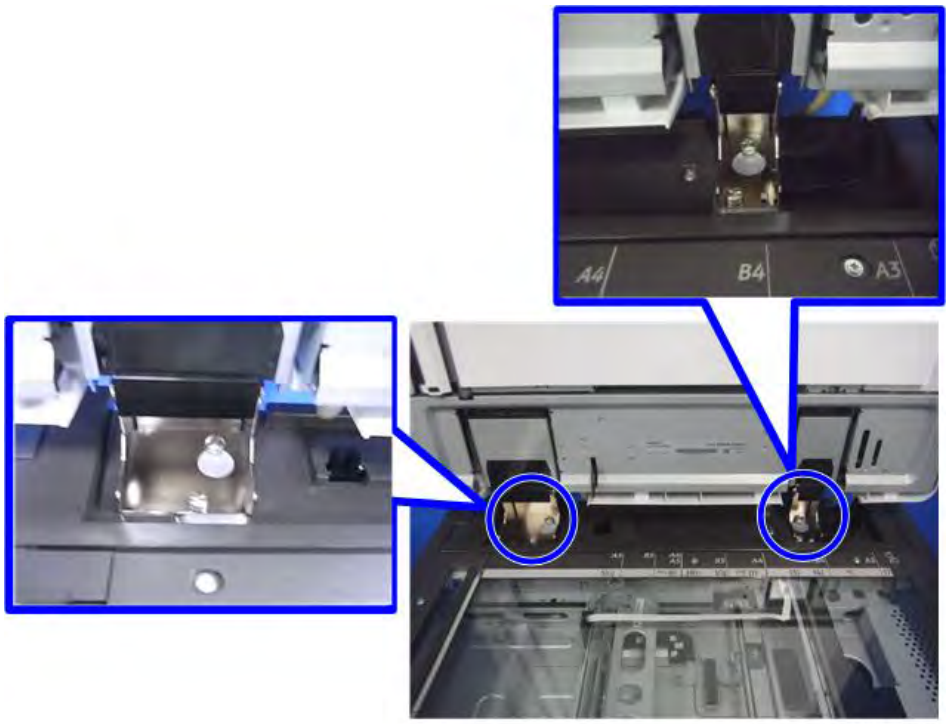
3. Remove the accessories in the package (boards, fixing screws, etc.).

4. Attach the 2 stepped screws to the machine.

x2 d238m0609

5. Align the hinges of the SPDF with the stepped screws, and attach them by sliding them in.

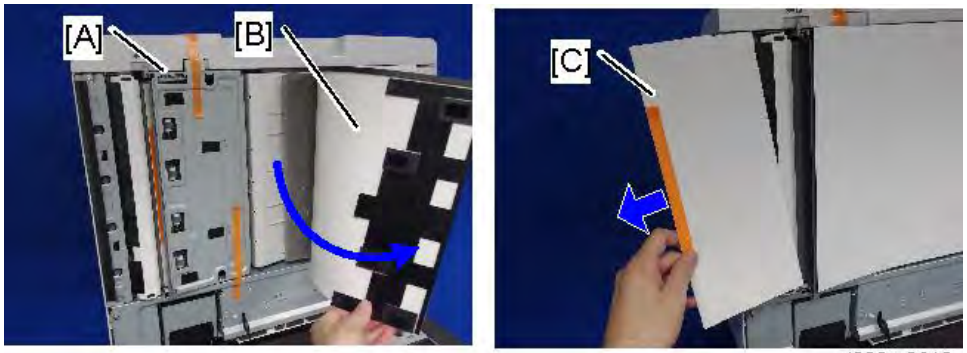
6. Fix the SPDF to the machine (coin screws×2)



d1462505

7. Release the lever [A], then open the pressure plate sheet [B], and gently remove the protective sheet [C].

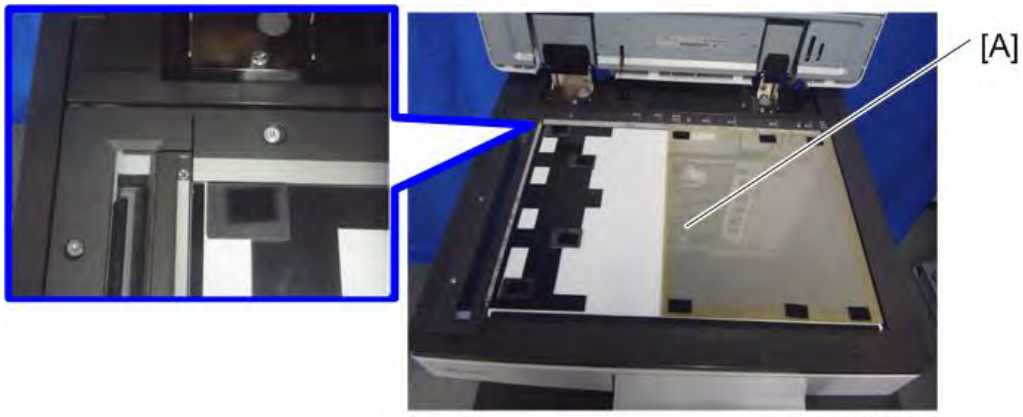
8. Remove the filament tape, and shut the pressure plate sheet.



d238m0610

9. Remove the platen sheet [A], and set it on the exposure glass.

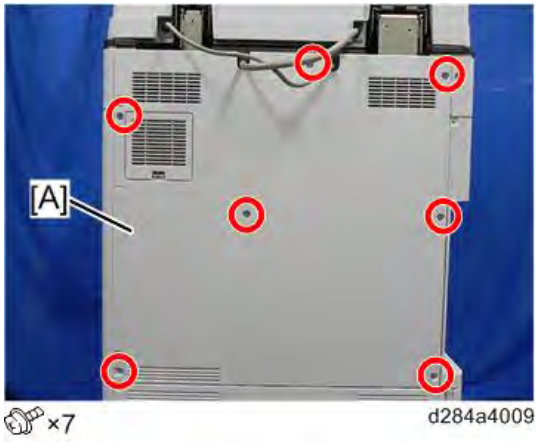
Align it with the left scale and rear scale of the printer.



d1462520

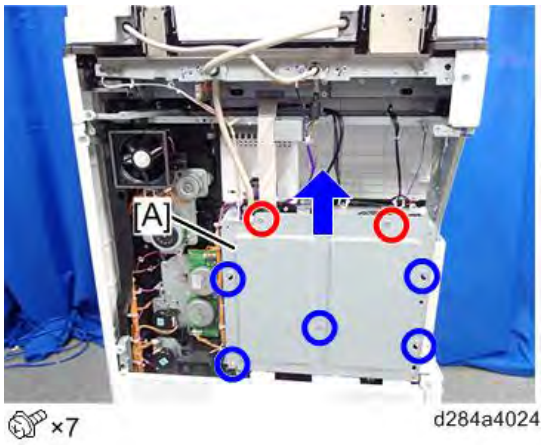
10. Close the SPDF slowly, and attach the platen sheet and SPDF.

11. Remove the rear cover [A].

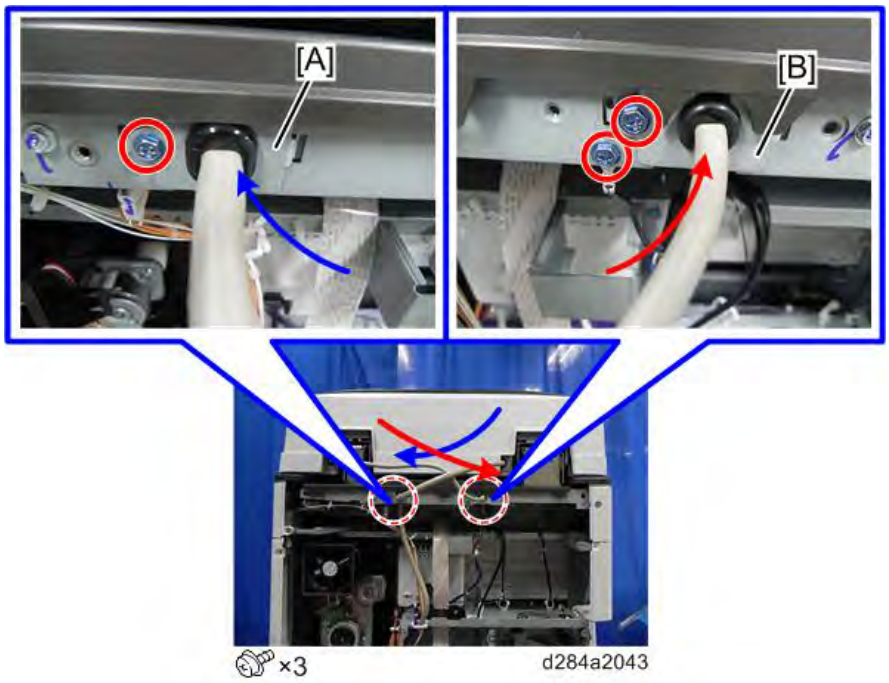


12. Remove the controller box cover [A].

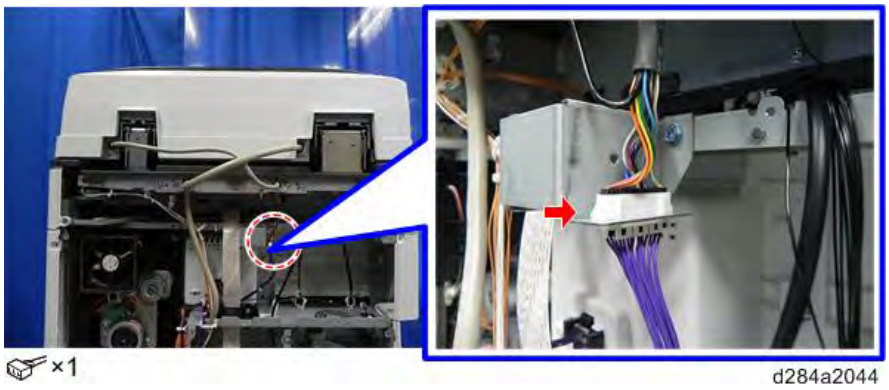
Red Circle: Remove, Blue Circle: Loosen



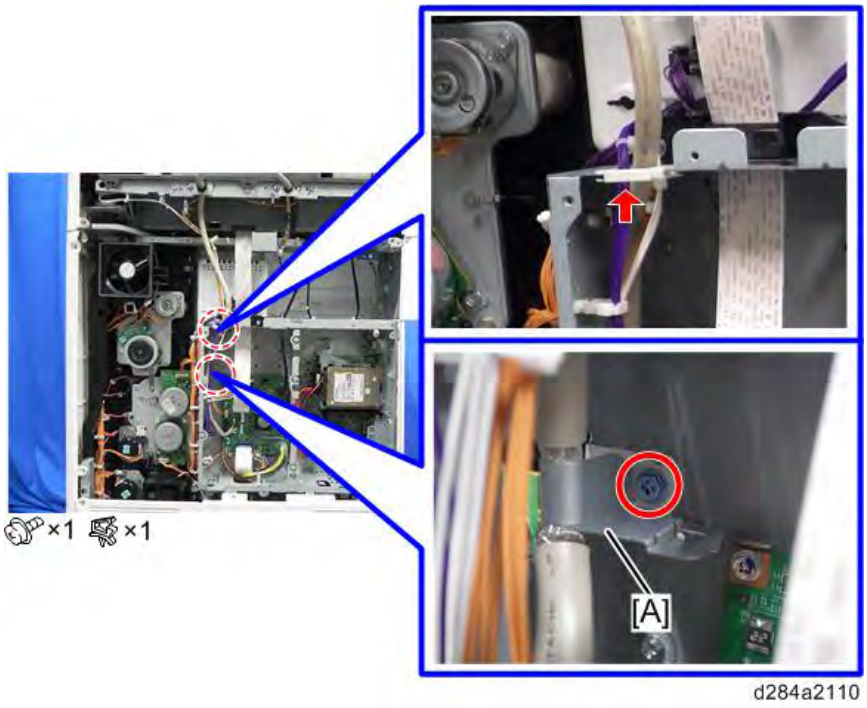
13. Connect the SPDF cable as shown and mount the brackets [A] and [B] on the machine's rear frame. Make sure to connect the grounding wire.



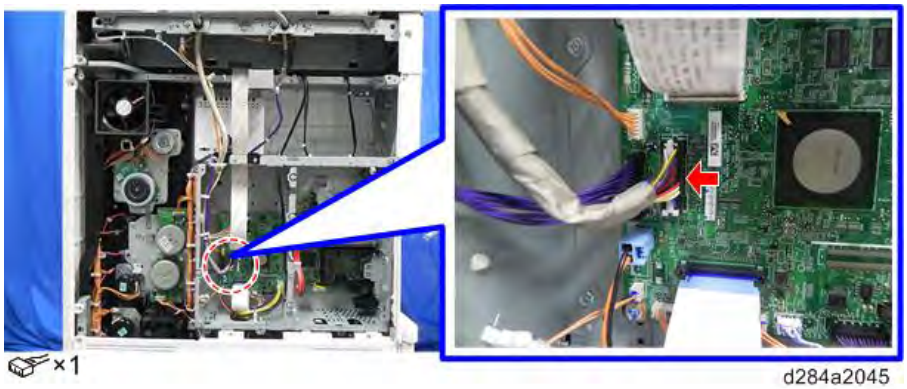
14. Connect the scanner cable to the connector at the machine's rear.



15. Attach the scanner cable with the bracket [A] to the inside of the controller box.



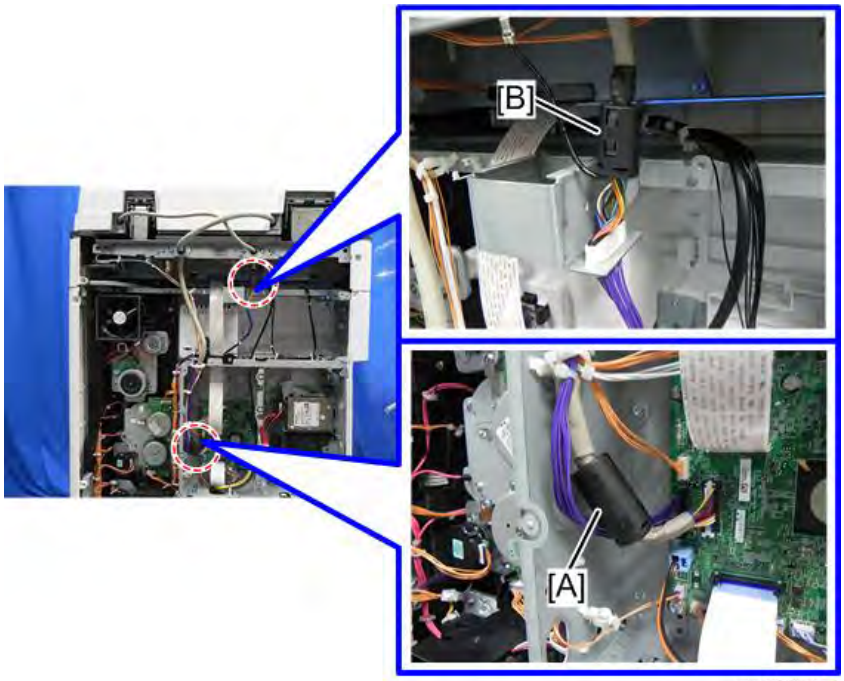
16. Connect the cable to the IPU (CN531).



17. Attach the supplied ferrite core (L) [A] and ferrite core (S) [B].

Attach [A] close to the connector.

Attach [B] near the end of the tube.



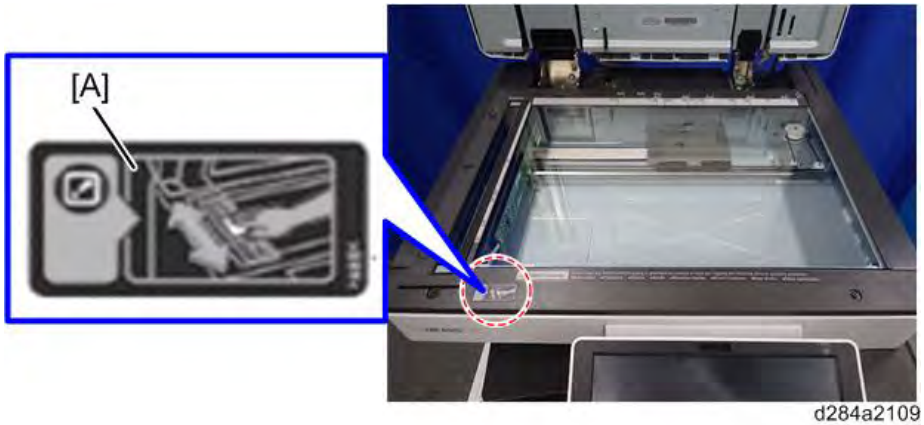
d284a2046

18. Reattach the controller box cover and the rear cover.

19. Attach the decals [A] and [B] to the SPDF.

d238m0621

20. Attach the decal [A] to the scanner front cover.



d284a2109

Adjust SP Settings

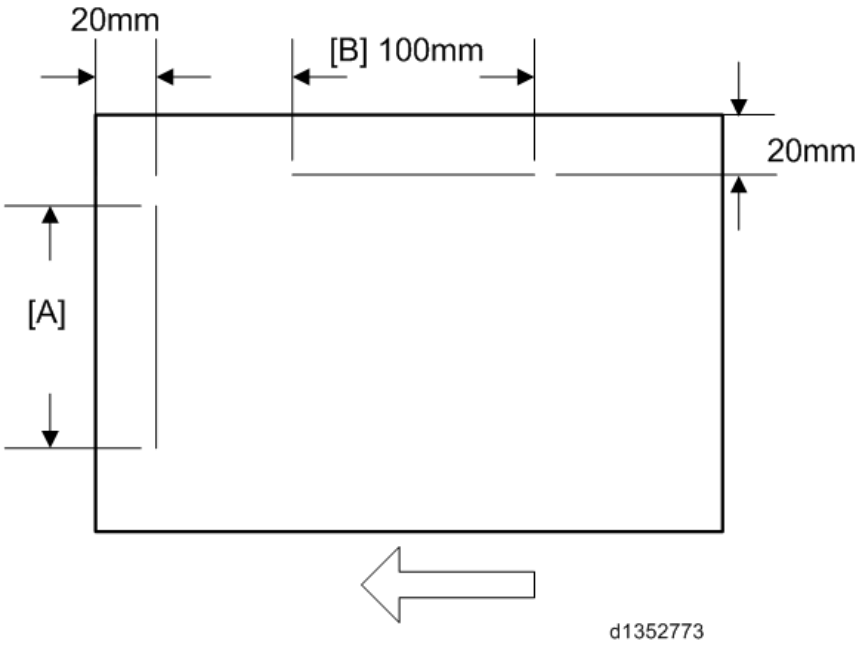
1. Turn ON the main power.

2. Set SP4-688-002 (Scan Image Density Adjustment 1-pass DF) to "101".

3. Execute SP4-730-002 (FROM Main Factory Setting Execution ON/OFF).

4. Check the vertical registration for the SPDF.

1. Create an original as shown in the following picture.
   The large white arrow indicates the direction of feed.



2. Copy the original and make sure that the position of the line [A] is within 0±1mm
3. If not within the standard, adjust with the SP modes.
   SP6-006-001 (ADF Adjustment Side-to-Side Regist: Front)
   SP6-006-002 (ADF Adjustment Side-to-Side Regist: Rear)

Note

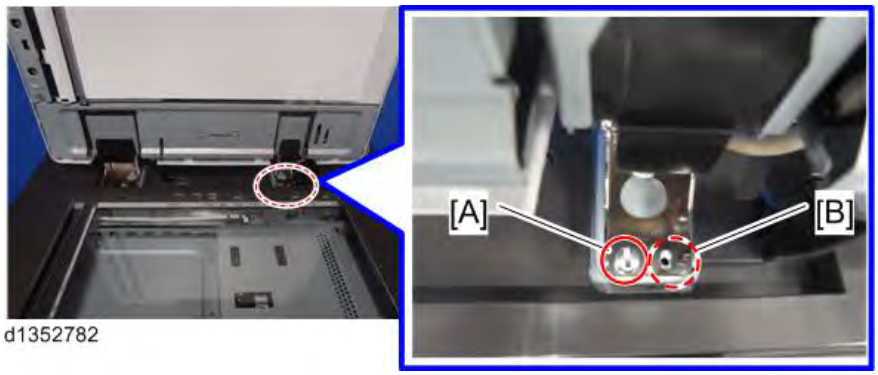
- The above SPs must be executed with the ADF cover closed, because the SPs will not succeed if the ADF cover is opened or lifted up.

5. Check the horizontal registration for the SPDF.

1. Copy the original and make sure that the position of the line [B] that you wrote on the original (see above) is within 0±2mm.
2. If not within the standard, adjust with the SP modes.
   SP6-006-010 (ADF Adjustment L-Edge Regist (1-Pass): Front)
   SP6-006-011 (ADF Adjustment L-Edge Regist (1-Pass): Rear)

6. Check the skew.

1. Make sure that the difference between both end positions of the line [A] that you wrote on the original (see above) is within 0±2mm.
2. If not within the standard, change the position of the fixing screw [A] to the long hole [B] at the right hinge.



SP descriptions

- **SP4-688-002 (Scan Image Density Adjustment: 1-pass DF)**
  Adjusts density difference between Book and ADF. This SP is only for the SPDF models.
- **SP4-730-002 (**FROM Main Factory Setting Execution ON/OFF**)**
  Copies the parameters written in FROM in the SPDF to the engine board in the MFP. This SP is only for the SPDF models.

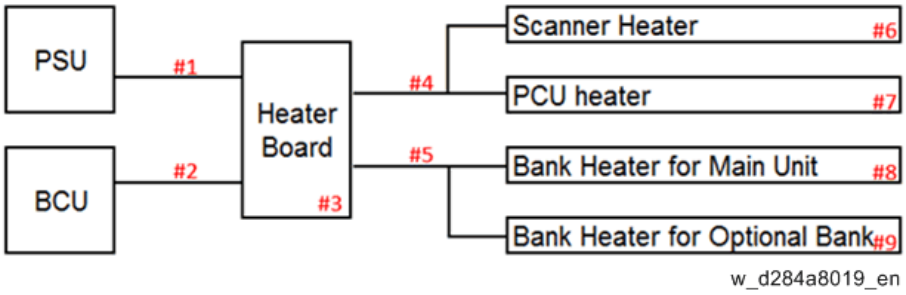
Anti-Condensation Heaters for Scanner, PCU and Trays

⚠CAUTION

- Turn off the main power and disconnect the power supply cord when installing this option.

Overview

The following diagram shows the heater configuration. When installing the heater, the heater board is required.



Heater Board

⚠CAUTION

- Turn off the main power and disconnect the power supply cord when installing this option.

Accessory Check

Description	Q'ty	Shown in the Overview as
Tapping Screw: M3x6	3	-
Clamp: LWSM-0306A	7	-
Clamp: LWS-1211A	1	-
Heater Board	1	#3
BCU Harness	1	#2
PSU Harness	1	#1
PFU Harness	1	#5

Installation Procedure

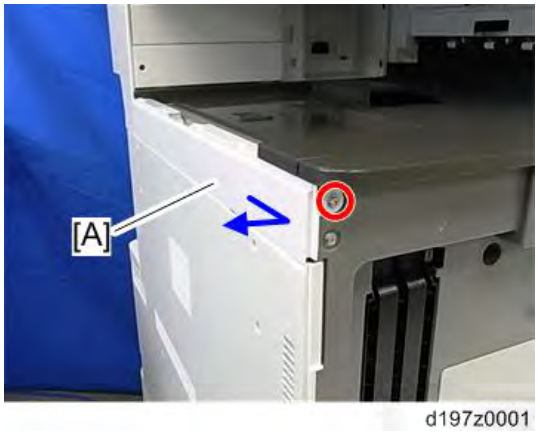
1. Open the front cover [A].

2. Remove the paper exit tray [A].

3. Remove the left upper cover [A] (×1).

Note

- Slide the cover in the direction of the blue arrow.



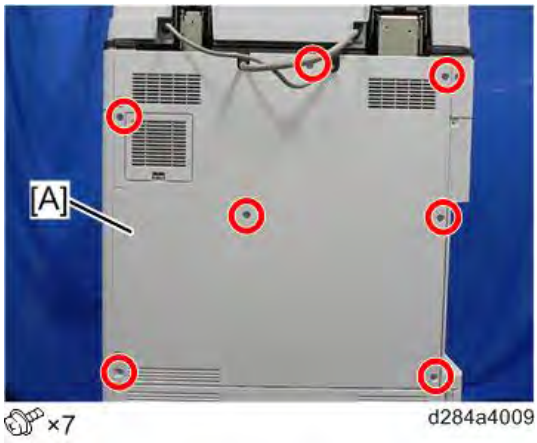
4. Remove the controller cover [A].

5. Open the 1st and 2nd paper feed trays slightly.

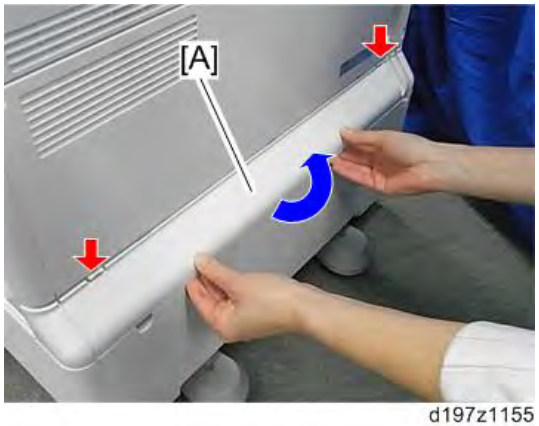
6. Remove the left cover [A].

Remove it while pressing down.

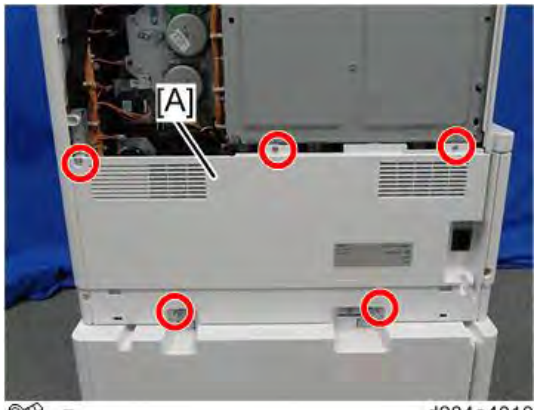
7. Remove the rear cover [A].



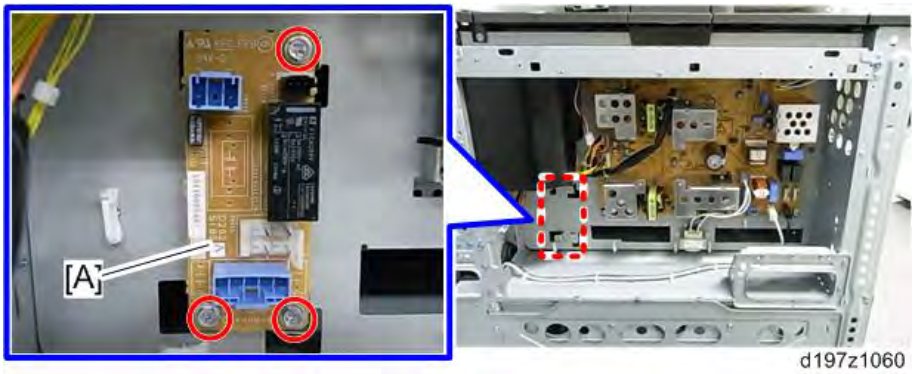
8. Remove the rear lower gap cover [A] (hook×2).



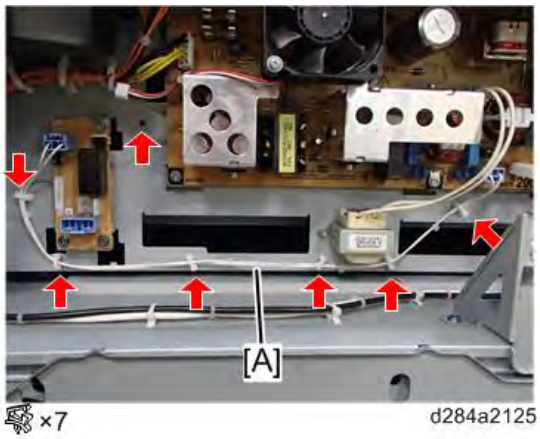
9. Remove the rear lower cover [A].



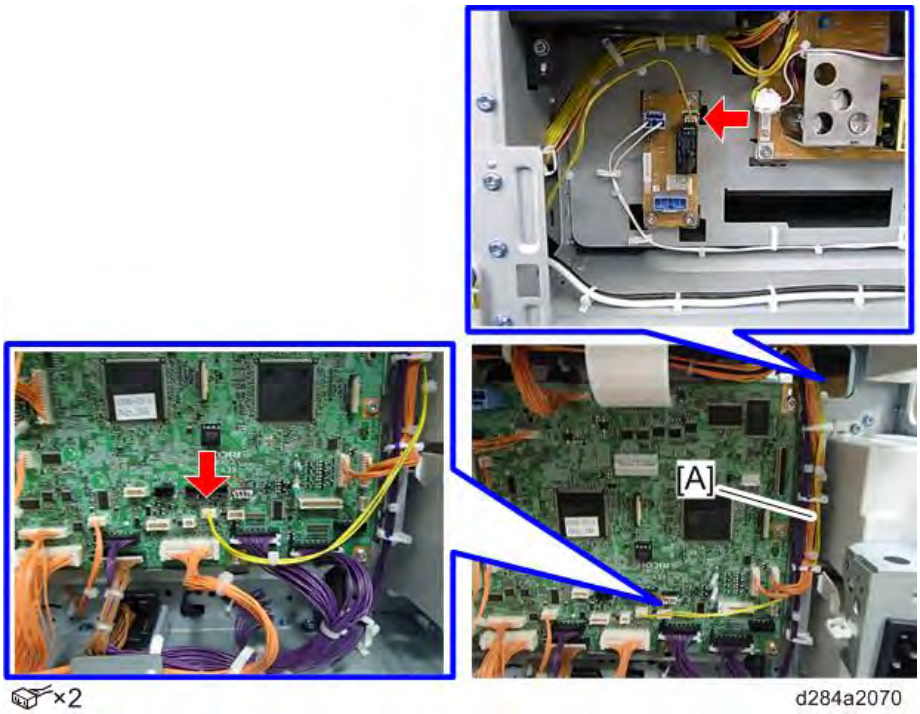
10. Attach the heater board [A] (x3).



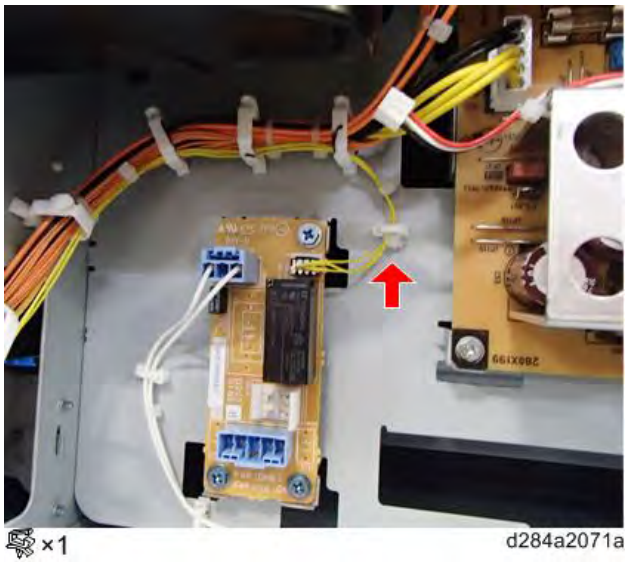
11. Attach the clamps (LWSM-0306A). Connect the PSU harness [A] to CN904 of the PSU and CN920 of the heater board, and clamp the harness [A].



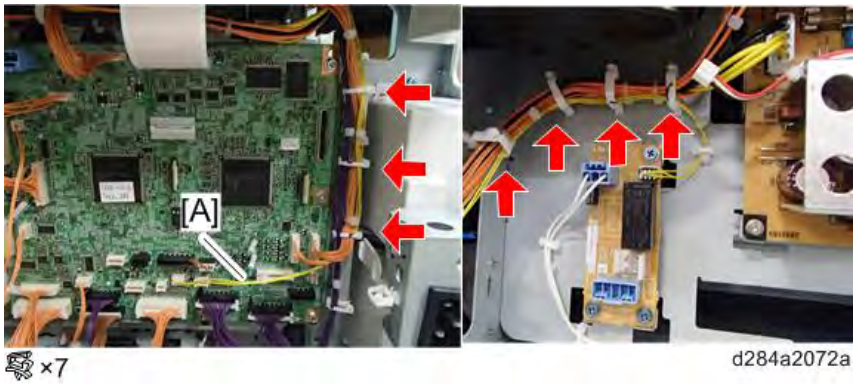
12. Connect the BCU harness [A] to CN121 of the BCU and CN930 of the heater board.



13. Clamp the harness.

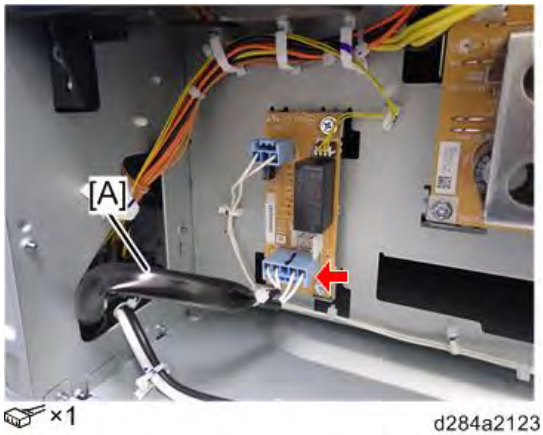


14. Clamp the harness [A] which was connected in step 12.

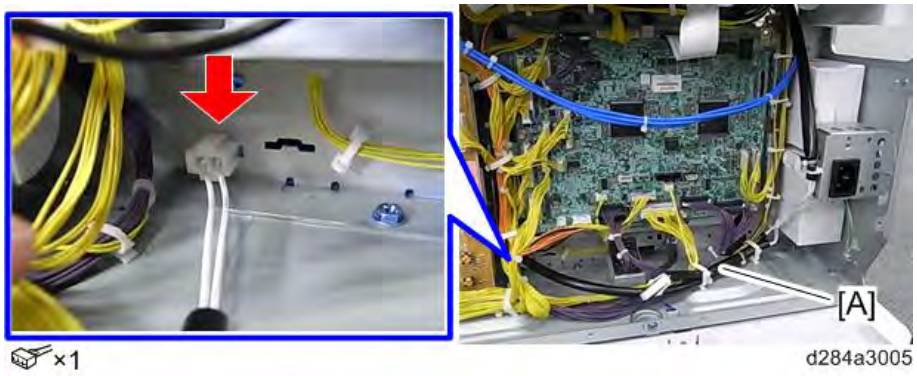


15. Attach the clamp (LWS-1211A).

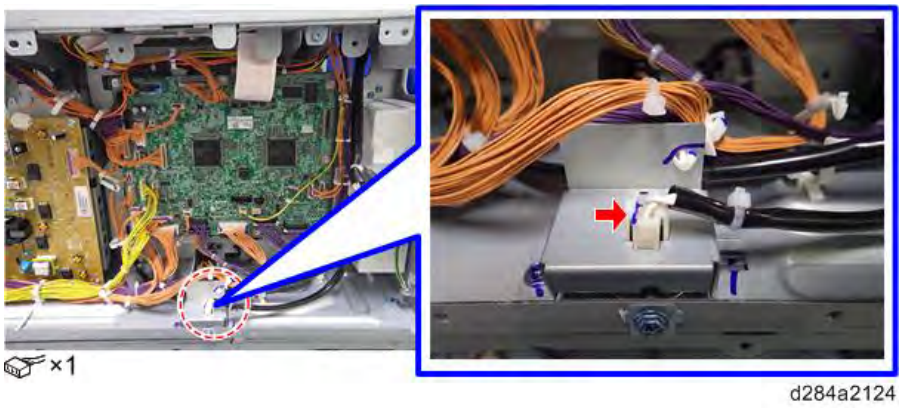
16. Connect the PFU harness [A] to CN921 of the heater board.



17. Attach the socket on the PFU harness [A] to the rear frame of the main unit.



18. Connect the connector.



19. Clamp the PFU harness (x3).

Anti-Condensation Heater (Scanner)

⚠CAUTION

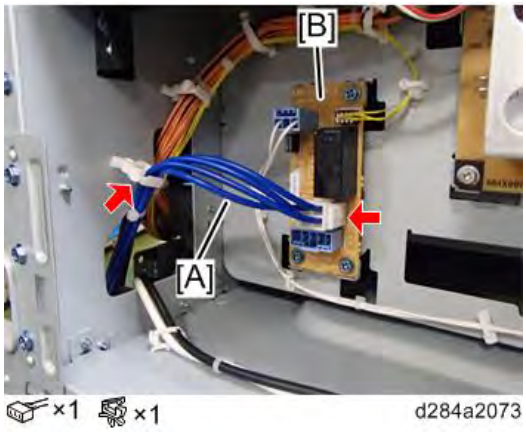
- Unplug the machine power cord before starting the following procedure.
- Do the following procedure not to damage any harnesses.
- Check that harnesses are not damaged or pinched after installation.

Accessory Check

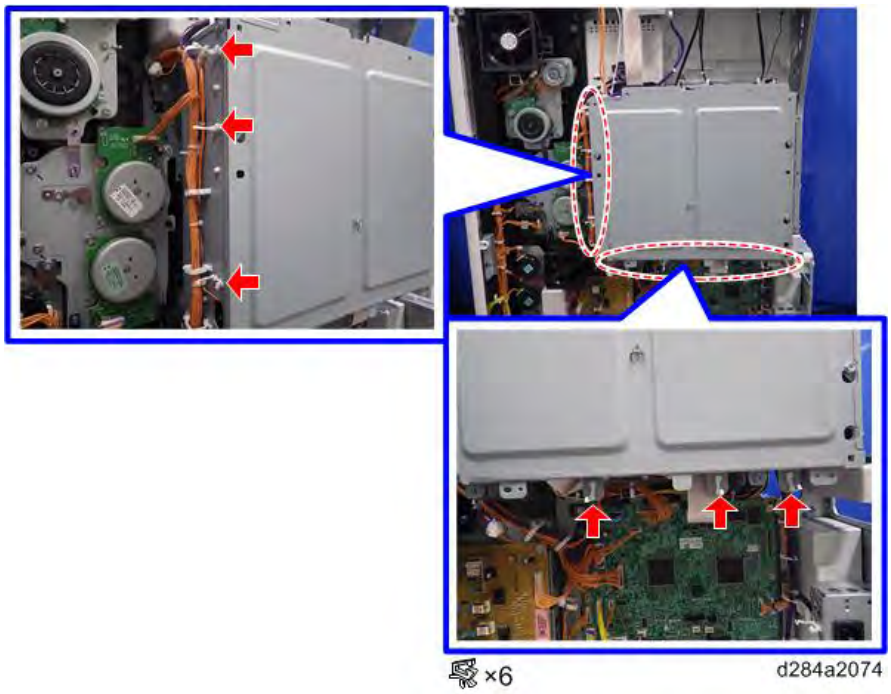
Description	Q'ty	Shown in the Overview as	Remarks
Scanner/PCU Harness	1	#4	This part is not needed if the PCU heater has been installed.
Clamp: LWSM-0511A	6	-	These parts are not needed if the PCU heater has been installed.
Scanner Heater	1	#6	
Bracket	1	-	
Heater Cover	1	-	
Tapping Screw: M3x6	2	-	

Installation Procedure

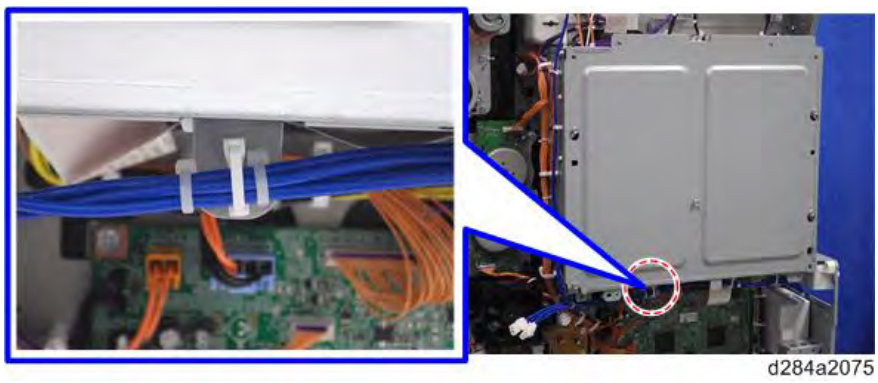
1. Install the heater board. (Installation Procedure)
2. Connect the Scanner/PCU Harness [A] to CN922 of the heater board [B] and clamp the harness.



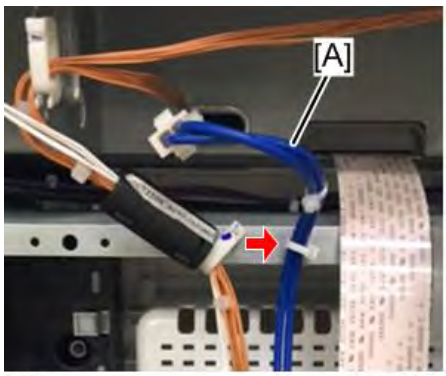
3. Attach the clamps around the controller board in the rear main unit.



4. Route the heater cable to the rear of the main unit.



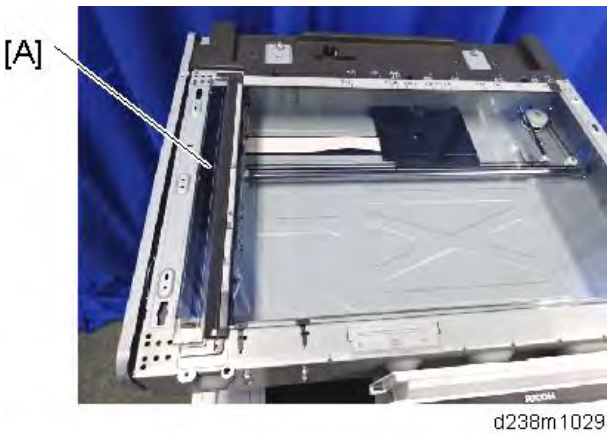
5. Clamp the harness [A].



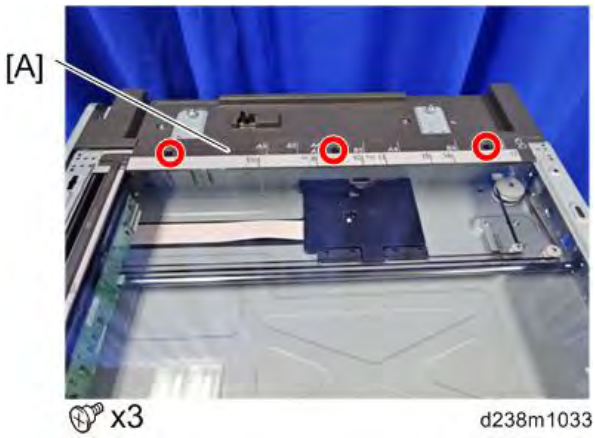
6. Open the DF or platen cover.

7. Remove the guide scale [A].

8. Remove the sheet-through exposure glass [A].



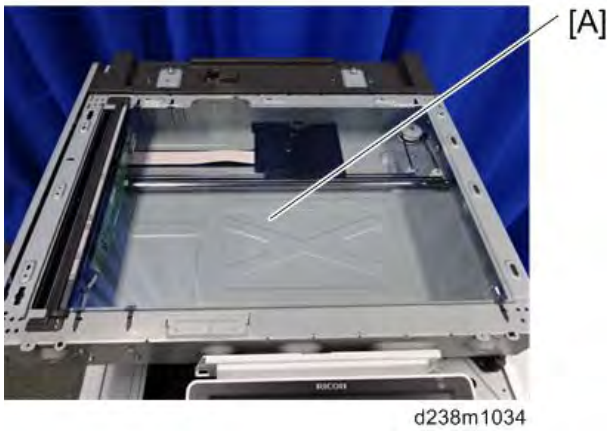
9. Remove the rear scale [A].



10. Remove the left scale and the exposure glass [A].

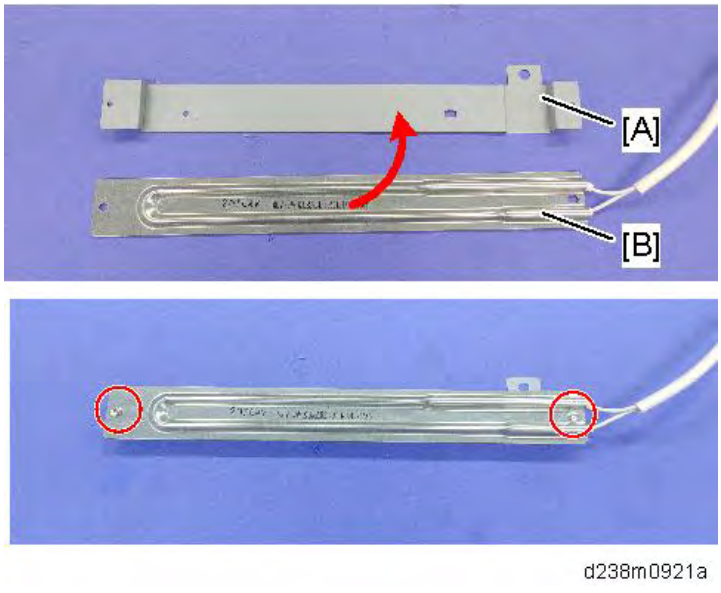
Note

- The exposure glass and the left scale are attached with double-sided tape.

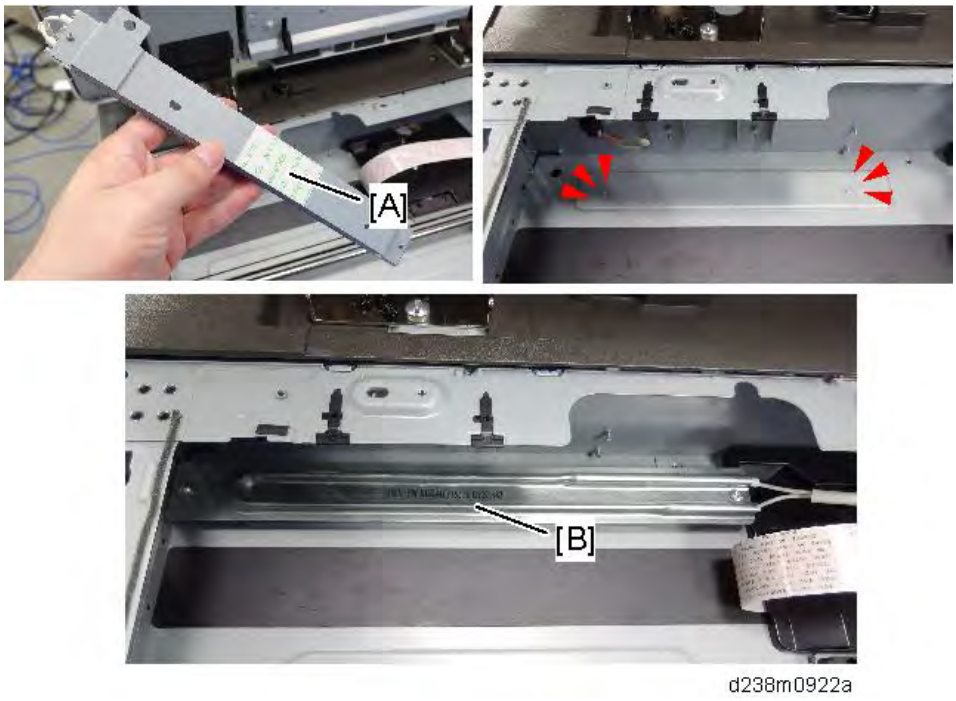


11. Move the carriage to the right.

12. Attach the heater [B] to the bracket [A] provided with the accessories (×2).

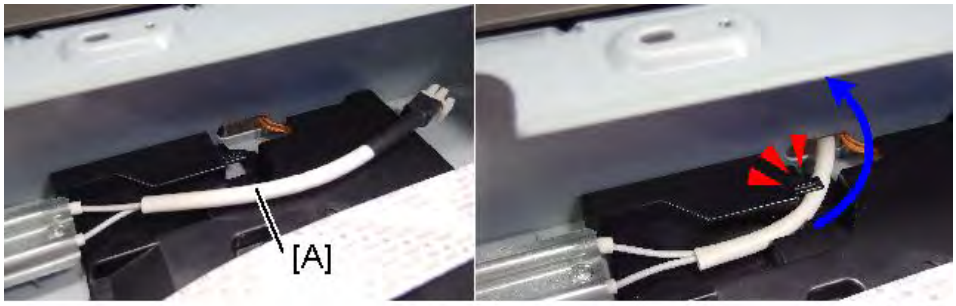


13. Remove the release paper [A] on the back side of the bracket, and secure the heater [B] with the seal, aligning it with the boss on the frame.



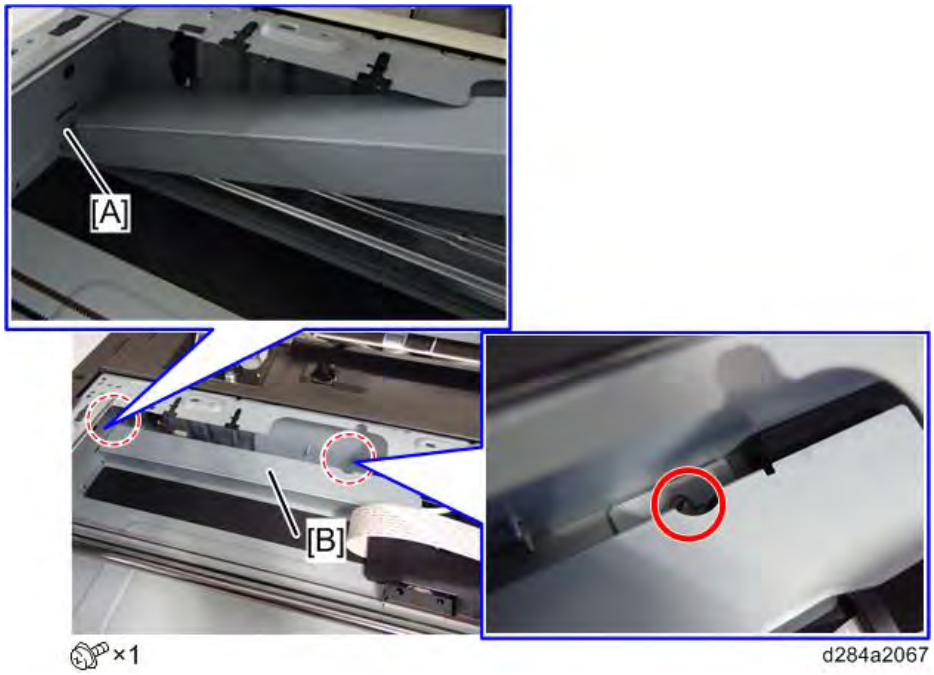
d238m0922a

14. Pull the harness [A] out of the frame hole.
Route the harness into the harness guide.

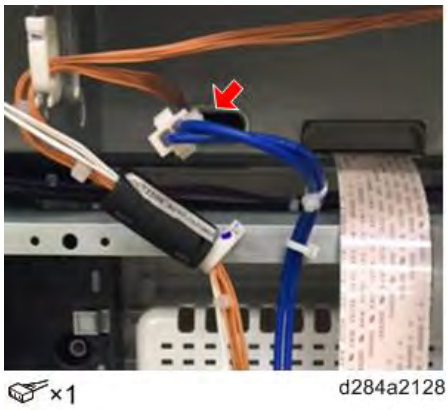


d238m0923a

15. Set the tabs into the cutout [A], and attach the heater cover [B].



16. Connect the connector, which is shown in step 14, to the Scanner/PCU Harness.



17. Attach the scanner scales and exposure glass, and all covers which have been removed.

Anti-Condensation Heater (PCU)

⚠CAUTION

- Unplug the machine power cord before starting the following procedure.
- Do the following procedure not to damage any harnesses.
- Check that harnesses are not damaged or pinched after installation.

Accessory Check

Description	Q'ty	Shown in the Overview as	Remarks
Scanner/PCU Harness	1	#4	This part is not needed if the scanner heater has been installed.
Clamp: LWSM-0511A	6	-	These parts are not needed if the scanner

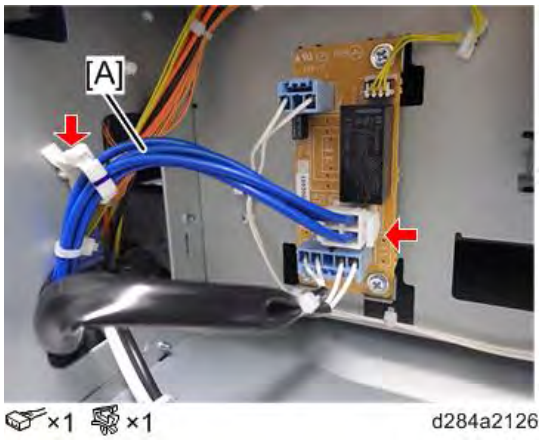
2.Installation

Description	Q'ty	Shown in the Overview as	Remarks
			heater has been installed.
PCU Heater	1	#7	
THERMOSTAT:ASS'Y	1	-	
SCREW:SMALL ROUND/SPRING:M3X6	1	-	
DECAL:WARNING (HIGH TEMPERATURE)	1	-	

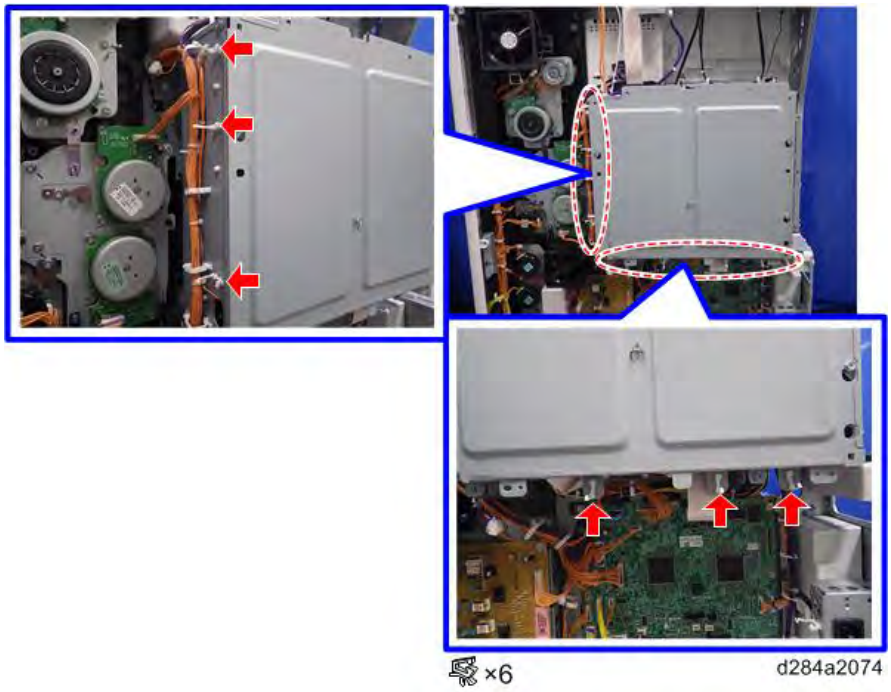
Installation Procedure

1. Install the heater board. (Installation Procedure)

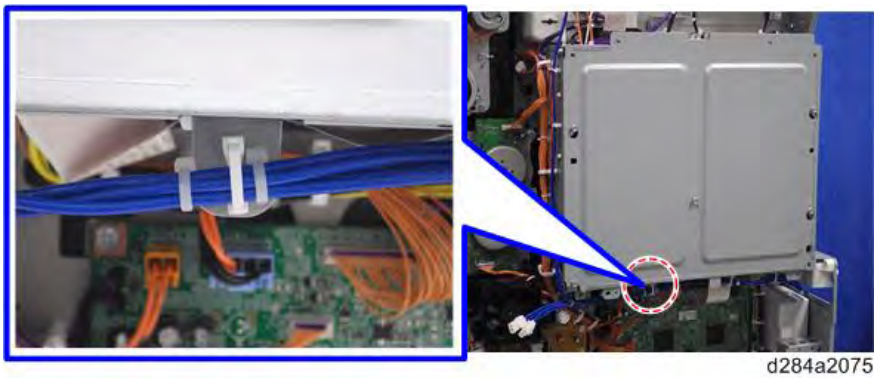
2. Connect the Scanner/PCU Harness cable [A] to CN922 of the heater board [B] and clamp the harness.



3. Attach the clamps around the controller board in the rear main unit.



4. Route the heater cable to the rear of the main unit.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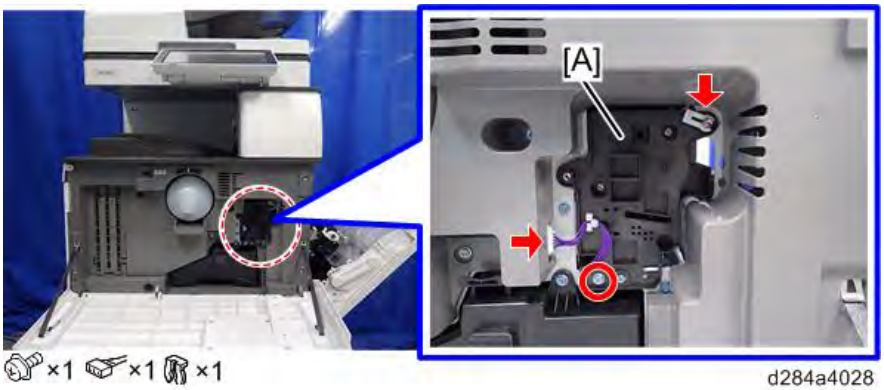
5. Open the front cover.
6. Open the right cover.
7. Open the transfer unit [A].

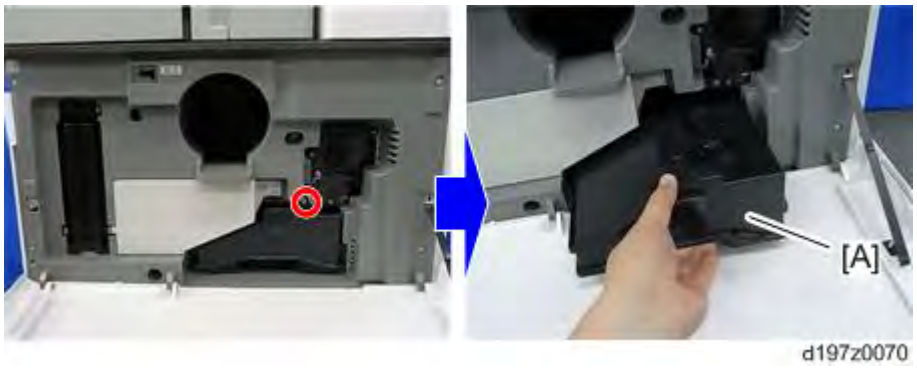
d284a4027

8. Remove the PCDU [A].

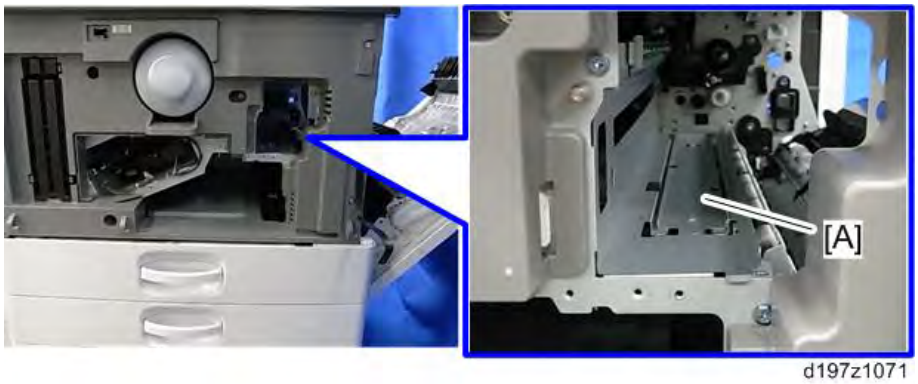


d284a4028

9. Pull out the waste toner bottle [A] (x1).



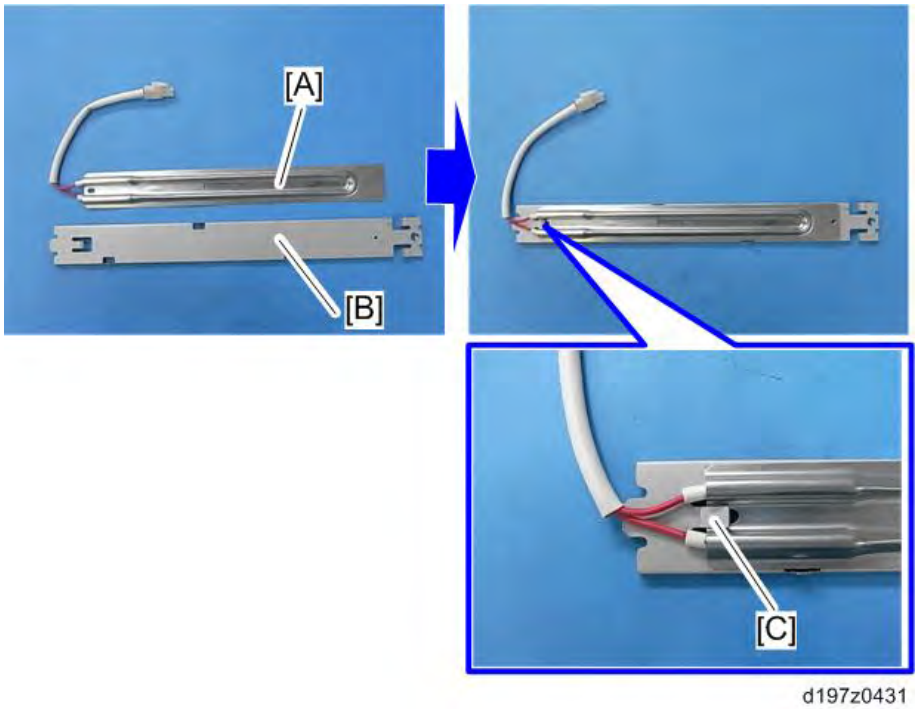
10. Take off the heater bracket [A].



11. Attach the anti-condensation heater (PCU) [A] to the heater bracket [B].

Note

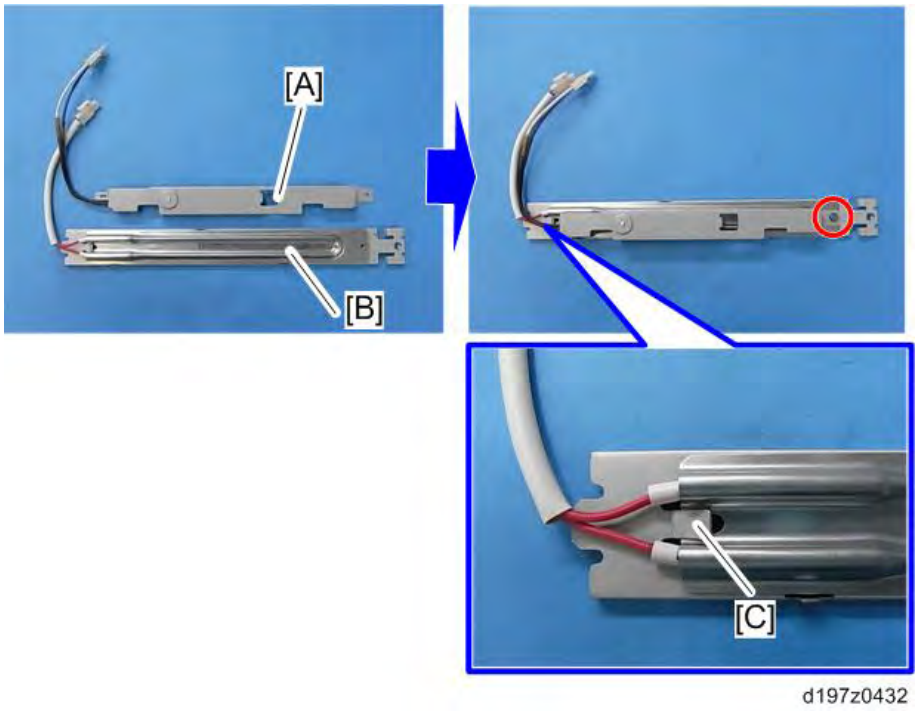
- Fit the anti-condensation heater (PCU) [A] into the tab [C] on the heater bracket [B].



12. Attach the thermostat [A] to the anti-condensation heater (PCU) [B] (x1).

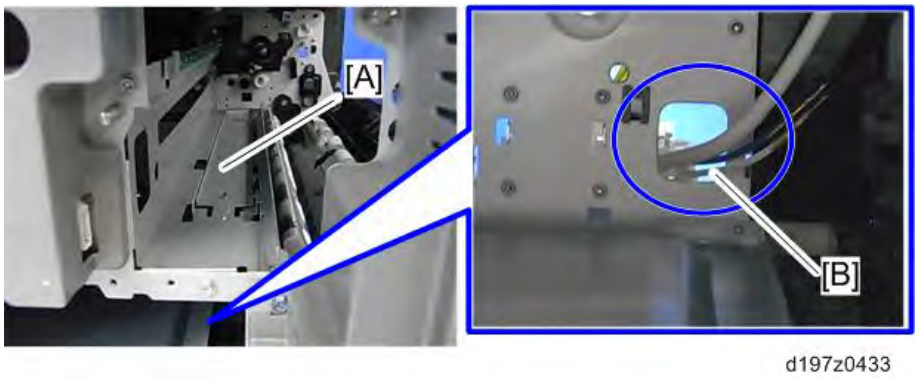
Note

- Fit the thermostat [A] into the tab [C] on the heater bracket [B].



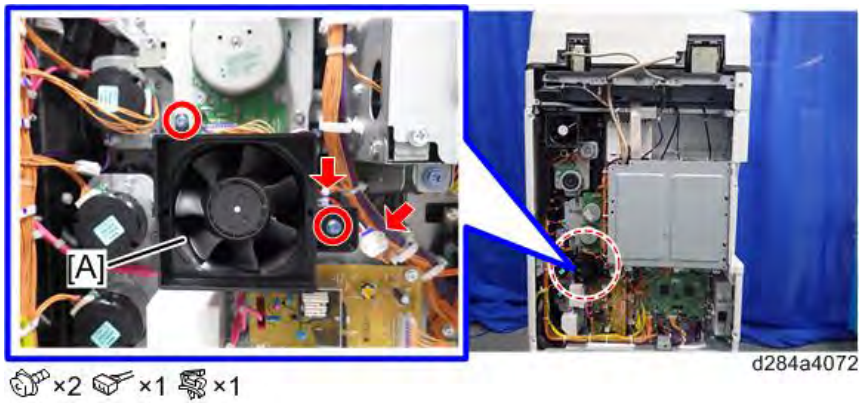
d197z0432

13. Put back the anti-condensation heater (PCU) [A], and then pass the heater harnesses out through the opening [B] at the inner rear side of the main unit.



d197z0433

14. For MP 4055 SP, MP 5055 SP, and MP 6055 SP only: Remove the development bearing cooling fan [A].



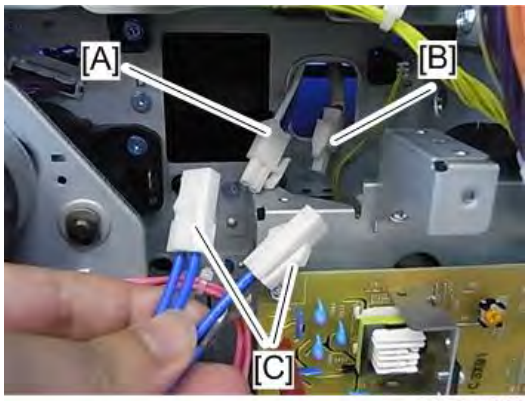
d284a4072

×2 ×1 ×1

15. Connect the harnesses of the thermostat [A] and of the anti-condensation heater (PCU) [B] to the harnesses [C] which are routed in step 4.

Note

- You can connect the harnesses [C] up to either harness [A] or [B].



d197z0434

16. Attach the warning decal on the bracket.

d197z9004

17. Reattach the development bearing cooling fan, PCDU, waste toner bottle and covers which have been removed.

Tray Heater for Main Unit

⚠CAUTION

- Turn off the main power switch and disconnect the power supply cord when installing this option.

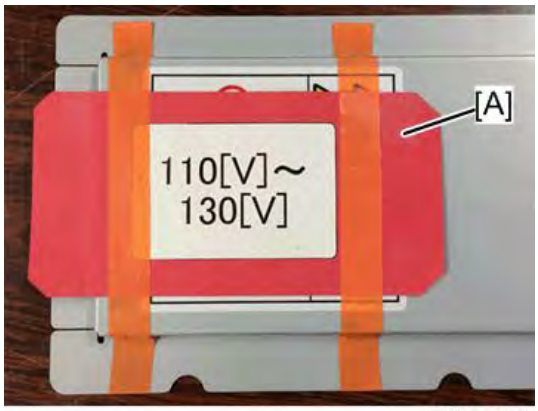
Accessory Check

Description	Q'ty	Shown in the Overview as
Tray Heater for Main Unit	1	#8
TAPPING SCREW - M3X8	1	-

Installation Procedure

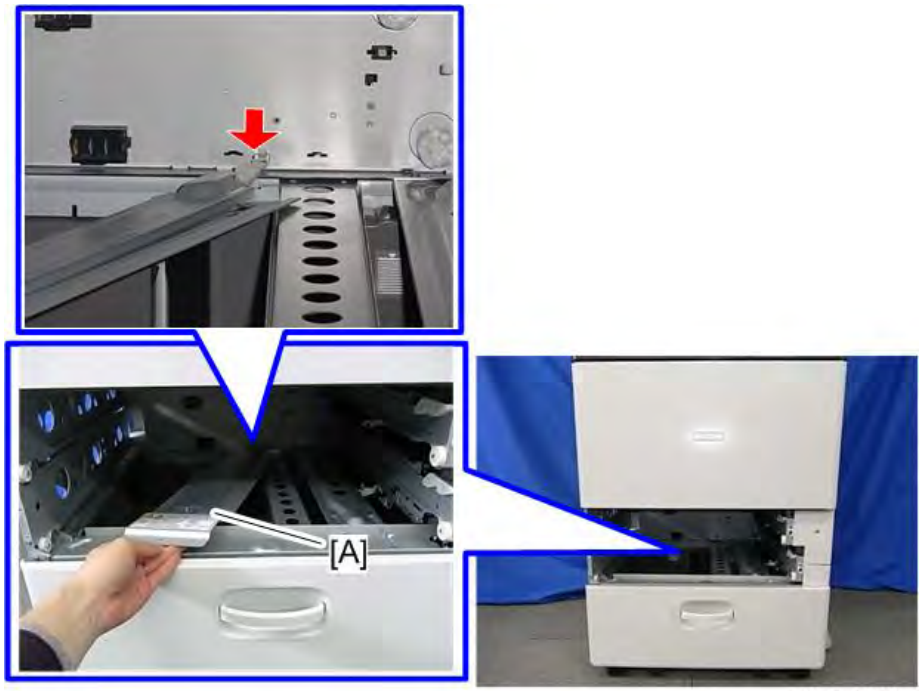
Note

In North America, this option has a decal [A] attached that says 110V-130V. Peel off this decal.



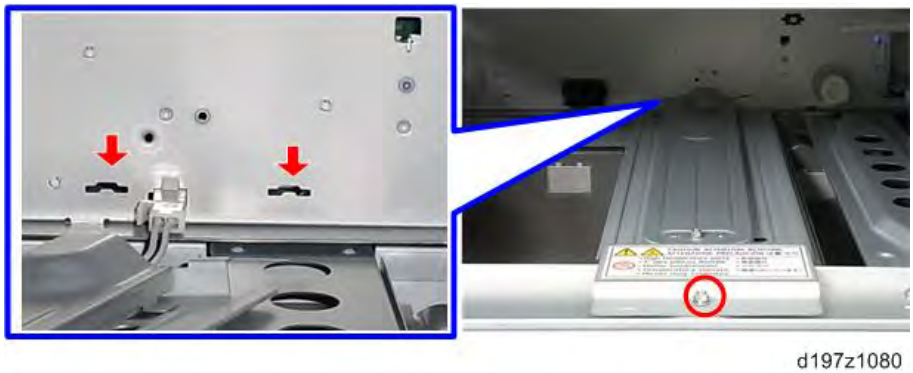
d284a8089

1. Install the heater board. (Installation Procedure)
2. Pull out the first and second paper feed trays.
3. Connect the harness of the tray heater [A] for the main unit to the socket in the inner rear frame of the main unit (x1).



d197z1079

4. Insert the tabs of the tray heater for the main unit in the cutouts in the inner rear frame of the main unit, and then attach the heater (x1).


d197z1080

5. Reattach all the paper feed trays, covers, etc. which have been taken off.

Do the following two steps to set the Anti-Condensation Heater to be constantly ON.

1. Set the setting of SP5-805-001 (Anti-Condensation Heater ON/OFF setting) to [1].
2. Manually disconnect the PCU and scanner heaters.

Important

- The PCU and scanner heaters must be disabled because the temperature in the machine could become too high, causing problems with toner clogging, or damage to the scanner lamp stabilizer.

Tray Heater for Paper Feed Unit PB3210 / PB3220

⚠CAUTION

Turn off the main power switch and disconnect the power supply cord when installing this option.

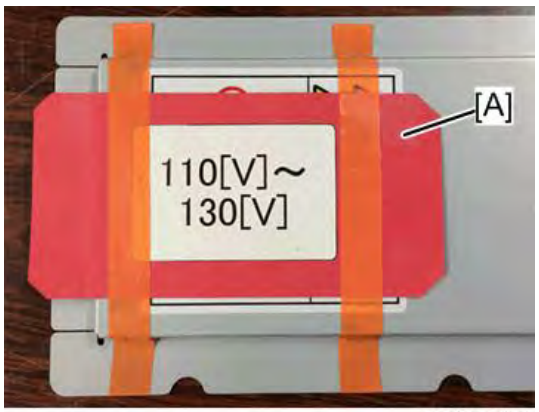
Accessory Check

Description	Q'ty	Shown in the Overview as
Tray Heater	1	#9
SCREW:SPRING WASHER:ROUND POINT:M4X10	1	-

Installation Procedure

Note

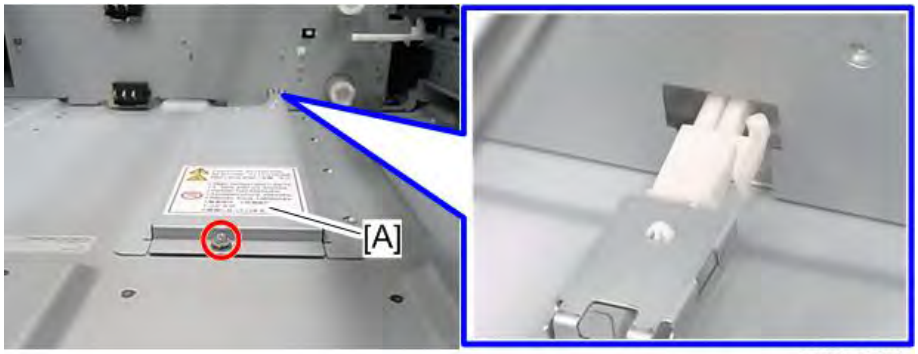
In North America, this option has a decal [A] attached that says 110V-130V. Peel off this decal.



d284a8089

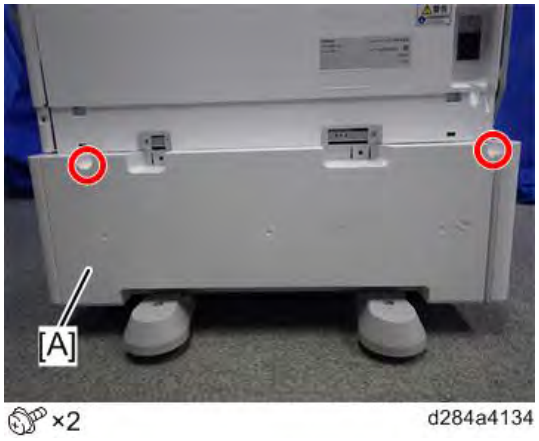
1. Install the heater board. (Installation Procedure)
2. Pull out the 1st and 2nd paper feed trays of the paper feed unit.
3. Pass the harness of the heater [A] for the optional paper feed unit through the hole in the inner rear frame of

the optional paper feed unit, and then attach it (x1).



4. Remove the bracket [A].

5. Remove the rear cover [A] of the optional paper feed unit.

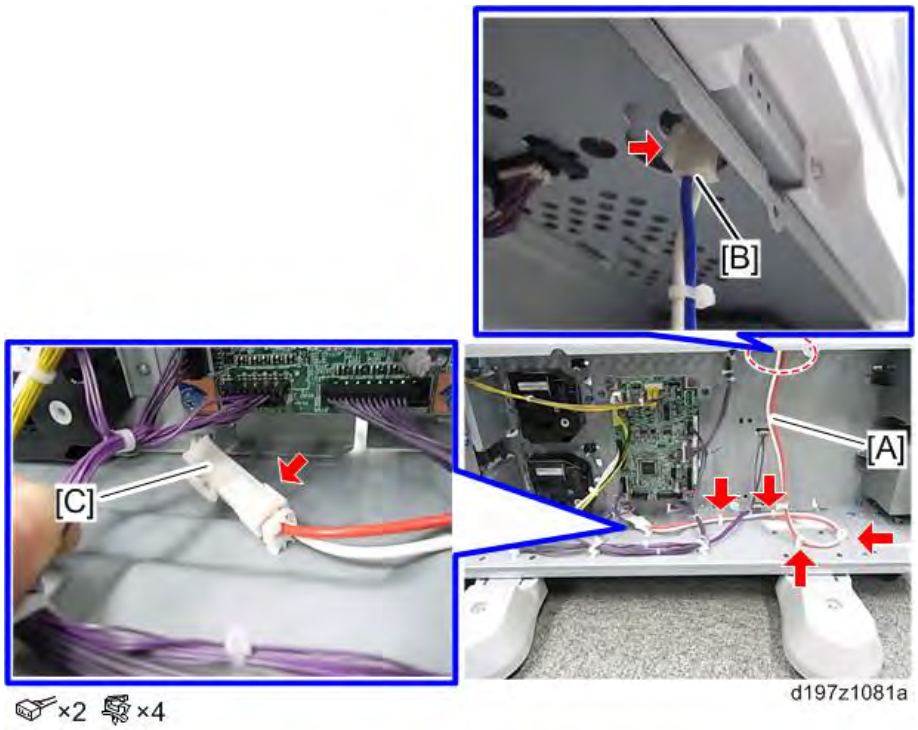


6. Connect the PFU harness [A] of the optional paper feed unit to the relay harness [B] of the main unit and the

heater harness [C].

Note

- Put the PFU harness through the hole which is revealed when the bracket is removed in step 6.



7. Reattach the rear cover of the optional paper feed unit, securing brackets, and rear lower cover of the main unit.
8. Connect the power supply cord and turn ON the main power.

Do the following two steps to set the anti-condensation heater to be constantly ON.

1. Set the setting of SP5-805-001 (Anti-Condensation Heater ON/OFF setting) to [1].
2. Manually disconnect the PCU and scanner heaters.

Important

- The PCU and scanner heaters must be disabled because the temperature in the machine could become too high, causing problems with toner clogging, or damage to the scanner lamp stabilizer.

Tray Heater for Paper Feed Unit PB3150

⚠CAUTION

Turn off the main power switch and disconnect the power supply cord when installing this option.

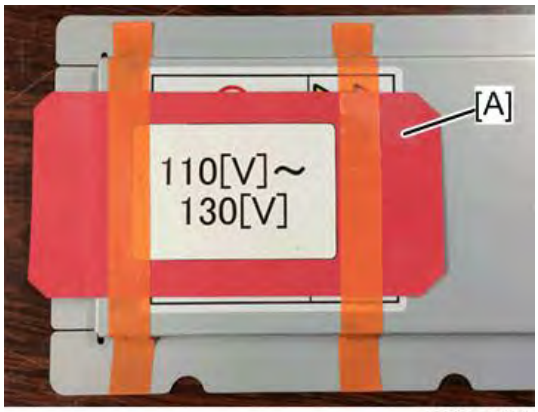
Accessory Check

Description	Q'ty	Shown in the Overview as
Tray Heater	1	#9
SCREW:SPRING WASHER:ROUND POINT:M4X10	1	-

Installation Procedure

Note

In North America, this option has a decal [A] attached that says 110V-130V. Peel off this decal.

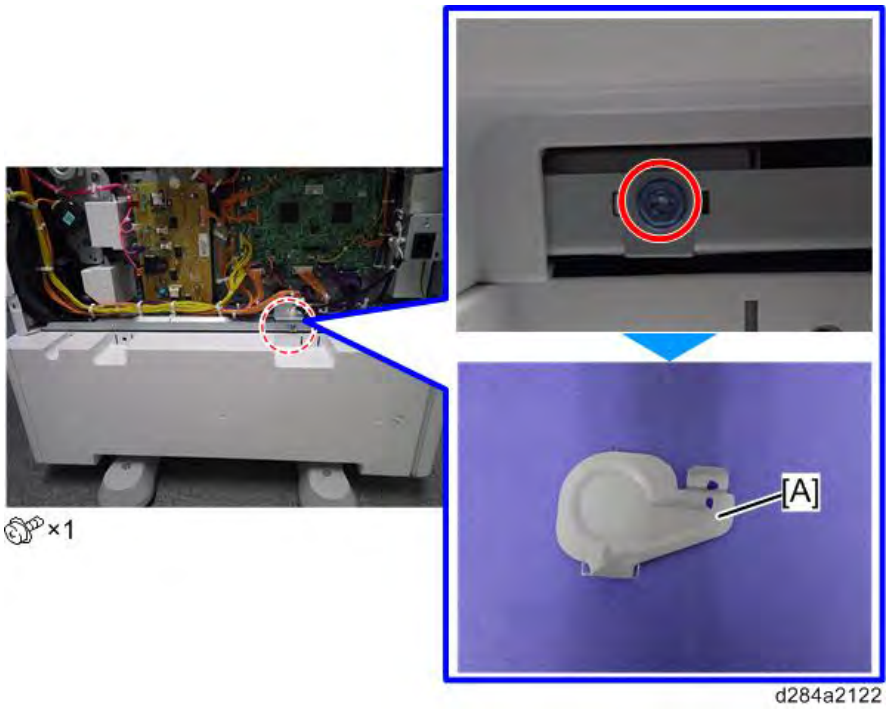


d284a8089

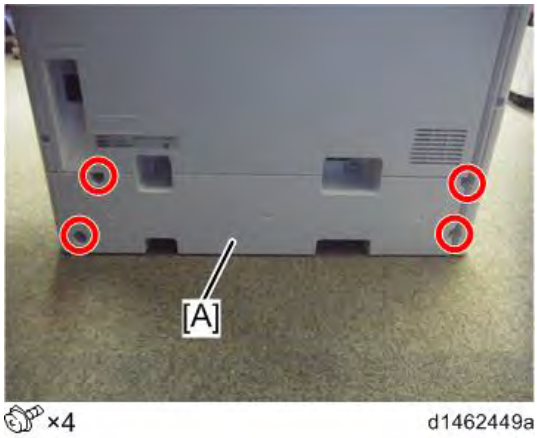
1. Install the heater board. (Installation Procedure)
2. Pull out the paper feed tray of PB3150.
3. Put the harness of the heater [A] for the optional paper feed unit through the hole at the inner rear frame, and then attach it (x1).

d197z1084

4. Remove the bracket [A].



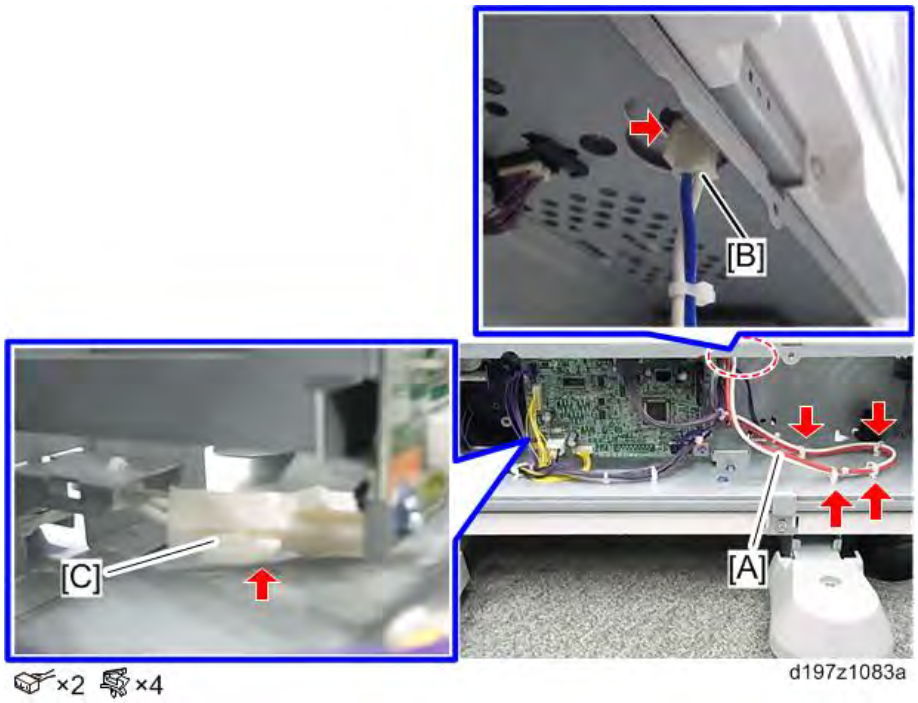
5. Remove the rear cover [A] of Paper Feed Unit PB3150.



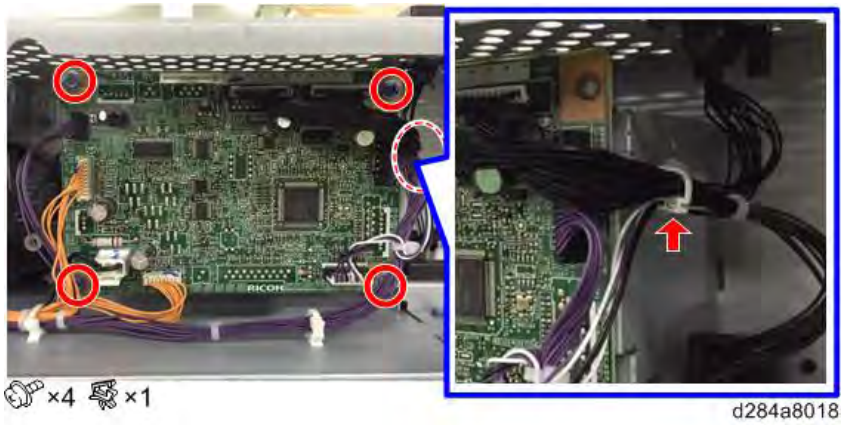
6. Connect the PFU harness [A] of the optional paper feed unit to the relay harness [B] of the main unit and the heater harness [C].

Note

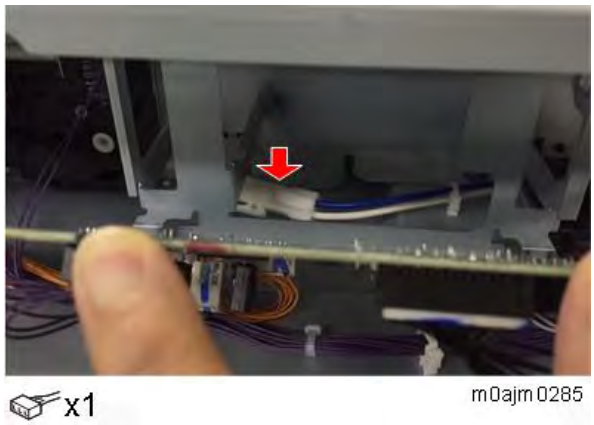
- Put the PFU harness through the hole which is revealed when the bracket is removed in step 4.



7. To gain access to the connector at the back of the board, remove the controller board's screws and clamp.



8. Tilt the controller board to the front to expose the connector, and then connect the heater harness.



9. Reattach the rear cover of the paper feed unit PB3150, securing brackets, and rear lower cover of the main unit.

10. Connect the power supply cord and turn ON the main power.

Do the following two steps to set the anti-condensation heater to be constantly ON.

1. Set the setting of SP5-805-001 (Anti-Condensation Heater ON/OFF setting) to [1].
2. Manually disconnect the PCU and scanner heaters.

Important

- The PCU and scanner heaters must be disabled because the temperature in the machine could become too high, causing problems with toner clogging, or damage to the scanner lamp stabilizer.

Tray Heater for LCIT PB3170/ PB3230

⚠CAUTION

Turn off the main power switch and disconnect the power supply cord when installing this option.

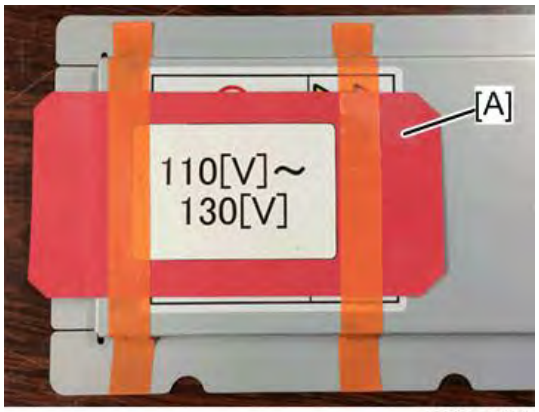
Accessory Check

Description	Q'ty	Shown in the Overview as
Tray Heater	1	#9
SCREW:SPRING WASHER:ROUND POINT:M4X10	1	-

Installation Procedure

Note

In North America, this option has a decal [A] attached that says 110V-130V. Peel off this decal.



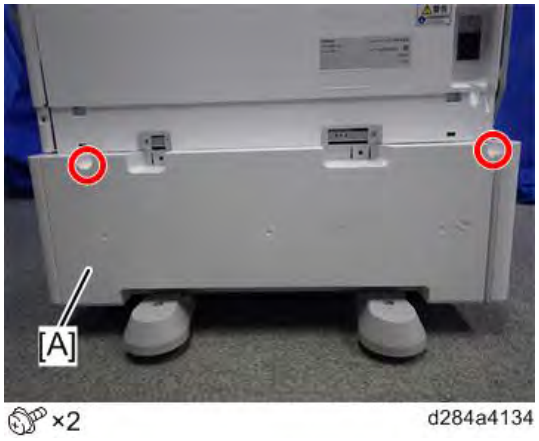
d284a8089

1. Install the heater board. (Installation Procedure)
2. Pull out the paper feed tray of the optional LCT unit.
3. Pass the harness of the heater [A] for the optional tray out through the hole in the inner rear frame of the

optional LCT unit, and then attach it (x1).

4. Remove the bracket [A].

5. Remove the rear cover [A] of the optional LCT unit.

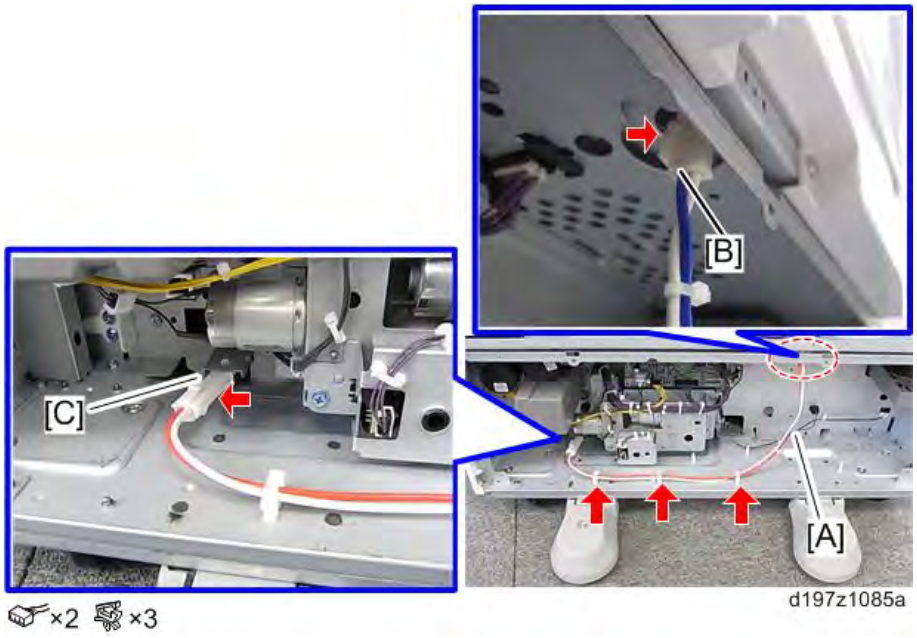


6. Connect the PFU harness [A] of the optional LCT unit to the relay harness [B] of the main unit and the heater

harness [C].

Note

- Put the PFU harness through the hole which is revealed when the bracket is removed in step 4.



7. Reattach the rear cover of the optional LCT unit, securing brackets, and rear lower cover of the main unit.
8. Connect the power supply cord and turn ON the main power.

Do the following two steps to set the anti-condensation heater to be constantly ON.

1. Set the setting of SP5-805-001 (Anti-Condensation Heater ON/OFF setting) to [1].
2. Manually disconnect the PCU and scanner heaters.

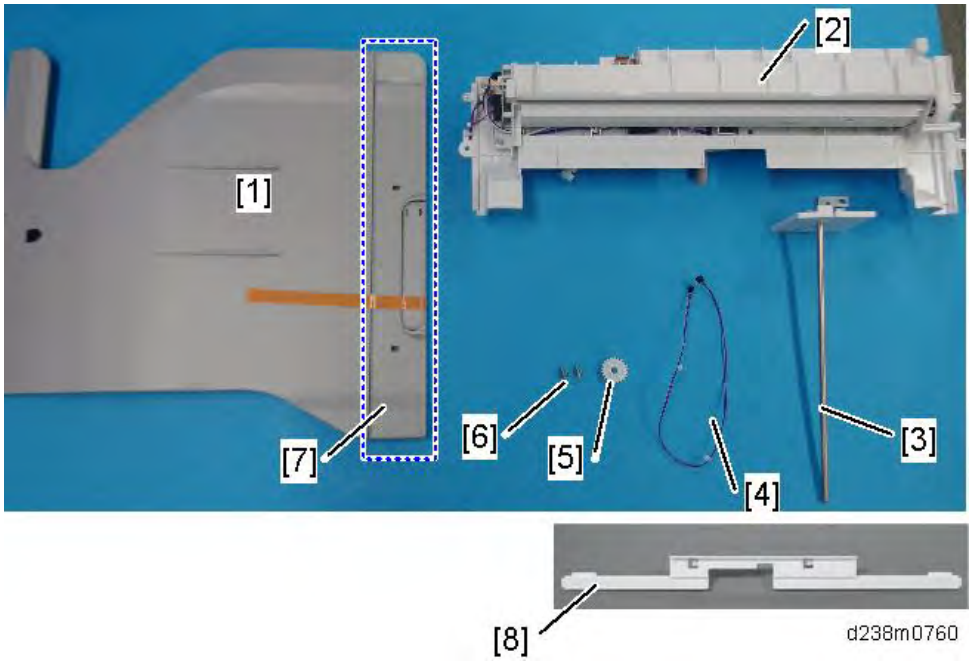
Important

- The PCU and scanner heaters must be disabled because the temperature in the machine could become too high, causing problems with toner clogging, or damage to the scanner lamp stabilizer.

1 Bin Tray BN3110 (D3CQ)

Accessory Check

No.	Description	Q'ty	Remarks
1	Tray	1	
2	1-bin tray unit	1	
3	Tray support bar	1	
4	Harness	1	
5	Gear	1	
6	Screw: M3 x 8	2	
7	Harness cover	1	
8	Paper support guide	1	Not used for this machine



Installation Procedure

⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

Important

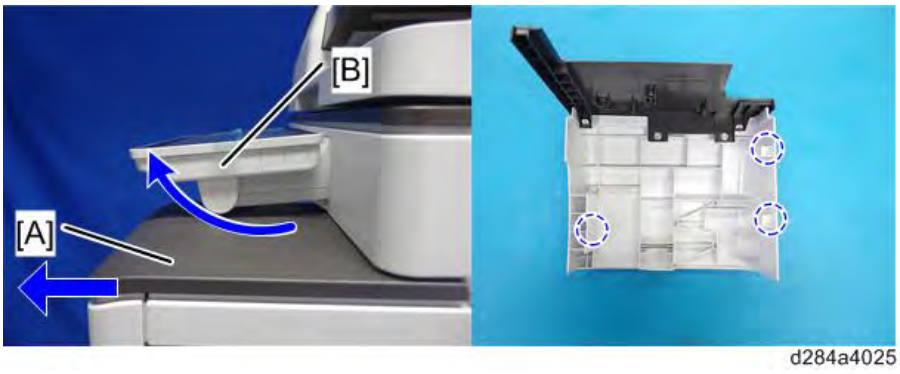
- When attaching this 1-bin tray unit at the same time as the following peripherals, attach the one-bin tray first. Otherwise, the 1-bin tray's exit tray cannot be attached.
  - Internal Shift Tray SH3070 (D691)
  - Side Tray Type M3 (D725)
  - Bridge Unit BU3070 (D685)
- To use together with the "Internal Finisher SR3130" or "Internal Finisher SR3180", first attach the

bottom plate of Internal Finisher SR3130 and Internal Finisher SR3180, and then install the 1-bin tray.

1. Remove the orange tape and shipping retainers.
2. Remove the accessories (fixing screws, etc.) provided with the machine.
3. Open the right cover, and remove the upper front cover.

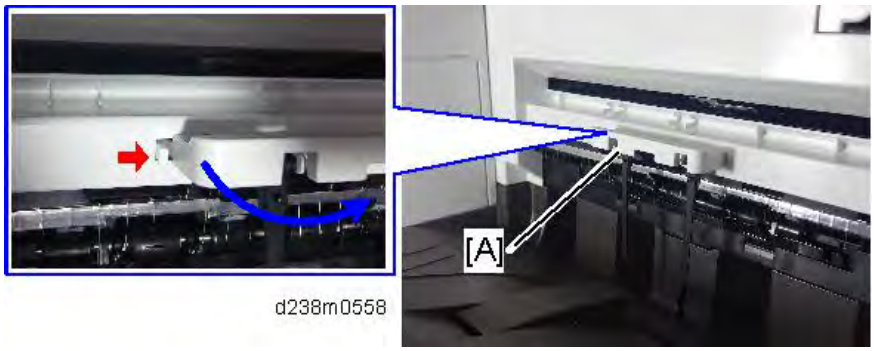
Note

- When removing the upper front cover, release the hooks at the back of the cover.
- Tilt the operation panel [B] upward to a horizontal position, and then remove the upper front cover [A].



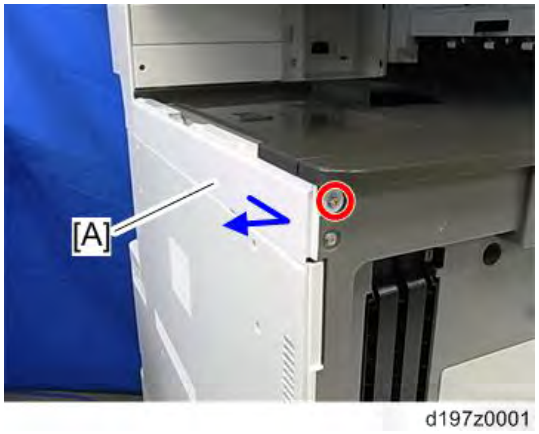
4. Remove the paper exit tray [A].

5. Remove the paper exit feeler [A].

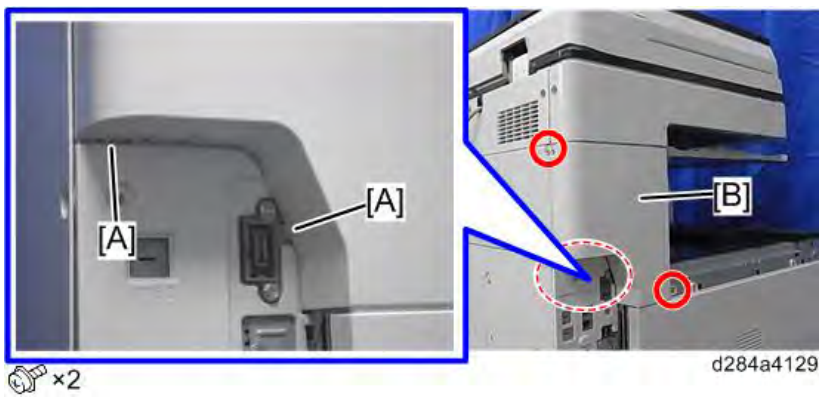


6. Tuck in the lever [A] for detecting when the tray is full.

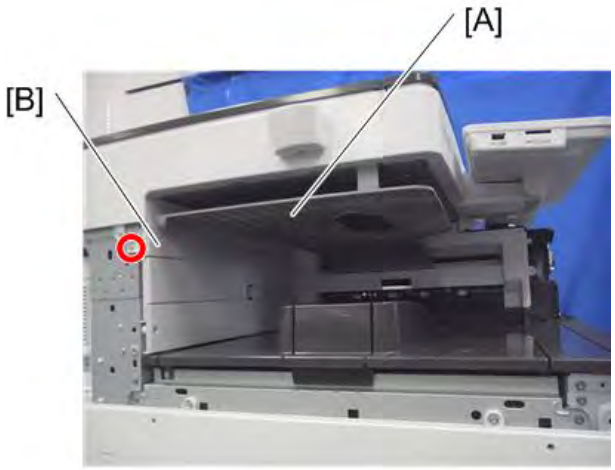
7. Open the front cover, and then remove the upper left cover [A] by pulling it towards the front (×1).



8. Release the hooks [A], and remove the left rear cover [B].



9. Remove the inverter tray [A], and tray support rod cover [B] (×1).



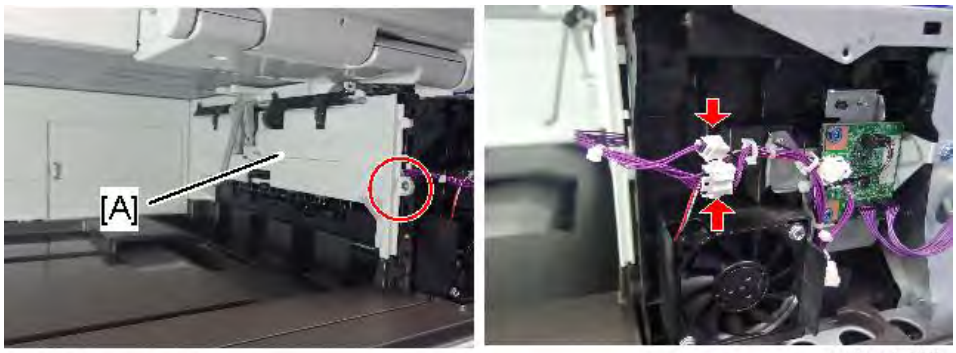
10. Remove the paper exit cover [A] (×1).

11. Attach the gear [A] provided with the accessories.

12. Attach the 1-bin tray unit [A].

Make sure to engage it with the gear attached in the previous step.

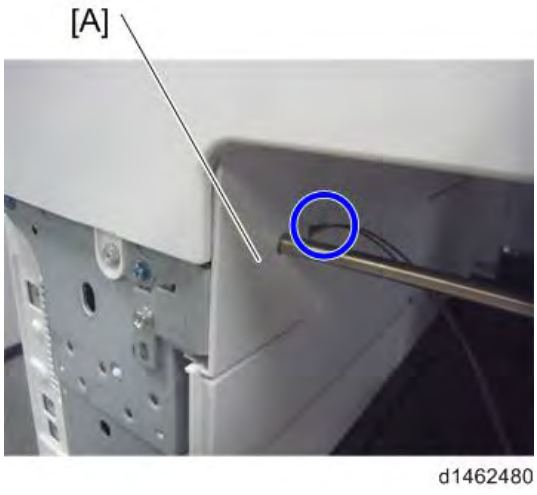
Take care that the harness is not trapped between the 1-bin tray unit and the machine frame.



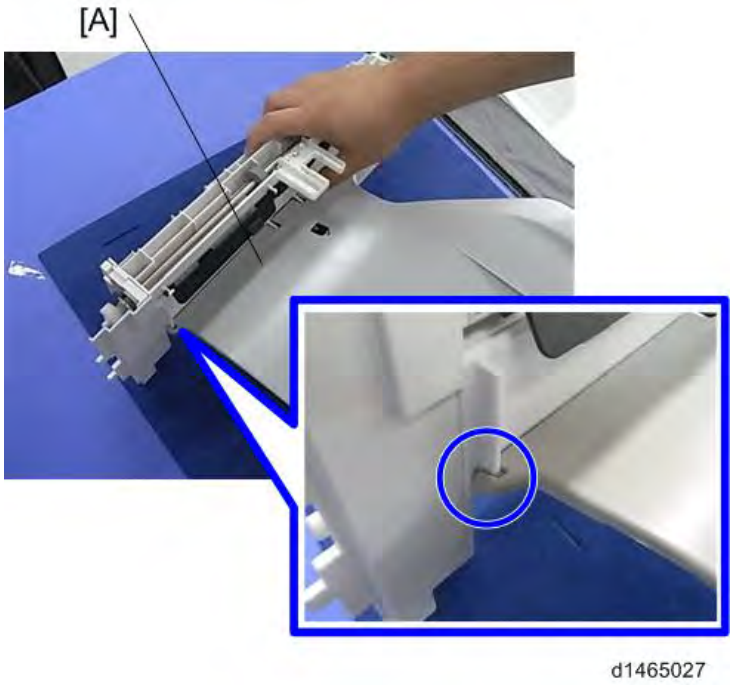
13. Attach the harness provided with the accessories.

14. Attach the tray support bar [A] (×1).

When attaching the tray support bar [A], make sure that the harness attached in the previous step goes through the slit in the tray support bar circled in blue [A] and comes outside of it as shown below.



15. Hook the 1-bin tray [A] onto the 1-bin tray unit, aligning the positions in the blue circle.

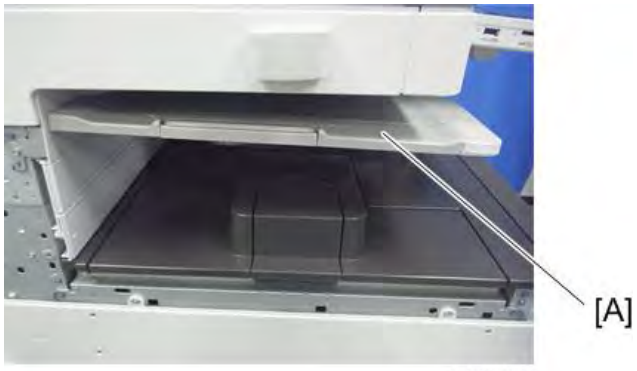


d1465027

16. Connect the harness to the 1-bin tray, and bring it around.

d1462482

17. Insert the tray support bar firmly in the 1-bin tray, and attach the harness cover [A].



d1462483

18. Reattach the covers, and close the right door.

19. Reattach the paper exit tray and paper exit feeler.

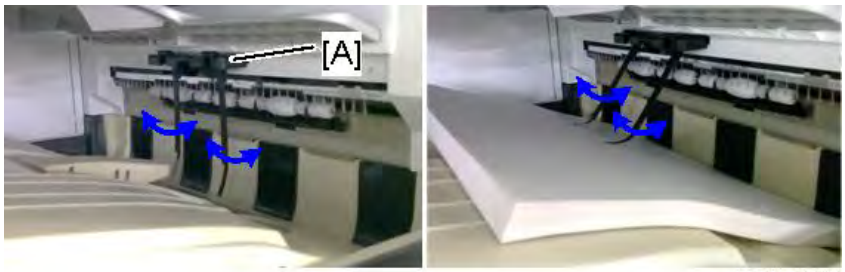
20. Turn ON the main power.

21. Check that output to this tray can be selected on the operation panel, and check the operation.

Checking the Position of the Paper Exit Feeler

Check the following points for the paper exit feeler [A] at the paper exit.

- It can move in line with the ejection of paper
- It holds contact with the surface of the ejected paper and is still movable



d238m0651

Paper will get jammed in the following cases.

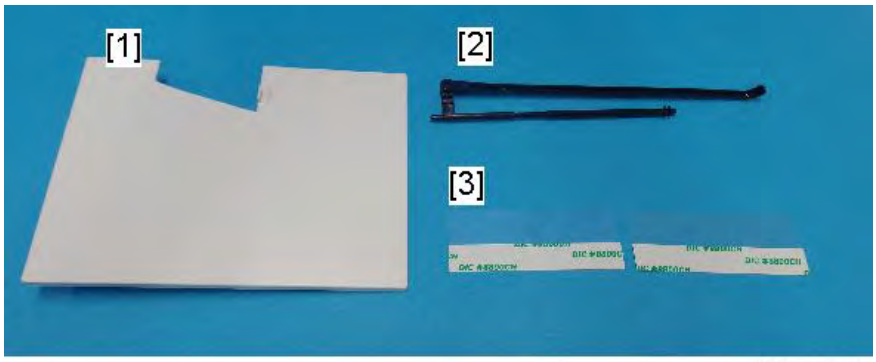
- The paper exit feeler does not function due to obstacles (such as cables).
- The paper exit feeler does not function when the paper is pulled out and pushed back again.

d238m0652

Internal Shift Tray SH3070 (D691)

Accessory Check

No.	Description	Q'ty	
1	Tray Cover	1	
2	Lever	1	Not used for this machine
3	Sheet	2	



d238m0574

Installation Procedure

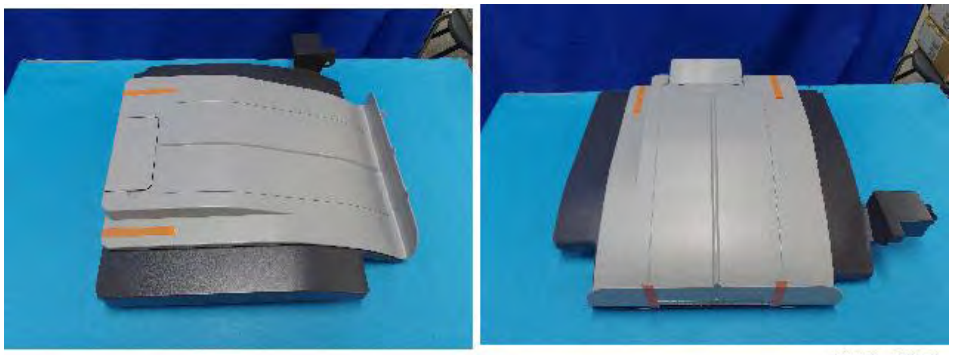
⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

Note

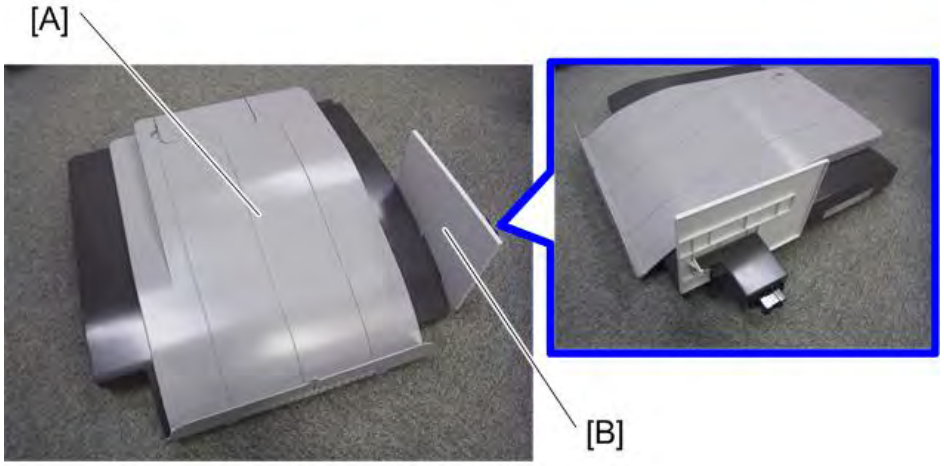
- The internal shift tray cannot be used together with the following peripherals:
  - Side Tray Type M3 (D725)
  - Internal Finisher SR 3180 (D766)
  - Internal Finisher SR 3130 (D690)
  - Bridge Unit BU3070 (D685)
  - Internal Multi-fold Unit FD3000 (M482-17, -21)
- To use together with the "1 Bin Tray BN3110 (D3CQ)", attach the "1 Bin Tray BN3110 (D3CQ)" first before installing the internal shift tray.

1. Remove the orange tapes, shipping retainers, and provided accessories (fixing screws, etc.).



d238m0575

2. Attach the tray cover [B] to the shift tray [A].



d1462486

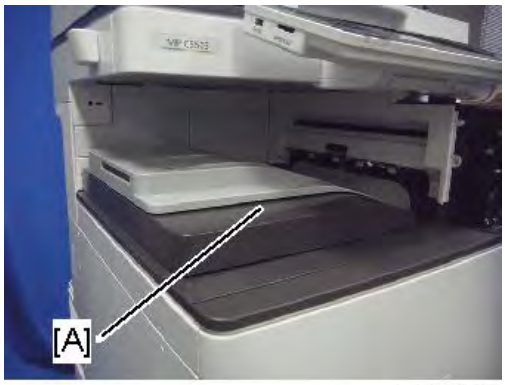
3. Remove the paper exit tray [A].

d1462023

4. Remove the connector cover [A].

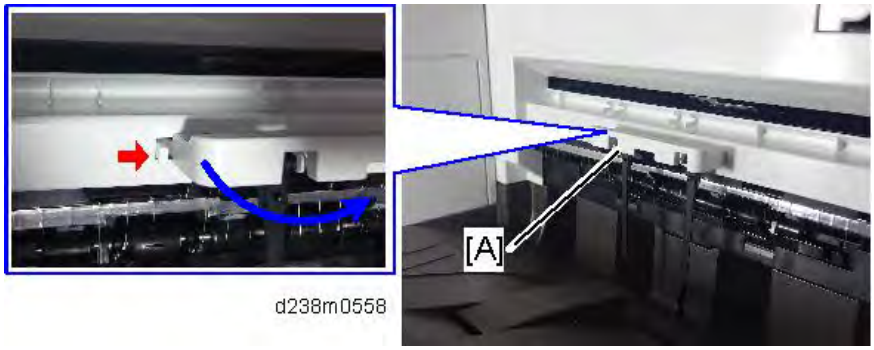
d1462470

5. Attach the shift tray [A].



d1462487a

6. Remove the paper exit feeler [A].



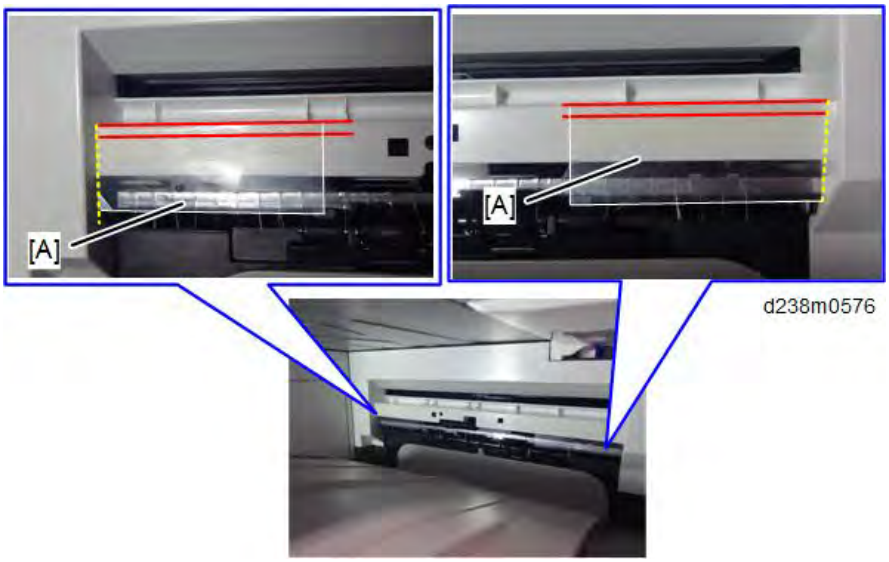
d238m0558

7. Attach the Mylar sheets [A] at the sides of the paper exit cover.

Important

- Make sure to attach the Mylar as shown in the photo below. This is to prevent curling when the paper lands in the tray.
- The Mylar’s top edge should be **0-2.5mm** from the top edge of the paper exit cover, i.e. between the two red lines.
- The Mylar's side edge should be **flush against** the side of the cover, i.e. along the yellow dotted

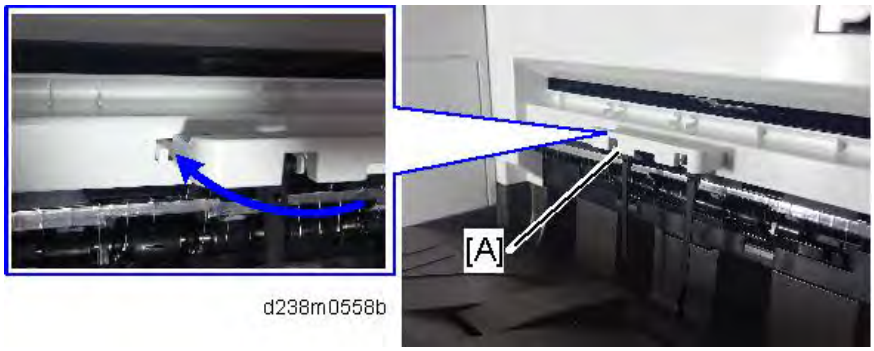
line.



8. Reattach the paper exit tray and close the right door.

9. Tuck in the lever [A] for detecting when the tray is full.

10. Reattach the removed paper exit feeler [A].



11. Do not use the lever supplied with the optional unit. Doing so may affect the stacking function.

12. Turn ON the main power.

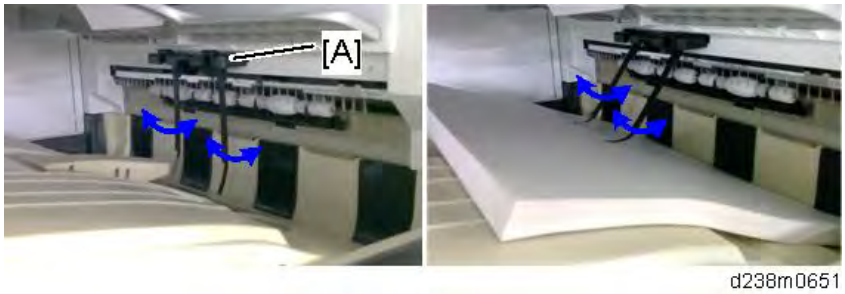
13. Check that paper output to the shift tray can be selected at the operation panel, and check the operation.

Checking the Position of the Paper Exit Feeler

Check the following points for the paper exit feeler [A] at the paper exit.

- It can move in line with the ejection of paper

- It holds contact with the surface of the ejected paper and is still movable



d238m0651

Paper will get jammed in the following cases.

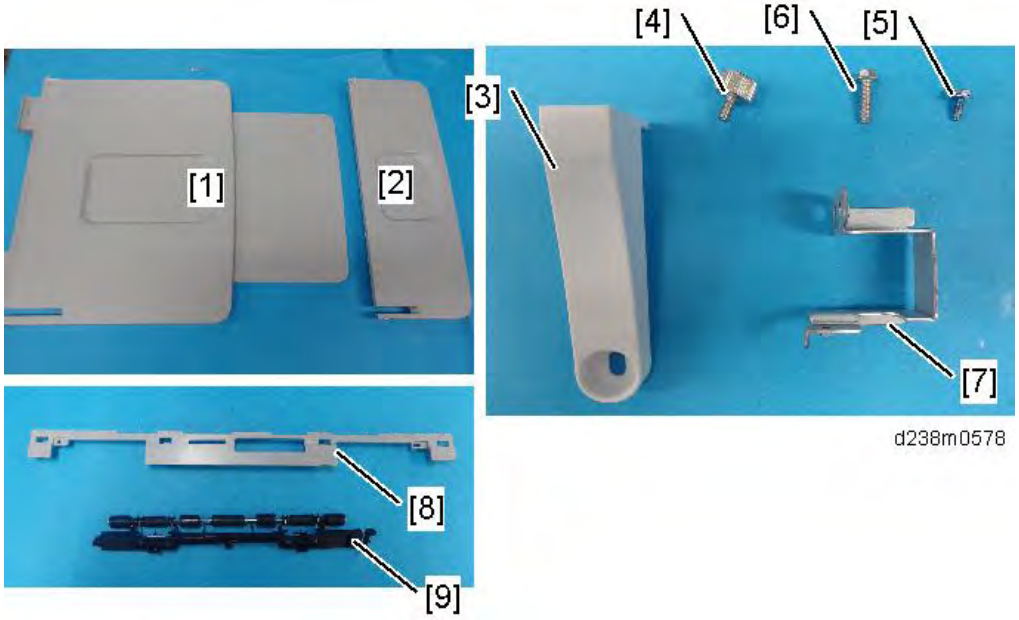
- The paper exit feeler does not function due to obstacles (such as cables).
- The paper exit feeler does not function when the paper is pulled out and pushed back again.

d238m0652

Side Tray Type M3 (D725)

Accessory Check

No.	Description	Q'ty	
1	Left Extension Tray	1	
2	Upper Extension Tray	1	
3	Fixing Plate	1	
4	Knob Screw	1	
5	Tapping screw - M3 x 8	1	
6	Tapping screw - M4 x 14	1	
7	Bracket	1	
8	Paper Support Guide	1	
9	Driven Roller (Flat)	1	
-	SHEET:NOTE_OPTIONAL_UNIT:EXP	1	



Installation Procedure

⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

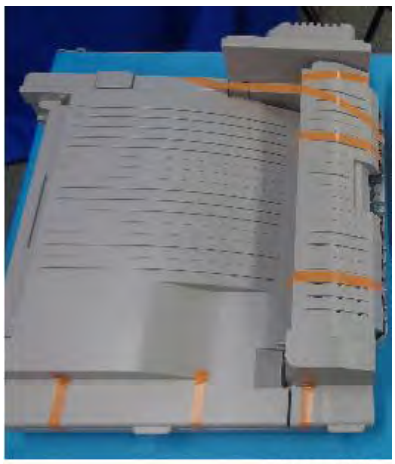
Note

- The side tray cannot be used together with the following peripherals:
  - Internal Shift Tray SH3070 (D691)
  - Bridge Unit BU3070 (D685)
  - Internal Finisher SR 3180 (D766)

- Internal Finisher SR 3130 (D690)
- Internal Multi-fold Unit FD3000 (M482-17, -21)

- To use together with the "1 Bin Tray BN3110 (D3CQ)", attach the "1 Bin Tray BN3110 (D3CQ)" first before installing the side tray.

1. Remove the orange tapes, shipping retainers, and accessories (fixing screws, etc.).

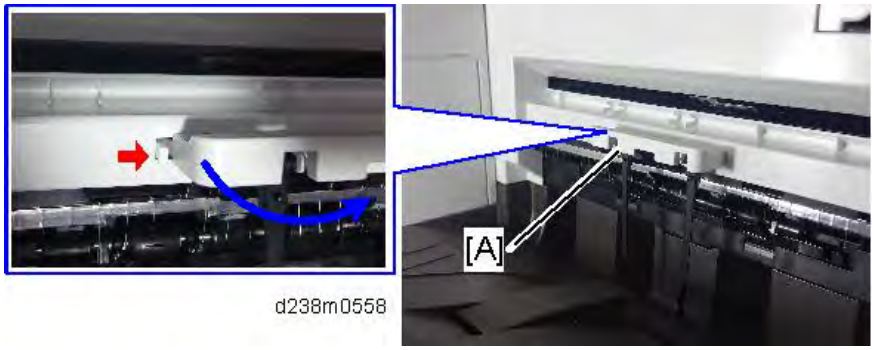


d238m0579

2. Remove the paper exit tray [A].

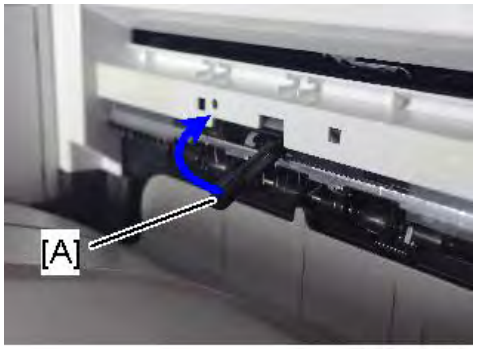
d1462023

3. Remove the paper exit feeler [A].



d238m0558

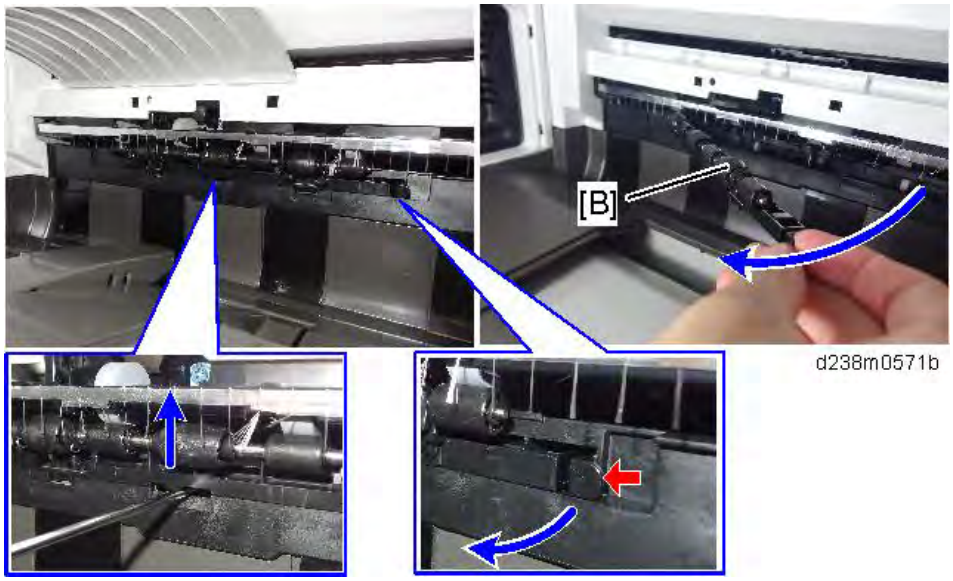
4. Tuck in the lever [A] for detecting when the tray is full.



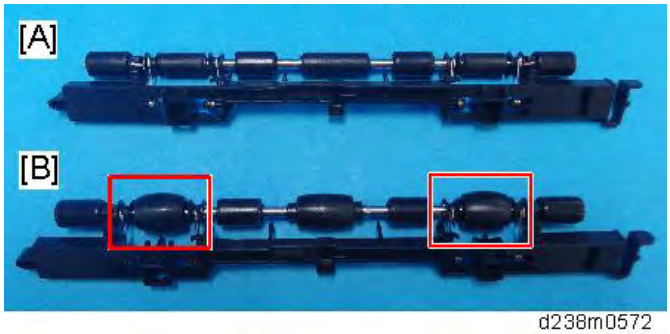
d238m0577

5. Remove the driven roller [B] at the machine's exit tray and attach the supplied driven roller [A].

- Insert a flathead screwdriver into the depression in the center, and then, lifting the driven roller, unlock the part indicated by the red arrow.
- When attaching the driven roller, push its center all the way in until it clicks.



d238m0571b

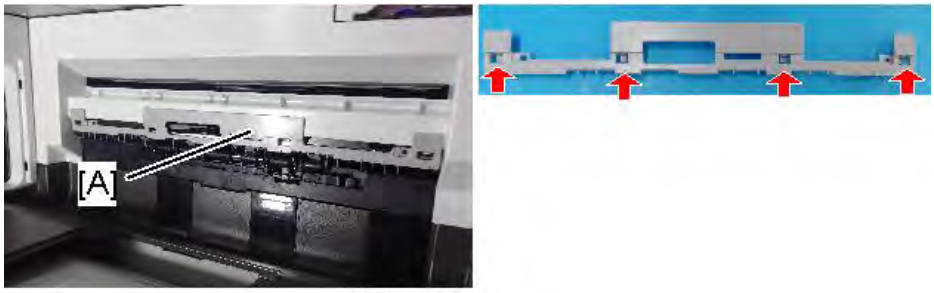


d238m0572

[A]: The supplied driven roller has flat rollers.

[B]: The machine's standard driven roller has drum-type rollers (as indicated by the red frames).

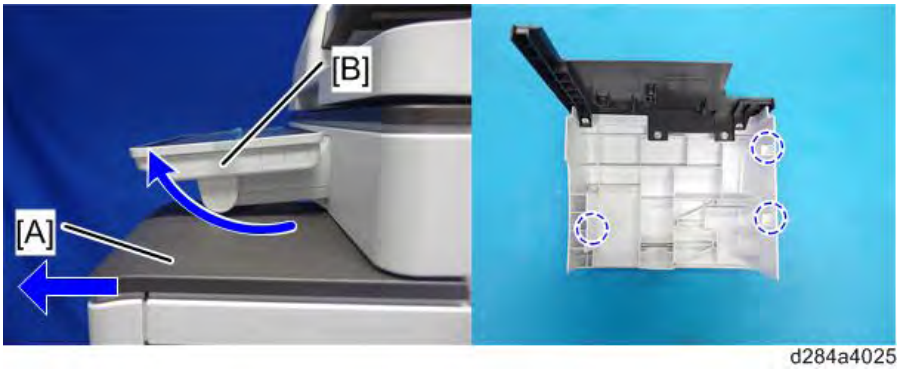
6. Attach the paper support guide [A] (Tab x4).



7. Open the right cover, and then remove the upper front cover [A].

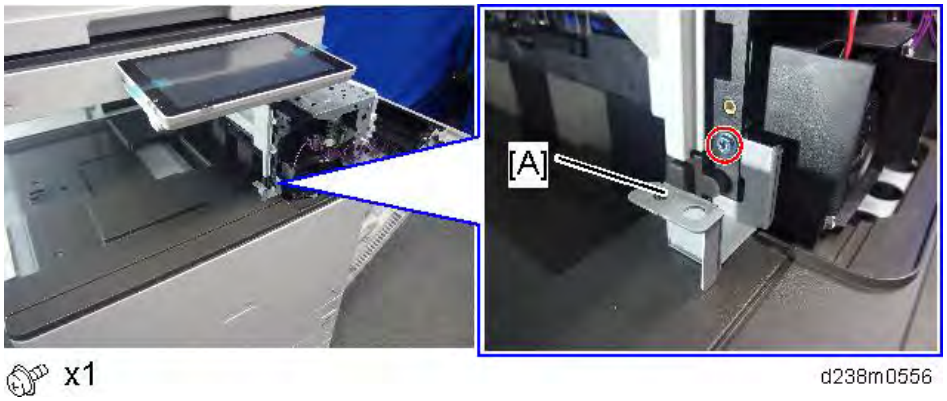
Note

- When removing the upper front cover, release the hooks at the back of the cover.
- Tilt the operation panel [B] upward to a horizontal position, and then remove the upper front cover [A].



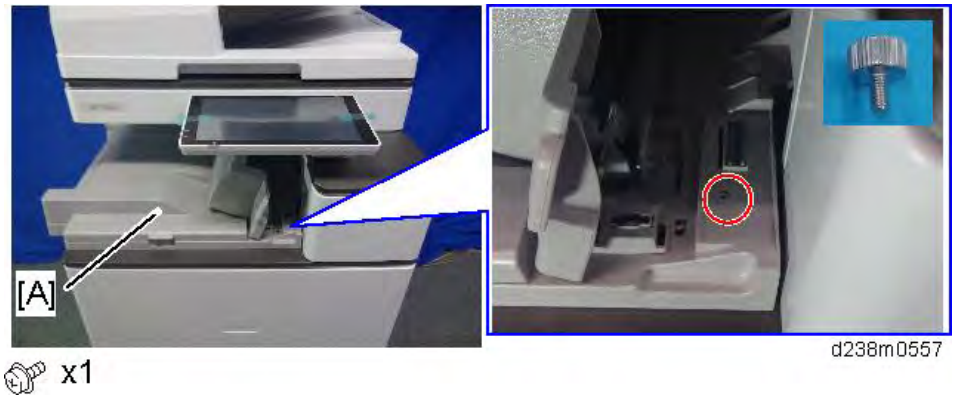
8. Remove the connector cover [A].

9. Attach the bracket [A].



10. Reattach the covers, and close the right door.

11. Attach the side tray unit [A] to the machine, and fix it with a knob screw.



12. Attach the fixing plate [A] (×1).

13. Attach the upper extension tray [A] and the left extension tray [B].

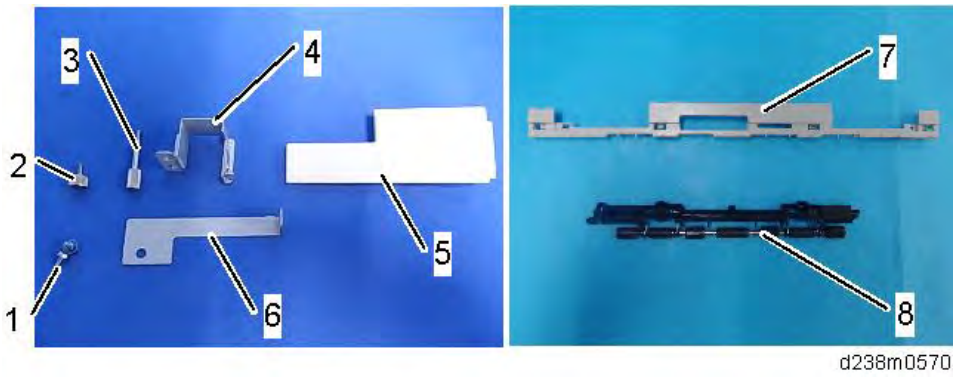
14. Turn ON the main power.

15. Check that paper output to the side tray can be selected at the operation panel, and check the operation.

Bridge Unit BU3070 (D685)

Accessory Check

No.	Description	Q'ty
1	Tapping Screw- M3 × 8	1
2	Screw - M4	1
3	Knob Screw - M4	1
4	Right Front Bracket	1
5	Upper Left Cover	1
6	Left Front Bracket	1
7	Paper Support Guide	1
8	Driven Roller (Flat)	1
-	SHEET:NOTE_OPTIONAL_UNIT:EXP	1



Installation Procedure

⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

Note

- The bridge unit cannot be used together with the following peripherals:
  - Internal Shift Tray SH3070 (D691)
  - Side Tray Type M3 (D725)
  - Internal Finisher SR 3180 (D766)
  - Internal Finisher SR 3130 (D690)
  - Internal Multi-fold Unit FD3000 (M482-17, -21)
- To use together with the "1 Bin Tray BN3110 (D3CQ)", attach the "1 Bin Tray BN3110 (D3CQ)" first before installing the bridge unit.

1. Remove the orange tapes, shipping retainers, and provided accessories (fixing screws, etc.).

d238m0569

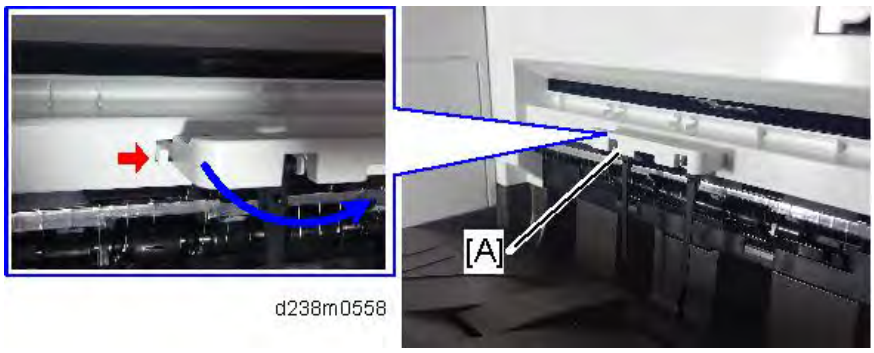
2. Remove the paper exit tray [A].

d1462023

3. Remove the connector cover [A].

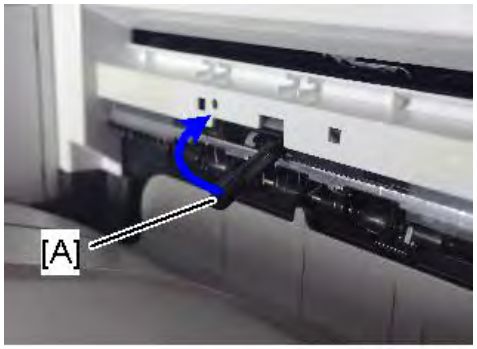
d1462470

4. Remove the paper exit feeler [A].



d238m0558

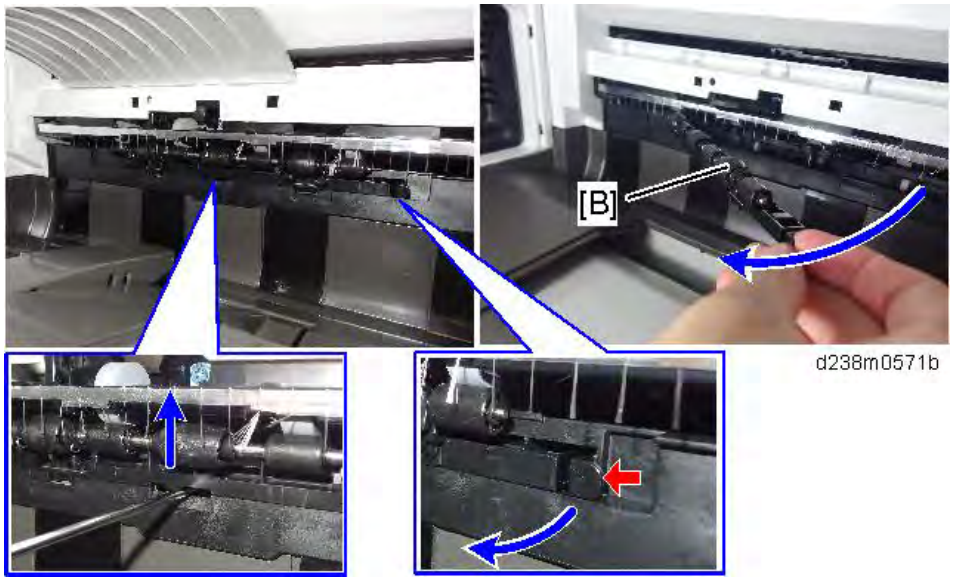
5. Tuck in the lever [A] for detecting when the tray is full.



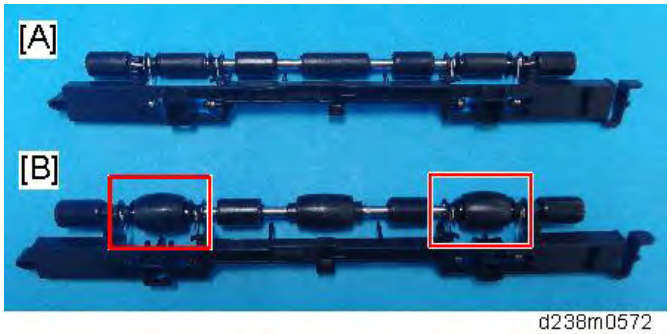
d238m0577

6. Remove the driven roller [B] at the machine's exit tray and attach the supplied driven roller [A].

- Insert a flathead screwdriver into the depression in the center, and then, lifting the driven roller, unlock the part indicated by the red arrow.
- When attaching the driven roller, push its center all the way in until it clicks.



d238m0571b

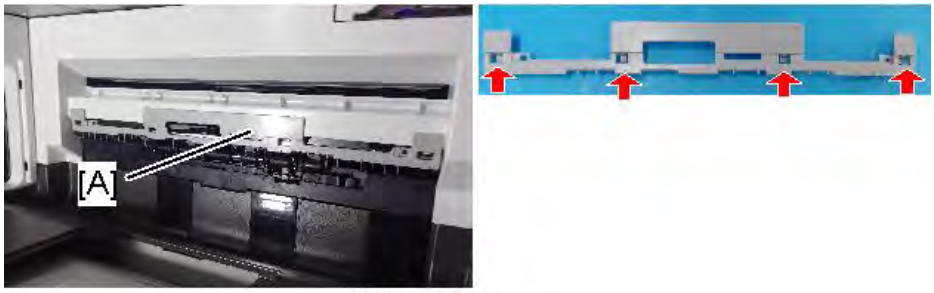


d238m0572

[A]: The supplied driven roller has flat rollers.

[B]: The machine's standard driven roller has drum-type rollers (as indicated by the red frames).

7. Attach the paper support guide [A] (Tab x4).

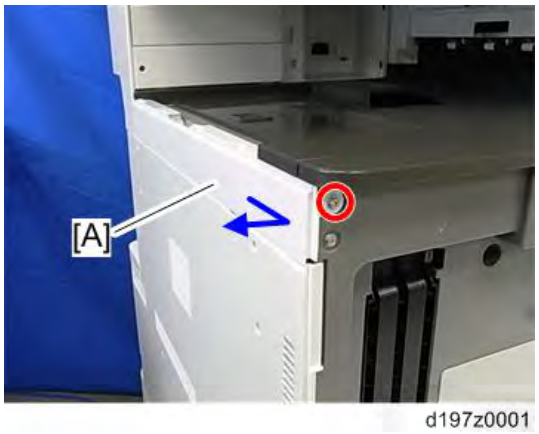


8. Open the front cover.

9. Remove the upper left cover [A] (×1).

Note

- The screw removed is used again in step 14.

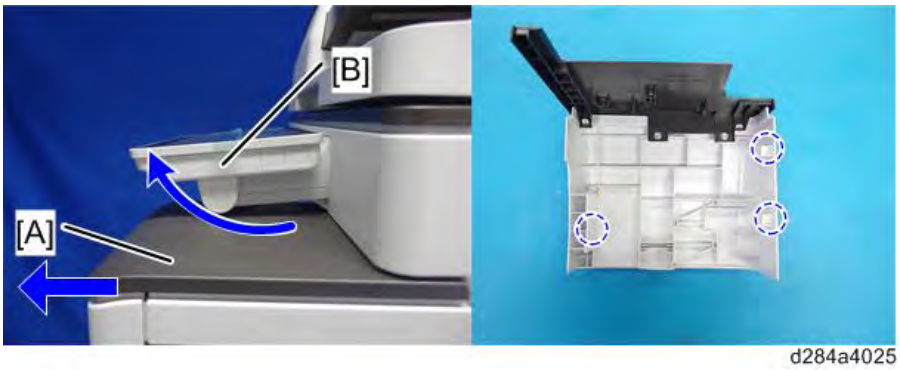


10. Open the right cover, and then remove the upper front cover [A].

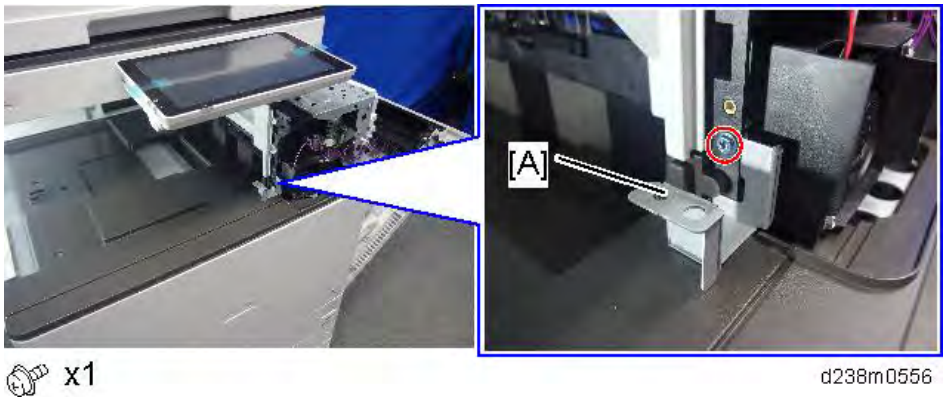
Note

- When removing the upper front cover, release the hooks at the back of the cover.
- Tilt the operation panel [B] upward to a horizontal position, and then remove the upper front cover

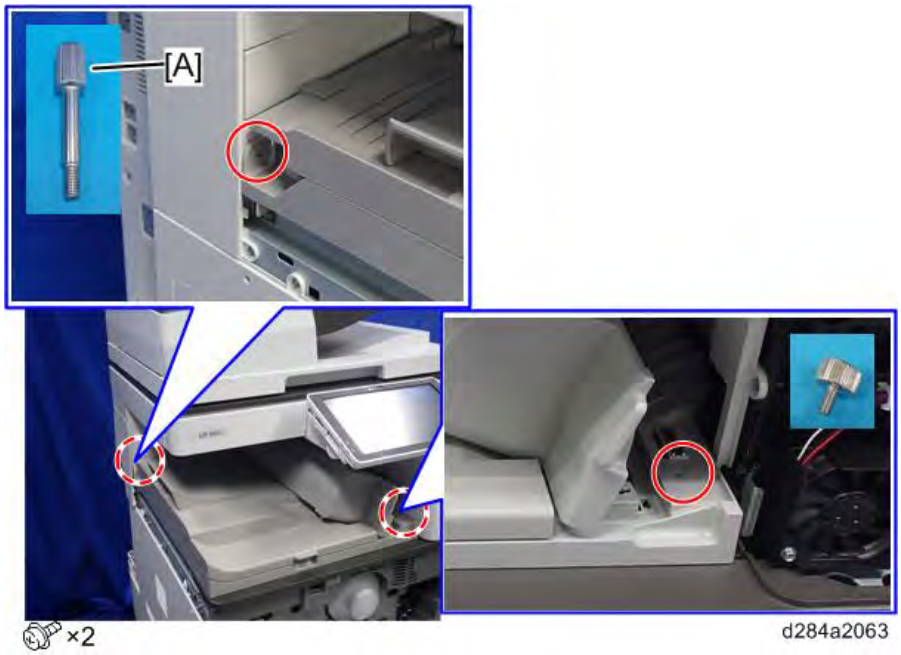
[A].



11. Attach the right front bracket [A].

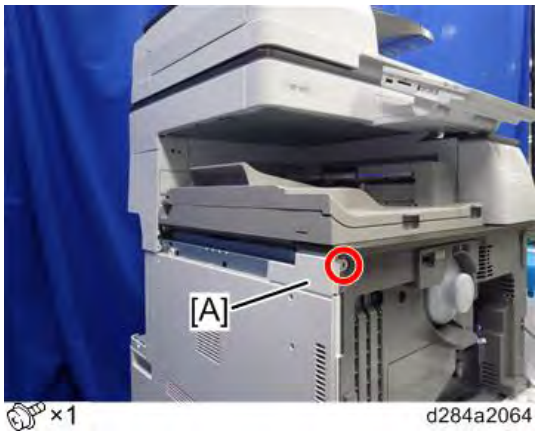


12. Attach the bridge unit to the machine (using the knob screw [A]).



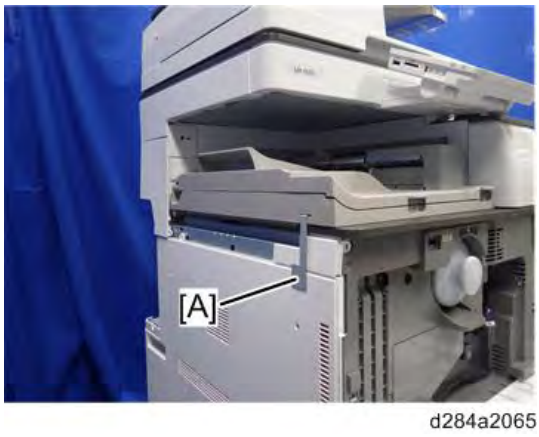
13. Attach the covers removed in step 9 and step 10, and then close the right cover.

14. Attach the upper left cover [A] provided with the accessories.



15. Attach the L type connecting bracket [A].

To fix the bridge unit securely on the machine, tighten the finisher's joint bracket [A] and the L type connecting bracket [B] together when installing the finisher.



16. Complete the bridge unit attachment. Refer to the procedure for connecting the optional unit downstream of the bridge unit.

- Booklet Finisher SR3240 (D3BB) (Booklet Finisher SR3240 / Finisher SR3230)
- Finisher SR3230 (D3BA) (Booklet Finisher SR3240 / Finisher SR3230)
- Booklet Finisher SR3220 (D3B9) (Booklet Finisher SR3220 (D3B9))
- Finisher SR3210 (D3B8) (Finisher SR3210 (D3B8))

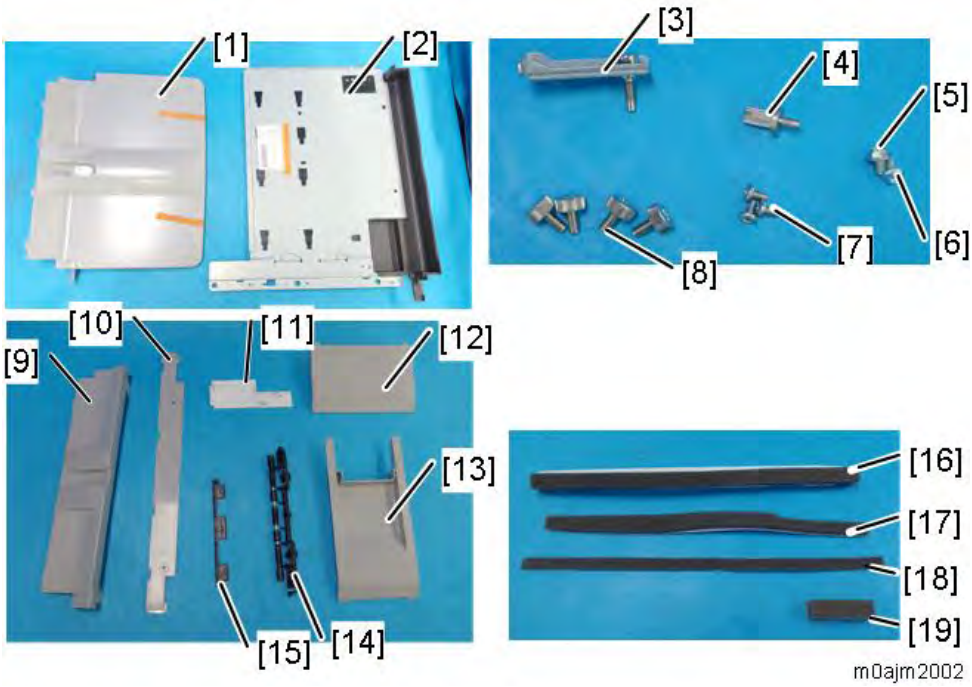
17. After the finisher is installed, turn ON the main power.

18. Check that the finisher can be selected at the operation panel.

Internal Multi-fold Unit FD3000 (M482-17, -21)

Accessory Check

No.	Description	Q'ty	Remarks
1	Paper Exit Tray	1	
2	Base Plate	1	
3	Correction Plate for Side to side registration	1	
4	Coin Screw M4	1	
5	Screw M4x6	1	
6	Screw M3x6	1	
7	Bind Screw M3x6	3	
8	Coin Screw M4x8	4	
9	Paper Exit Guide (Relay)	1	Use this when connecting the finisher beyond the internal multi-fold unit.
10	Paper Relay Cover	1	
11	Left Upper Cover	1	Use this when connecting the finisher beyond the internal multi-fold unit.
12	Support Tray: Shift	1	Use this for the Finisher SR3230/SR3240 shift tray.
13	Support Tray: Proof	1	Use this for the Finisher SR3230/SR3240 proof tray.
14	Driven Roller (Flat)	1	
15	Paper Support Guide (Small)	1	
16	Cushion (Top/Front)	1	Not used for this machine.
17	Cushion (Rear)	1	
18	Cushion (Paper Entrance)	1	
19	Cushion (Short)	1	Not used for this machine.
-	Sheet (applying pressure to the folding roller)	1	
-	Sheet (attaching the paper support guide)	1	
-	Sheet (keeping the accessories)	1	
-	Sheet (about interference with the finisher's I/F cables)	1	



When installing the internal multi-fold unit alone

Use the paper exit tray [1] and the paper relay cover [10].

When connecting the finisher beyond the internal multi-fold unit

Use the paper exit guide (relay) [9] and the left upper cover [11].

Note

The customer should keep the unused accessories included with the product. When connecting a finisher that was purchased separately or when disconnecting the finisher that is connected downstream from the internal multi-fold unit, if the customer did not keep the necessary accessories, order them as service parts.

Installation Procedure

⚠CAUTION

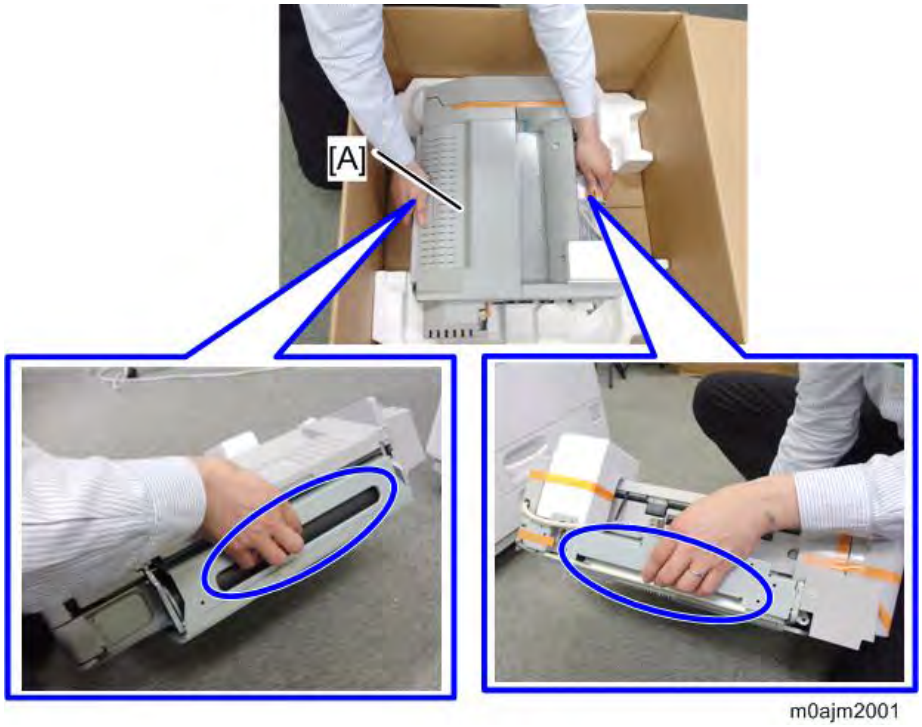
- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

Note

- This option cannot be used together with the following peripherals:
  - Internal Shift Tray SH3070 (D691)
  - Side Tray Type M3 (D725)
  - Bridge Unit BU3070 (D685)
  - Internal Finisher SR 3180 (D766)
  - Internal Finisher SR 3130 (D690)
- For using this option together with "1 Bin Tray BN3110 (D3CQ)", attach the bottom plate of this option at the beginning, then install the "1 Bin Tray BN3110 (D3CQ)", followed by installing this option.

1. Unpack the internal multi-fold unit [A].

Hold the parts circled in blue. Do not hold other parts. Doing so may damage exterior cover or deform the frame.

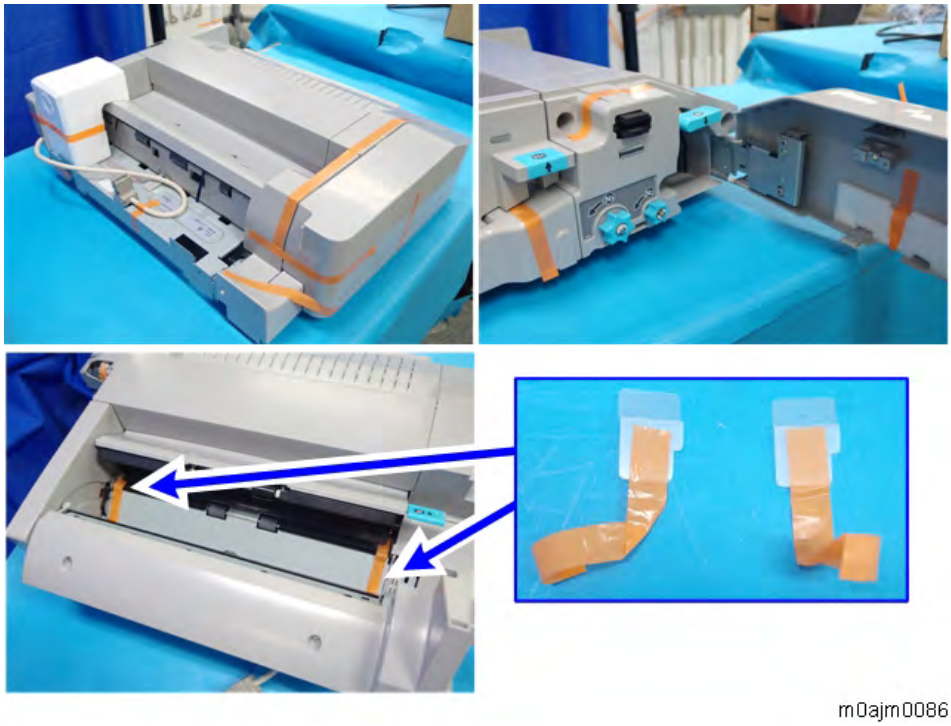


m0ajm2001

2. Remove the orange tapes and shipping retainers, and take out the accessories (fixing screws, etc.) provided with this unit.

Note

- When removing the upper front cover, release the hooks at the back of the cover.

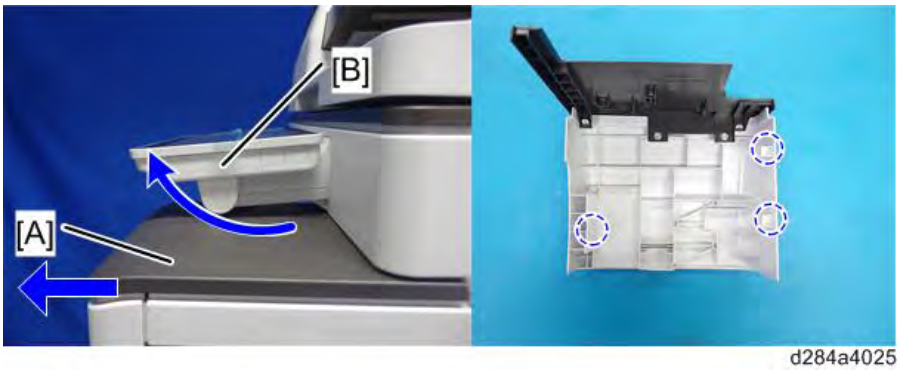


m0ajm0086

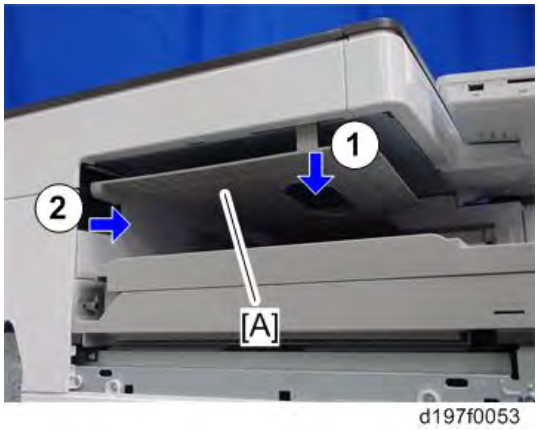
3. Open the right cover, and remove the upper front cover [A].

Note

- When removing the upper front cover, release the hooks at the back of the cover.
- Tilt the operation panel [B] upward to a horizontal position, and then remove the upper front cover [A].

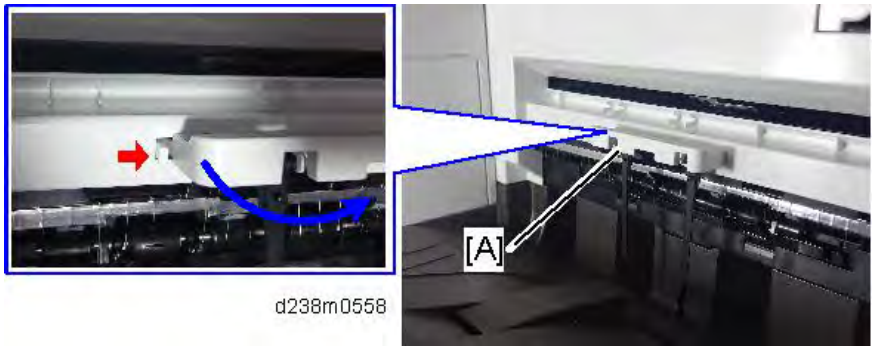


4. Remove the inverter tray [A].



5. Remove the paper exit feeler [A].

The removed paper exit feeler can be discarded.

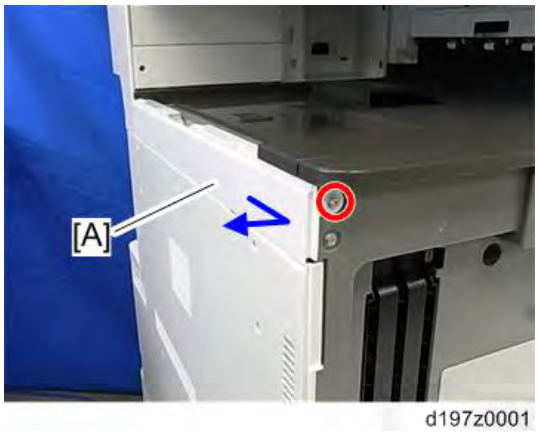


6. Tuck in the lever [A] for detecting when the tray is full.

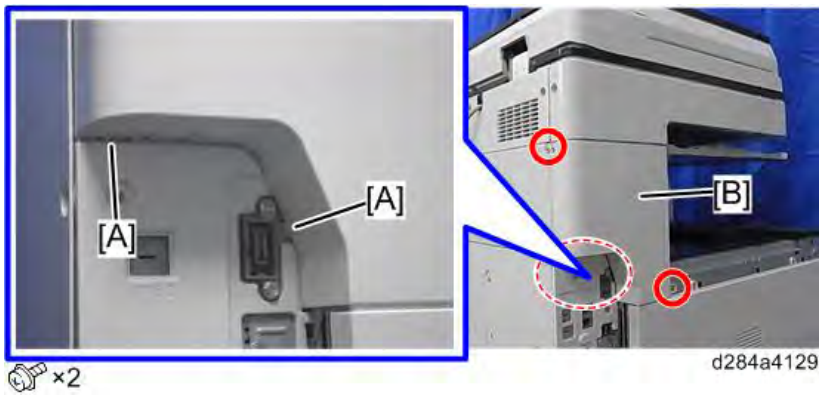
7. Remove the paper exit cover [A] (×1).

8. Remove the paper exit tray [A].

9. Open the front cover, and remove the upper left cover [A] by sliding it in the direction of the arrow (×1).



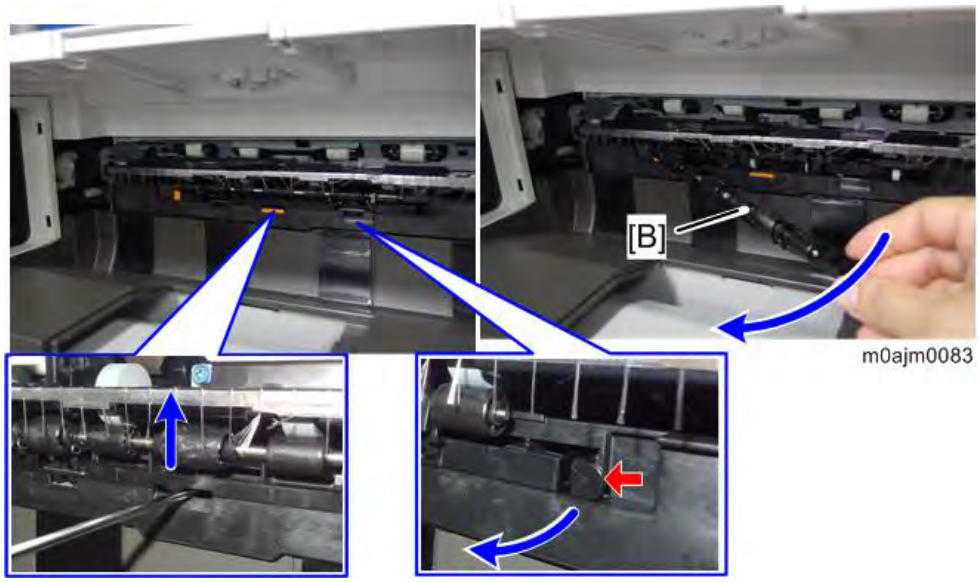
10. Release the hooks [A], and remove the left rear cover [B].



11. Remove the connector cover [A].

12. Remove the driven roller [B] at the machine's exit tray and attach the supplied driven roller [A].

- Insert a flathead screwdriver into the depression in the center, and then, lifting the driven roller, unlock the part indicated by the red arrow.
- When attaching the driven roller, push its center all the way in until it clicks.

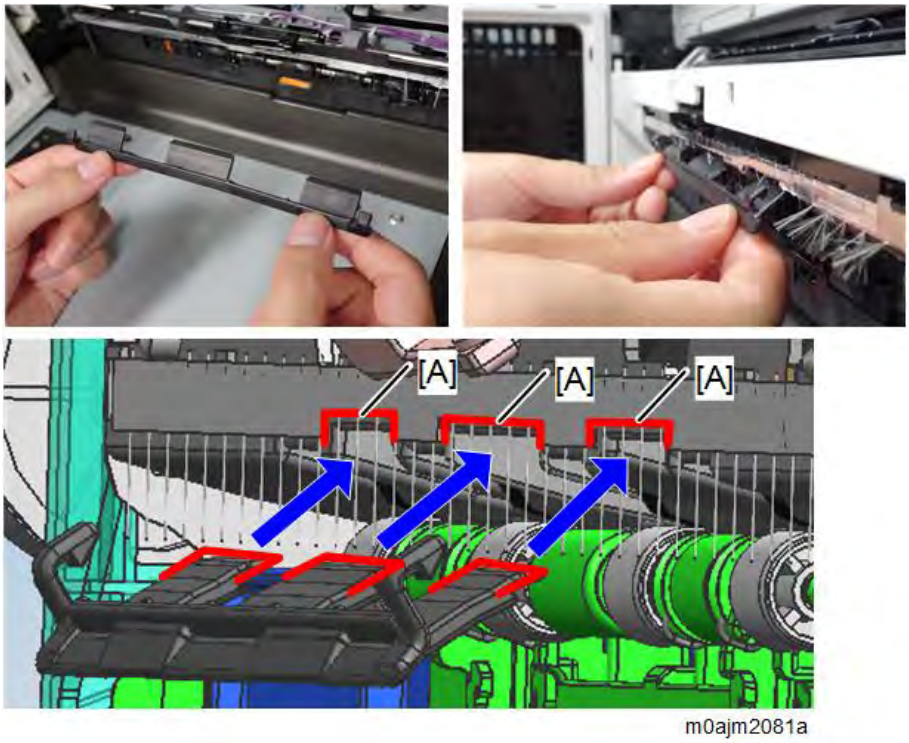


[A]: The supplied driven roller has flat rollers.

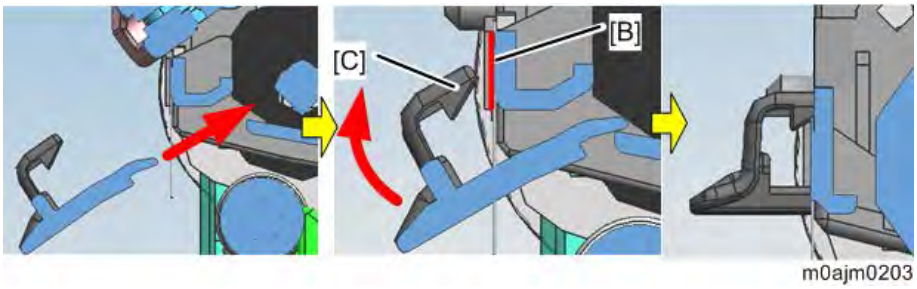
[B]: The machine's standard driven roller has drum-type rollers (as indicated by the red frames).

13. Attach the paper support guide (small) to the exit tray (hook x2).

1. Align and insert the support guide's tabs under the notches in the discharge brush frame [A] upward at an angle.

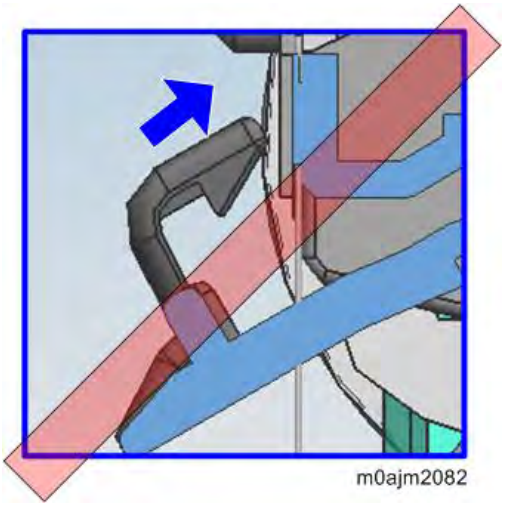


2. Rotate the support guide upward so that the support guide's hooks [C] become horizontal to the discharge brush frame [B].



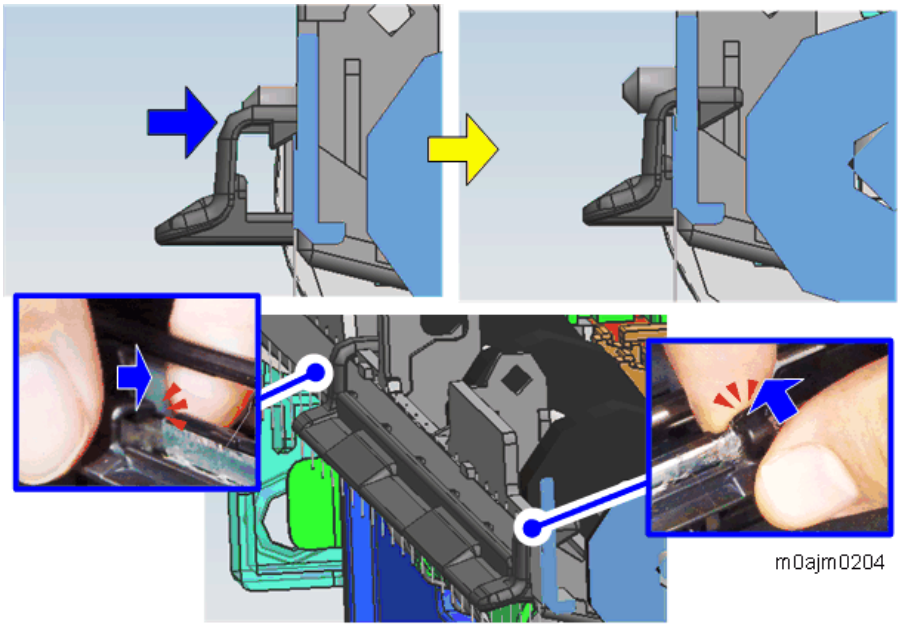
Important

- Do not continue to hold the support guide at an angle when pushing it in. Otherwise you might cause faulty attachment or damage to the hooks.

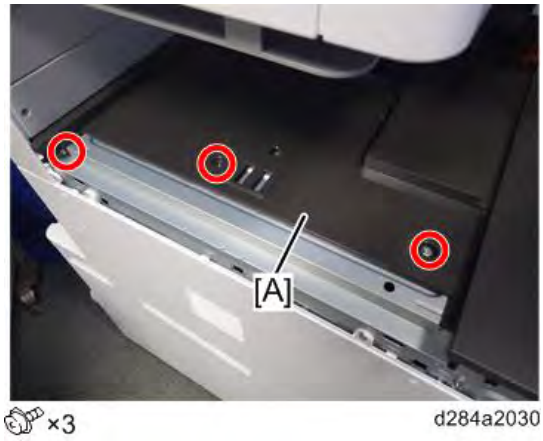


3. Holding the back of the discharge brush frame with the forefingers, push the hooks in horizontally one

at a time until they click.

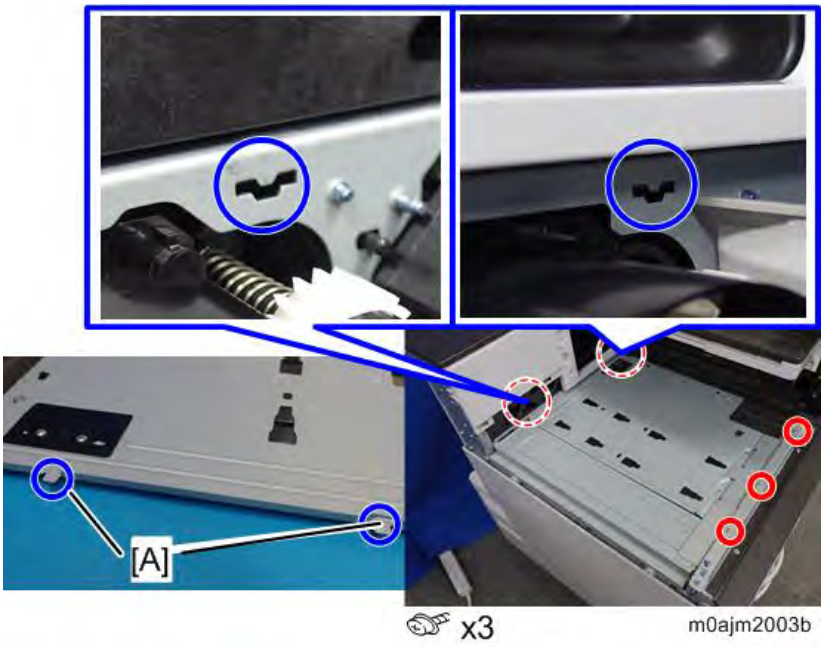


14. Remove the paper exit lower cover [A].



15. Attach the base plate (3 × 6). Before you attach it, insert the base plate's 2 tabs [A] into the slots in the

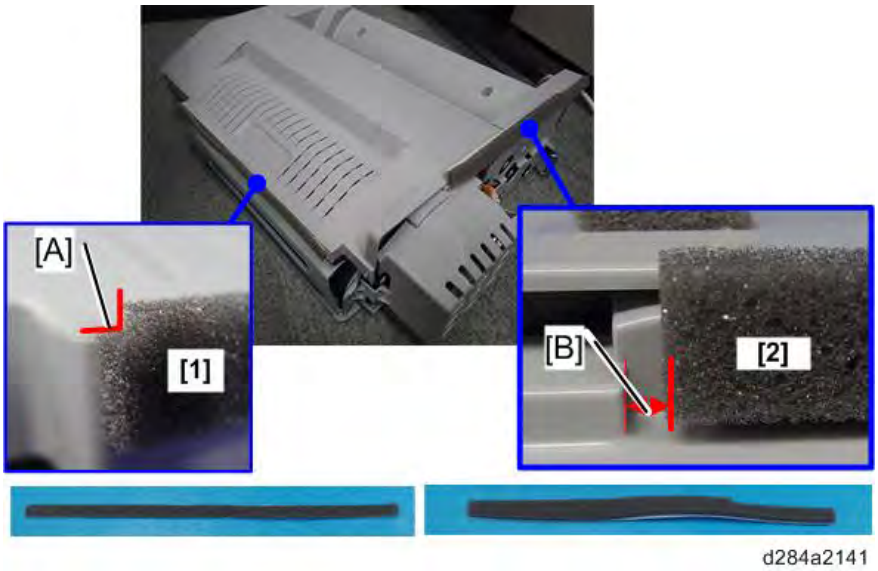
machine.



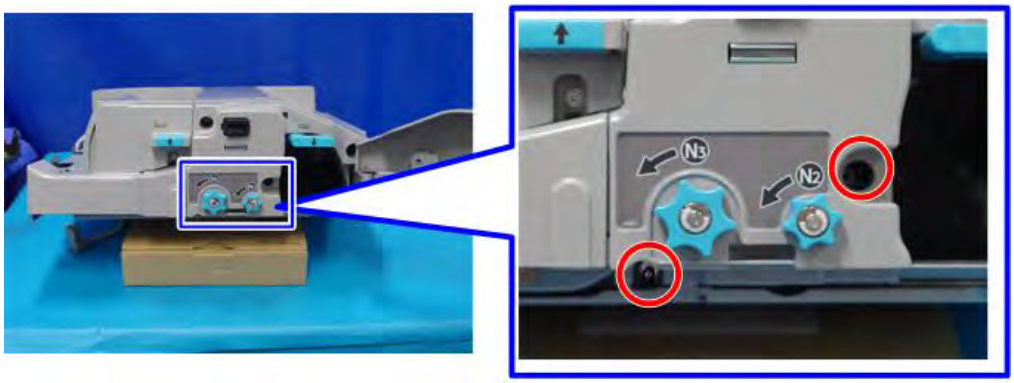
16. Reattach the covers in the following order: paper exit cover and upper front cover. Then close the front cover and right door.

17. Attach the cushions to the internal multi-fold unit.

- When attaching the cushion (paper entrance) [1], align the cutout [A] with the top of the upper cover.
- When attaching the cushion (rear) [2], align it with a point 3 mm from the left edge [B].



18. Open the front cover of the internal multi-fold unit, and then secure the 2 screws in the recesses.



m0ajm2008

Note

- This operation is required to apply pressure to the internal multi-fold unit roller when attaching it. The screw holes become inaccessible when the unit is attached to the machine, so be sure to perform this in advance.
- Be sure to turn the screws until they stop. It is not necessary to continue tightening them.

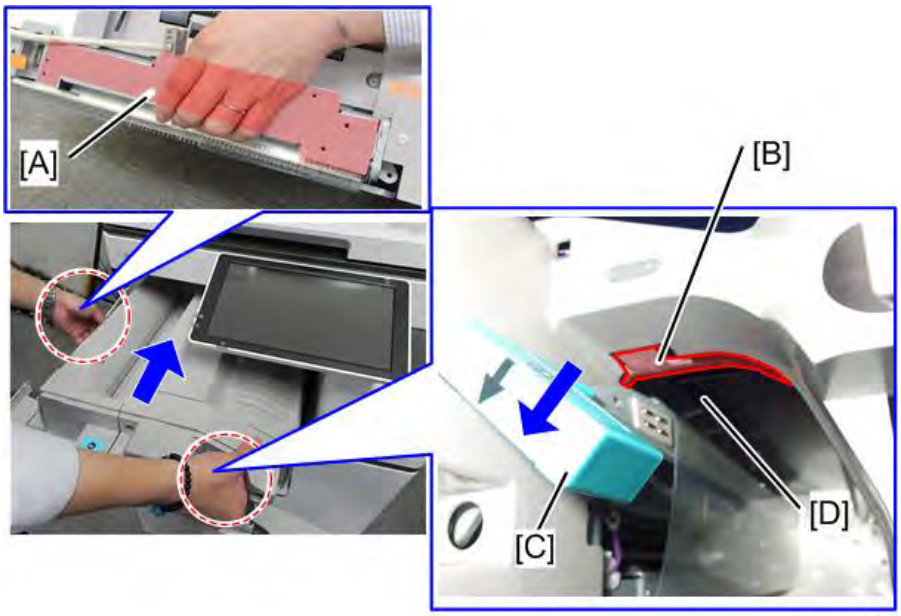
19. Temporarily place the internal multi-fold unit [A] on the base plate.

d284a2031

20. Open the front cover of the internal multi-fold unit, and then, holding the exit tray frame [A] and the top edge of the opening [B], lift the internal multi-fold unit and attach it to the machine.

- Lower the lever [C] to keep the paper guide plate open during operation, because the plate might be deformed if a strong force is applied while the guide plate is closed.
- Hold the metal frame part of the opening [B], not the exterior cover, to avoid the deformation of the cover.

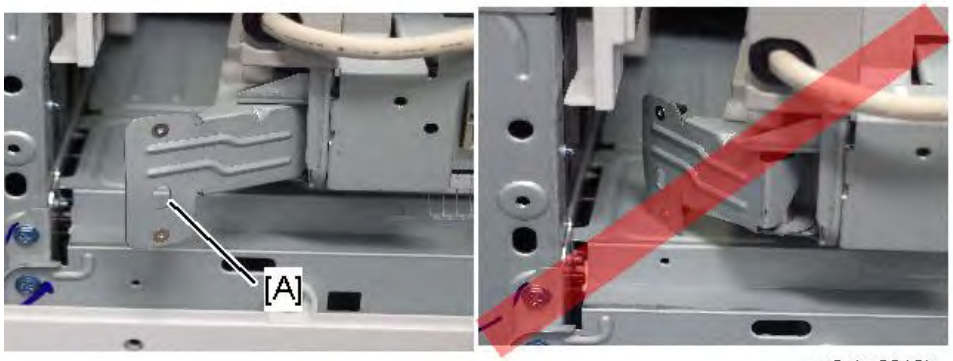
- Be careful not to touch the mylar sheet [D] located behind.



d284a2032

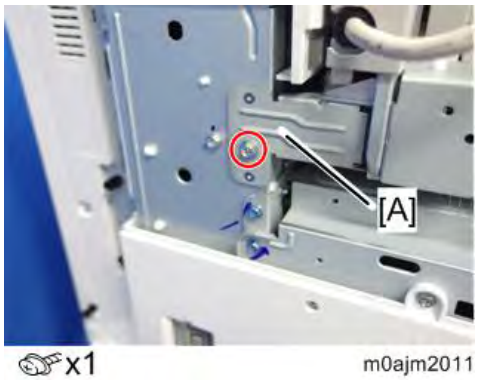
Note

- Be careful not to let the securing bracket [A] get caught between the internal multi-fold unit and the machine.



m0ajm2010b

21. Attach the securing bracket [A] (M4x6).



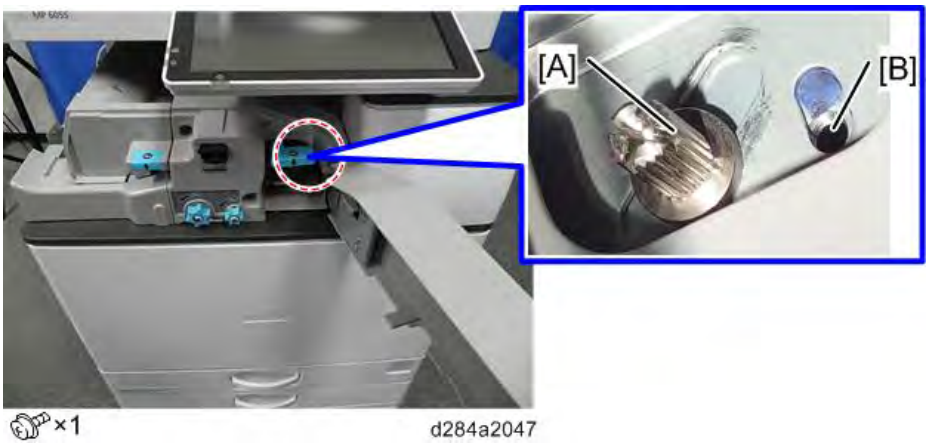
m0ajm2011

22. Temporarily attach the internal multi-fold unit with the supplied coin screw (M4x1).

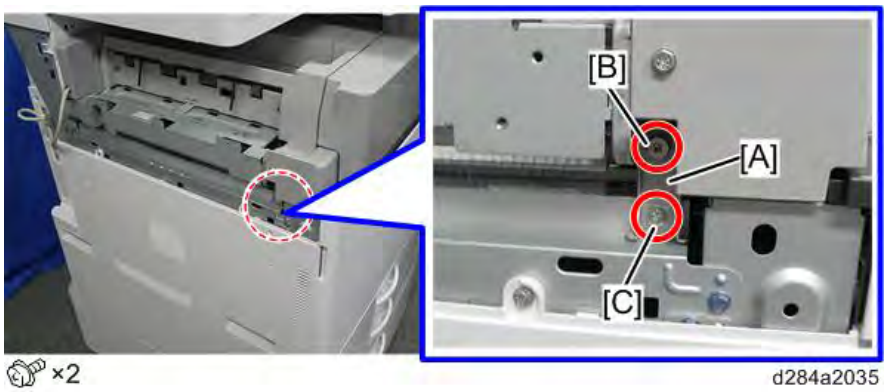
Note

- The unit is only temporarily attached at this stage, so leave the screws loose.

- Fix the screw to the left screw hole [A] of the two screw holes. Do not use the right screw hole [B].



23. Attach the correction plate for side-to-side registration [A] to the machine (M3x6).



Note

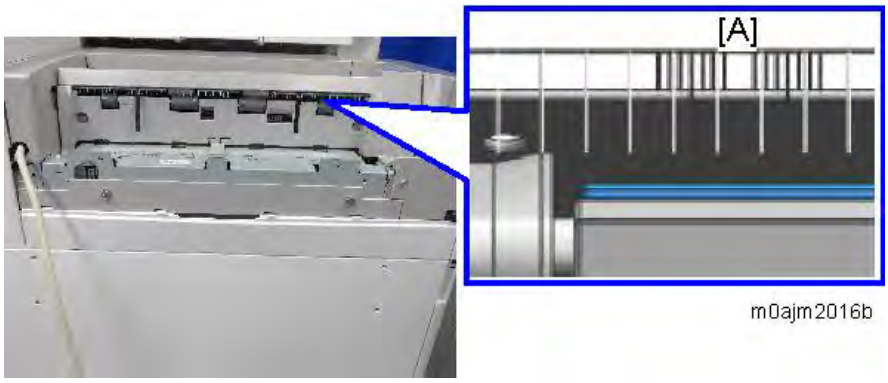
- Partially secure the adjusting screw [B] on the upper part of the correction plate, and then secure the screw [C] at the bottom part of the plate.

24. Connect the cable [A] of the internal multi-fold unit to the machine.

25. Turn ON the main power.

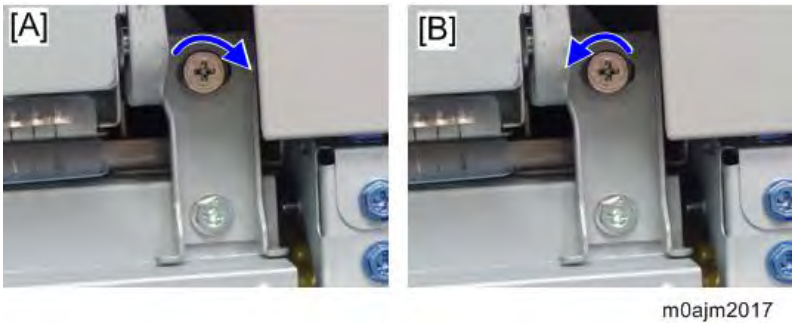
26. Feed A3/DLT paper (any brand) from Tray 2 and check the scale [A].

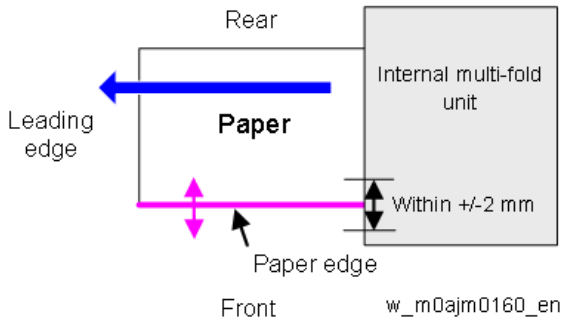
Select the [User Tools] icon > [Machine Features] > [Printer Features] > [List/ Test Print] > [Operation Test].



27. Check the movement at the paper edge from the leading to trailing edges, and turn the adjusting screws of the correction plate to adjust the internal multi-fold unit's position until the deviation stays within 2 marks on the scale. (Each mark represents 1 mm.)

- [A]: When the paper edge shifts towards the front, turn the adjusting screw clockwise.
- [B]: When the paper edge shifts towards the rear, turn the adjusting screw counterclockwise.

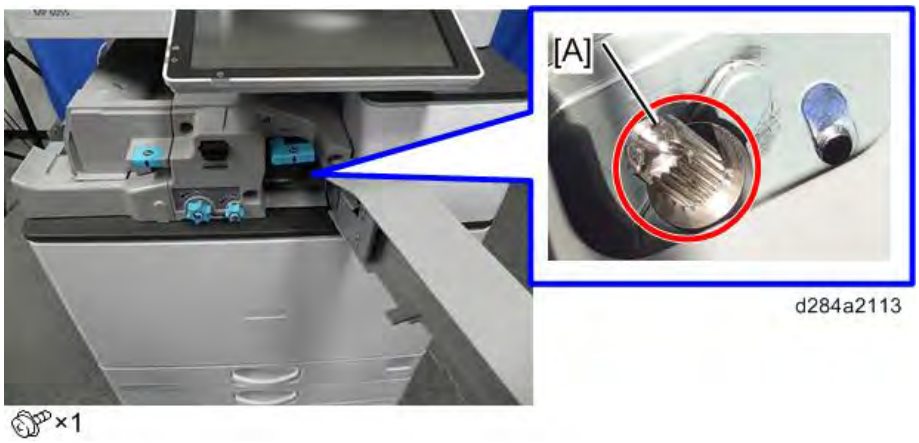




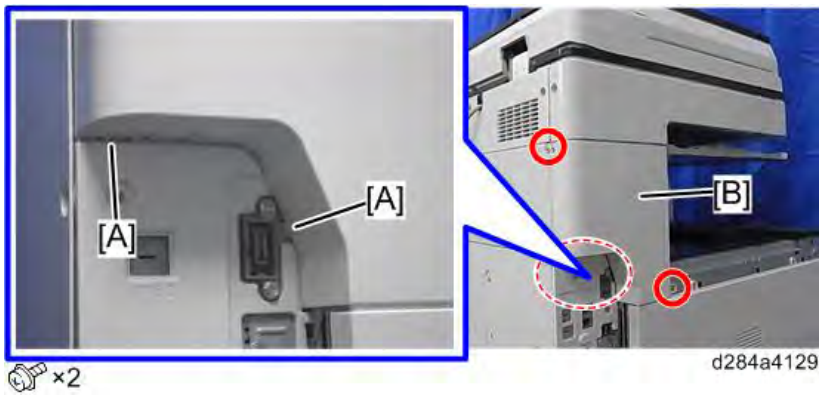
28. After registration, tighten the coin screw [A] to secure the internal multi-fold unit.

Important

- When you fully open the front cover of the internal multi-fold unit, it may interfere with the machine's upper front cover, causing the internal multi-fold unit to become misaligned. Therefore, tighten the screw [A] with a stubby screwdriver.



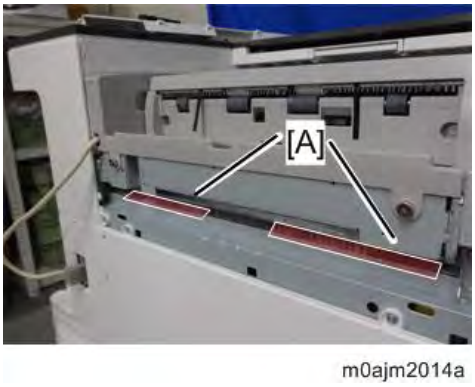
29. Reattach the hooks [A], and re-install the left rear cover [B].



30. When attaching the finisher beyond the internal multi-fold unit, attach the supplied paper exit guide (No.9). For details, refer to When Attaching the Finisher Beyond the Internal Multi-Fold Unit.

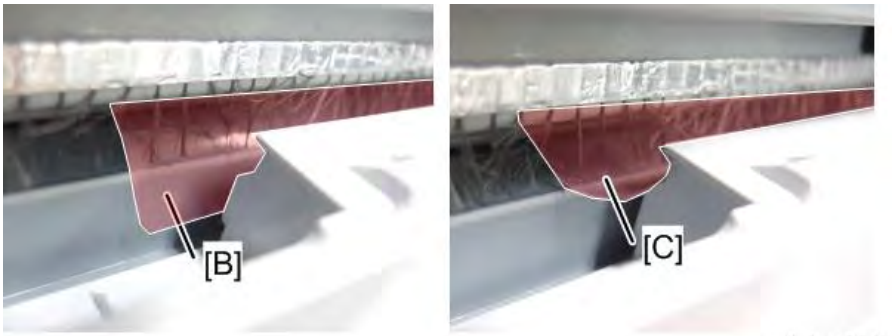
31. Reattach the left upper cover.

- The exit tray of the internal multi-fold unit has mylar sheets [A] on it. When attaching the cover, be careful not to damage the mylar sheets [A].
- The left upper cover bulges slightly because of the mylar sheets, but this does not cause any problem if the mylar sheets are positioned correctly.



- Reattach the left upper cover with the mylar sheets [B] sandwiched behind it. The mylar sheets must not

catch on or hang over the left upper cover, as shown by [C].



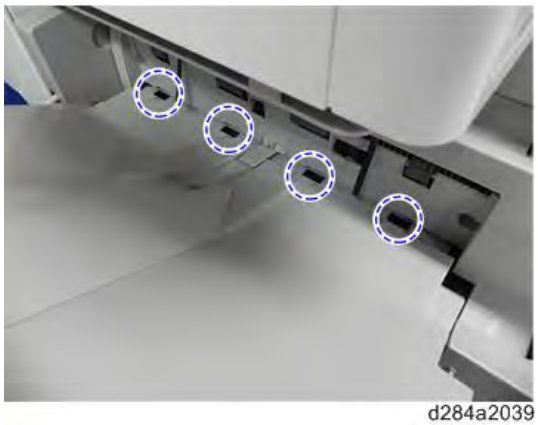
m0ajm2014b

32. Reattach the inverter tray.

33. Insert the 4 hooks on the paper exit tray [A] into the slots (hook x 4).

When attaching the paper exit tray, do not put the movable plate [B] under the paper exit tray, because that would interfere with the operation of the internal multi-fold unit.

d284a2038



d284a2039

34. Tighten the screws to secure the paper exit tray (coin screw x2 :M4).

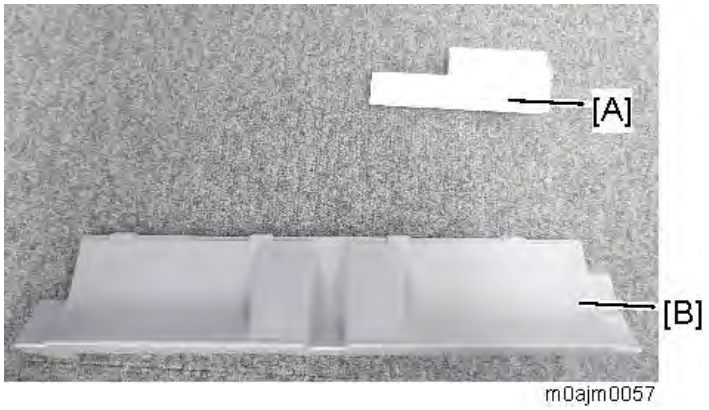
m0ajm2020

35. Attach the paper relay cover (coin screw x2: M4)

m0ajm2021

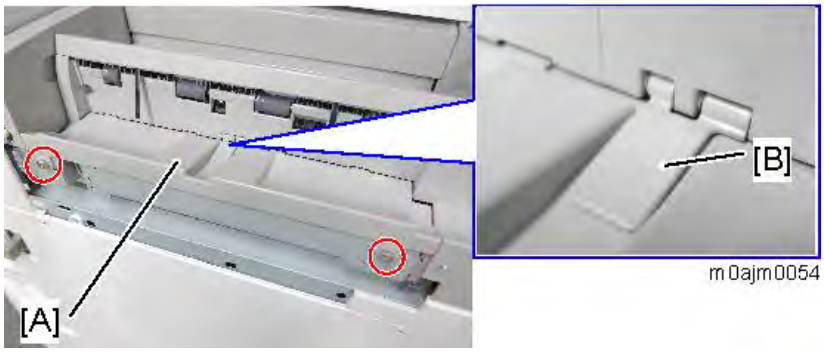
When Attaching the Finisher Beyond the Internal Multi-Fold Unit

When attaching a finisher downstream from the internal multi-fold unit, attach the supplied left upper cover [A] and paper exit guide (relay) [B].

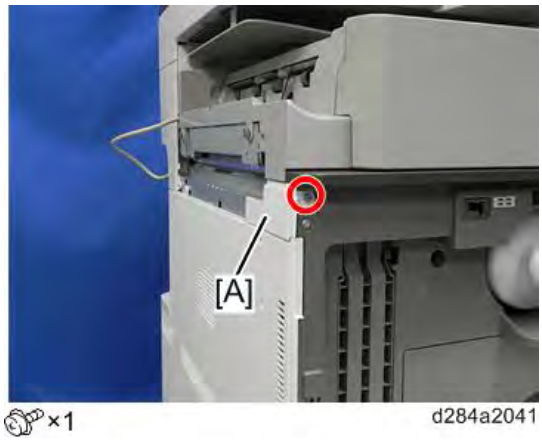


m0ajm0057

1. Attach the paper exit guide (relay) [A] provided with this unit. (coin screw x2)
When attaching the paper exit tray, do not put the movable plate [B] under the paper exit tray, because that would interfere with the operation of the internal multi-fold unit.



2. Attach the left upper cover [A] provided with this unit.



3. To complete installation of the finisher, refer to the finisher installation below.

- Booklet Finisher SR3240 / Finisher SR3230
- Booklet Finisher SR3220 (D3B9)
- Finisher SR3210 (D3B8)

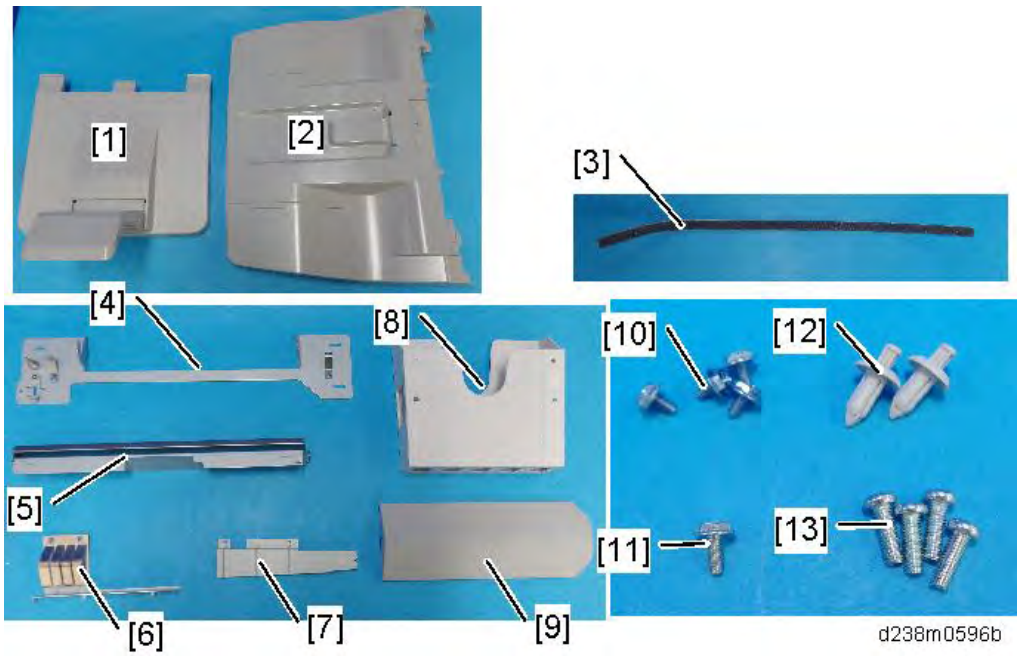
Booklet Finisher SR3240 / Finisher SR3230

Important

- To attach this optional unit, the following optional units are required.
  - Bridge Unit BU3070 (D685) or Internal Multi-Fold Unit FD3000 (D3E4)
  - LCIT PB3170/PB3230 (D695) or Paper Feed Unit PB3150 (D694)

Accessory Check

No.	Description	Q'ty	Remarks
1	Booklet Tray	1	Booklet Finisher SR3240 only
2	Shift Tray 2	1	
3	Cushion	1	
4	Joint Bracket	1	
5	Entrance Guide Plate	1	
6	Ground Plate	1	
7	Booklet Stapler Unit Fixing Cover	1	Booklet Finisher SR3240 only
8	Tray Holder	1	
9	Proof Support Tray	1	
10	Screws (3x6)	4	
11	Screws (3x8)	1	
12	Round Rivets	2	
13	Screws (4x12)	4	



Installation Procedure

⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

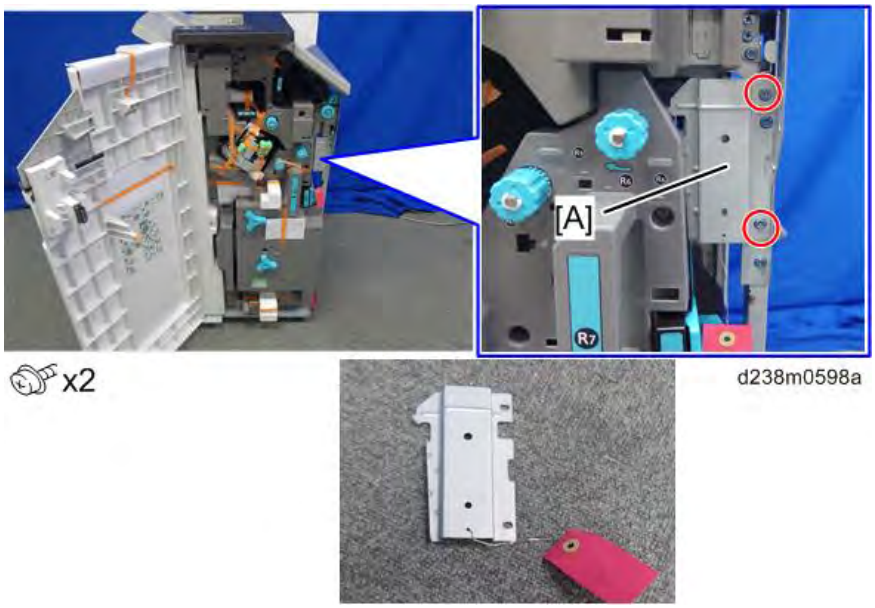
Note

- Before installing this option, attach the "Bridge Unit BU3070 (D685)" or "Internal Multi-Fold Unit FD3000 (D3E4)" first.
- Attach the "LCIT PB3170/PB3230 (D695)" or "Paper Feed Unit PB3210/PB3220 (D787)" first before installing this option.

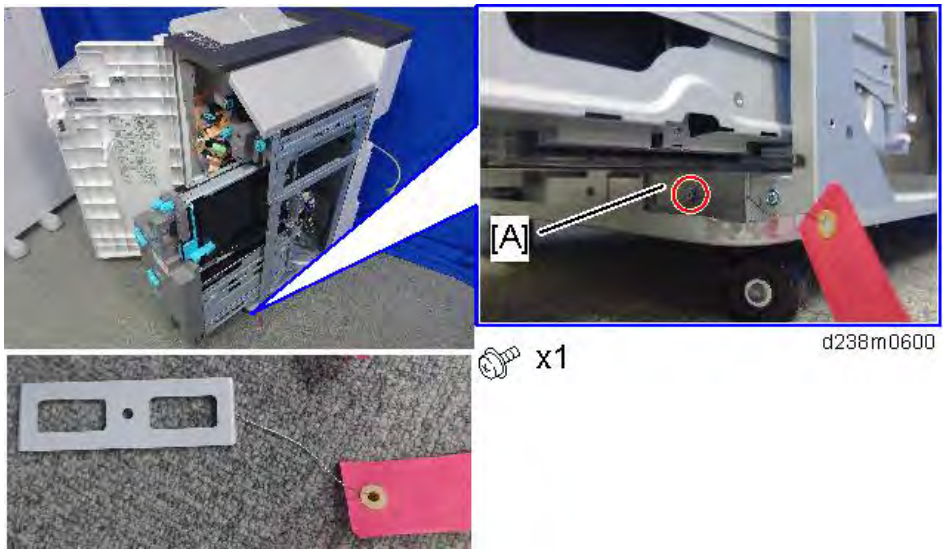
1. Remove the external orange tape and shipping retainers.

d238m0597

2. Open the front cover, and remove the orange tapes, shipping retainers and fixing bracket [A].
Keep the screws that were removed when removing the fixing bracket [A] and reuse them for attaching the supplied booklet stapler unit fixing cover [A] in step 4.

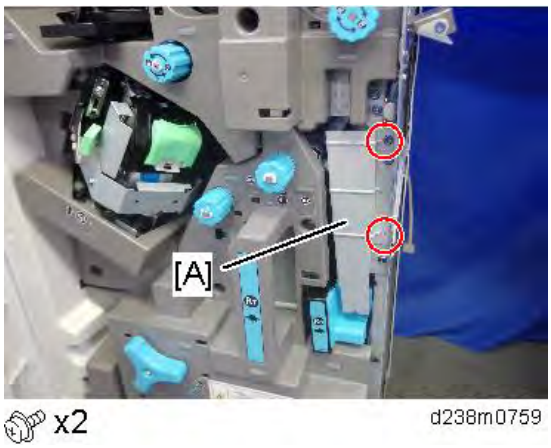


3. Pull out the saddle stitch unit and remove the fixing bracket [A] at the lower part of the finisher.



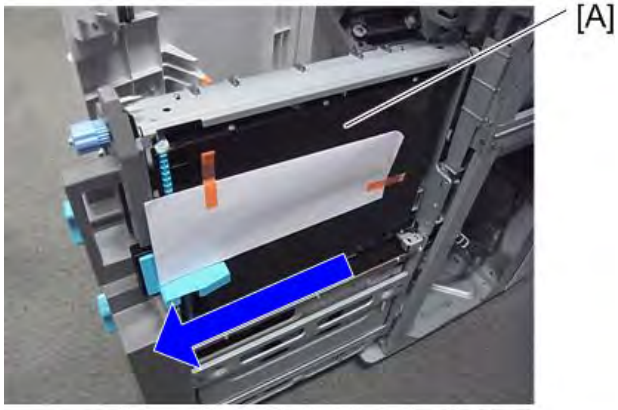
4. Attach the supplied booklet stapler unit fixing cover [A]. (Booklet Finisher SR3240 only).

When attaching Punch Unit PU3060, it is not necessary to attach this cover.



5. Pull out the saddle stitch unit [A] again, and remove the orange tape and shipping retainers (Booklet Finisher

SR3240 only).



d1462543

6. Remove the accessories in the package (fixing screws, etc.).

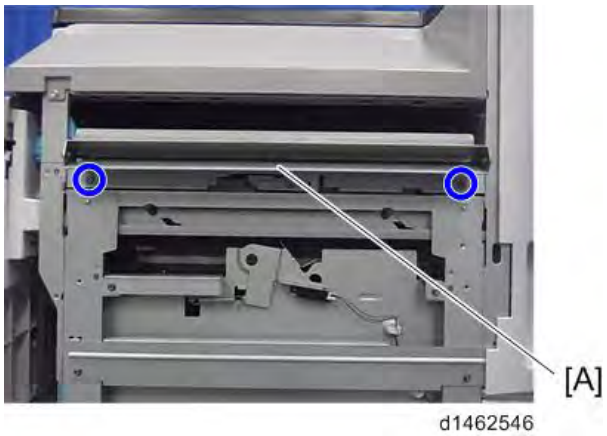
7. Attach the shift tray [A] (×1:3x8).

d1462544

8. Attach the booklet tray [A] (Booklet Finisher SR3240 only).

d146z0024

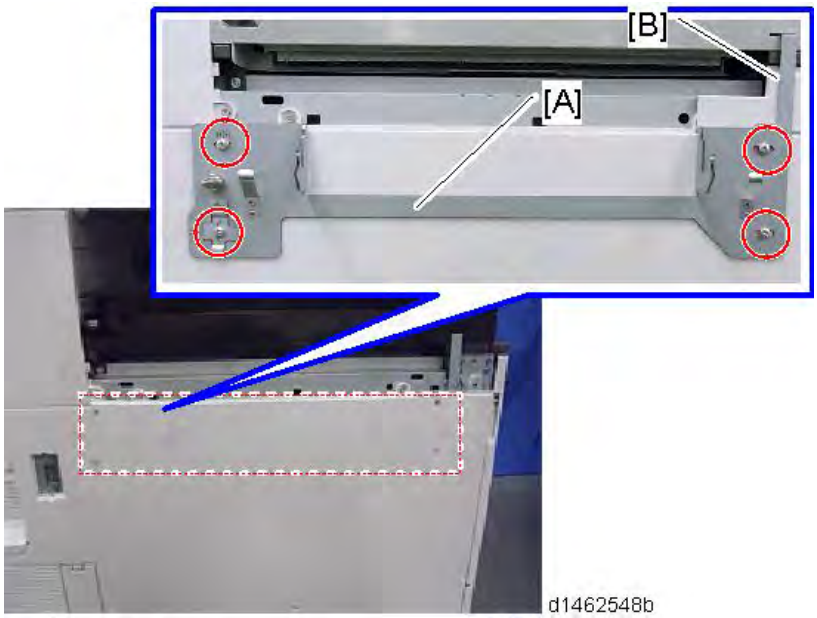
9. Attach the entrance guide plate [A] (×2: 3x6).



10. Attach the ground plate [A] (×2: 3x6).

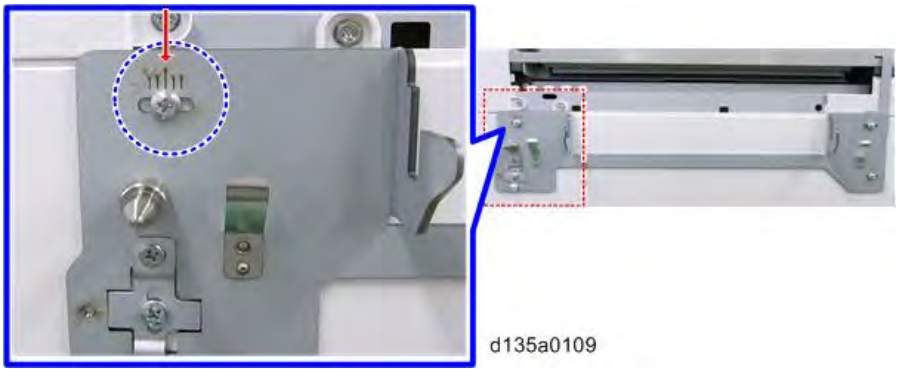
11. Attach the joint bracket [A] to the machine (×4).

Tighten the joint bracket [A] and bracket [B] of the bridge unit together.



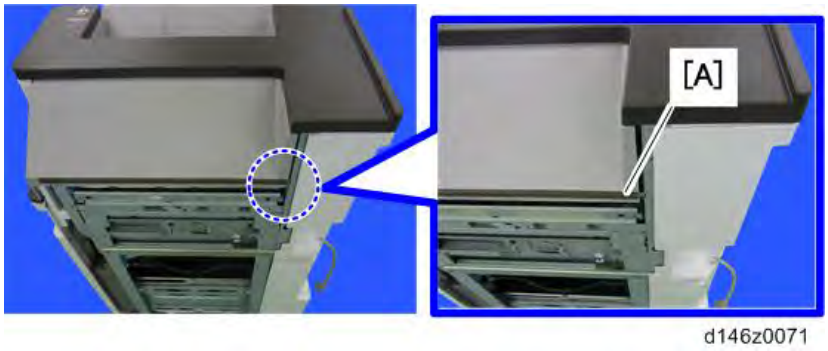
Note

- Attach the screw so that the screw head is at the center of the mark.



12. Clean the right side of the upper cover with a cloth moistened with alcohol, and then attach the cushion to the finisher.

- Make sure that the cushion is aligned with the rear-lower edge [A] of the upper cover.



13. Connect the cable of the finisher to the connector of the Internal Multi-Fold Unit. (Only when the Internal Multi-Fold Unit is installed.)

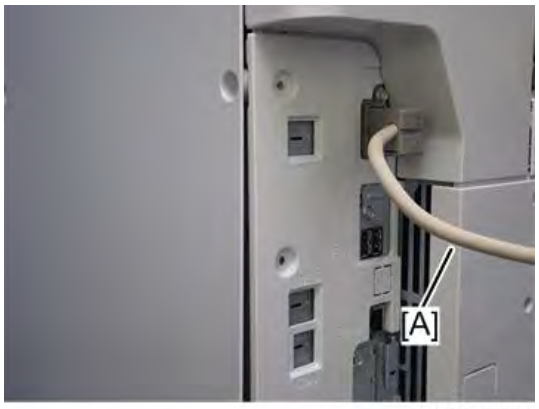
14. Remove the screw on the connection lever [A] and pull the lever.

x1

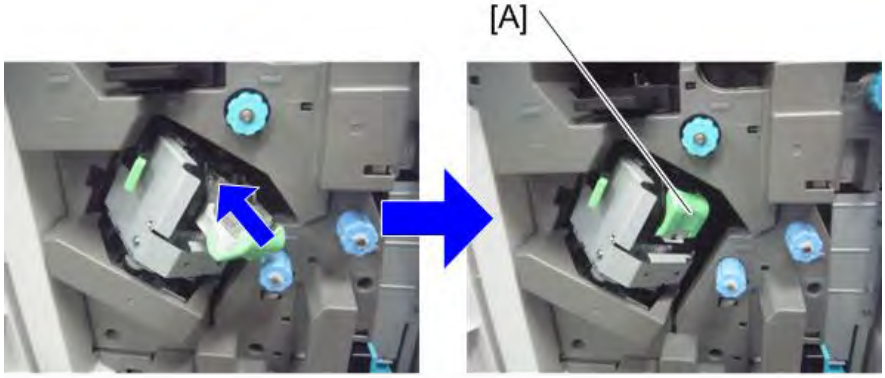
15. Connect the finisher to the main unit, and then push in the connection lever [A] to fasten it to the main unit.

x1

16. Connect the interface cable [A] to the machine. (Only when the Bridge Unit is installed.)



17. Set the staple cartridge [A].



18. Attach the tray holder (x2).

19. Close the front cover.

20. Turn ON the main power.

21. Deliver some A3/DLT paper to the proof tray and check if the vertical registration is correct according to the adjustment scale for A3/DLT paper. (Finisher Registration Adjustment)

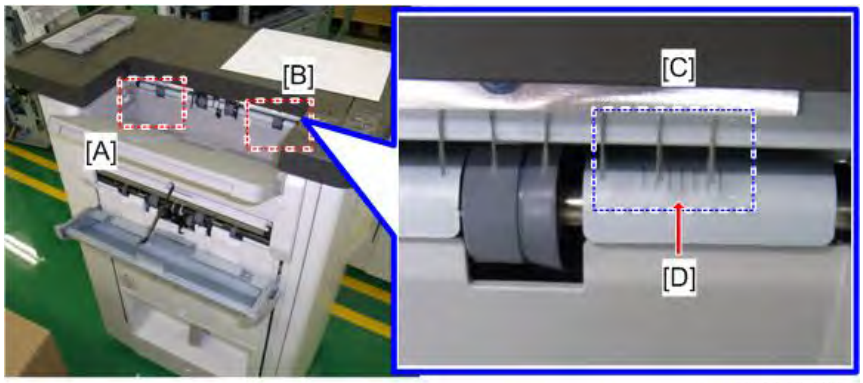
22. Check that the finisher can be selected on the operation panel, and check the finisher's operation.

Adjustment after Installing the Finisher

After installing a finisher, make sure that the side-to-side registration of the finisher matches that of the main machine.

How to Check and Adjust the Side-to-Side Registration

Check the side-to-side registration by exiting to the proof tray. Print out an A3 or DLT sheet to the proof tray. Using the markings on the front-most exit roller, check to see where the paper edge is located when the paper is fed out. For purposes of accuracy, print out about 5 sets. If side-to-side registration shift occurs, see the Troubleshooting section and make adjustments (Other Problems).



[A]: Scale marks for DLT

[B]: Scale marks for A3

[C]: 7 scale marks at 2mm intervals

[D]: Center mark

Note

- Each marking represents 2mm.
- If the paper edge is lined up with the center marking, this means the paper is aligned correctly.
- If the paper edge is lined up with any marking to the right of center, this means the paper is shifted toward the front.
- If the paper edge is lined up with any marking to the left of center, this means the paper is shifted toward the rear.

Attaching a Support Tray

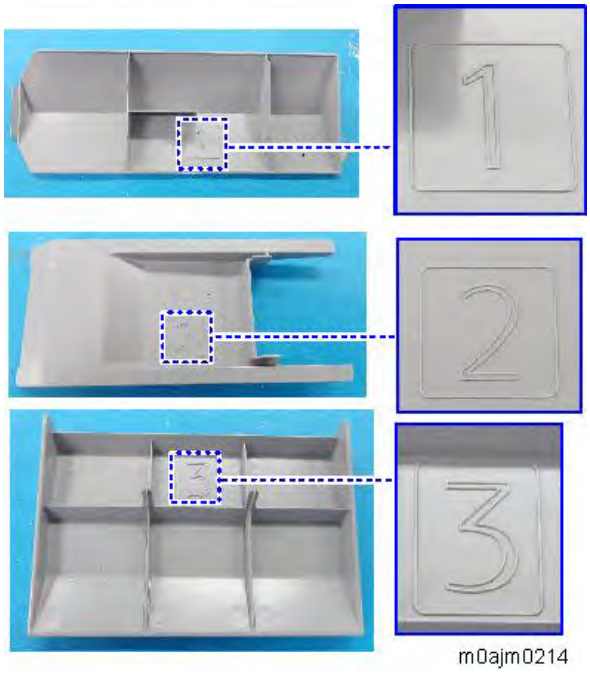
Explain the following information to the users.

The sensor may detect that the exit tray is full prematurely when delivering z-folded sheets or curled paper to the tray.

If a message reporting a full paper exit tray appears, the job is suspended until the paper is removed from the paper exit tray. By attaching a support tray, you can prevent the premature full detection.

Three types of support tray are supplied with this finisher. Make sure that you understand the purpose of each support tray before installing one of them.

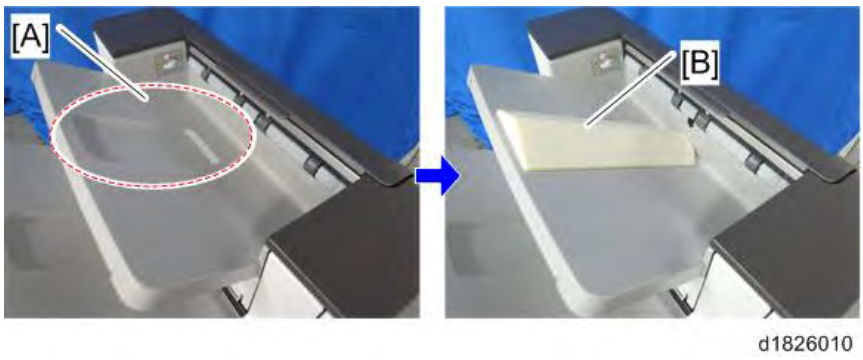
2.Installation



Support Tray: Proof Tray ("1" marked on the back)

When using B4, LG or larger paper, or when using limp paper, the sheet may become bent, resulting in premature full detection.

This can be solved by attaching the proof support tray [B] on the proof tray [A].



Problem that may occur after attaching this support tray:

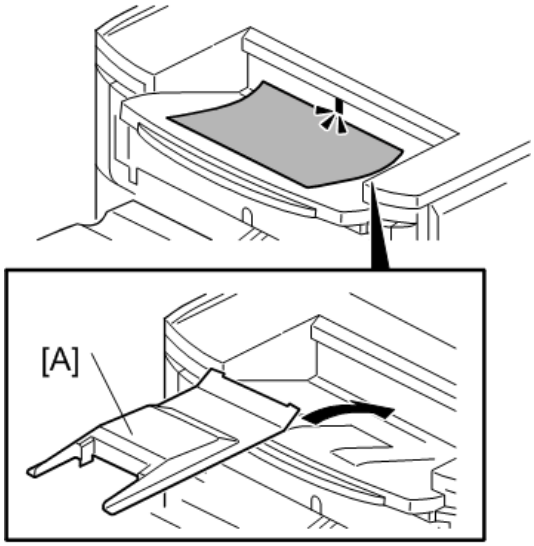
When printing A4, LT or smaller paper with the support tray, the machine stacks only 200 sheets, which is less

than the standard specification of 250 sheets.

When printing B4, LG or larger paper with the support tray, the machine stacks 50 sheets, which is the same as the standard specification.

Support Tray: Proof Tray ("2" marked on the back) provided with the Internal Multi-Fold Unit FD3000

By attaching Support Tray: Proof [A], more sheets can be stacked when delivering z-folded sheets to the proof tray, preventing premature full detection.



d1354040

Support Tray: Shift Tray ("3" marked on the back) provided with the Internal Multi-Fold Unit FD3000

By attaching Support Tray: Shift [A], more sheets can be stacked when delivering z-folded sheets to the shift tray, preventing premature full detection.

The sensor is located at the paper exit. During the installation, be careful not to remove the feeler.

m0ajm0116

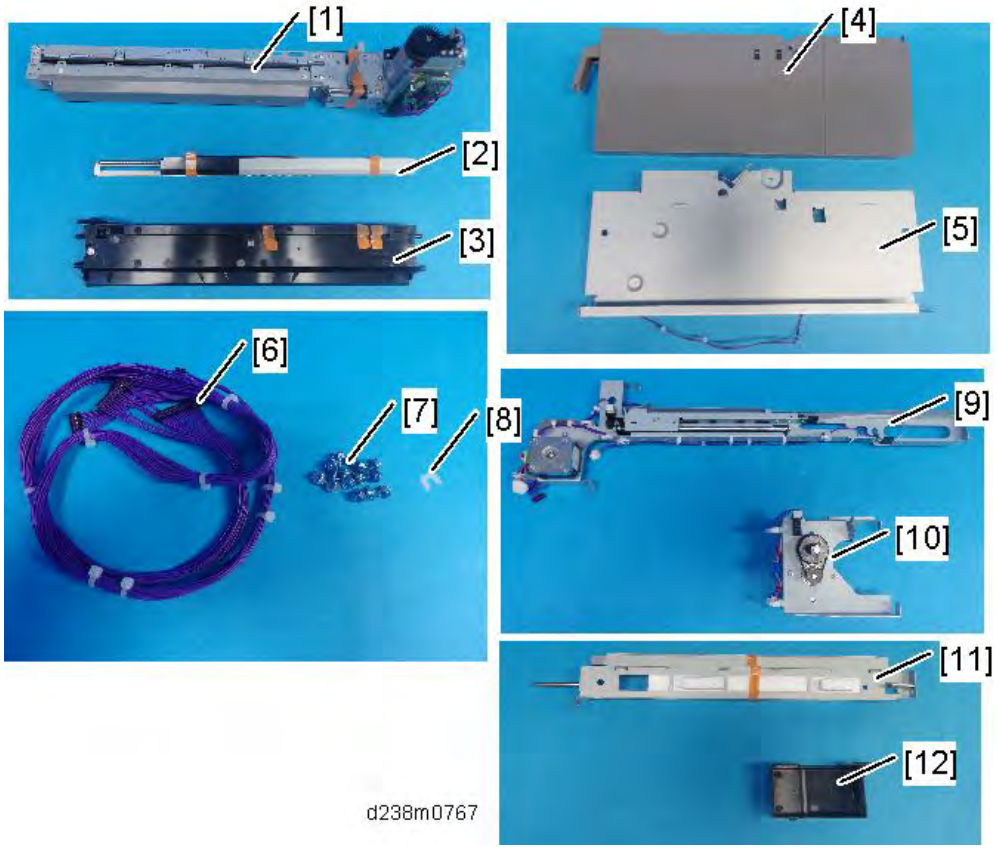
Punch Unit PU3060 (D706)

Note

- This Punch Unit is for the Booklet Finisher SR3240 (D3BB)/Finisher SR3230 (D3BA)

Accessory Check

No.	Description	Q'ty	Remarks
1	Punch Unit	1	
2	Registration Guide Plate	1	
3	Punch Waste Paper Guide	1	
4	Hopper	1	
5	Hopper Bracket	1	
6	Harness	1	
7	Tapping Screw- M3×6	15	
8	Clip Ring	1	
9	Side-to-side Detection Unit	1	
10	Punch Unit Movement Motor Unit	1	
11	Punch Unit Stay	1	
12	Cover	1	

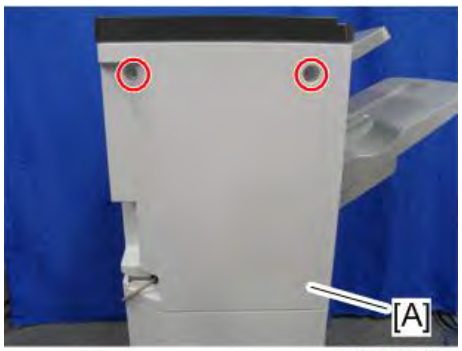


Installation Procedure

⚠CAUTION

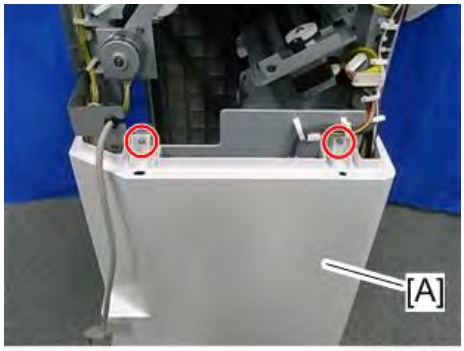
- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

1. Remove the rear upper cover [A]. (×2)



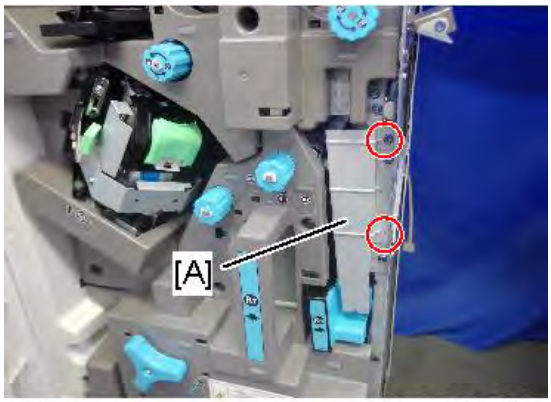
d7060011

2. Remove the rear lower cover [A]. (×2)



d7060012

3. For booklet finisher SR3240, remove the cover [A] of the booklet finisher unit.

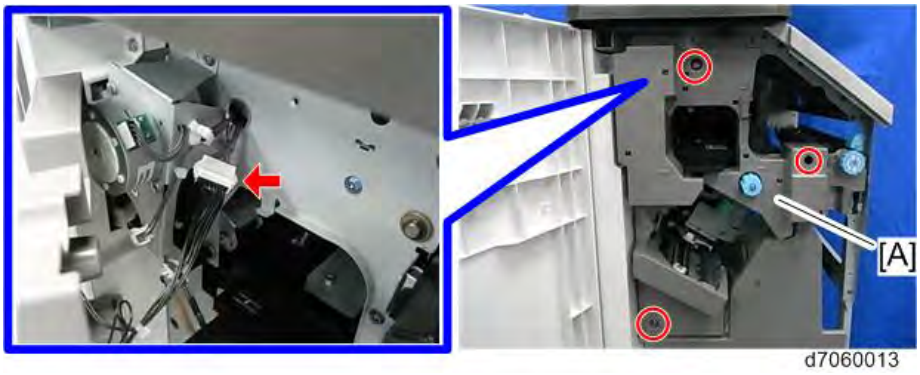


d238m0759

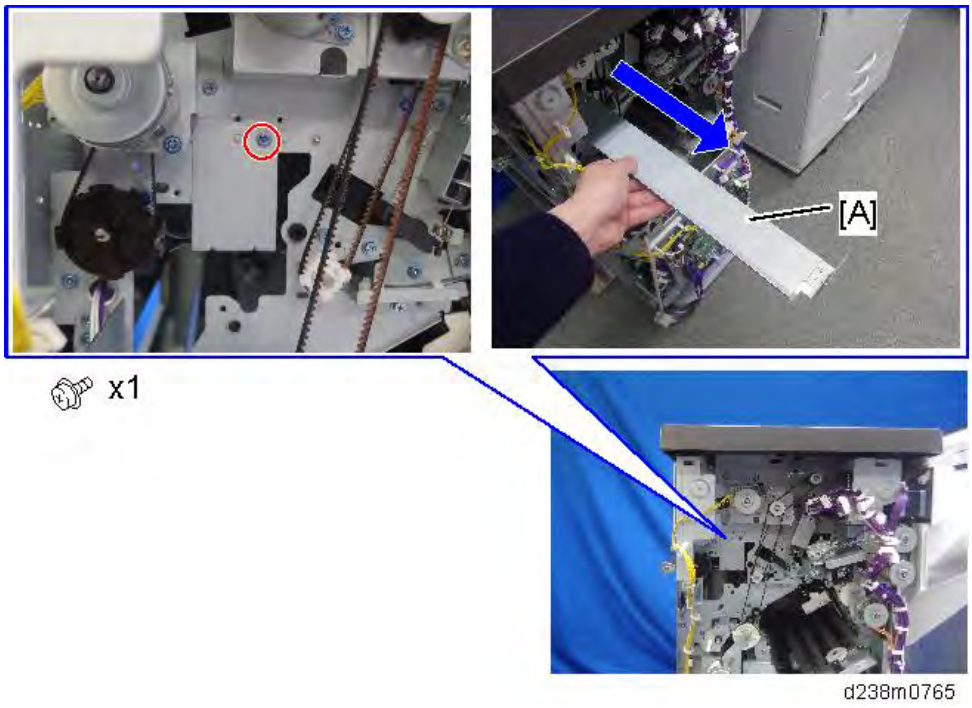
4. Remove the inner cover [A]. (×3, ×1)

Note

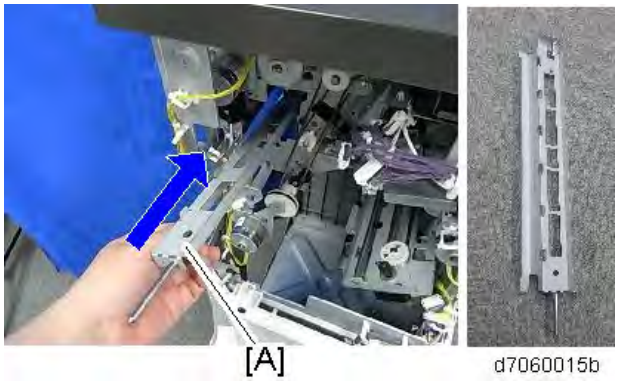
- There is a connector on the back of the inner cover.



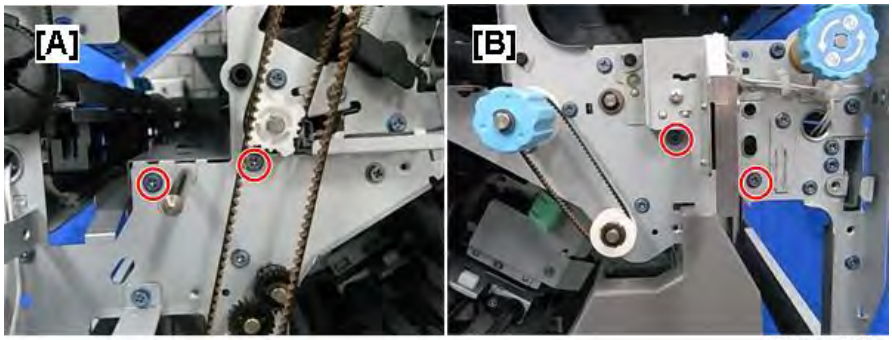
5. Remove the punch guide plate [A].



6. Attach the punch unit stay [A]. (×4)



[A]: Rear, [B]: Front

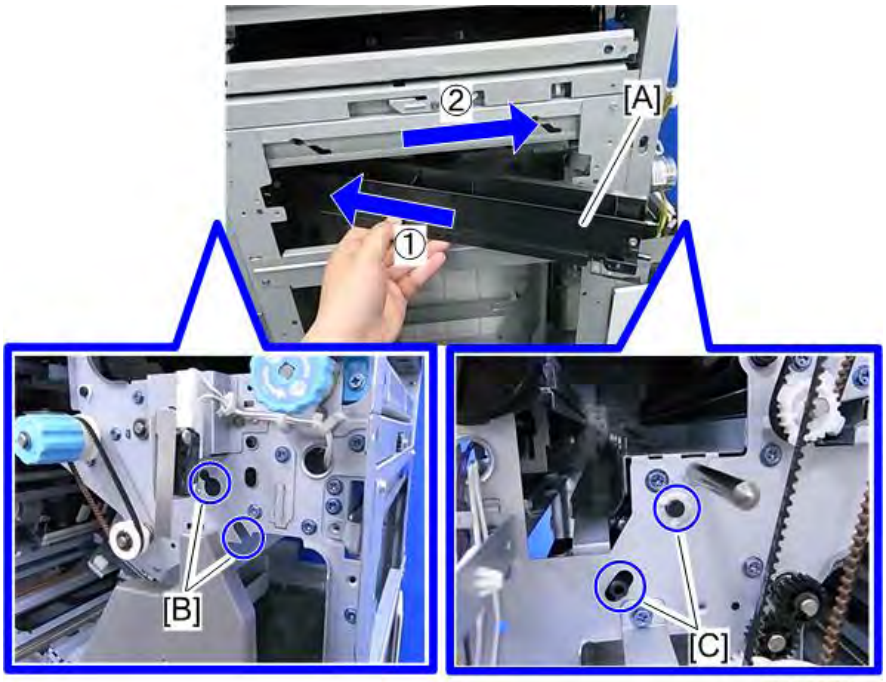


d238m0930a

7. Attach the punch waste paper guide [A]. (×1)

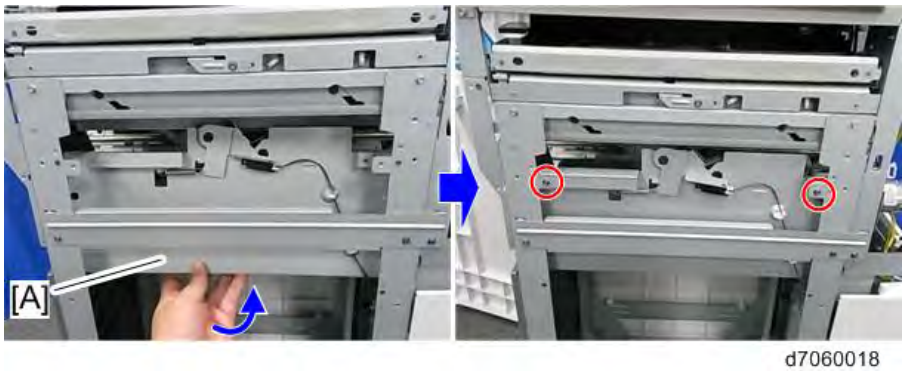
Note

- After inserting the front tab of the punch waste paper guide into the frame [B] of the finisher, insert the rear tab into the frame [C].



d7060017a

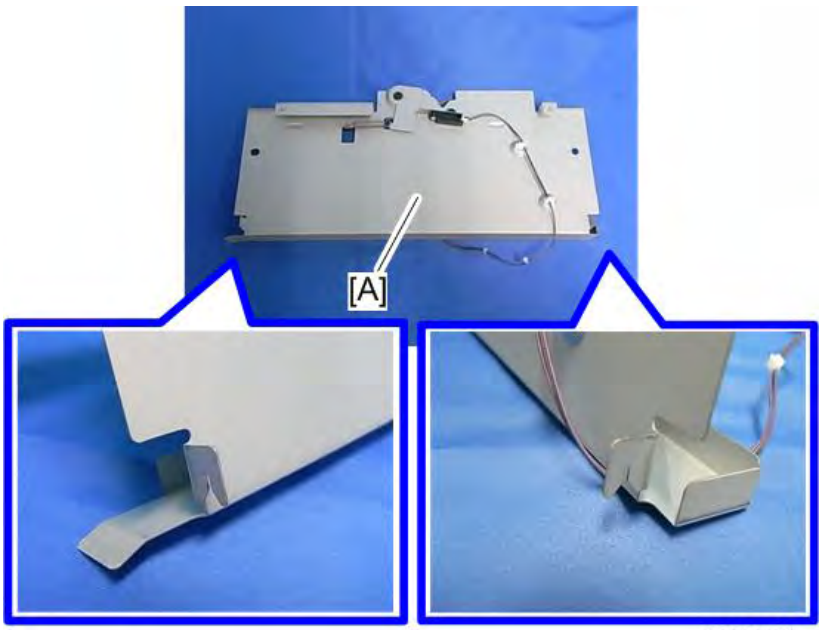
8. Attach the hopper bracket [A], inserting it from the outside frame of the finisher. (×2, 2 hooks)



d7060018

Note

- Hook the hooks of the hopper bracket onto the back side of the frame.



d7060019

d7060020

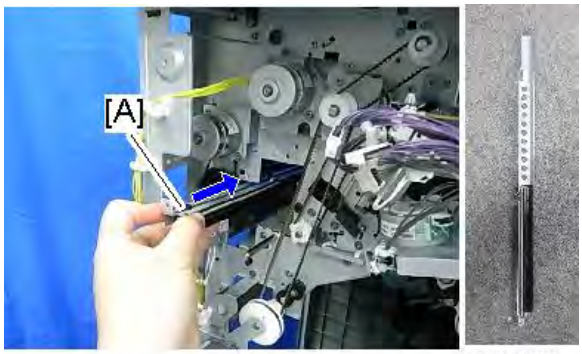
- Hook the upper frame of the hopper bracket onto the outside frame of the finisher.

d7060021

9. Fix the harness of the hopper sensor. (×1)

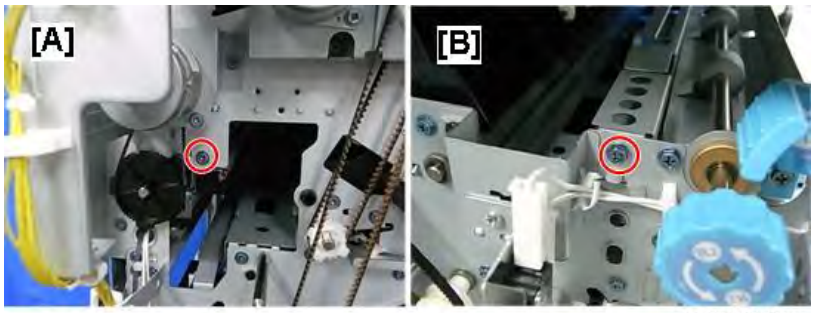
d7060022

10. Attach the registration guide plate [A]. (×2)



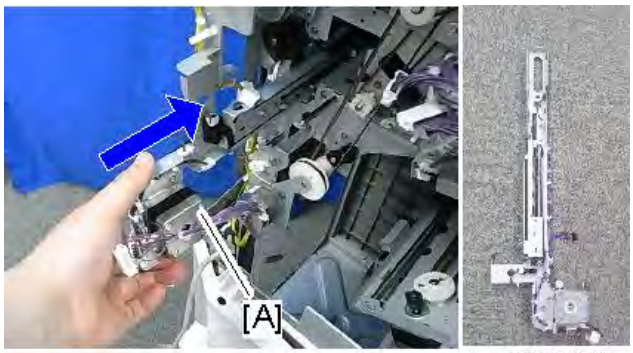
d7060023b

[A]: Rear, [B]: Front

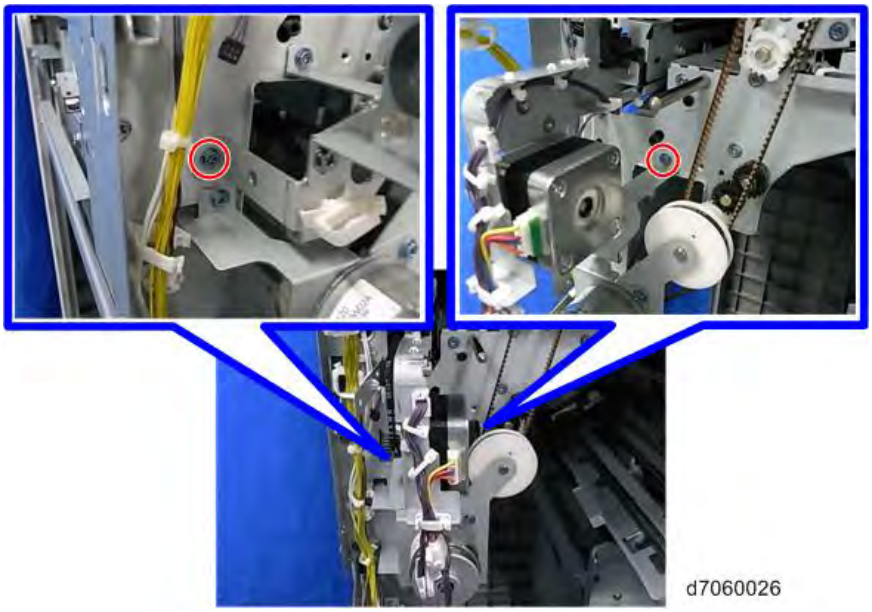


d238m0931a

11. Attach the side-to-side detection unit [A]. (×2)

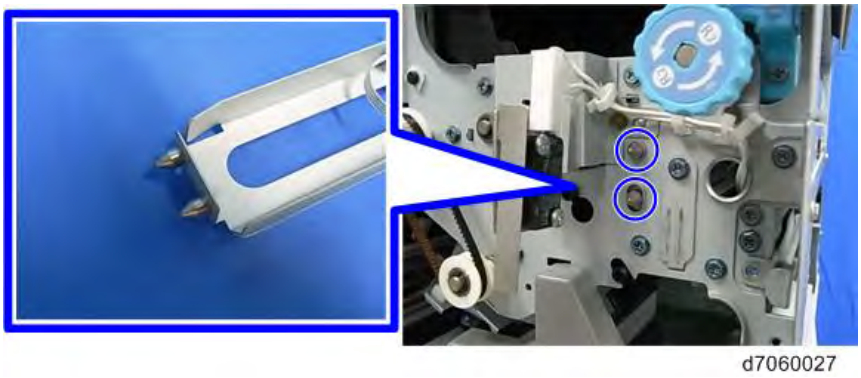


d7060025b


d7060026

Note

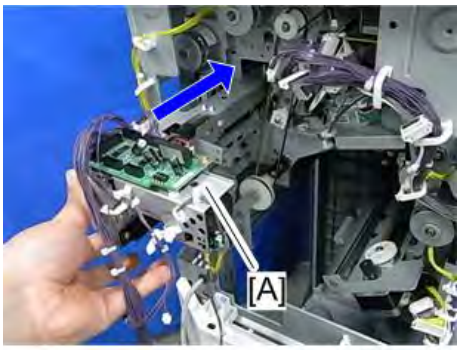
- Insert the front pins of the side-to-side detection unit into the holes in the frame.


d7060027

12. Attach the punch unit [A]. (×2)

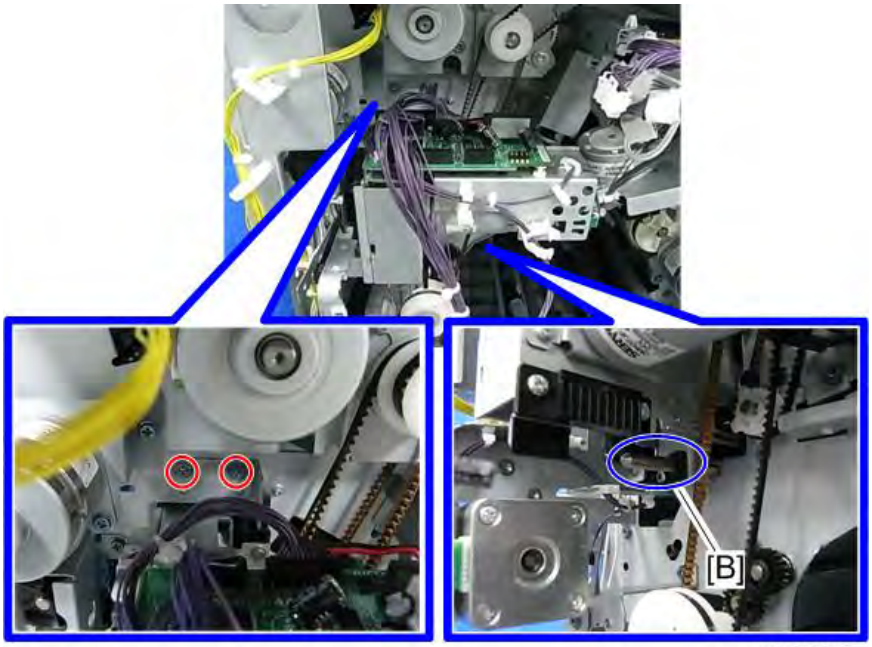
Note

- After inserting the pins [B] of the punch unit stay into the front and rear holes in the punch unit, fix the punch unit with two screws.



d7060028

- Rear

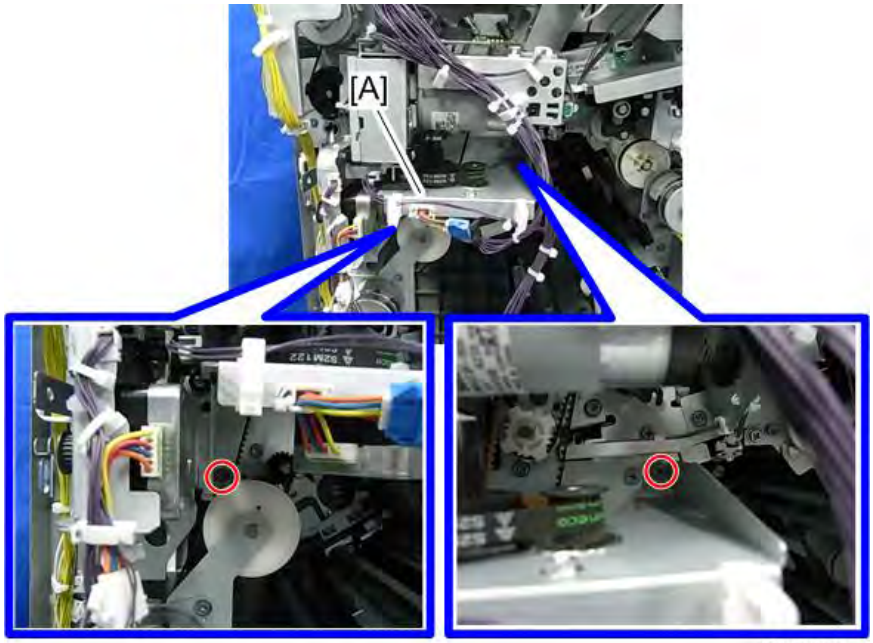


d7060029

- Front

d7060030

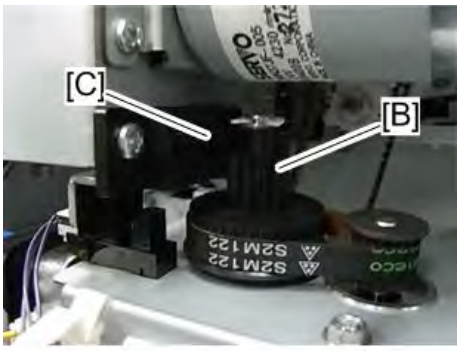
13. Attach the punch unit movement motor unit [A]. (×2)



d7060031

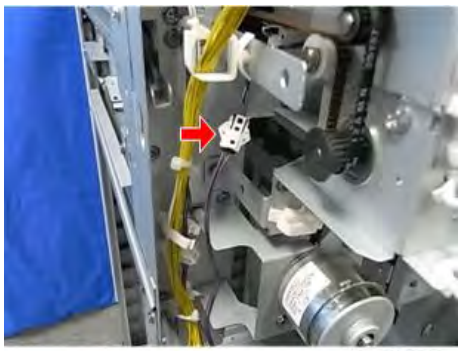
Note

- Engage the gear [B] of the punch unit movement motor unit with the rack [C] of the punch unit.

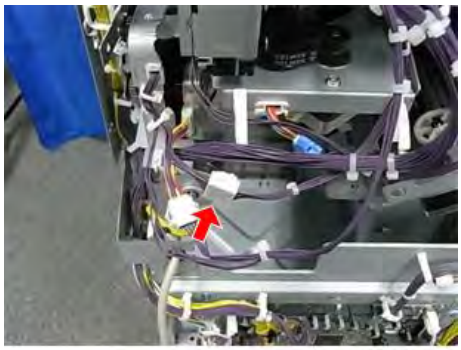


d7060032

14. Connect the harness of the hopper sensor to the connector of the finisher. (×1)

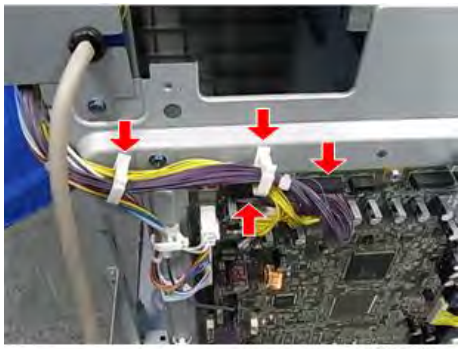

d7060033

15. Connect the harness of the punch unit to the connector of the registration drive unit. (×1)



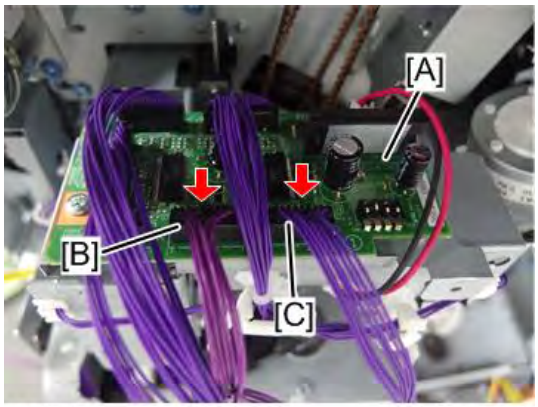
d7060034

16. Connect the harness of the punch unit to the main board, and then clamp it. (×2, ×2)



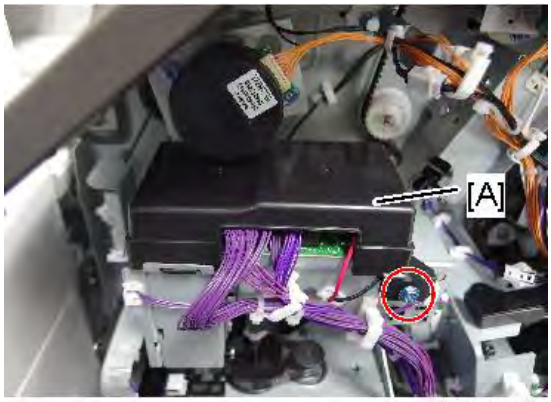
d7060035

17. Connect the harness [B] of the punch unit movement motor unit and the harness [C] of the side-to-side detection unit to the punch unit board [A].

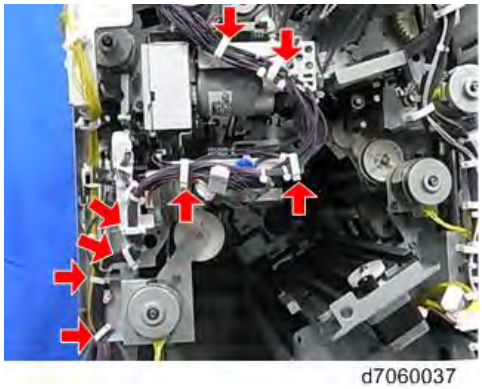


×2 d284a8019

18. Attach the supplied cover [A] to the punch unit board.



19. Fix all the harnesses of the punch unit PU3060. (×8)



20. Attach the hopper [A].

21. Attach the rear upper cover, the rear lower cover, the inner cover, and the punch guide plate.

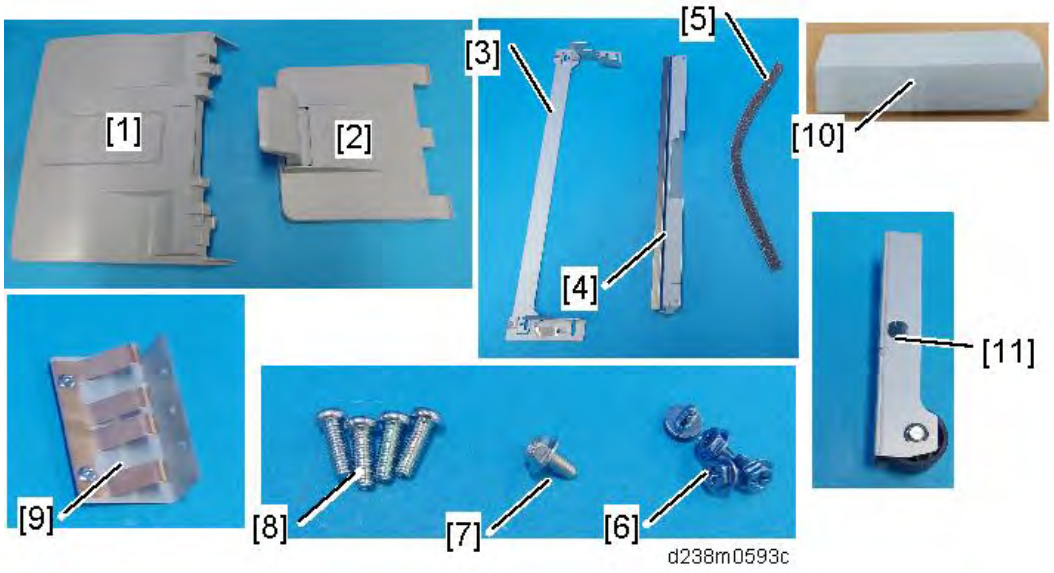
Booklet Finisher SR3220 (D3B9)

Important

- To attach this optional unit, the following optional units are required.
  - Bridge Unit BU3070 (D685) or Internal Multi-Fold Unit FD3000 (D3E4)
  - LCIT PB3170/PB3230 (D695) or Paper Feed Unit PB3150 (D694)

Accessory Check

No.	Description	Q'ty	Remarks
1	Shift Tray	1	
2	Booklet Tray	1	
3	Joint Bracket	1	
4	Entrance Guide Plate	1	
5	Cushion	1	
6	Tapping screws - M3 × 6	4	
7	Tapping screw - M4 × 8	1	
8	Screws - M4 × 12	4	
9	Ground Plate	1	
10	Proof Support Tray	1	
11	Stabilizer	1	This part must be attached to the finisher just after it is taken out of the shipping box.



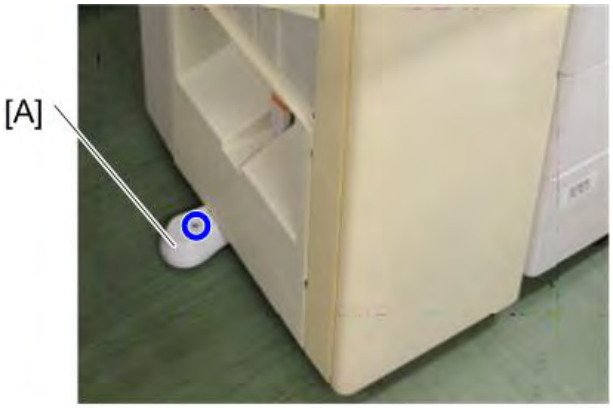
Installation Procedure

⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

Note

- Before installing this option, attach the “Bridge Unit BU3070 (D685)” or "Internal Multi-Fold Unit FD3000 (D3E4)"first.
- Attach the “LCIT PB3170/ PB3230 (D695)” or “Paper Feed Unit PB3210/PB3220 (D787)” first before installing this option.
- This finisher is light and has a high center of gravity, so it easily topples when installing or moving it. Therefore, it is equipped with the stabilizer [A] attached to it when shipped.



d1463221

Important

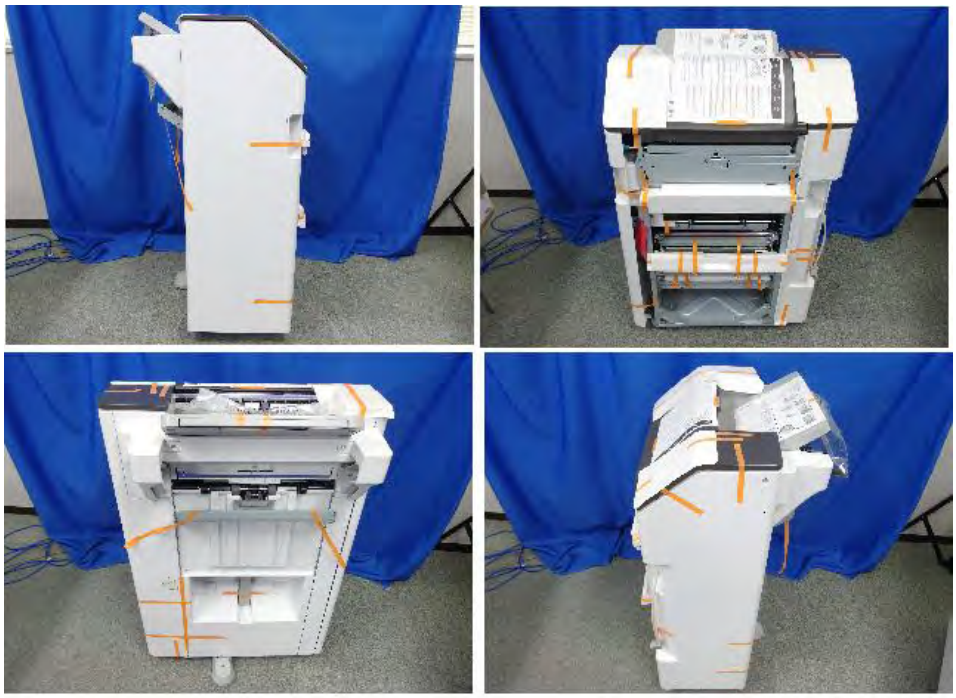
- When you lift the finisher at the time of unpacking, do not hold the part [A]. Doing so may damage the frame.

d238m0601b

1. After unpacking, immediately attach the stabilizer [B] to prevent toppling.
Attach it along the guide rail [A] and push it in all the way, until it clicks.

m0ajm0201

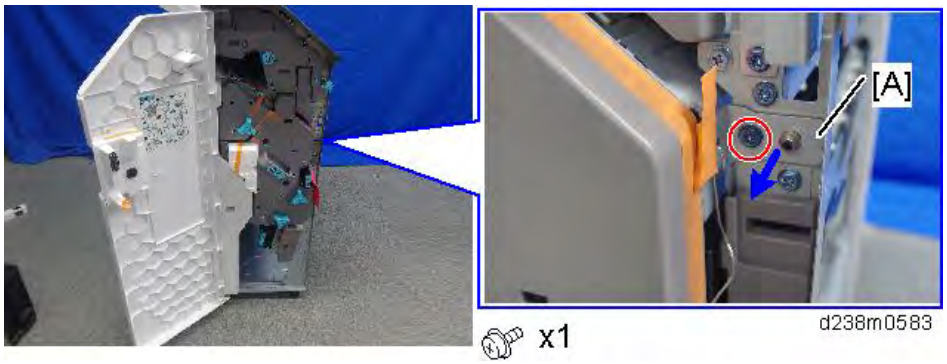
2. Remove the external orange tape and shipping retainers.



d238m0584b

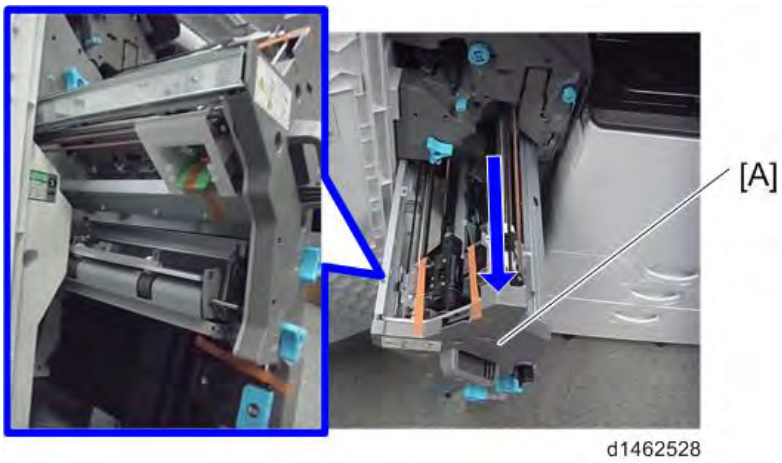
3. Open the front cover, and then remove the filament tape and packing materials.

4. Remove the fixing bracket [A].



d238m0583

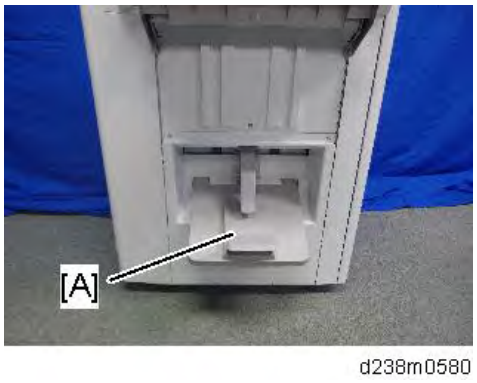
5. Pull out the saddle stitch unit [A], and remove the filament tape and packing materials.



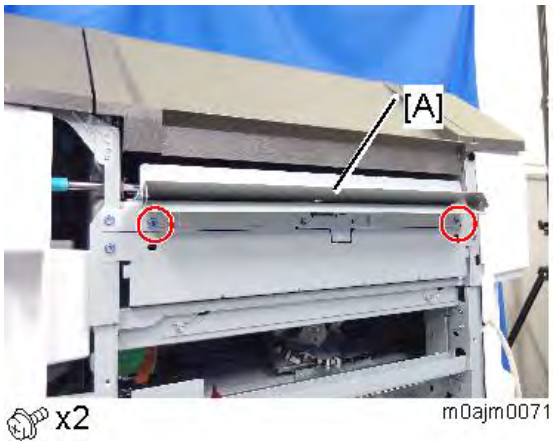
6. Remove the accessories in the package (fixing screws, etc.).

7. Attach the shift tray [A] (x1; M4 x 8).

8. Attach the booklet tray [A].

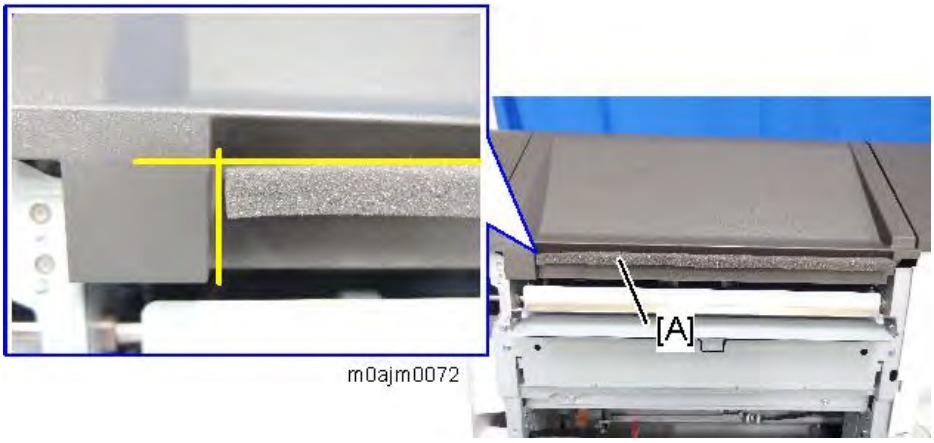


9. Attach the entrance guide plate [A]. (M3×6)



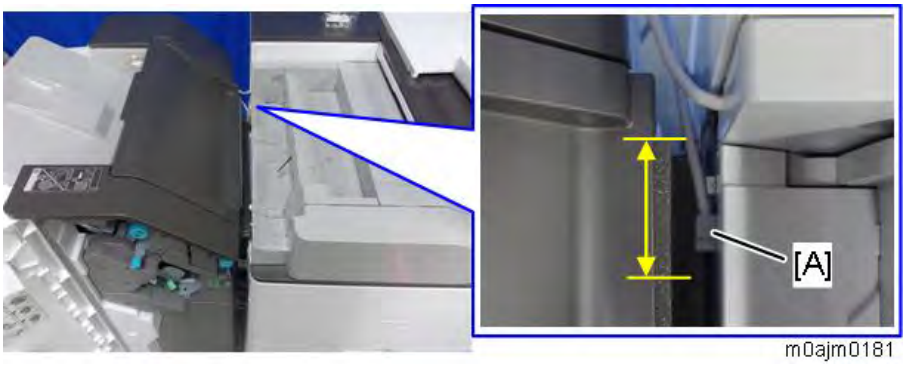
10. Clean the right side of the upper cover with a cloth moistened with alcohol, and then attach the cushion to the finisher.

- Make sure that the cushion is aligned with the left-upper edge [A] of the upper cover.

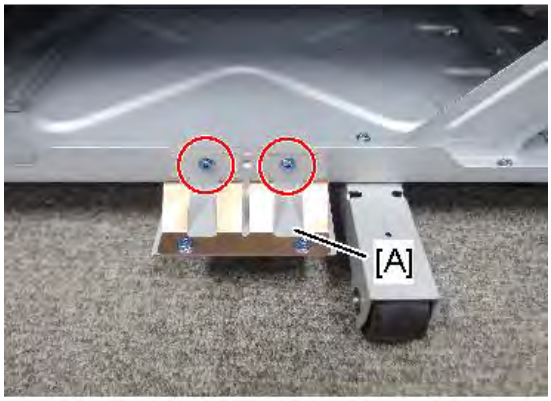


Important

If the internal multi-fold unit is installed on the main machine, the cushion is too long. So cut off a section of the cushion at the notch in the cushion, so that the cushion does not interfere with the I/F connector [A] of the finisher.



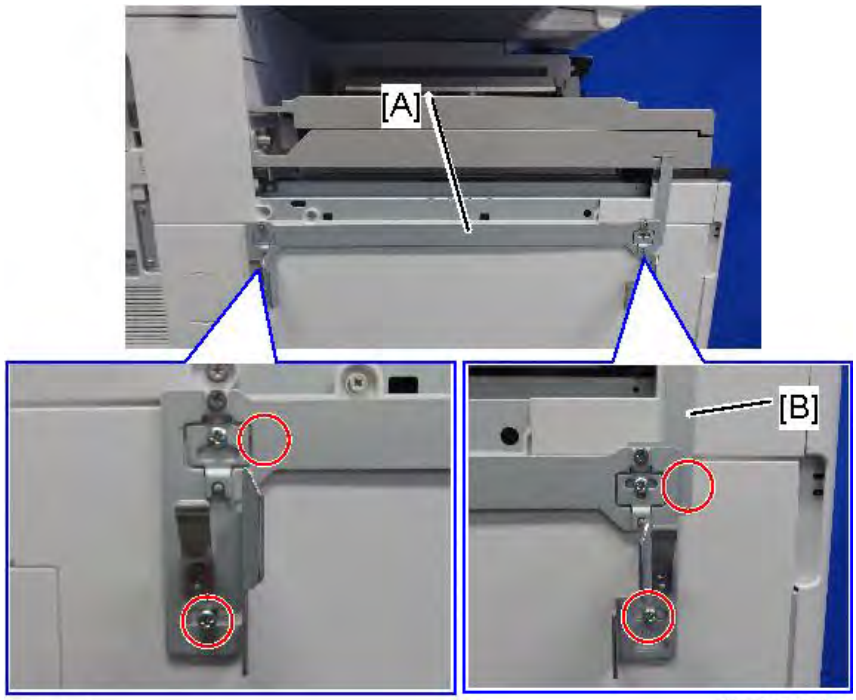
11. Attach the ground plate [A] (M3x6).



x2 m0ajm0075

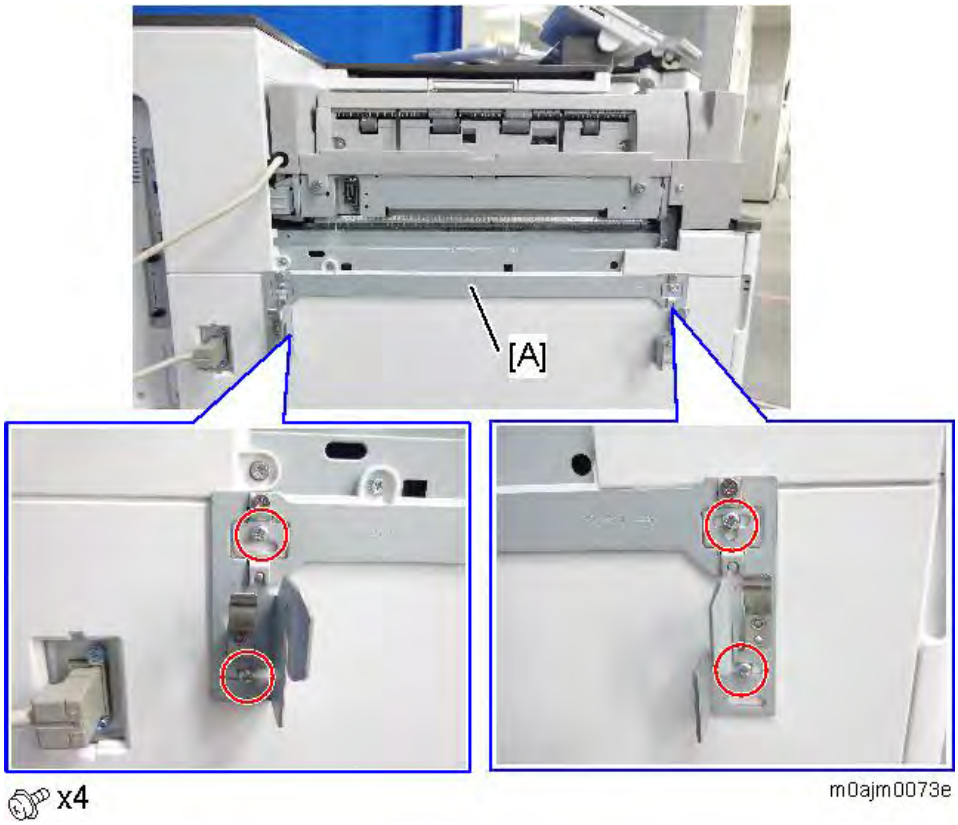
12. Attach the joint bracket [A] to the machine (4x12).

Tighten the joint bracket [A] and bracket [B] of the bridge unit together.



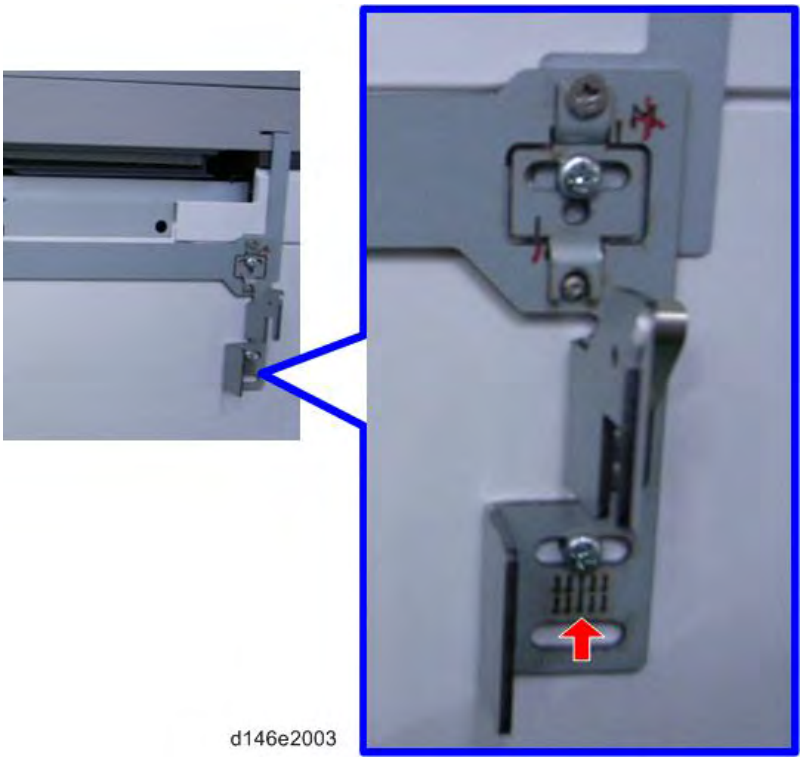
x4 d238m0581e

If the machine is equipped with the internal multi-fold unit, attach the joint bracket [A] only.



Note

- Attach the screw so that the screw head is at the center of the mark.



13. If the internal multi-fold unit is installed, connect the finisher cable to the connector on the internal multi-fold

unit.

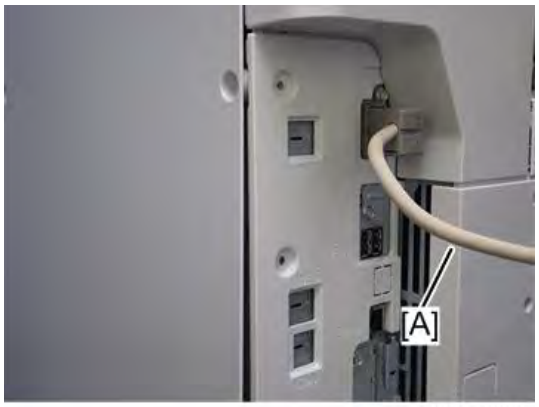
14. Remove the screw on the connection lever [A] and pull the lever.

15. Connect the finisher to the main unit, and then push in the connection lever [A] to fasten it to the main unit. (x1)

When the Internal Multi-Fold Unit is installed, check that the two cables of the finisher do not cross each other, before connecting the finisher.

m0ajm0074

16. Connect the interface cable [A] to the machine (only when the bridge unit is installed).



d284a2095

17. Close the front cover.

18. Turn ON the main power.

19. Deliver some A3/DLT paper to the proof tray and check if the vertical registration is correct according to the adjustment scale for A3/DLT paper. (Finisher Registration Adjustment)

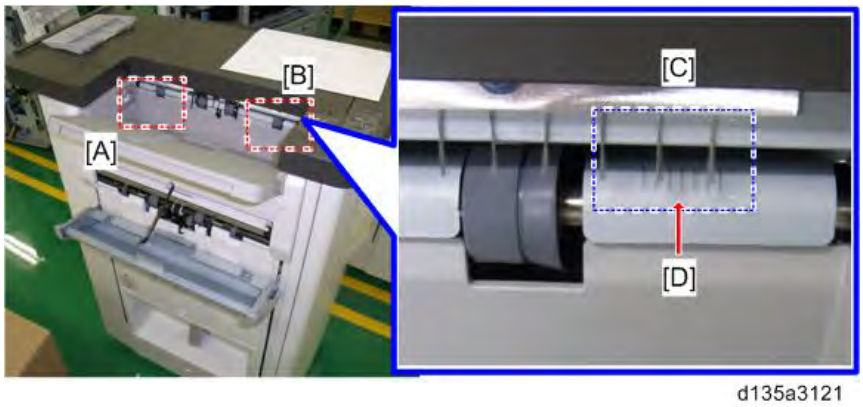
20. Check that the finisher can be selected on the operation panel, and check the finisher's operation.

Adjustment after Installing the Finisher

After installing a finisher, make sure that the side-to-side registration of the finisher matches that of the main machine.

How to Check and Adjust the Side-to-Side Registration

Check the side-to-side registration by exiting to the proof tray. Print out an A3 sheet to the proof tray. Using the markings on the front-most exit roller, check to see where the paper edge is located when the paper is fed out. For purposes of accuracy, print out about 5 sets. If side-to-side registration shift occurs, see the Troubleshooting section and make adjustments (Other Problems).



[A]: Scale marks for DLT

[B]: Scale marks for A3

[C]: 7 scale marks in 2 mm intervals

[D]: Center mark

Note

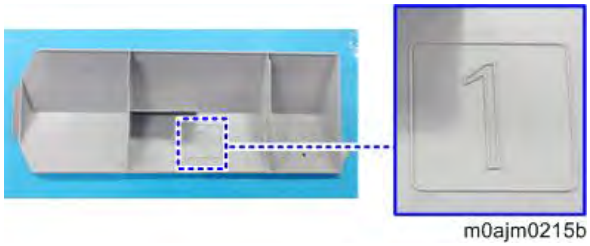
- Each marking represents 2 mm.
- If the paper edge is lined up with the center marking, this means the paper is aligned correctly.
- If the paper edge is lined up with any marking to the right of center, this means the paper is shifted toward the front.
- If the paper edge is lined up with any marking to the left of center, this means the paper is shifted toward the rear.

Attaching the Proof Support Tray

Explain the following information to the users.

The sensor may detect that the exit tray is full prematurely when delivering z-folded sheets or curled paper to the tray.

If a message reporting a full paper exit tray appears, the job is suspended until the paper is removed from the paper exit tray. By attaching a support tray, you can prevent the premature full detection.

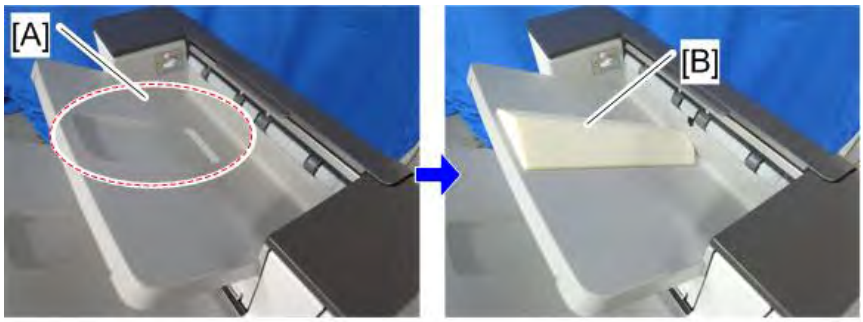


Proof Support Tray ("1" marked on the back), provided with this finisher

When using B4, LG or larger paper, or when using limp paper, the sheet may become bent, resulting in premature full detection.

d1826009

This can be solved by attaching the proof support tray [B] on the proof tray [A].



d1826010

Problem that may occur after attaching this support tray:

When printing A4, LT or smaller paper with the support tray, the machine stacks only 200 sheets, which is less than the standard specification of 250 sheets.

When printing B4, LG or larger paper with the support tray, the machine stacks 50 sheets, which is the same as the standard specification.

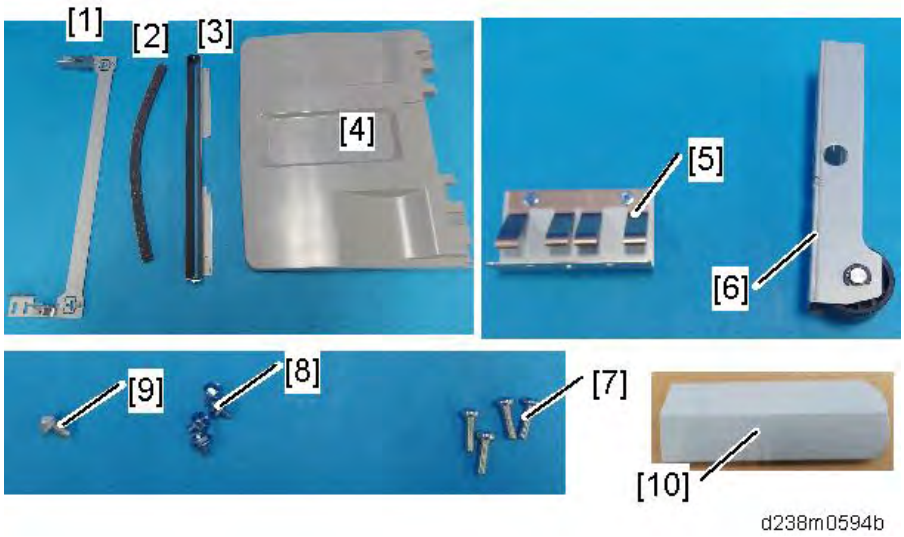
Finisher SR3210 (D3B8)

Important

- To attach this optional unit, the following optional units are required.
  - Bridge Unit BU3070 (D685) or Internal Multi-Fold Unit FD3000 (D3E4)
  - LCIT PB3170/PB3230 (D695) or Paper Feed Unit PB3150 (D694)

Accessory Check

No.	Description	Q'ty	Remarks
1	Joint Bracket	1	
2	Cushion	1	
3	Entrance Guide Plate	1	
4	Shift Tray	1	
5	Ground Plate	1	
6	Stabilizer	1	This part must be attached to the finisher just after it is taken out of the shipping box.
7	Screws - M4 × 12	4	
8	Tapping Screws - M3 × 6	4	
9	Tapping Screw - M4 × 8	1	
10	Proof Support Tray	1	
-	Installation Instructions for Stabilizer	1	



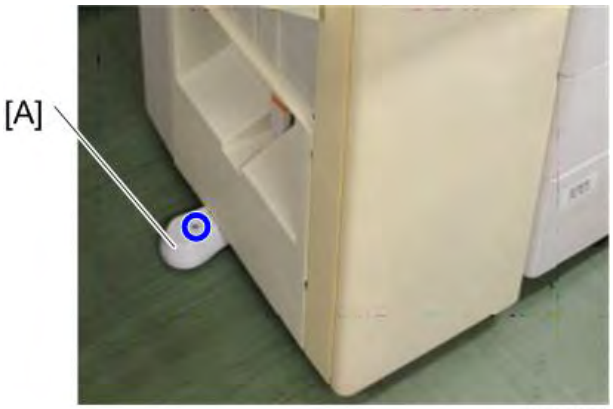
Installation Procedure

⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

Note

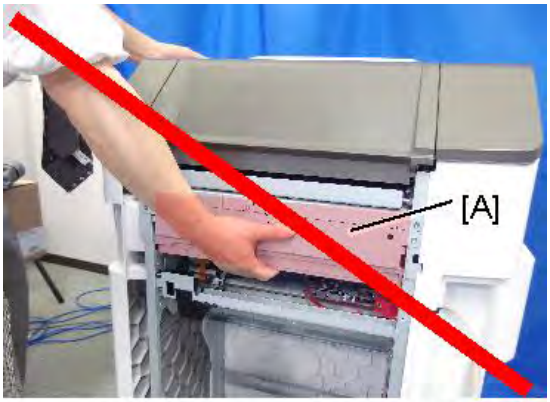
- Before installing this option, attach the “Bridge Unit BU3070 (D685)” or "Internal Multi-Fold Unit FD3000 (D3E4)"first.
- Attach the “LCIT PB3170/ PB3230 (D695)” or “Paper Feed Unit PB3210/PB3220 (D787)” first before installing this option.
- This finisher is light and has a high center of gravity, so it easily topples when installing or moving it. Therefore, it is equipped with the stabilizer [A] attached to it when shipped.



d1463221

Important

- When you lift the finisher at the time of unpacking, do not hold the part [A]. Doing so may damage the frame.



d238m0601b

1. After unpacking, immediately attach the stabilizer [B] to prevent toppling.
Push it in thoroughly along the guide [A] until it clicks.

m0ajm0201

2. Remove the external orange tape and shipping retainers.

d238m0585b

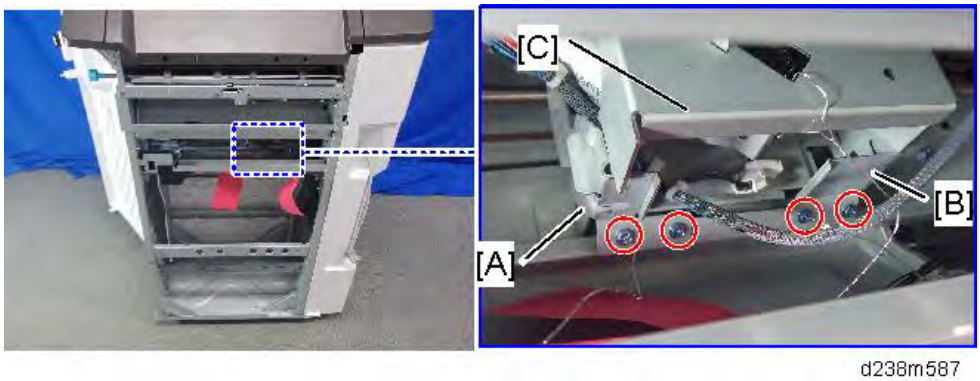
3. Open the front cover, and then remove the orange tapes and shipping retainers.

d238m0586b

4. Remove the accessories in the package (fixing screws, etc.).

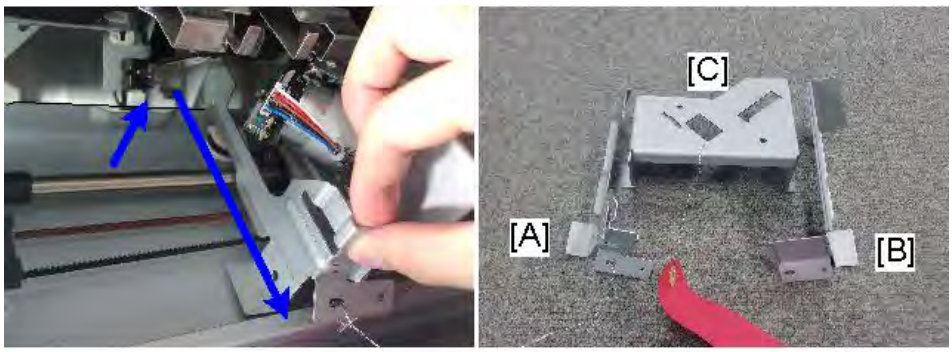
5. Remove the fixing brackets of the stapleless stapler unit. (×4)

Remove the fixing brackets in the order of [A], [B], and [C].



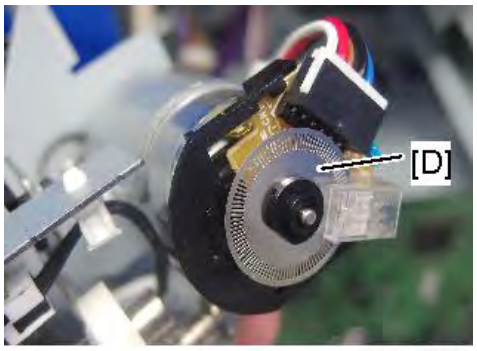
d238m587

The fixing brackets are hooked to the metal plate, so slightly lift it and then remove it.



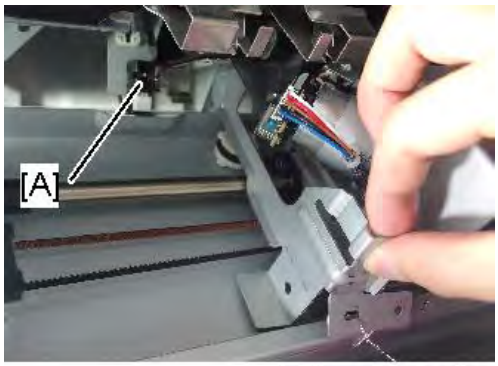
d238m588

Be careful not to touch the encoder [D] at the back of the motor.



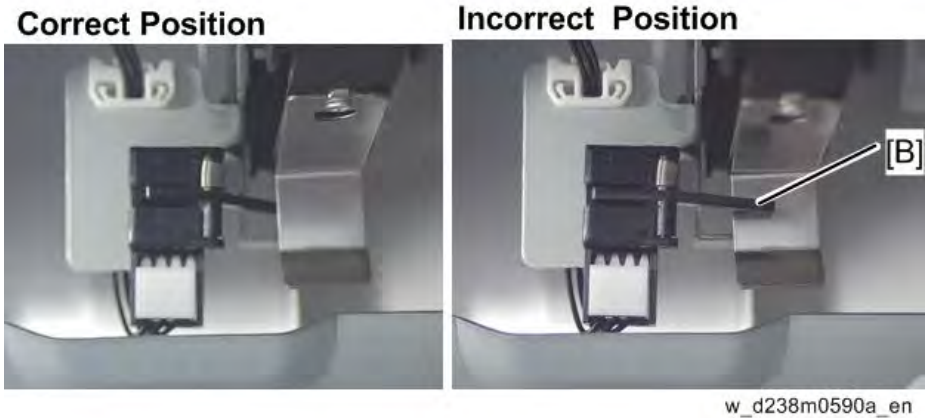
d238m0807

Be careful so that the fixing brackets do not come into contact with the feedout pawl HP sensor.



d238m589

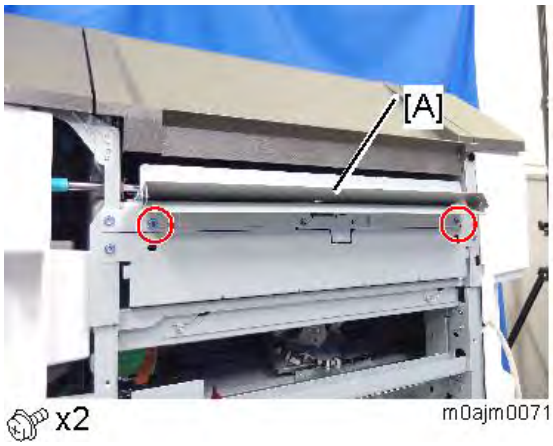
If they come into contact, check that the feeler [B] is positioned correctly.



w_d238m0590a_en

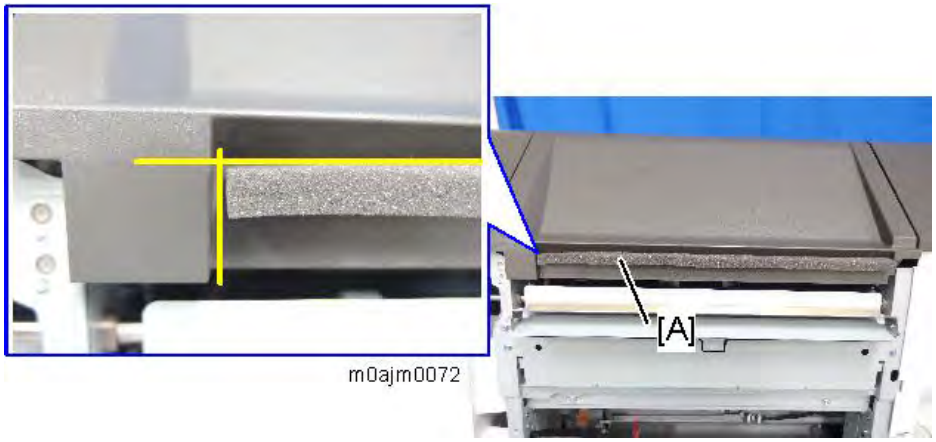
6. Attach the shift tray [A] (x1; M4 x 8).

7. Attach the entrance guide plate [A]. (M3 x 6)



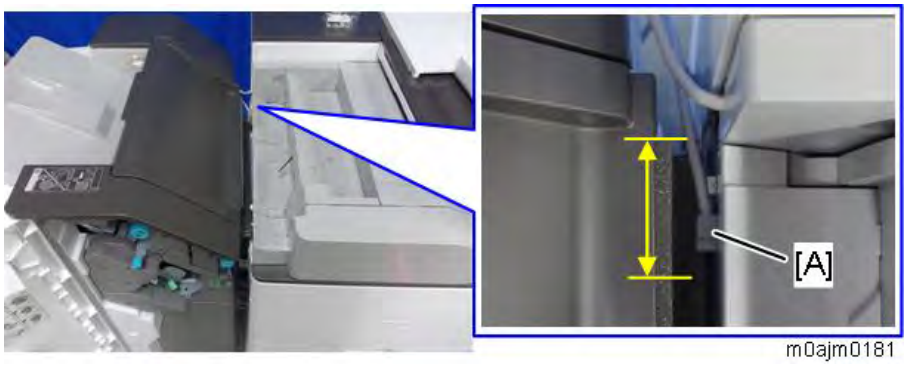
8. Clean the right side of the upper cover with a cloth moistened with alcohol, and then attach the cushion to the finisher.

- Make sure that the cushion is aligned with the left-upper edge [A] of the upper cover.

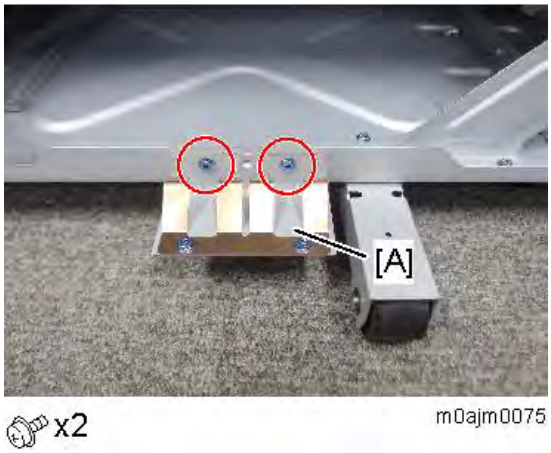


Important

If the internal multi-fold unit is installed on the main machine, the cushion is too long. So cut off a section of the cushion at the notch in the cushion, so that the cushion does not interfere with the I/F connector [A] of the finisher.

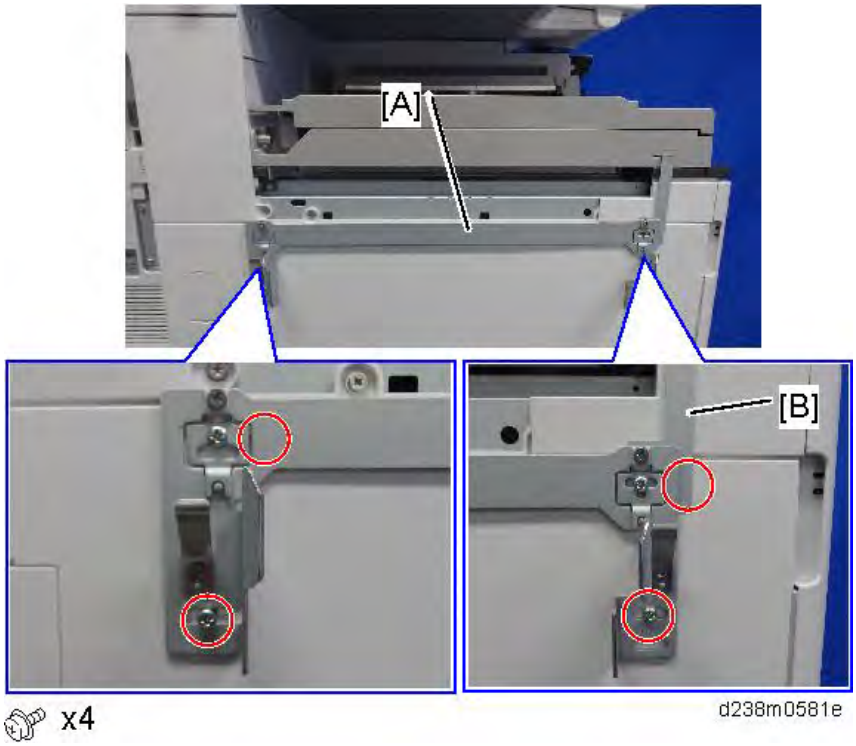


9. Attach the ground plate [A] (M3×6).

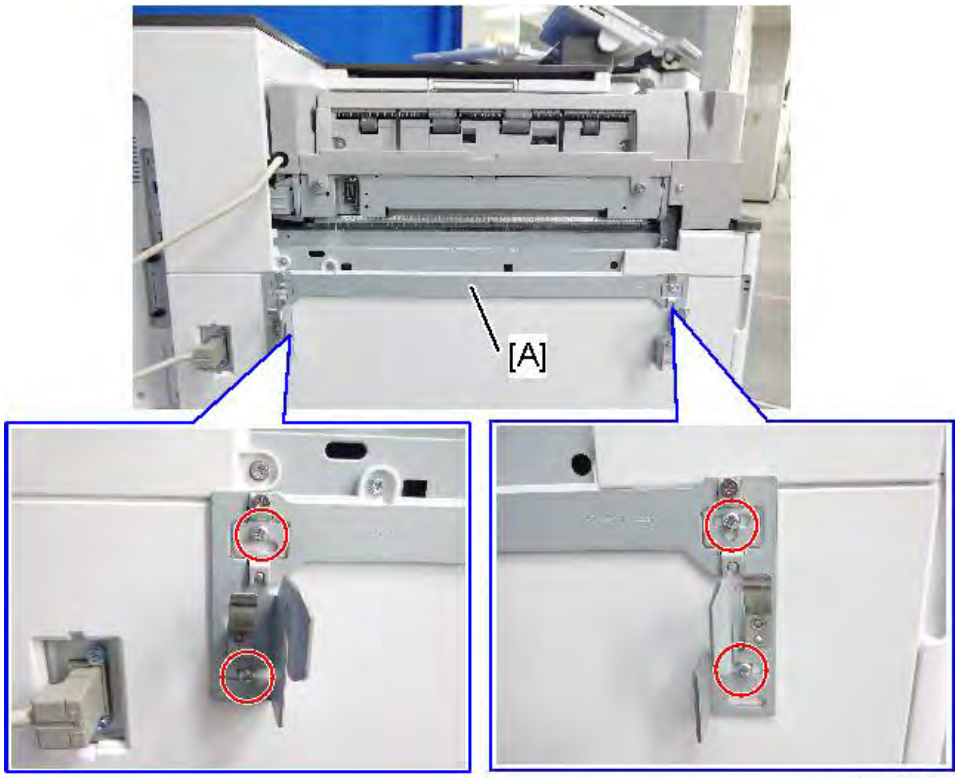


10. Attach the joint bracket [A] to the main machine (M4x12).

If the machine is equipped with the bridge unit, attach the joint bracket [A] together with the L type connecting bracket [B] of the bridge unit.

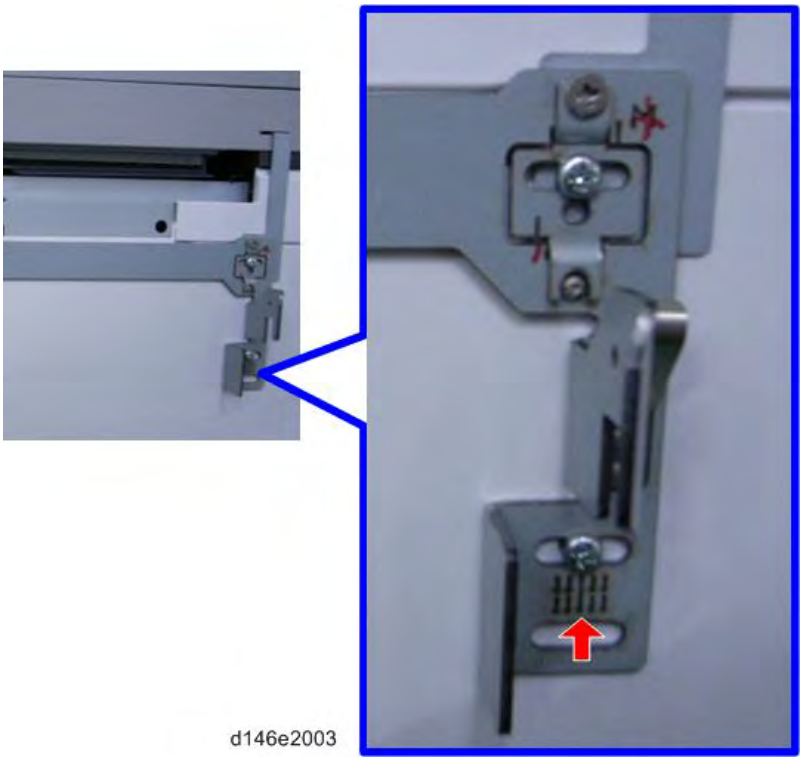


If the machine is equipped with the internal multi-fold unit, attach the joint bracket [A] only.



Note

- Attach the screw so that the screw head is at the center of the mark.

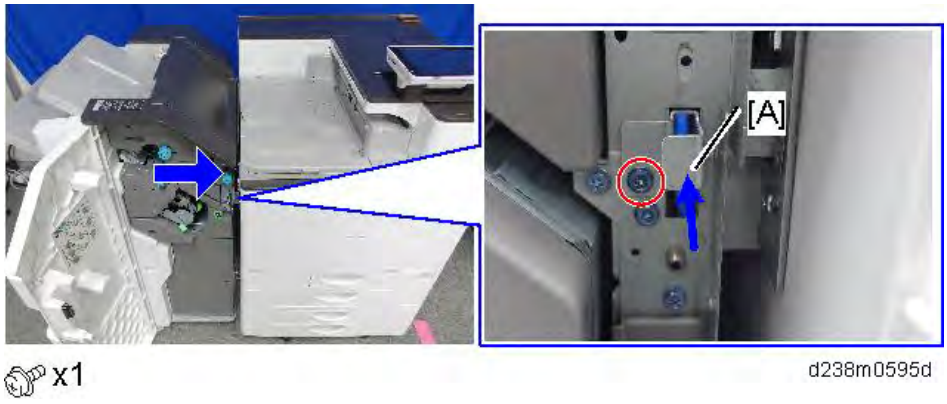


11. Connect the cable of the finisher to the connector of the Internal Multi-Fold Unit. (Only when the Internal

Multi-Fold Unit is installed.)

12. Remove the screw on the connection lever [A] and pull the lever.

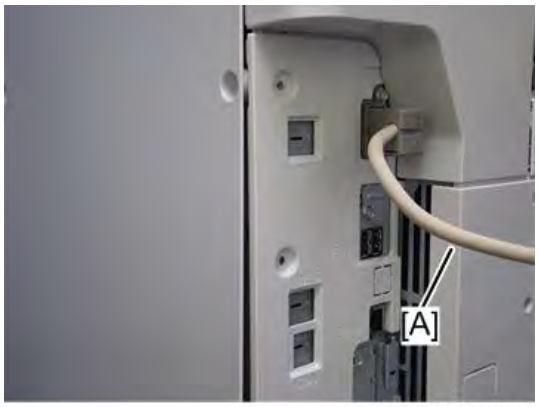
13. Connect the finisher to the main unit, and then push in the connection lever [A] to fasten it to the main unit.



When the Internal Multi-Fold Unit is installed, check that the two cables of the finisher do not cross each other, before connecting the finisher (for interference prevention).

m0ajm0074

14. Connect the interface cable [A] to the machine. (Only when the Bridge Unit is installed.)



d284a2095

15. Close the front cover.

16. Turn ON the main power.

17. Deliver some A3/DLT paper to the proof tray and check if the vertical registration is correct according to the adjustment scale for A3/DLT paper. (Finisher Registration Adjustment)

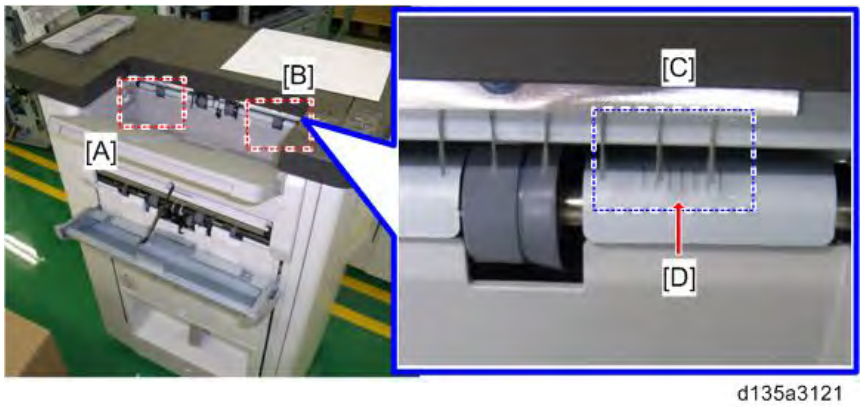
18. Check that the finisher can be selected on the operation panel, and check the finisher's operation.

Adjustment after Installing the Finisher

After installing a finisher, make sure that the side-to-side registration of the finisher matches that of the main machine.

How to Check and Adjust the Side-to-Side Registration

Check the side-to-side registration by exiting to the proof tray. Print out an A3 sheet to the proof tray. Using the markings on the front-most exit roller, check to see where the paper edge is located when the paper is fed out. For purposes of accuracy, print out about 5 sets. If side-to-side registration shift occurs, see the Troubleshooting section and make adjustments (Other Problems).



[A]: Scale marks for DLT

[B]: Scale marks for A3

[C]: 7 scale marks in 2 mm intervals

[D]: Center mark

Note

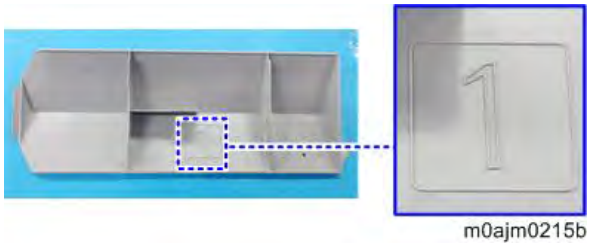
- Each marking represents 2 mm.
- If the paper edge is lined up with the center marking, this means the paper is aligned correctly.
- If the paper edge is lined up with any marking to the right of center, this means the paper is shifted toward the front.
- If the paper edge is lined up with any marking to the left of center, this means the paper is shifted toward the rear.

Attaching the Proof Support Tray

Explain the following information to the users.

The sensor may detect that the exit tray is full prematurely when delivering z-folded sheets or curled paper to the tray.

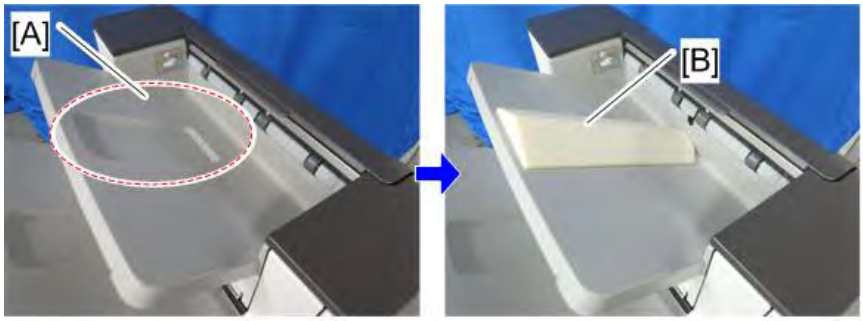
If a message reporting a full paper exit tray appears, the job is suspended until the paper is removed from the paper exit tray. By attaching a support tray, you can prevent the premature full detection.



Proof Support Tray ("1" marked on the back), provided with this finisher

When using B4, LG or larger paper, or when using limp paper, the sheet may become bent, resulting in premature full detection.

This can be solved by attaching the proof support tray [B] on the proof tray [A].



Problem that may occur after attaching this support tray:

When printing A4, LT or smaller paper with the support tray, the machine stacks only 200 sheets, which is less than the standard specification of 250 sheets.

When printing B4, LG or larger paper with the support tray, the machine stacks 50 sheets, which is the same as the standard specification.

Stapleless Stapler Initial Settings

Note

- To adjust the strength of the crimp between sheets of stapled paper, there is a setting to select either single or double stapling.
- The crimp is weakened when there is an image (toner) at the point which is to be stapled. There also is a setting to mask the image on the point for stapling, in order to prevent the crimp from being weakened.
- Depending on users demands, explain the settings/methods of the settings by checking the following instructions.

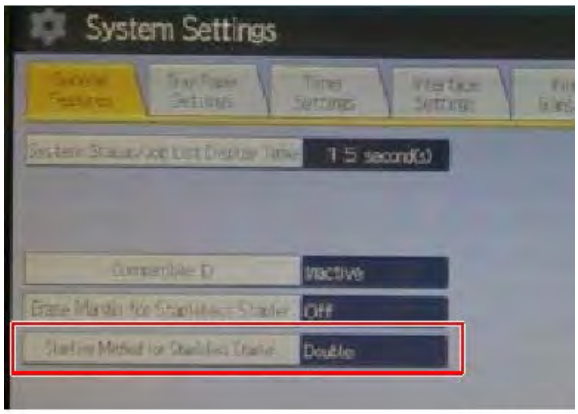
How to change the setting of Staple Method for the Stapleless Stapler

Use this procedure to select the type of stapling that is done by the stapleless stapler.

Note that if you change the finisher type from Internal Finisher SR3180 to Finisher SR3210, which has the same type of stapleless staple unit, the current setting in [Stapling Method for Stapleless Stapler] is not carried over, so configure the setting again.

1. Press the [User Tools] icon on Home screen.
2. Press [Machine Features] > [System Setting] > [General Setting] > [Stapling Method for Stapleless Stapler].

3. Select [Double] or [Single].

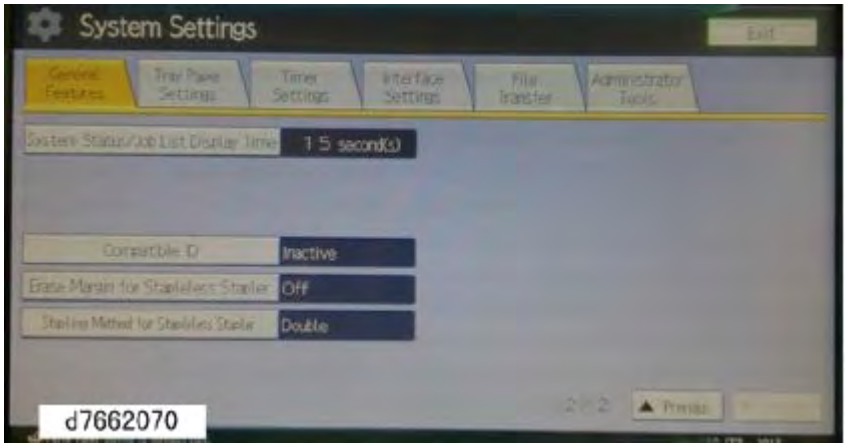


How to set Margin Erase for the Stapleless Stapler

1. Press the [User Tools] icon.

2. Press [Machine Features] > [System Setting] > [General Setting].

3. Press [Erase Margin for Stapleless Stapler].



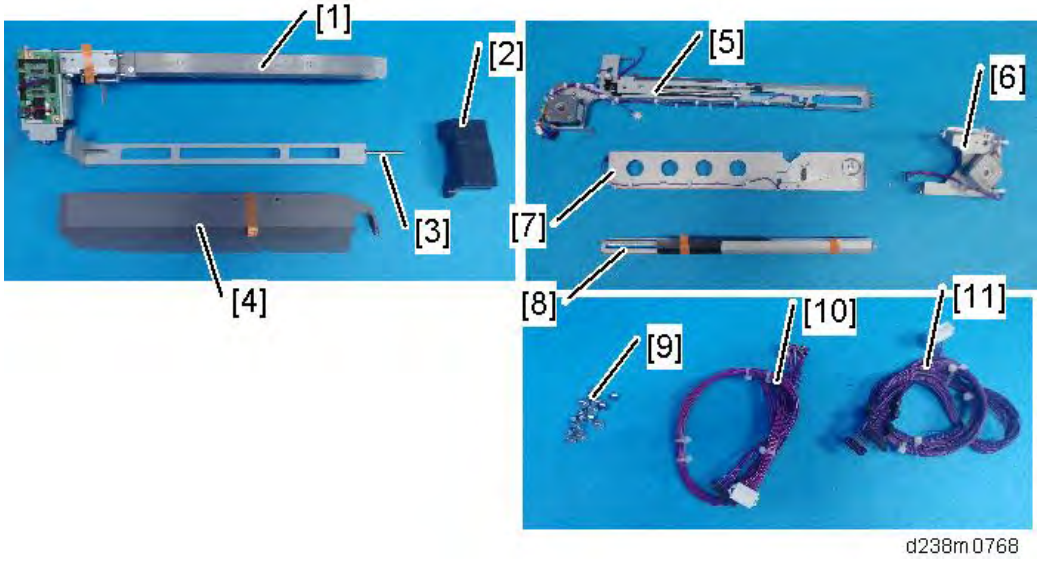
Punch Unit PU3050

Note

- This Punch Unit is for the Booklet Finisher SR3220 (D3B9)/Finisher SR3210 (D3B8).

Accessory Check

No.	Description	Q'ty	Remarks
1	Punch unit	1	
2	Cover	1	
3	Stay	1	
4	Hopper	1	
5	Side-to-side detection unit	1	
6	Punch unit movement motor unit	1	
7	Hopper guide plate	1	
8	Guide plate	1	
9	Tapping screws - M3 × 6	16	
10	Harness (Short)	1	Used for SR3220
11	Harness (Long)	1	Used for SR3210



Installation Procedure

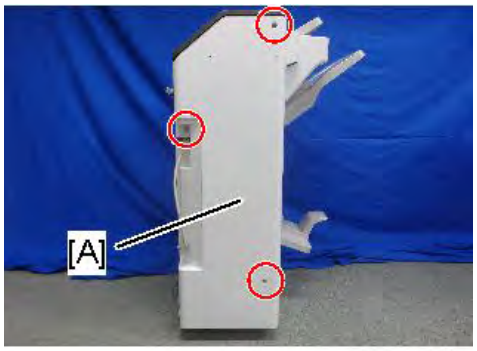
⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

1. Take out of the box, and remove the orange tape and shipping retainers.

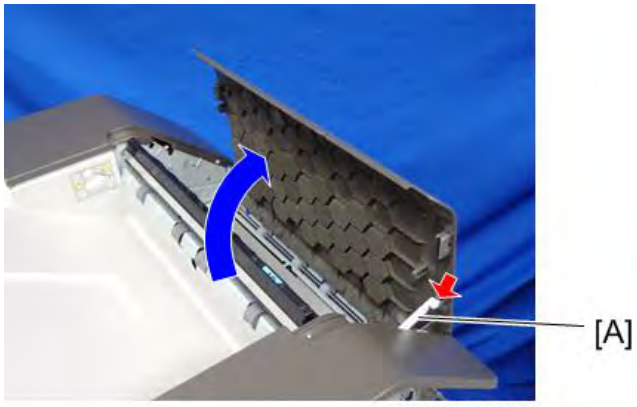
2. Pull out the finisher interface cable, and move it away from the machine.

3. Remove the finisher rear cover [A] (×3).



d238m0769

4. Open the top cover, and then remove the arm [A] (×1).

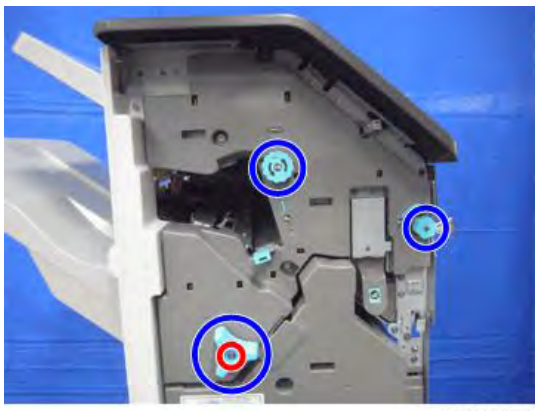


d238m1399

5. Open the finisher front cover, and remove the three knobs (x1).

Note

- Knobs with a lock mechanism are removed using a knob screwdriver or similar while releasing the lock.



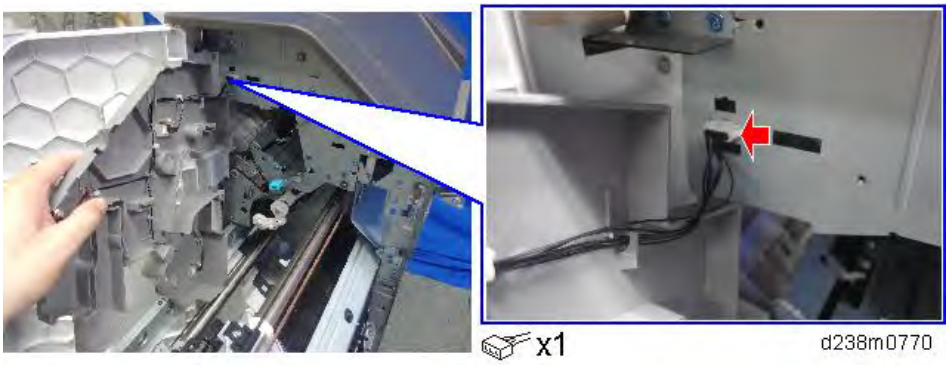
d6873232

6. Pull the saddle stitch unit [A] or stapling unit.

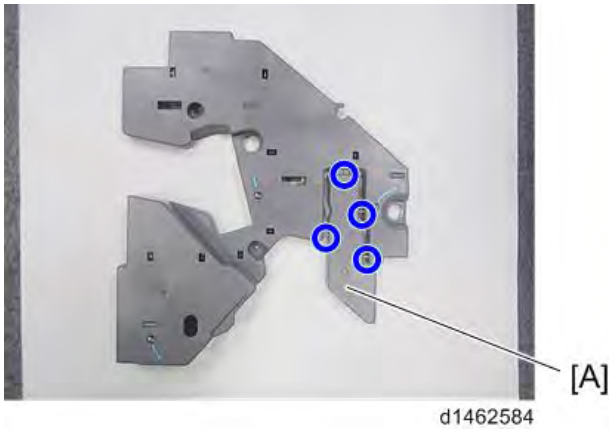
7. Remove the finisher inner cover [A] (×3).

Note

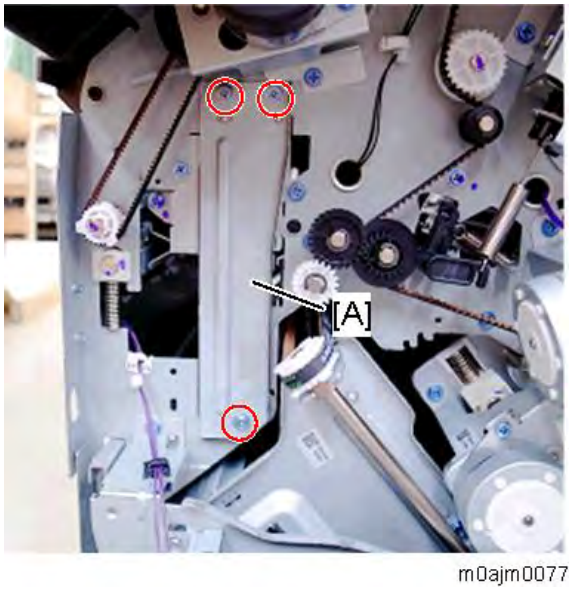
- Remove the connector at the back of the inner cover.



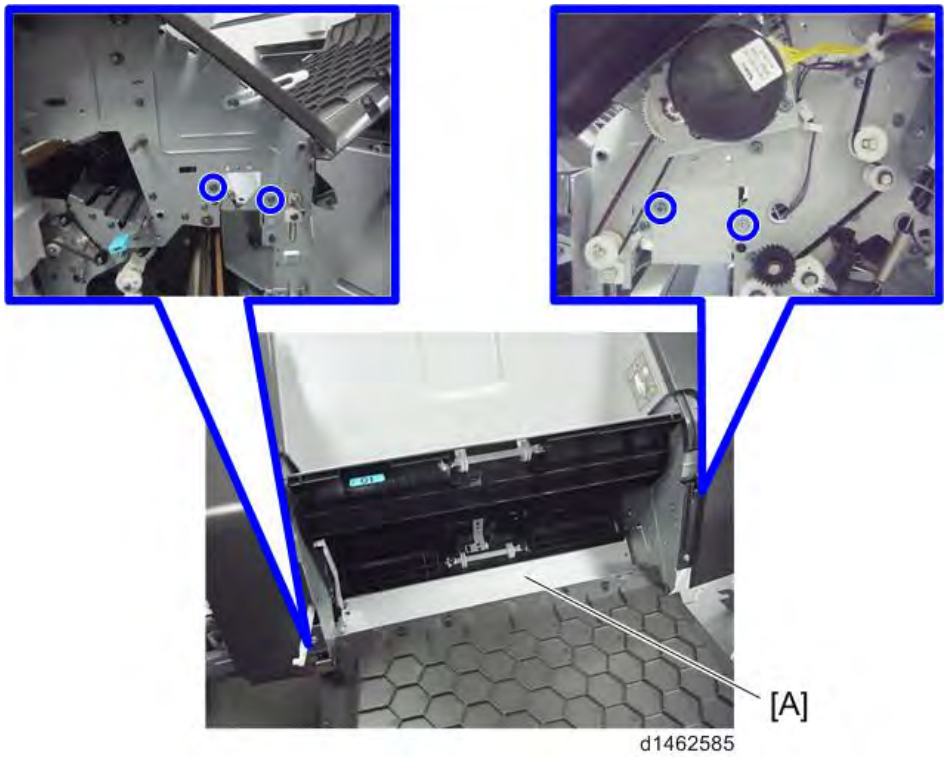
8. Cut off part of the finisher inner cover [A].



9. Remove the supporting plate [A] (×3).

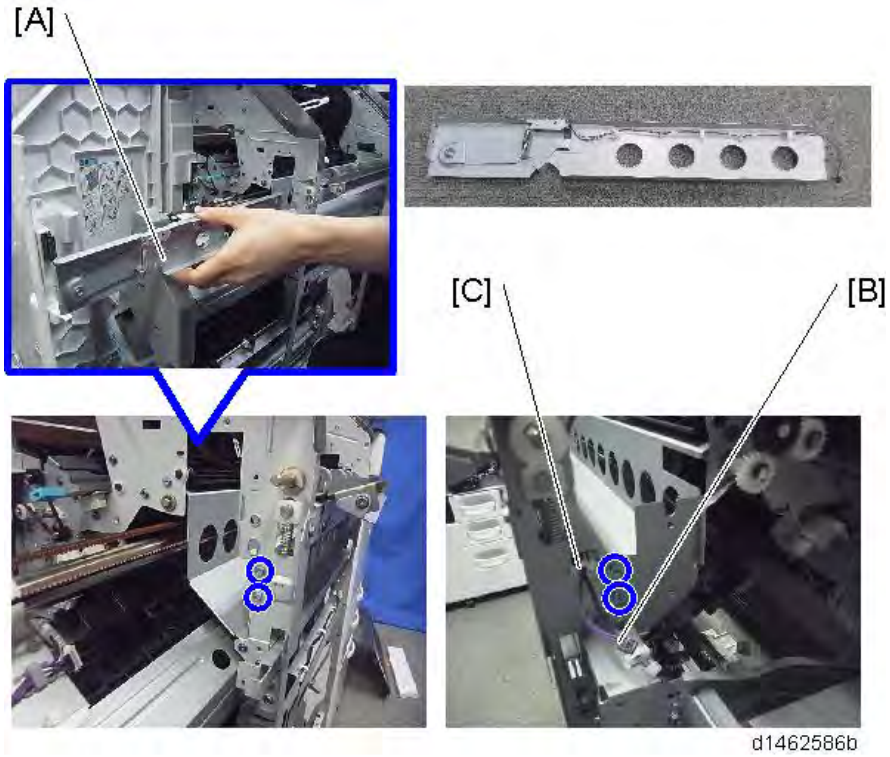


10. Remove the guide plate [A] (×4).



11. Insert and attach the hopper guide plate [A] from the front (×4).

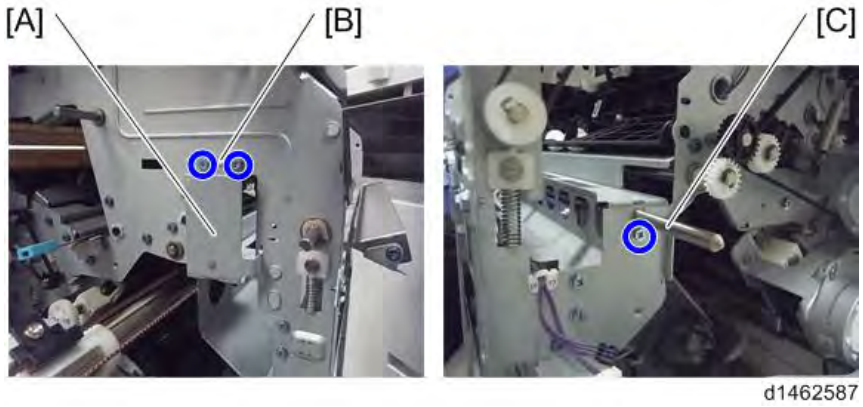
At this time, pass the harness [B] through the clamp [C].



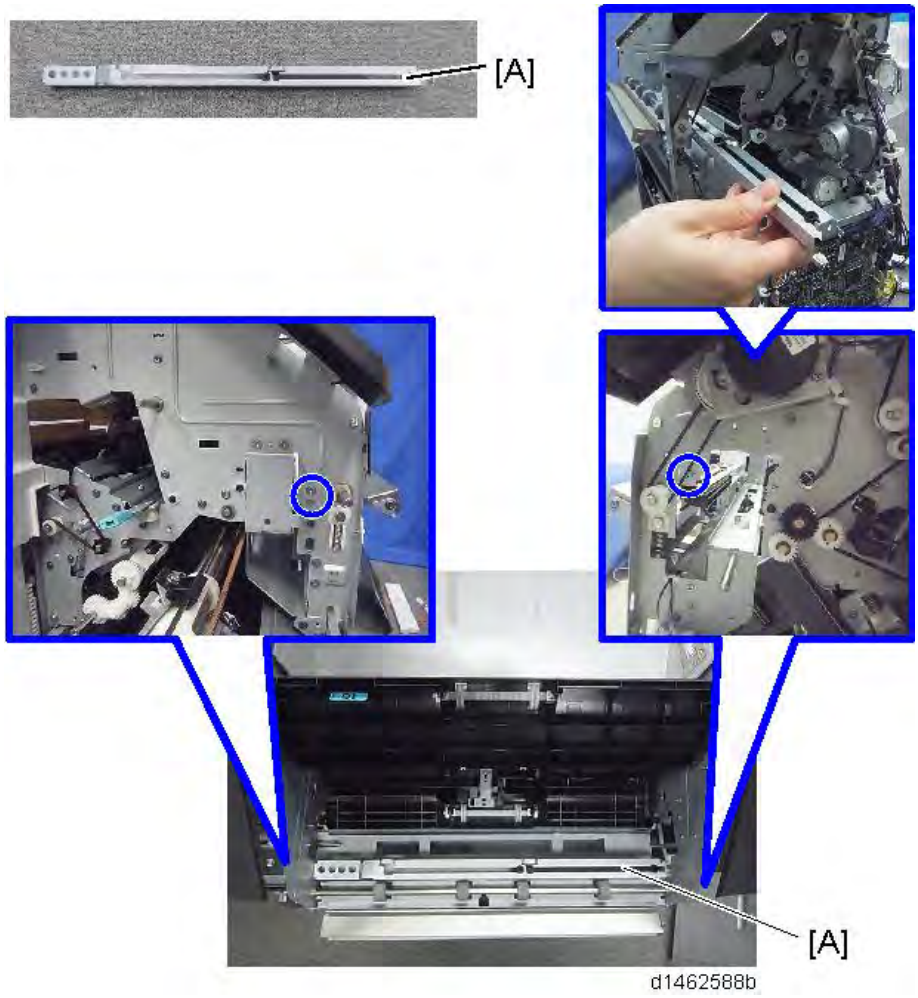
12. Attach the stay [A] (×3).

Front [B]: Insert the holes in the stay over the embossed parts on the finisher.

Rear [C]: Place the shaft of the stay through the notch in the finisher.

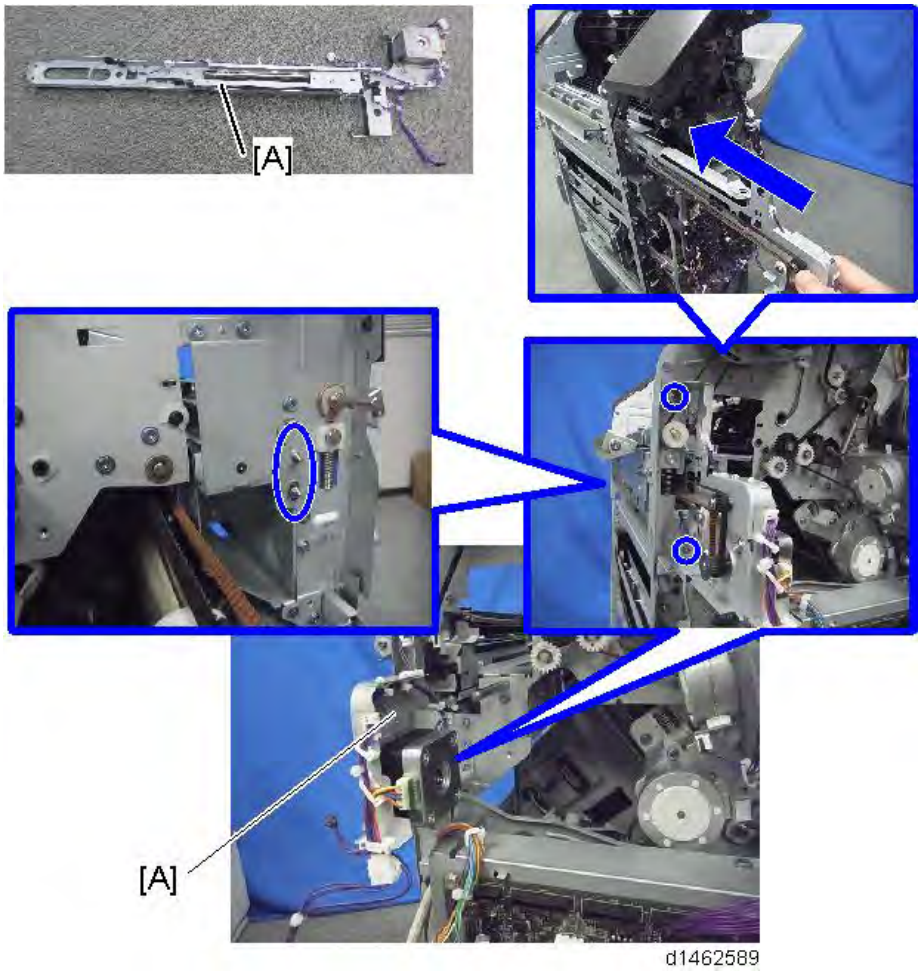


13. Insert and attach the guide plate [A] from the rear (×2).

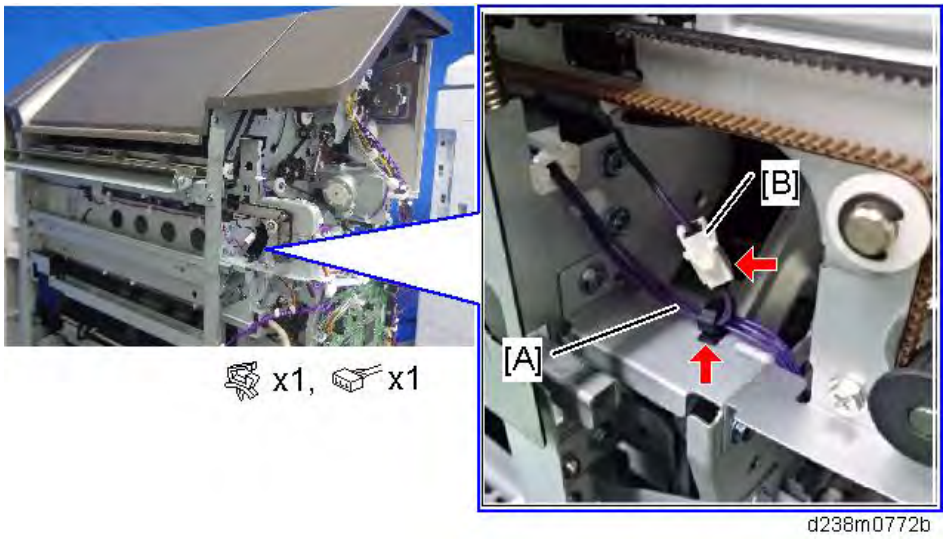


14. Insert and attach the side-to-side detection unit [A] from the rear (×2).

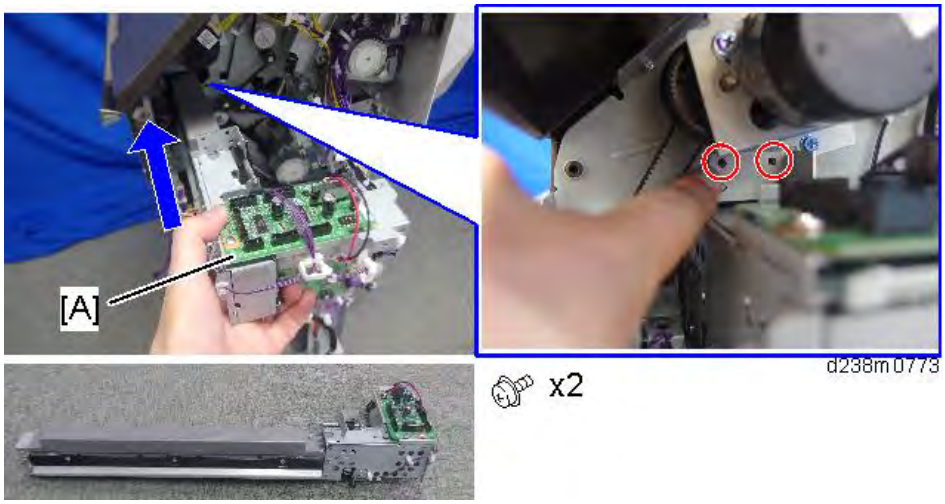
Front: The two shafts of the unit are passed through bearings in the finisher.



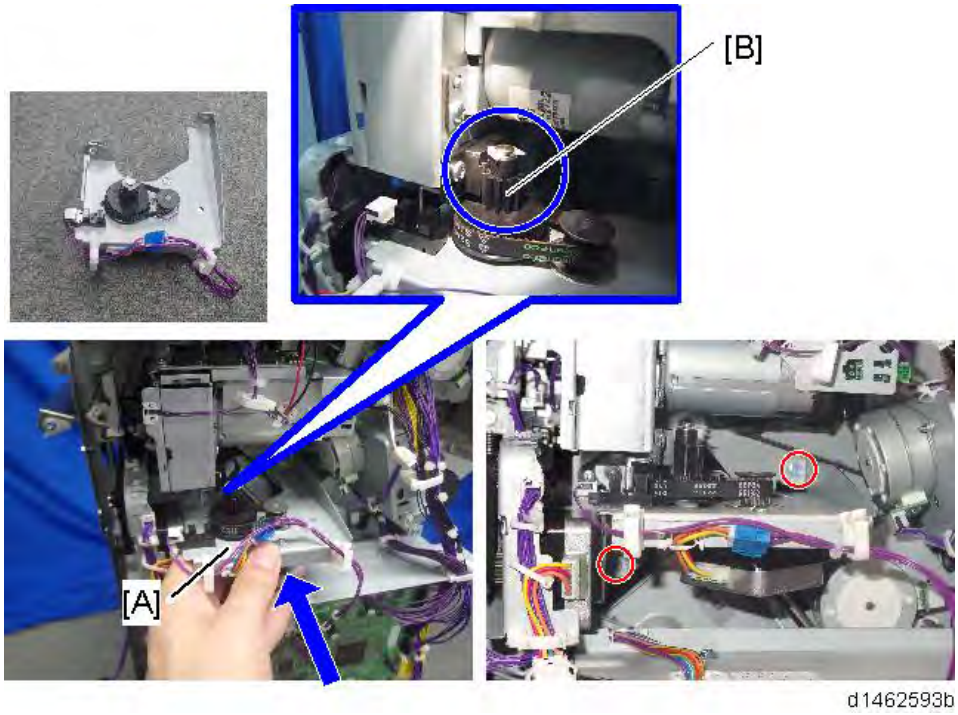
15. Connect the harness [A] of the hopper guide plate to the relay connector [B] of the side-to-side detection unit, and then clamp the harness.



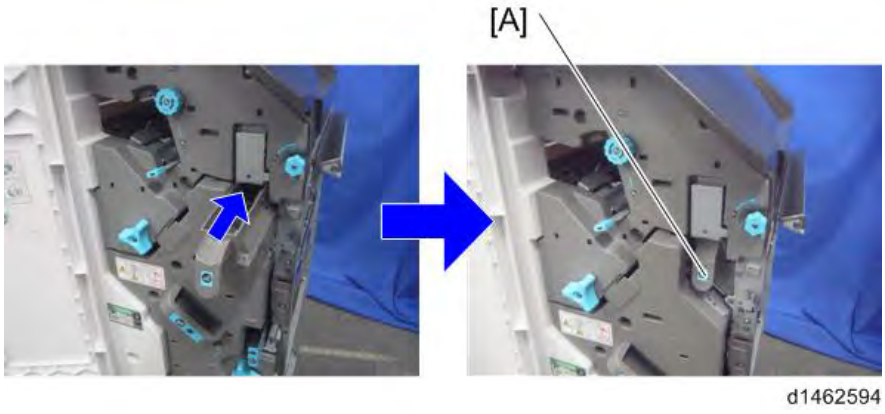
16. Insert and attach the punch unit [A] from the rear.



17. Attach the punch unit movement motor unit [A] so that the gear [B] meshes firmly (×2).

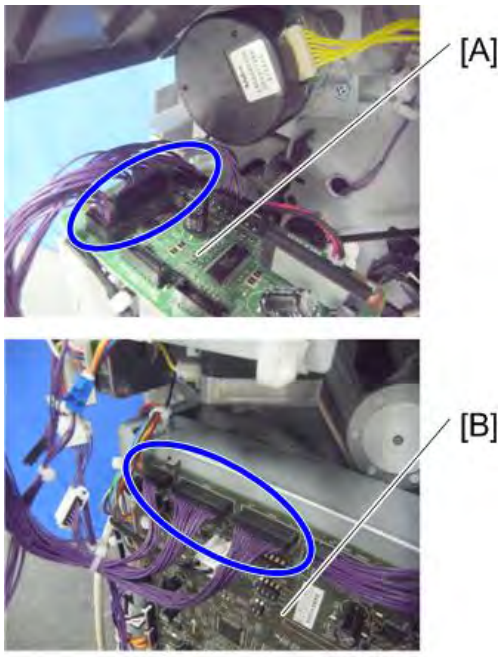


18. Insert the hopper [A].

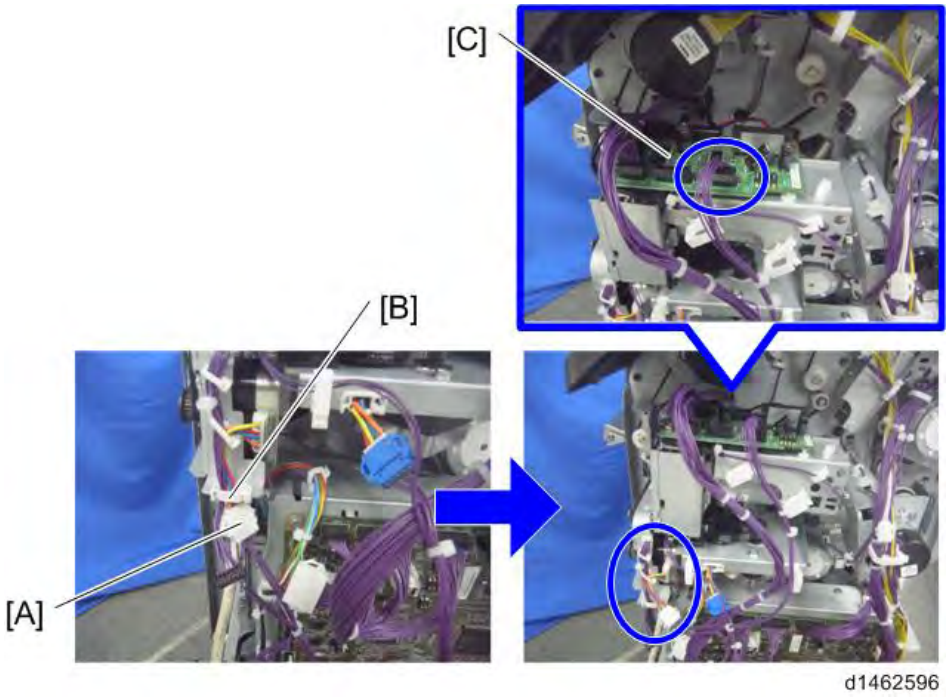


19. Connect the provided harness to the punch unit board [A] and the control board [B] of the finisher (×6).

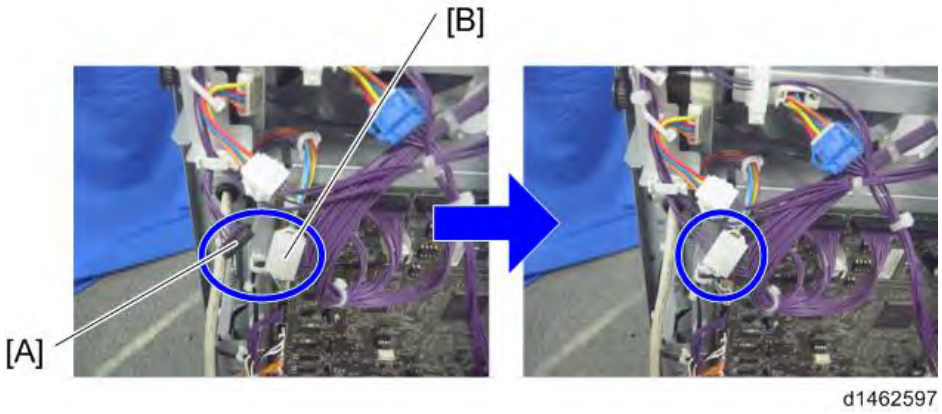
Use Harness (short) for SR3220 and Harness (long) for SR3210.



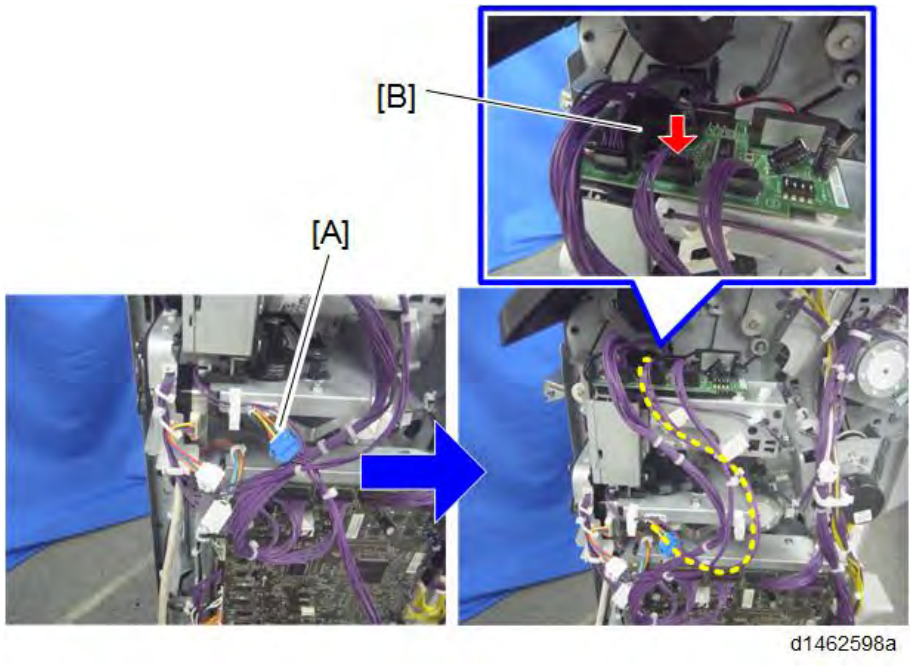
20. Remove the harness [A] from the clamp [B], and connect it to the punch unit board [C] (×1).



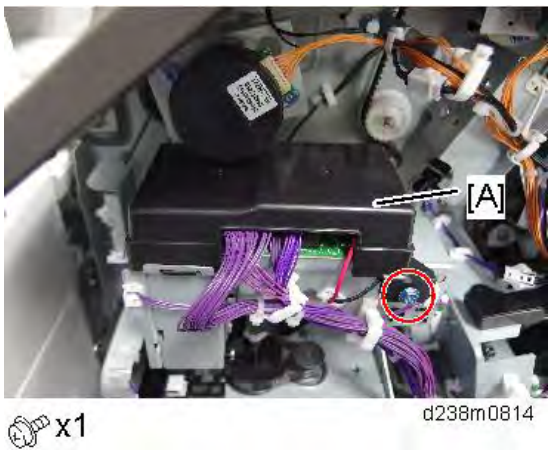
21. Connect the harness [A] of the side-to-side detection unit to the relay connector [B] of the harness (×1).



22. Connect the harness [A] of the punch unit movement motor unit to the punch unit board [B] (×1).

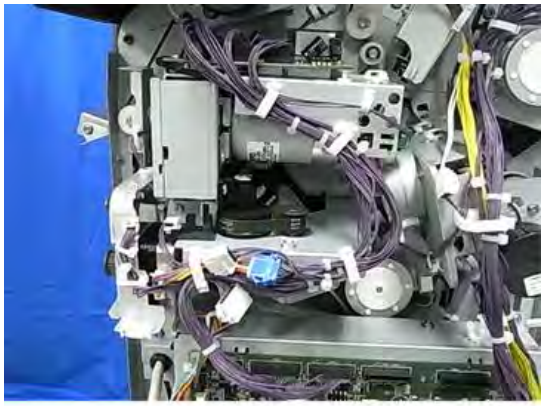


23. Attach the supplied cover [A] to the punch unit board.



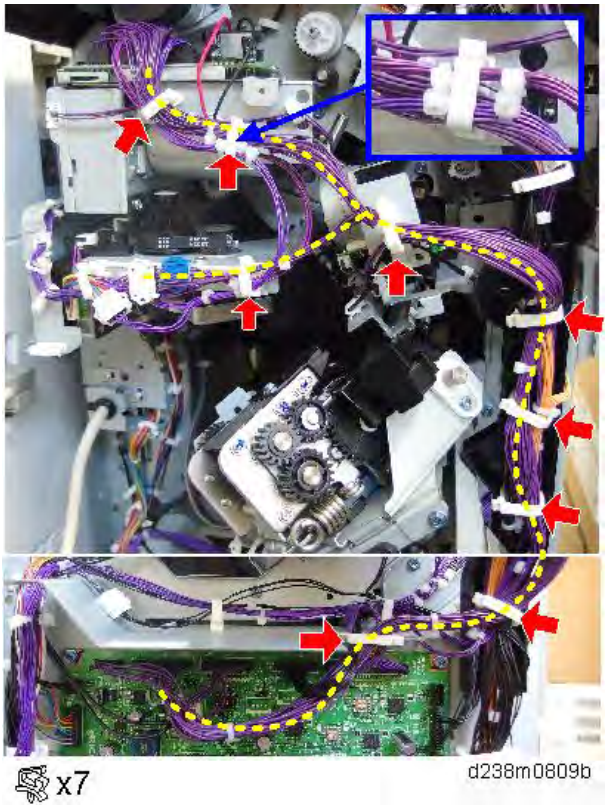
24. Clamp the harnesses.

For SR3220



d146z0068

For SR3210



x7

d238m0809b

25. Reattach the finisher rear cover.

26. Reattach the finisher inner cover and three knobs.

27. Close the front cover.

28. Close the top cover.

29. Reconnect the finisher to the machine, and connect the interface cable.

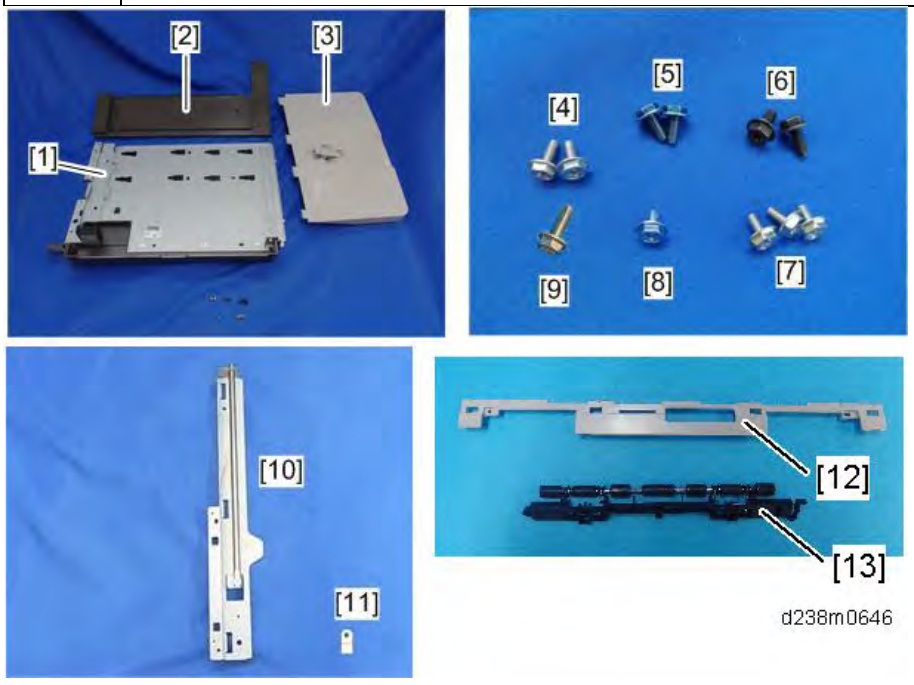
30. Turn ON the main power.

31. Check that the punch can be selected at the operation panel, and check the operation.

Internal Finisher SR3180 (D766)

Accessory Check

No.	Description	Q'ty	Remarks
1	Bottom Plate	1	
2	Left Lower Cover	1	
3	Paper Exit Tray	1	
4	Tapping Screw: 3x8	2	
5	Tapping Screw: 3x8	2	
6	Tapping Screw: 3x8	2	
7	Screw: M3x6	3	
8	Tapping Screw: 3x6	1	
9	Tapping Screw: 4x8	1	
10	Slide Rail	1	
11	Nylon Clamp	1	
12	Paper Support Guide	1	
13	Driven Roller (Flat)	1	
-	SHEET:NOTE_OPTIONAL_UNIT:EXP	1	



Installation Procedure

⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

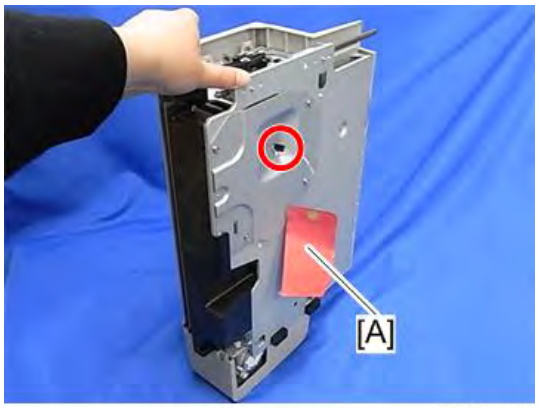
Note

- This option cannot be used together with the following peripherals:
  - Internal Shift Tray SH3070 (D691)
  - Side Tray Type M3 (D725)
  - Internal Finisher SR 3130 (D690)
  - Bridge Unit BU3070 (D685)
  - Internal Multi-Fold Unit FD3000 (D3E4)
- For using this option together with "1 Bin Tray BN3110 (D3CQ)", attach the bottom plate of this option at the beginning, then install the "1 Bin Tray BN3110 (D3CQ)", followed by installing this option.

1. Remove the orange tape and shipping retainers.

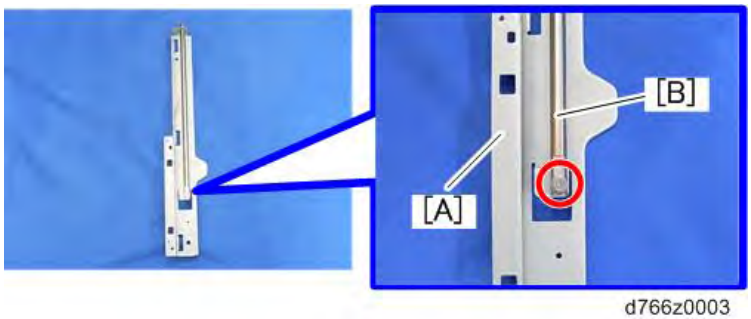
d766z0002

2. Remove the knob screw and red tag [A] (x 1).



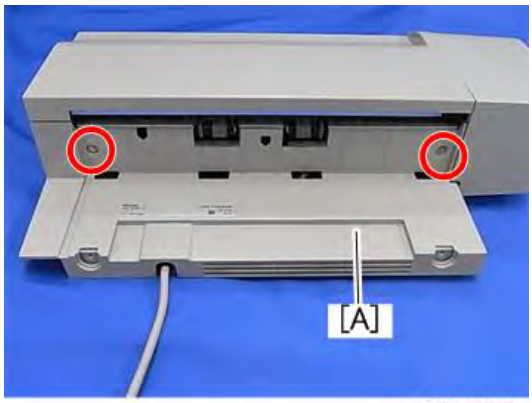
d7662074

3. Remove the shaft [B] from the slide rail [A] (x 1).



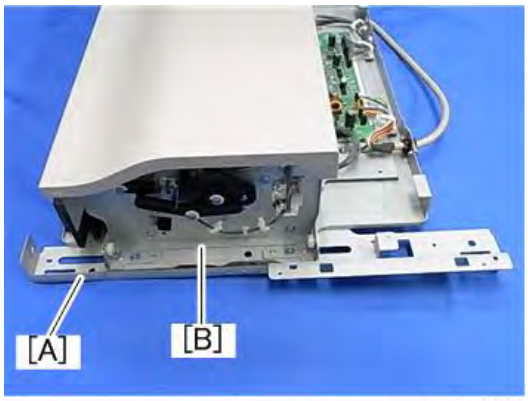
d766z0003

4. Remove the paper exit cover [A] (x 2).



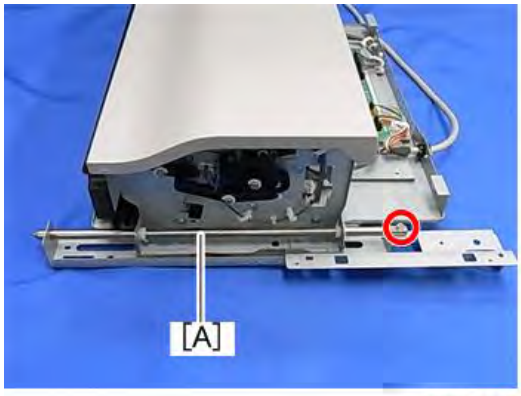
d766z0004

5. Place the slide rail [A] under the internal finisher [B].



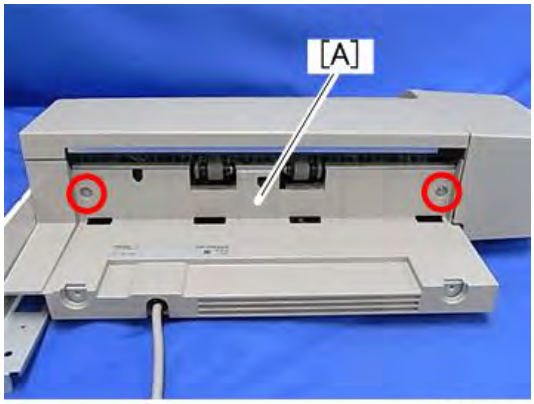
d766z0005

6. Insert the shaft [A] into the holes in the slide rail and internal finisher, and then fasten with the screw (x 1).



d766z0006

7. Attach the paper exit cover (removed in step 4) [A] (x 2).

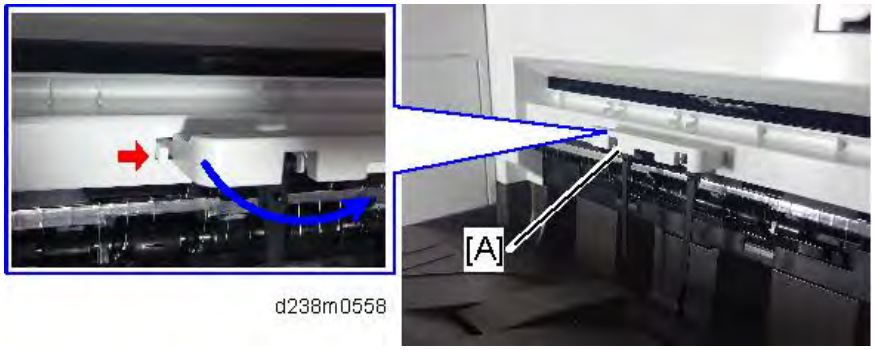


d177z4578

8. Remove the paper exit tray [A].

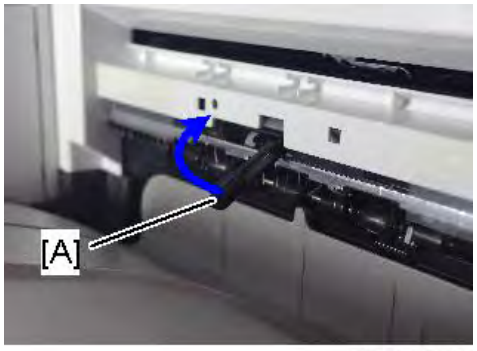
d1462023

9. Remove the paper exit feeler [A].



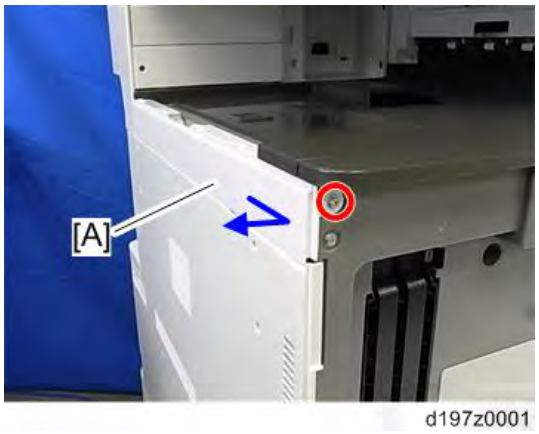
d238m0558

10. Tuck in the lever [A] for detecting when the tray is full.

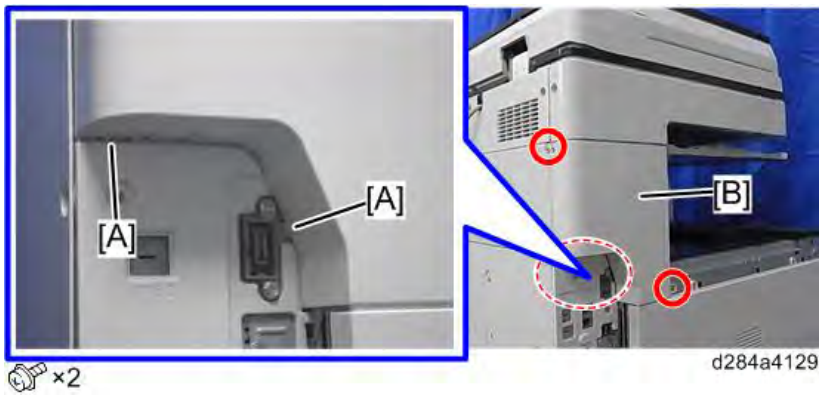


d238m0577

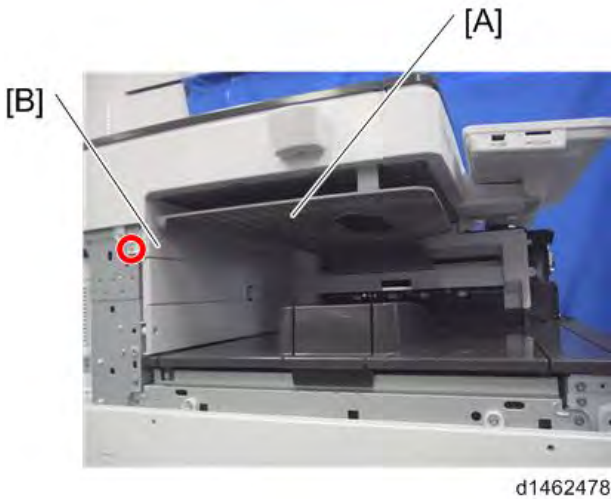
11. Open the front cover, and then remove the left upper cover [A] (x 1).



12. Release the hooks [A], and remove the left rear cover [B].



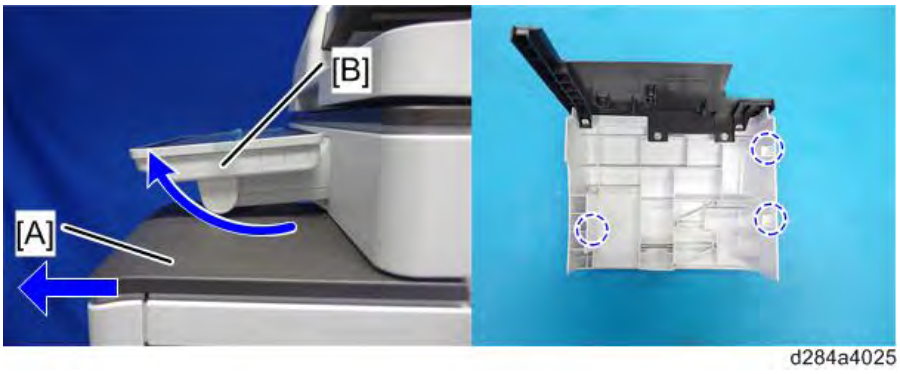
13. Remove the inverter tray [A] and tray support plate [B] (x 1).



14. Open the right cover, and then remove the upper front cover [A].

Note

- When removing the upper front cover, release the hooks at the back of the cover.
- Tilt the operation panel [B] upward to a horizontal position, and then remove the upper front cover [A].



15. Remove the paper exit cover [A] (x 1).

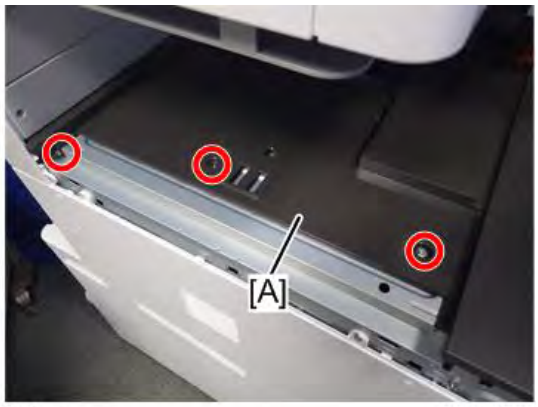
16. Remove the connector cover [A].

d7662066

17. Remove the paper exit lower cover [A].

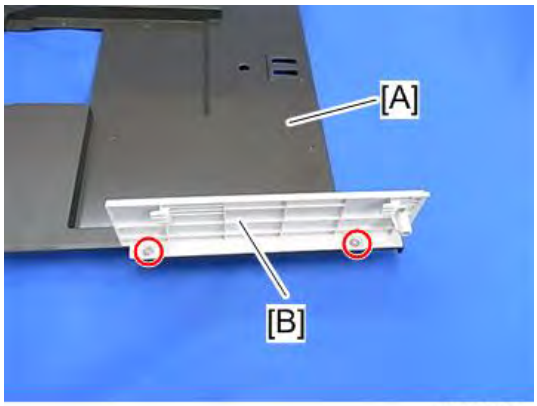
Note

- The lower inside cover can be removed together with the paper exit lower cover, because the inside cover is secured to the paper exit lower cover with three screws.



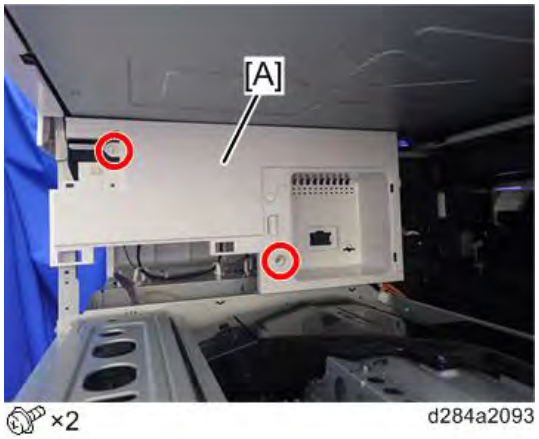
×3 d284a2030

18. Remove the lower inside cover [B] from the paper exit lower cover [A] (x 2).

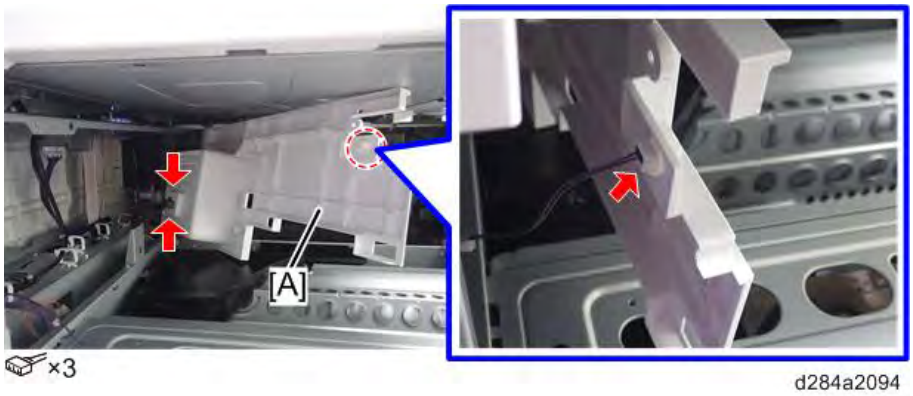


d7662050

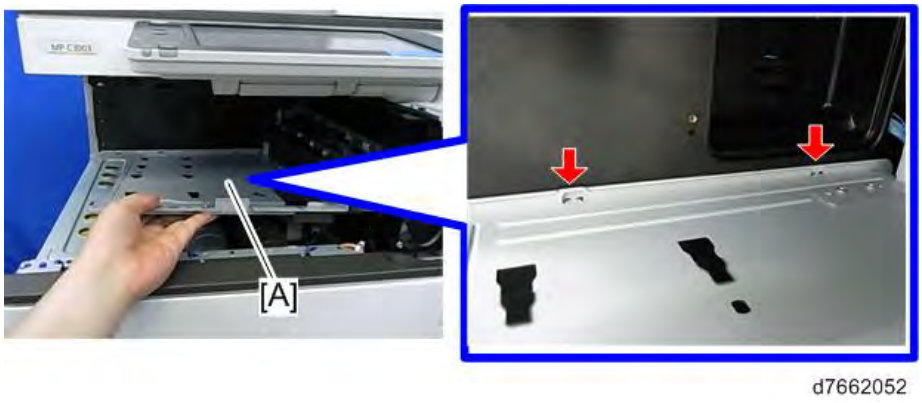
19. Remove the fixing screws on the upper inside cover [A].



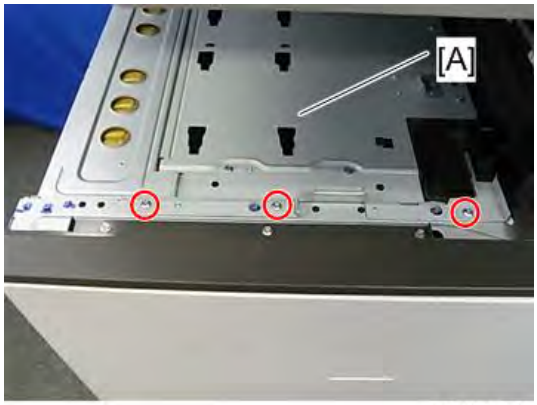
20. Remove the upper inside cover [A].



21. Insert the bottom plate [A] into the holes.

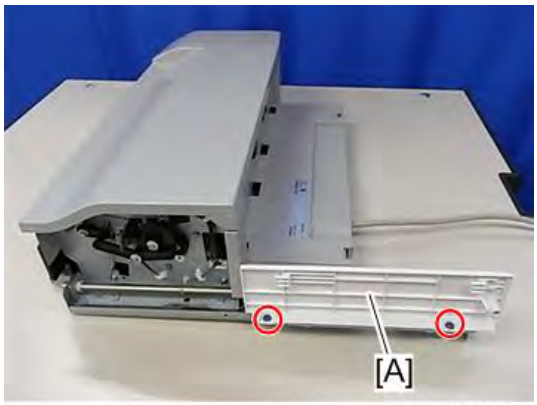


22. Install the bottom plate [A] (x 3, Accessory No. 7).



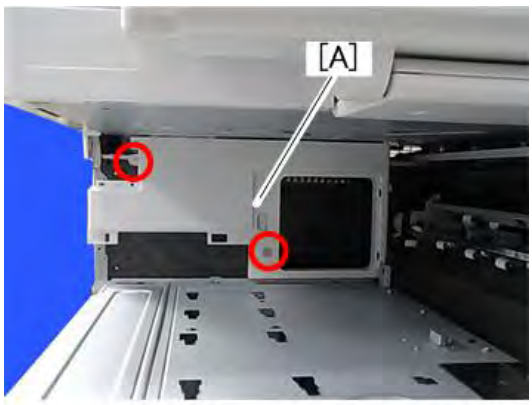
d7662053

23. Install the lower inside cover (removed in step 18) [A] in the finisher (x 2, Accessory No.5).



d7662051

24. Reattach the upper inside cover (removed in step 20) [A] (x 2).

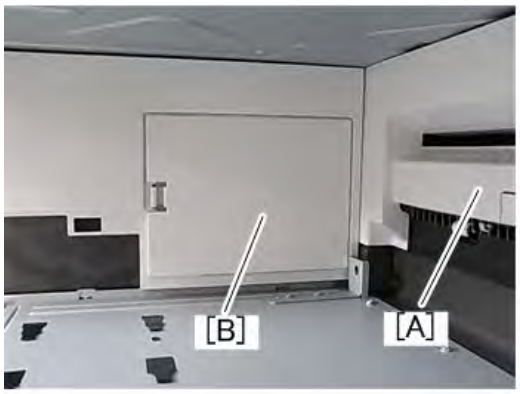


d177z4579

25. Reattach the paper exit cover [A] and the connector cover [B] (removed in step 15 and step 16).

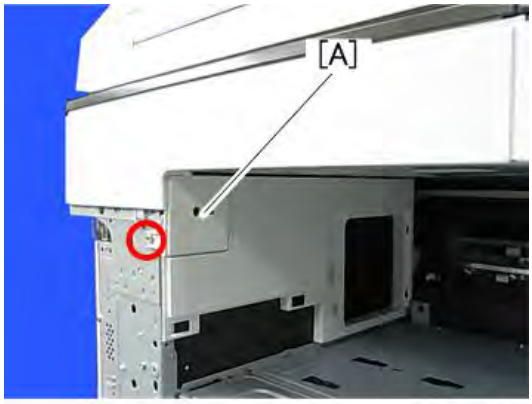
⚠CAUTION

- Touching the moving parts inside of the cover can result in an injury. To avoid this, be sure to install the connector cover [B].



d766z0007

26. Reattach the tray support plate (removed in step 13) [A] (x 1).

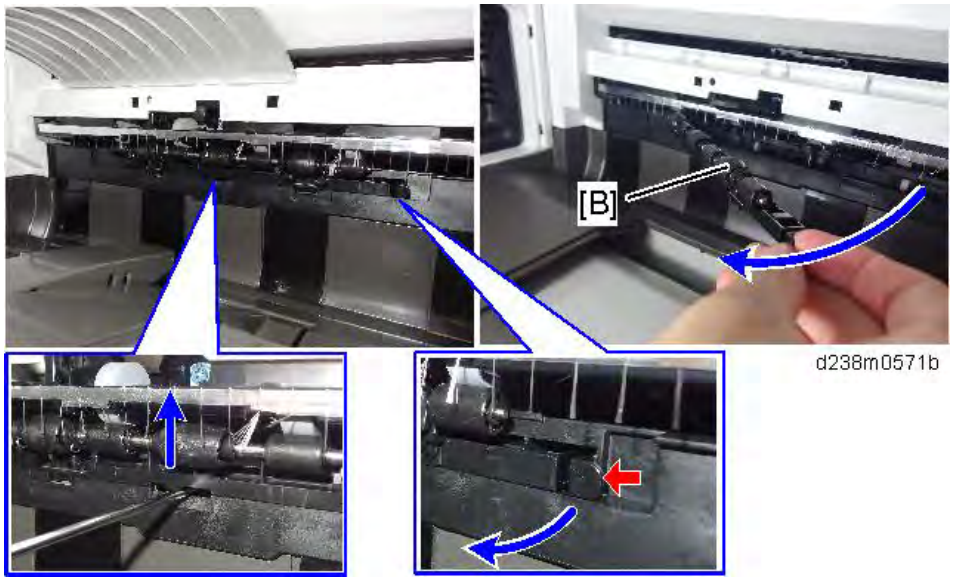


d177z4580

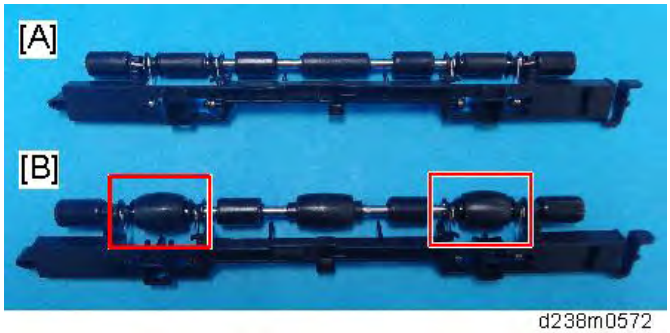
27. Reattach the covers (removed in step 14 and step 15), and close the right door.

28. Remove the driven roller [B] at the machine's exit tray and attach the supplied driven roller [A].

- Insert a flathead screwdriver into the depression in the center, and then, lifting the driven roller, unlock the part indicated by the red arrow.
- When attaching the driven roller, push its center all the way in until it clicks.



d238m0571b

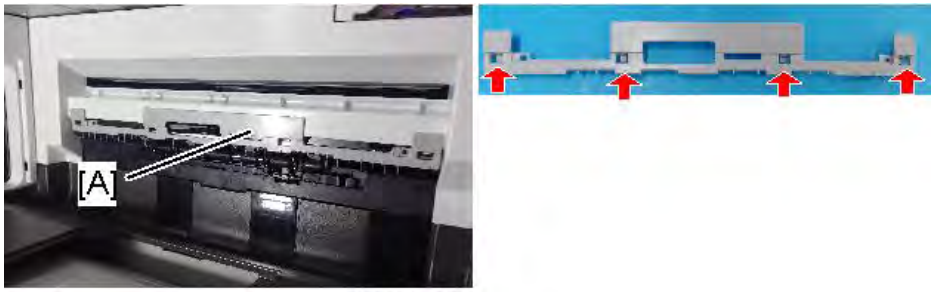


d238m0572

[A]: The supplied driven roller has flat rollers.

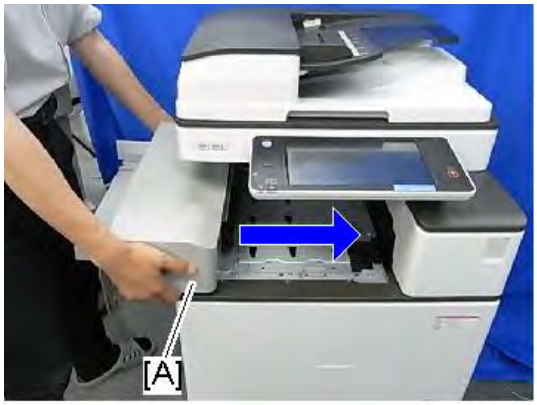
[B]: The machine's standard driven roller has drum-type rollers (as indicated by the red frames).

29. Attach the paper support guide [A] (Tab x 4)



d238m0573b

30. Install the internal finisher [A].

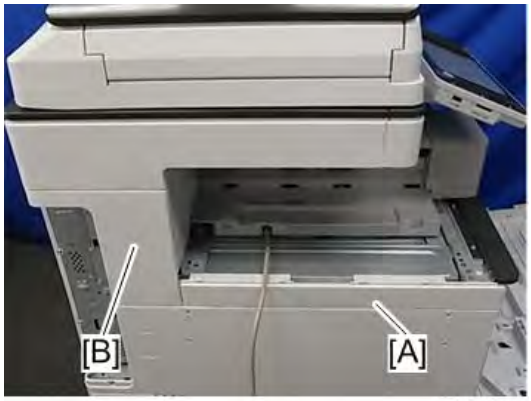


d7662055a

31. Secure the finisher (x 1, Accessory No.8).

d7662056

32. Attach the left upper cover [A] and the left rear cover [B] (removed in step 11 and step 12).

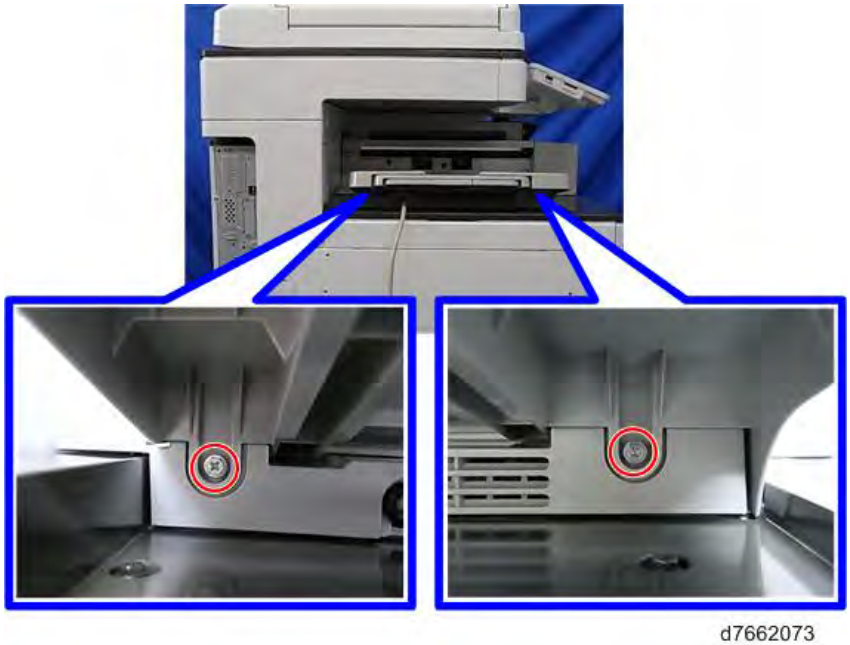


d7662071

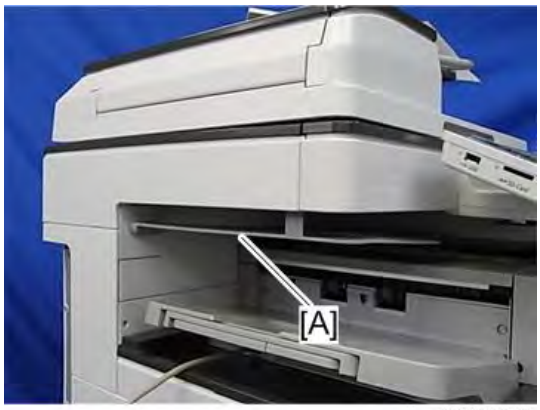
33. Attach the left lower cover [A] (x 2, Accessory No.6).

d7662072

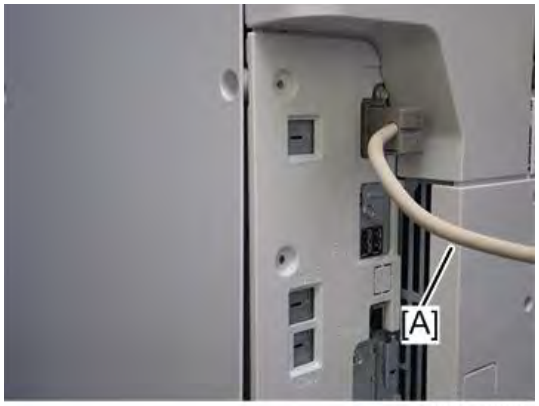
34. Attach the paper exit tray (x 2, Accessory No.4).


d7662073

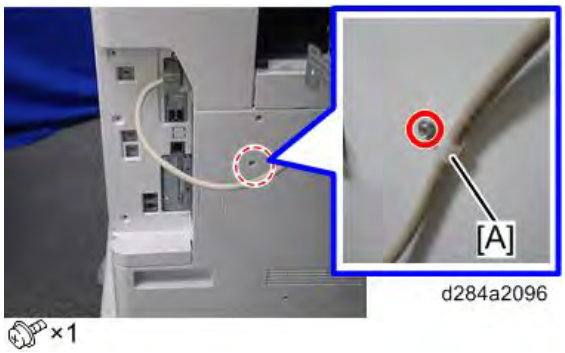
35. Reattach the inverter tray [A] removed in step 13.



36. Connect the interface cable [A].



37. Attach the nylon clamp [A] as shown below (Accessory No.9).



38. Turn ON the main power.

39. Ensure that the operation panel displays finisher jobs properly and that it works properly.

Stapleless Stapler Initial Settings

Note

- To adjust the strength of the crimp between sheets of stapled paper, there is a setting to select either single or double stapling.
- The crimp is weakened when there is an image (toner) at the point which is to be stapled. There also is a setting to mask the image on the point for stapling, in order to prevent the crimp from being weakened.
- Depending on users demands, explain the settings/methods of the settings by checking the following

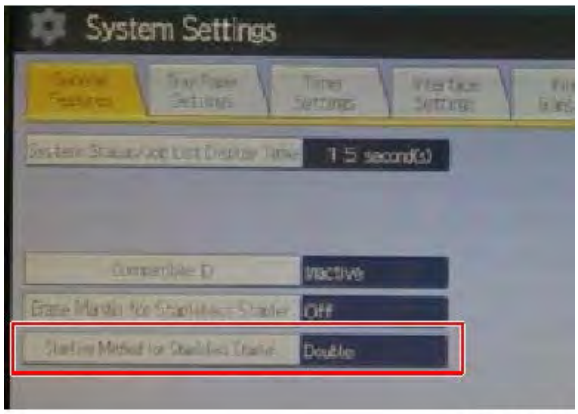
instructions.

How to change the setting of Staple Method for the Stapleless Stapler

Use this procedure to select the type of stapling that is done by the stapleless stapler.

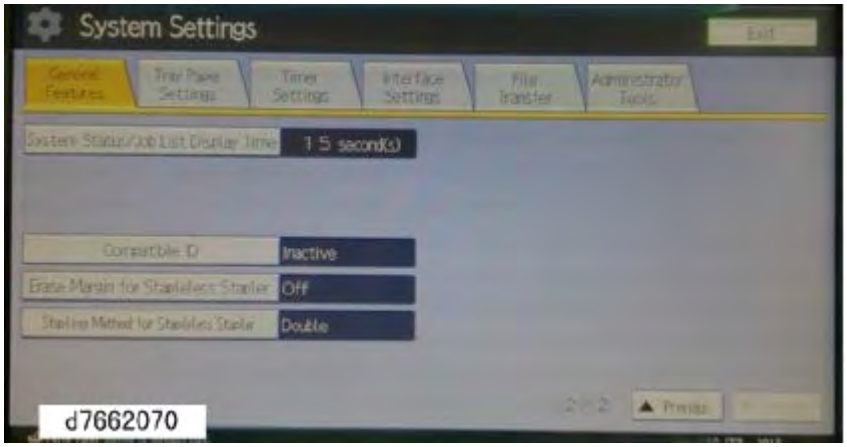
Note that if you change the finisher type from Finisher SR3210 to Internal Finisher SR3180, which has the same type of stapleless staple unit, the current setting in [Stapling Method for Stapleless Stapler] is not carried over, so configure the setting again.

1. Press the [User Tools] icon on Home screen.
2. Press [Machine Features] > [System Setting] > [General Setting] >[Stapling Method for Stapleless Stapler].
3. Select [Double] or [Single].



How to set Margin Erase for the Stapleless Stapler

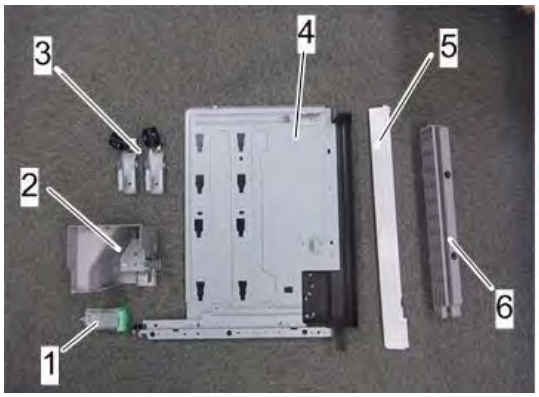
1. Press the [User Tools] icon.
2. Press [Machine Features] > [System Setting] > [General Setting].
3. Press [Erase Margin for Stapleless Stapler].

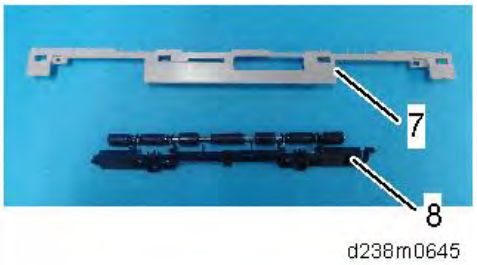


Internal Finisher SR3130 (D690)

Accessory Check

No.	Description	Q'ty	Remarks
1	Staple Cartridge	1	
2	Front Right Cover	1	
3	Stabilizer	2	
4	Bottom Plate	1	
5	Left Lower Cover	1	
6	Entrance Guide Plate	1	Not used when the punch unit is attached.
7	Paper Support Guide	1	
8	Driven Roller (Flat)	1	
-	Screw - M3 × 6	6	
-	Tapping Screw – M4 x 6	1	
-	Decal - EMC Address	1	
-	SHEET:NOTE_OPTIONAL_UNIT:EXP	1	





Installation Procedure

⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

Note

- This option cannot be used together with the following peripherals:
  - Internal Shift Tray SH3070 (D691)
  - Side Tray Type M3 (D725)
  - Internal Finisher SR 3180 (D766)
  - Bridge Unit BU3070 (D685)
  - Internal Multi-Fold Unit FD3000 (D3E4)
- To use together with the "1 Bin Tray BN3110 (D3CQ)", after attaching the bottom plate of this option,

attach the "1 Bin Tray BN3110 (D3CQ)", and then install this option.

- To use together with the "Punch Unit PU3040 (D716)", first attach the "Punch Unit PU3040 (D716)" before installing this option.

1. Remove the orange tape and shipping retainers.

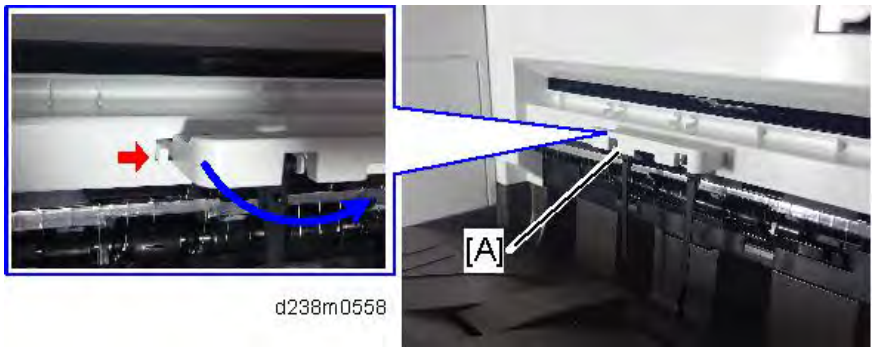
d1462556

2. Remove the package accessories (fixing screws, etc.).

3. Remove the paper exit tray [A].

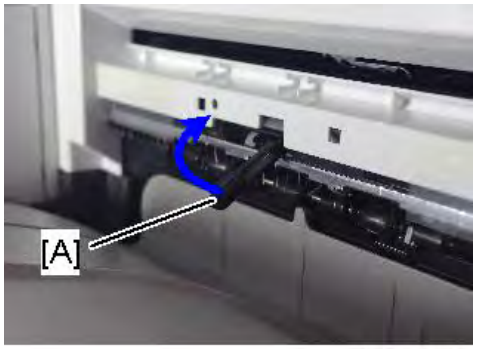
d1462023

4. Remove the paper exit feeler [A].

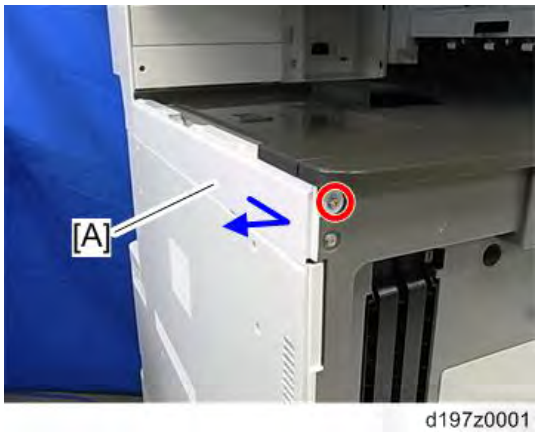


d238m0558

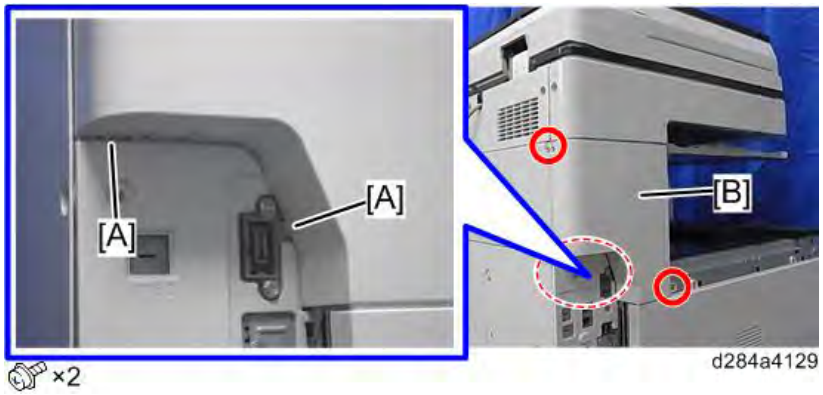
5. Tuck in the lever [A] for detecting when the tray is full.



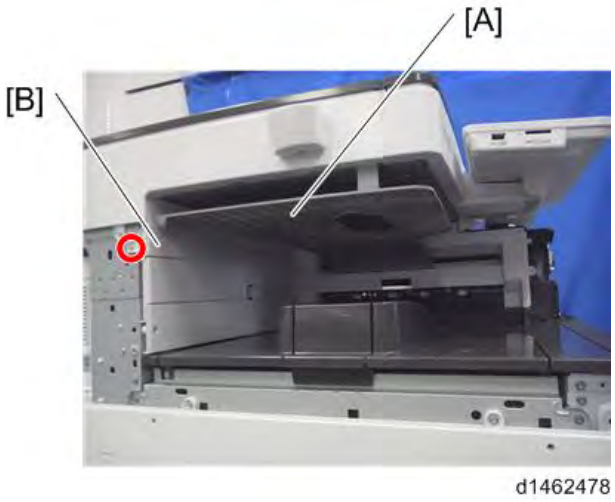
6. Open the front cover, and then remove the upper left cover [A] (×1).



7. Release the hooks [A], and remove the left rear cover [B].



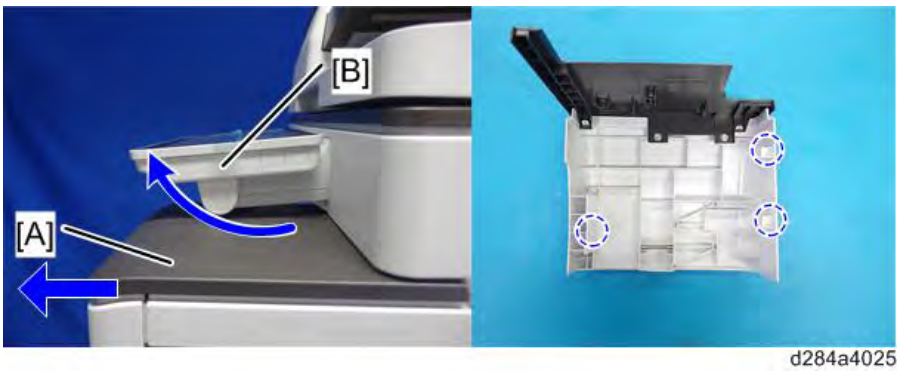
8. Remove the inverter tray [A], and the tray support plate [B] (×1).



9. Open the right cover, and then remove the upper front cover [A].

Note

- When removing the upper front cover, release the hooks at the back of the cover.
- Tilt the operation panel [B] upward to a horizontal position, and then remove the upper front cover [A].

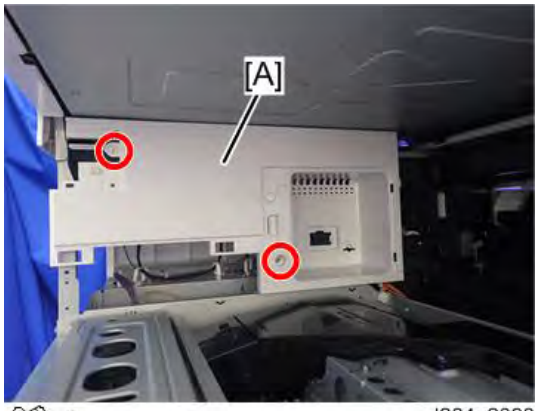


10. Remove the paper exit cover [A] (×1).

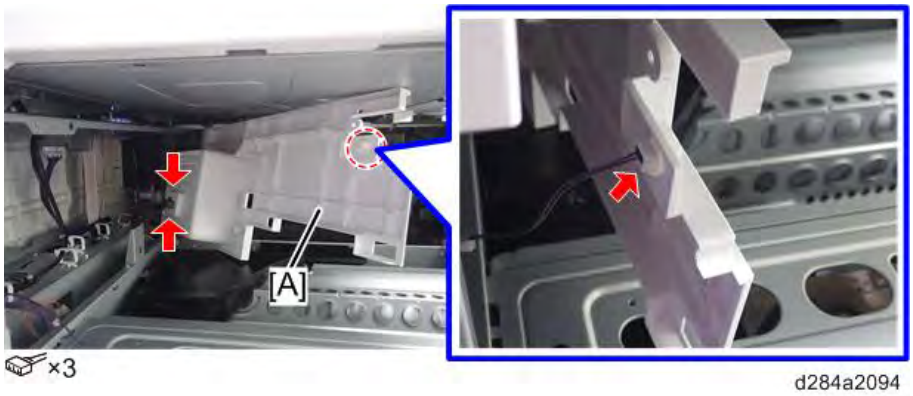
11. Remove the connector cover [A].

12. Remove the paper exit lower cover [A].

13. Remove the fixing screws on the upper rear inner cover [A].



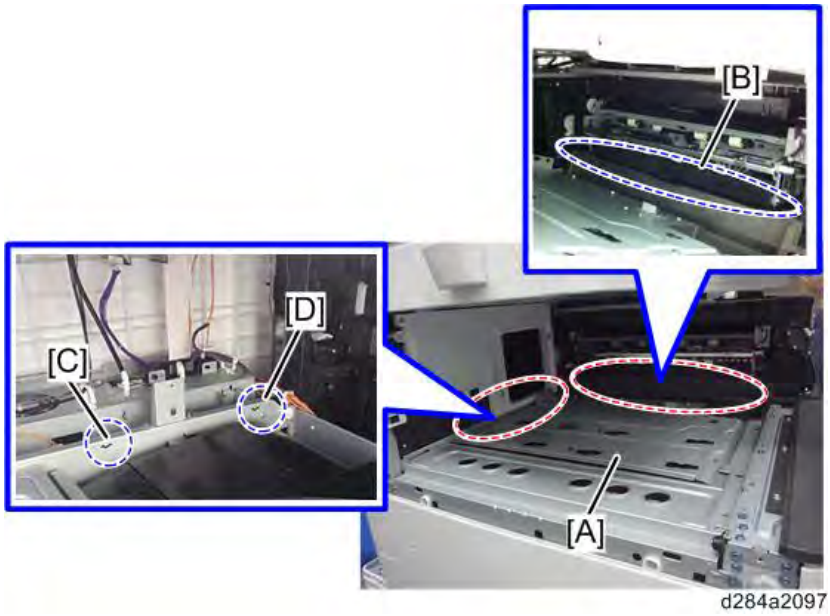
14. Remove the upper rear inner cover [A].



15. Install a screw removed in step 12 (×1).

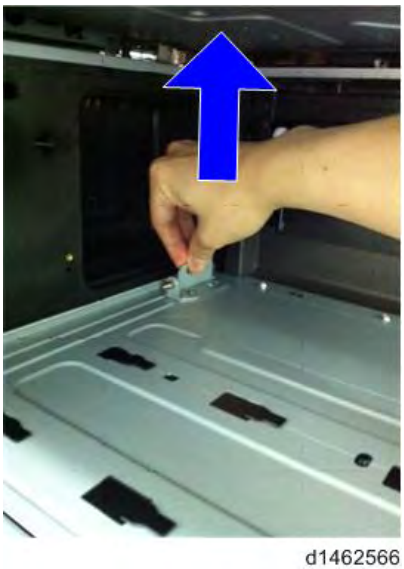
16. While pressing the bottom plate [A] into the area shown by the blue circle [B], insert it into the slot shown by

the blue circles [C] and [D].

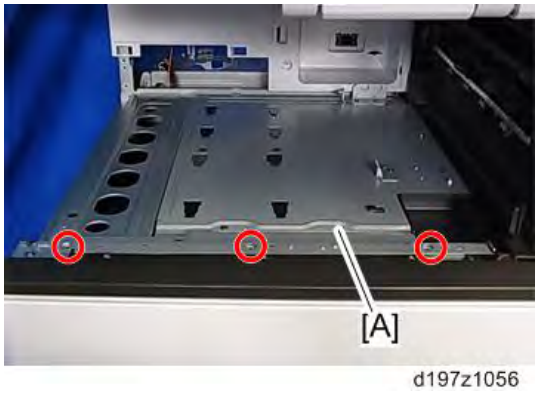


Note

- The following procedure is the easiest way to set this component.
- 1) Slip the bottom plate [A] into the position in the blue circle [B].
- 2) Insert the bottom plate [A] into the hole in the blue circle [C].
- 3) When the bottom plate [A] is picked up (see below), it can be inserted into the hole in the blue circle [D].



17. Attach the bottom plate [A] (×3)



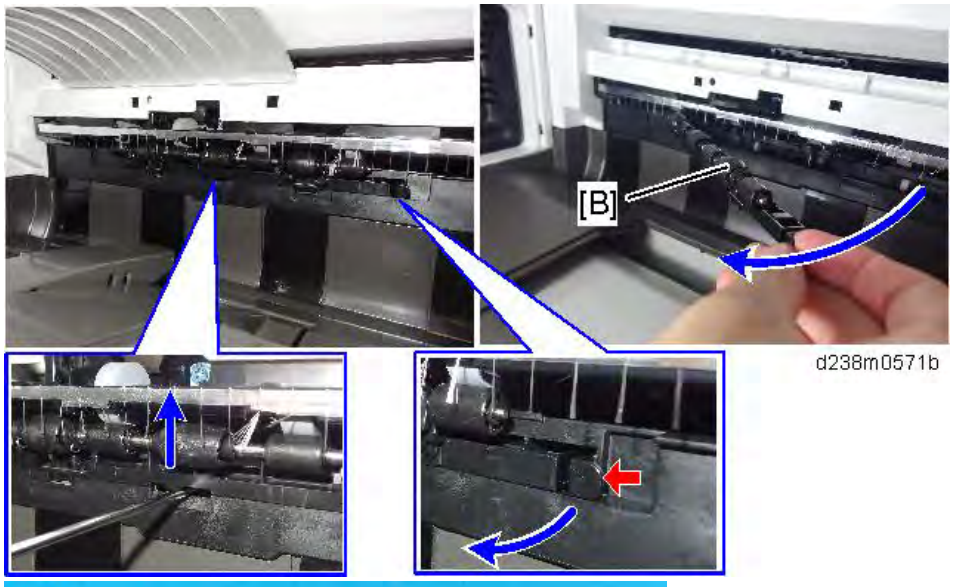
18. Attach the upper rear inner cover.

19. Attach the paper exit cover.

20. Reattach the connector cover and the covers (removed in step 9 and step 10), and then close the right door.

21. Remove the driven roller [B] at the machine's exit tray and attach the supplied driven roller [A].

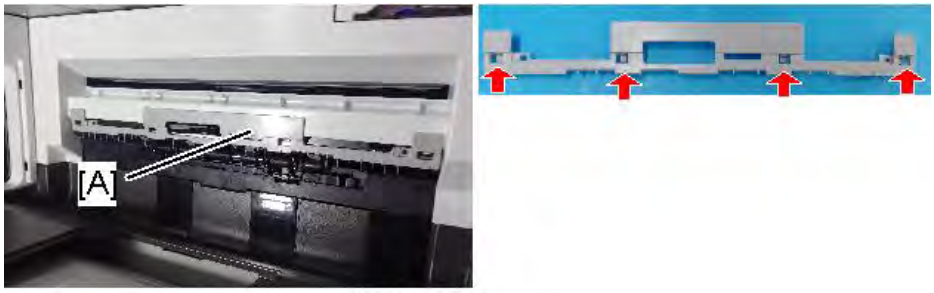
- Insert a flathead screwdriver into the depression in the center, and then, lifting the driven roller, unlock the part indicated by the red arrow.
- When attaching the driven roller, push its center all the way in until it clicks.



[A]: The supplied driven roller has flat rollers.

[B]: The machine's standard driven roller has drum-type rollers (as indicated by the red frames).

22. Attach the paper support guide [A] (Tab x4).



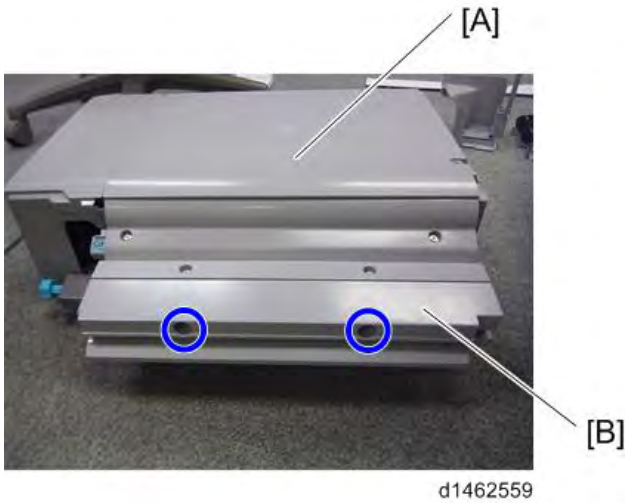
Note

- Up to this point, the procedure is the same as punch unit installation (for fitting the punch unit, refer to Step 3 and later of the punch unit installation procedure).

23. Slide the finisher front right cover [A] from left to right to attach it (×1).

24. Reattach the inverter tray.

25. Attach the entrance guide plate [B] to the finisher [A] (×2).

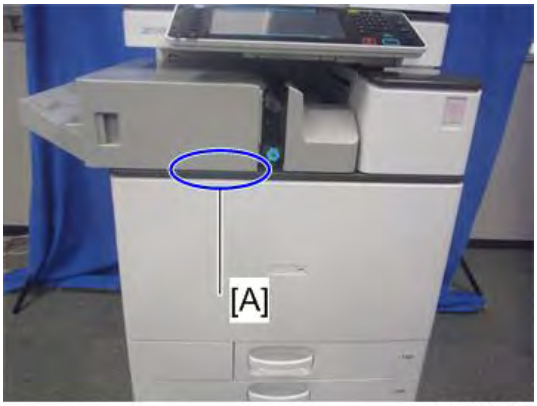


26. Slide the finisher [A] along the rail of the bottom plate from the left-hand side of the machine to attach it (

×1).

Note

- Hold the front side [A] of the internal finisher as shown below to check if the internal finisher is correctly set in the rail of the bottom plate.



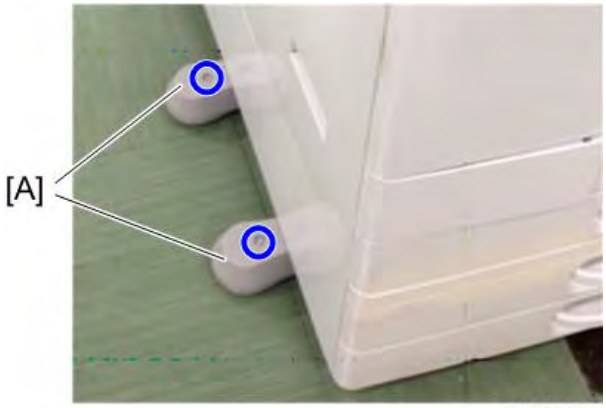
27. Reattach the left rear cover.

28. Insert the upper left cover [A] from the front, and slide it to reattach it (×1).

29. Attach the stabilizers [A].

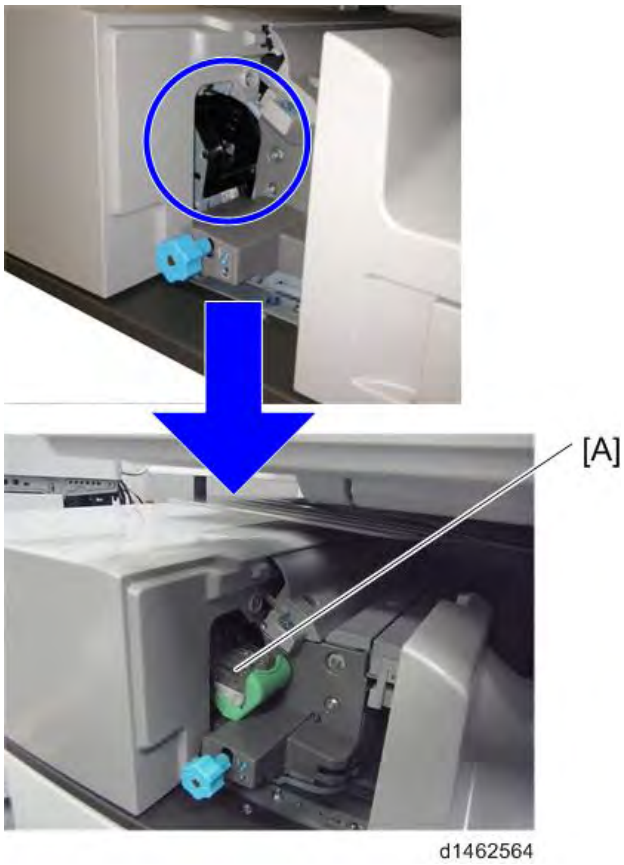
Note

- Because the weight is biased to the left of the machine if the internal finisher is installed, stabilizers are required on the left side. Because they are included with the finisher, install these stabilizers at the same time as you install the internal finisher.



30. Connect the interface cable [A] to the machine.

31. Move the stapler unit forward, then set the staple cartridge [A].



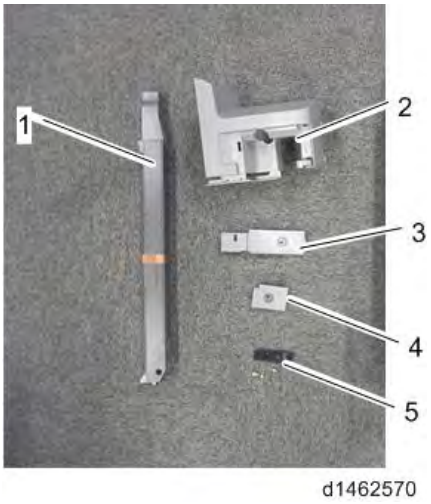
32. Reinstall the stapler unit, and then turn ON the main power.

33. Check that the finisher can be selected at the operation panel, and check the finisher operation. Also when the punch unit is installed, check the punching operation.

Punch Unit PU3040 (D716)

Accessory Check

No.	Description	Q'ty
1	Hopper	1
2	Punch Unit Cover	1
3	Lower Front Cover	1
4	Lower Rear Cover	1
5	Holder	1
-	Knob Screw - M4	1
-	Tapping screws: M3x6	3
-	Decal - EMC Address	1



Installation Procedure

⚠CAUTION

- When installing this option, turn the power to the machine off, and unplug the power plug from the wall socket.
- If this option is installed when the power is on, it will result in an electric shock or a malfunction.

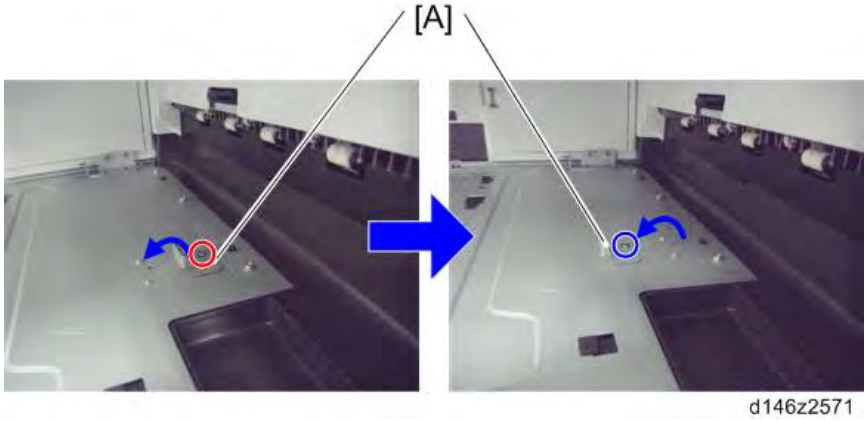
Note

- When installing this option together with the "Internal Finisher SR3130", attach this option first before installing the "Internal Finisher SR3130"

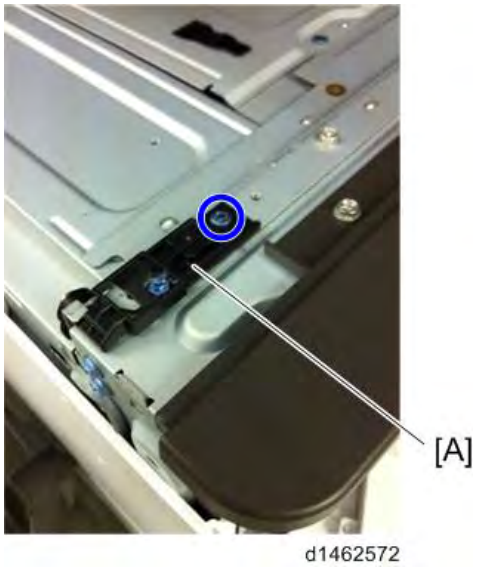
1. Take out from the box, and remove the filament tape and packing material.

2. Perform steps 1 to 22 of the installation procedure for the "Internal finisher SR3130".

3. Change the position of the bracket [A] on the bottom plate (×1).



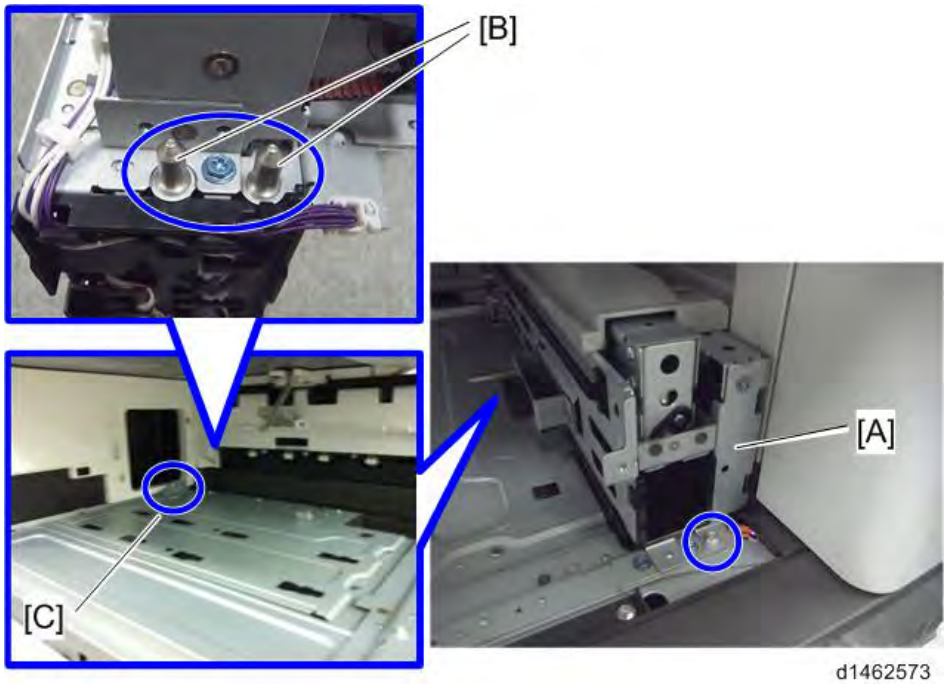
4. Replace the lock holder of the bottom plate with the lock holder [A] provided (×1).



5. Attach the upper front cover.

6. Pass the shafts [B] of the punch unit [A] through the bearings [C] in the bottom plate, and attach the punch

unit to the machine (×1, knob screw).



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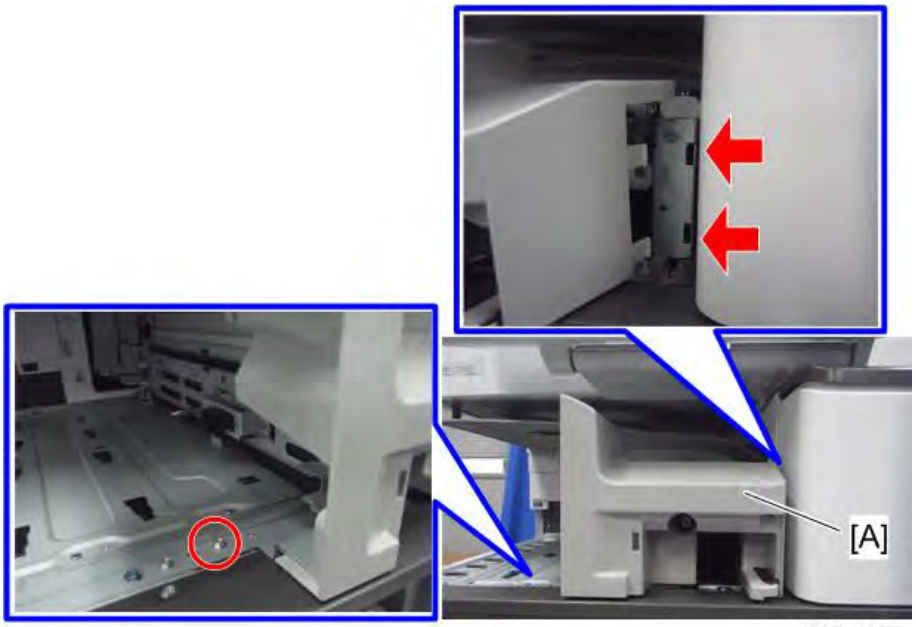
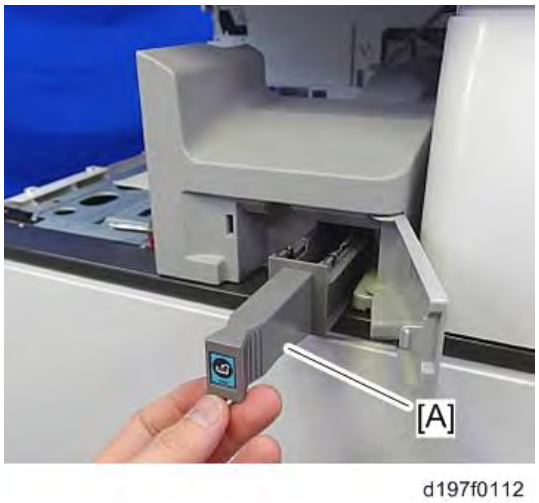
7. Attach the front right cover [A] provided with the punch unit, inserting the claws (×1).



8. Insert the hopper [A].



9. Slide the finisher [A] along the rail of the bottom plate from the left of the machine, and then attach it (×1).

Note

- Before fastening the screw, make sure that the finisher is correctly set in the rail of the bottom plate.

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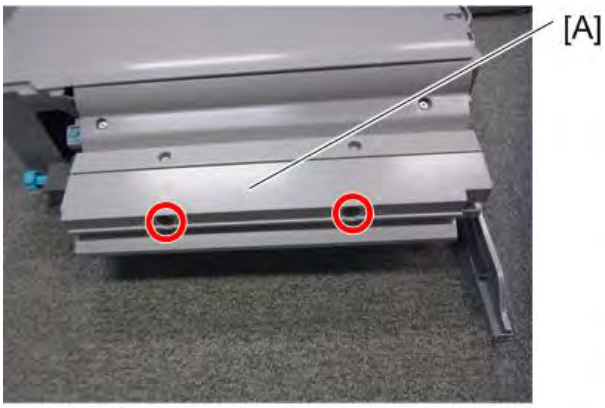
Note

- When installing the punch unit in a finisher which is already installed, remove the entrance guide plate [A] (×2). Note that this step is unnecessary when installing the finisher and punch unit at the same time.



d1462574

10. Attach the lower rear cover [A] and the lower front cover [B] to the finisher (×2).

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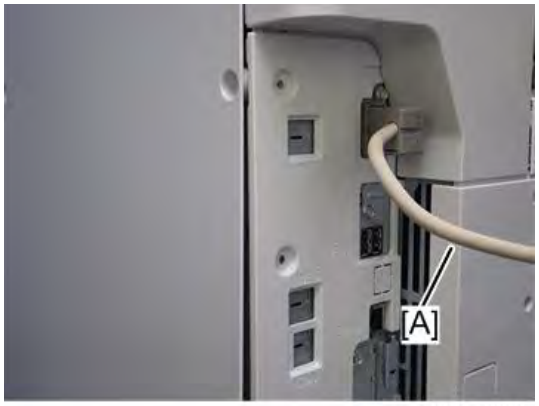
11. Attach the left rear cover to the machine.

12. Insert the upper left cover [A] from the front, and then attach it (x1).

d197f0109

13. Connect the interface cable [A] to the machine.



d284a2095

14. Turn the main power switch on.

15. Check that the finisher can be selected at the operation panel, and check the finisher and punch operation.

Key Counter Bracket Type M3

Accessory Check

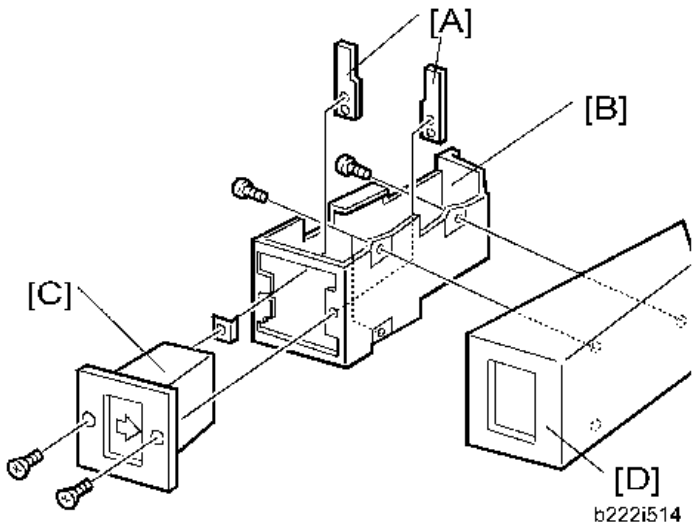
Description	Q'ty
Screw: M3X8	1
Binding Self-Tapping Screw: M4X8	3
Clamp:LWS-1211Z	2
Clamp:NK-3N	1
Double Sided Tape	2
Key Counter Plate Nut	2
Key Counter Harness	1

Installation Procedure

1. Hold the key counter plate nuts [A] on the inside of the key counter bracket [B], and insert the key counter holder [C].

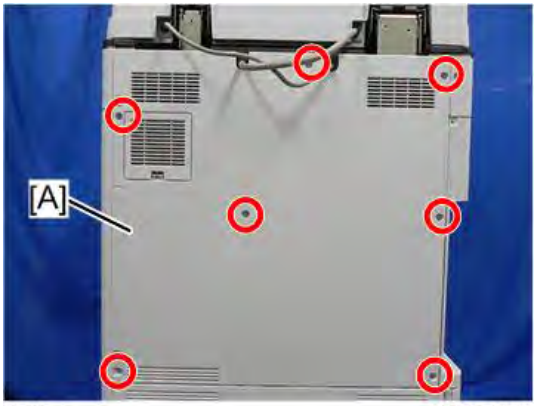
2. Secure the key counter holder to the bracket (x2).

3. Install the key counter cover [D] (x2).

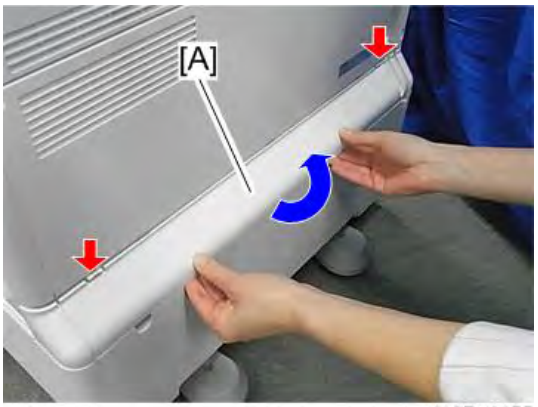


4. Attach the harness that comes from the key counter to the right side of the main machine with the two clamps provided with the accessories (CLAMP:LWS-1211Z).

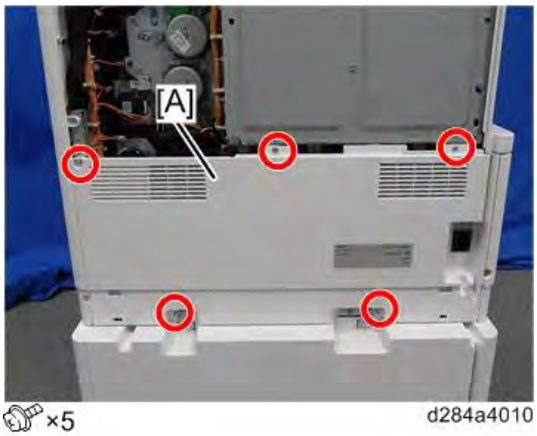
5. Remove the rear cover [A].



6. Remove the rear lower gap cover [A].

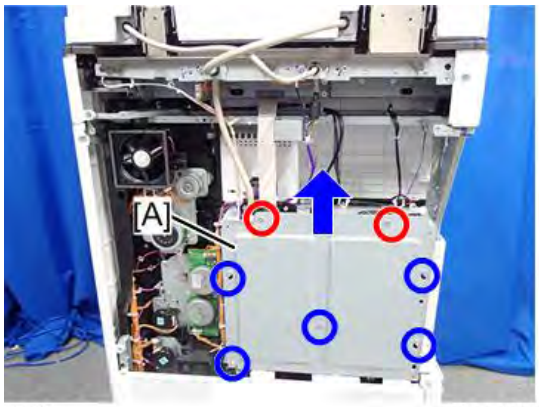


7. Remove the rear lower cover [A].



8. Remove the controller box cover [A].

Red Circle: Remove / Blue Circle: Loosen

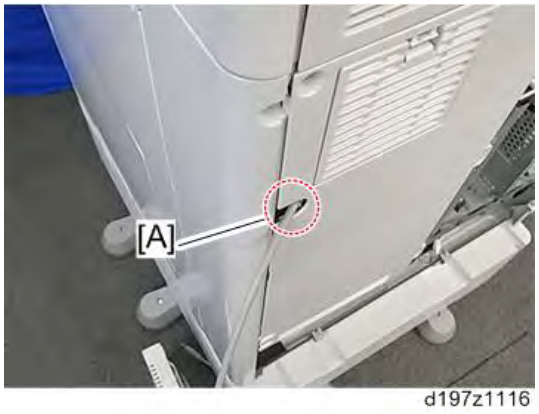


9. Connect the key counter harness to CN133 [A] of the BCU. (×1)

10. Secure the harness to the inside of the main frame with a clamp.

11. Remove the cut off part [A] of the rear right cover.

12. Pass the harness from the key counter through the cut off part [A] of the right rear cover.



13. Reinstall all the covers on the main machine.

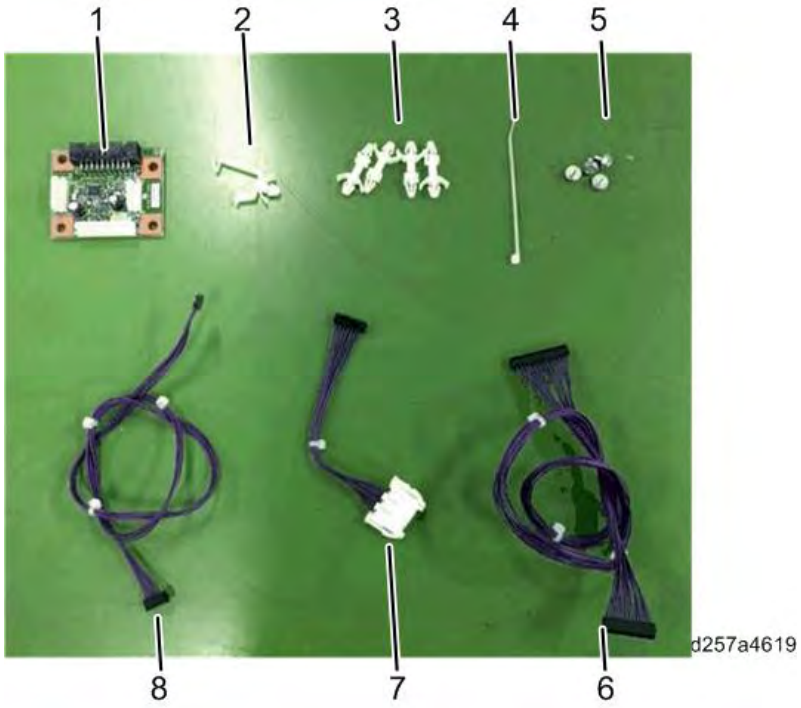
14. Peel off the double-sided tape on the key counter bracket, and attach the key counter to the scanner right cover.

15. Reassemble the machine.

Optional Counter Interface Unit Type M12 (B870-21)

Accessory Check

No.	Description	Q'ty	Remarks
1	PCB: MKB	1	
2	Harness Clamp: LWS-0711	1	
3	Stud	4	
4	Harness Band 80mm	1	
5	Screws M3x6 Standoffs	4	
6	Harness (IOB to MKB) Not Used	1	
7	Harness (Relay) Not Used	1	
8	Harness (MB to MKB) Not Used	1	



Installation Procedure

⚠CAUTION

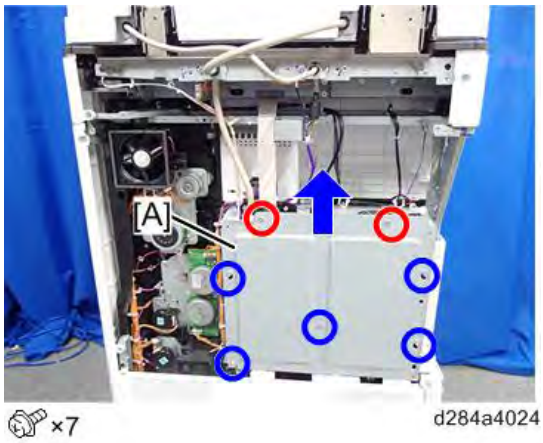
- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

1. Remove the following exterior covers. (Exterior Covers)

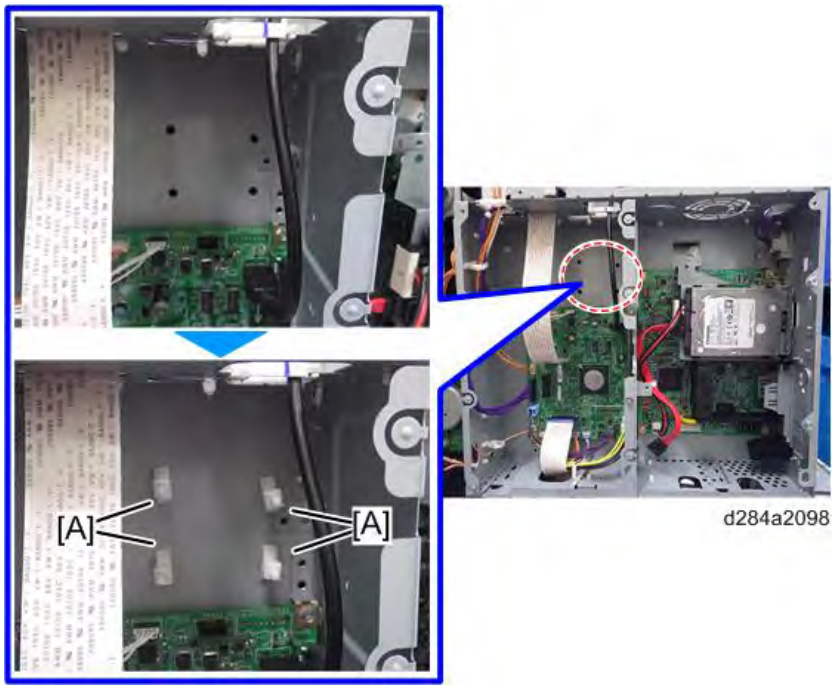
- Rear cover
- Rear lower cover

2. Remove the controller box cover [A].

Red Circle: Remove / Blue Circle: Loosen



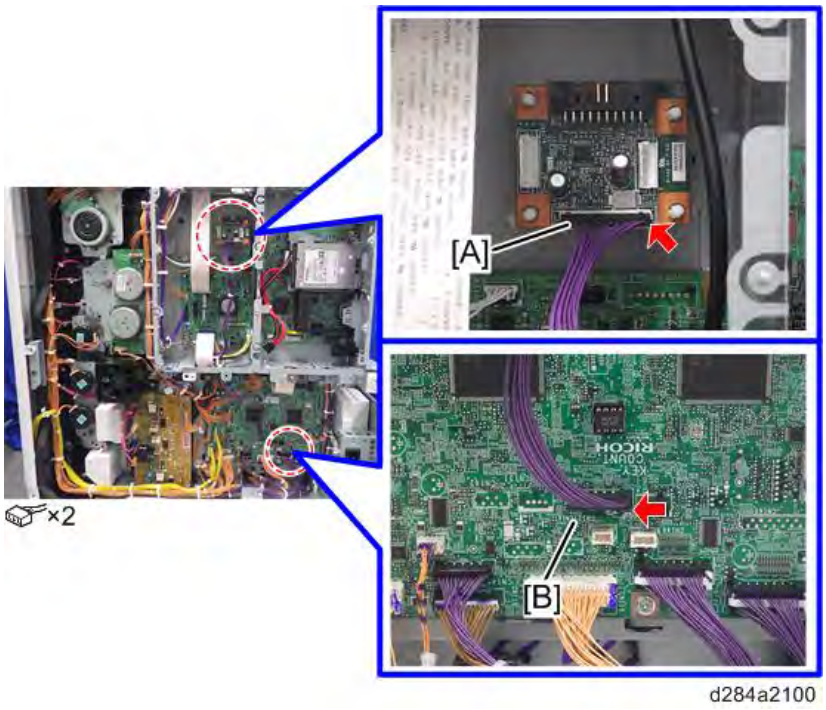
3. Install the four stud stays [A] in the location as shown below.



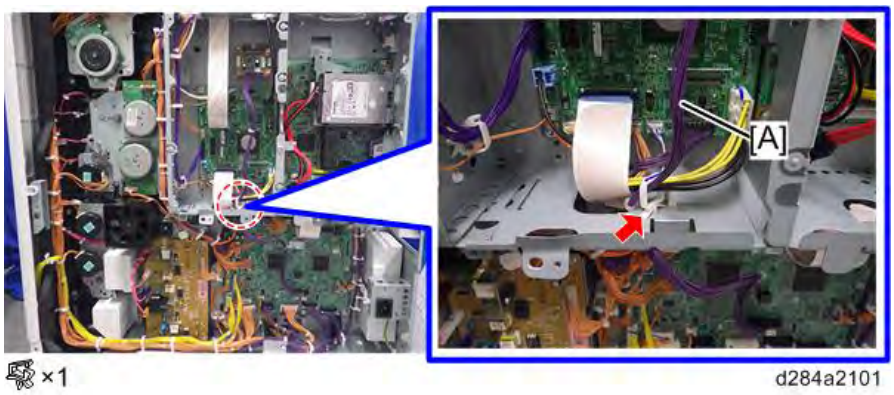
4. Install the optional counter interface board [A] on the four stud stays.

5. Connect the supplied harness (13 pins) to CN3 [A] on the optional counter interface board and CN132 [B] on

the BCU.



6. Route the harness [A] and clamp it as shown below.

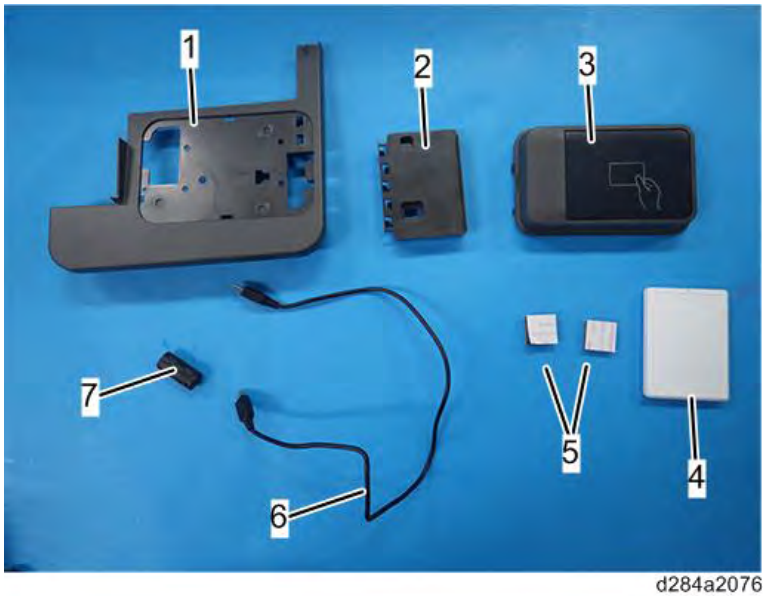


7. Re-install the exterior covers.

NFC Card Reader Type M29 (D3E3-21)

Accessory Check

No.	Description	Q'ty	Remarks
1	Corner Cover	1	
2	Reader Spacer	1	
3	Reader Cover	1	
4	Reader	1	
5	Sponge Cushions	2	
6	Interface Cable	1	
7	Ferrite Core (Black)	1	



d284a2076

Installation Procedure

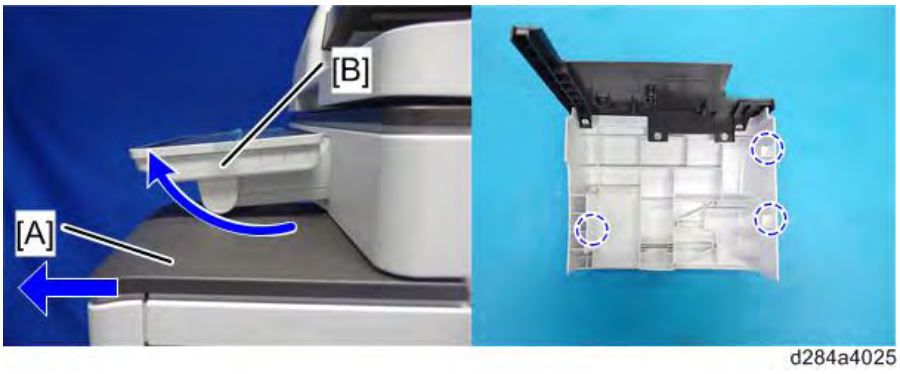
⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

1. Open the right cover, and then remove the upper front cover [A].

Note

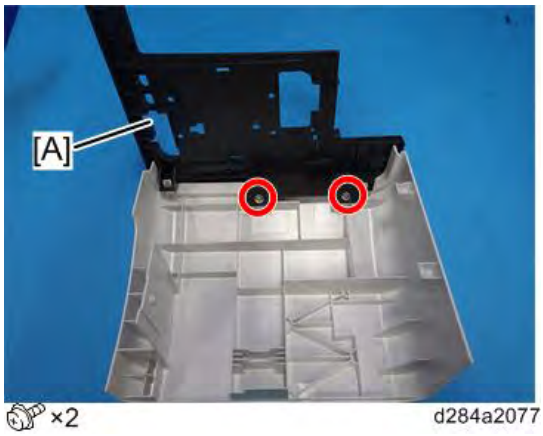
- When removing the upper front cover, release the hooks at the back of the cover.
- Tilt the operation panel [B] upward to a horizontal position, and then remove the upper front cover [A].



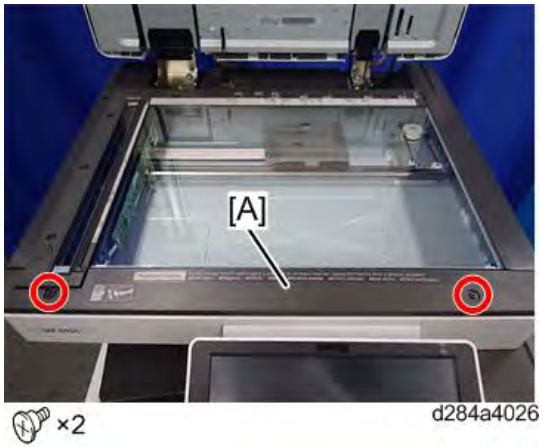
2. Remove the upper cover [A] of the upper front cover.

3. Attach the corner cover [A] provided with this option.

Use the screws removed in the previous step.



4. Remove the scanner front cover [A].

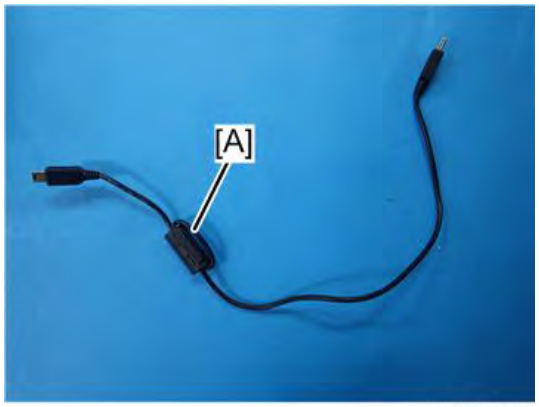


5. Remove the operation panel upper cover [A].

6. Remove the operation panel right cover [A].

d284a2078

7. Attach the ferrite core [A] to the cable as the picture below.



d284a2138

8. Connect the USB connector, which does not have the ferrite core, to the operation panel.

×1 d284a2079

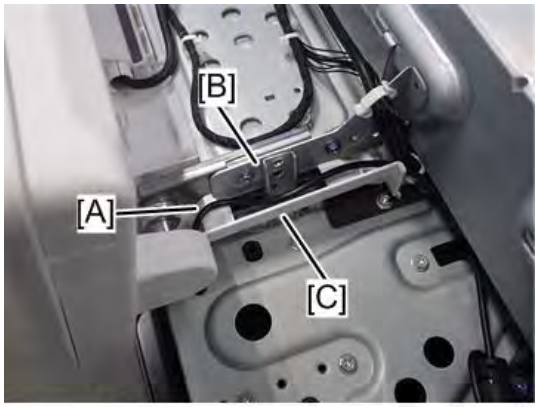
9. Hook the USB cable [B] in the notch [A].

d284a2080

10. Reattach the operation panel right cover [A].

d284a2081

11. Pass the USB cable [A] between the operation panel bracket [B] and the operation panel under cover [C].



d284a2082

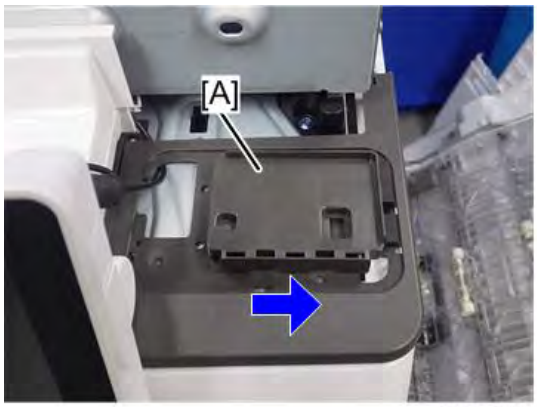
12. Reattach the operation panel upper cover [A].

d284a2083

13. Pass the USB cable [A] through the hole in the upper front cover, and reattach the upper front cover [B].

d284a2084

14. Attach the reader spacer [A].



d284a2085

15. Connect the USB cable [A] to the reader, and attach the reader [B].

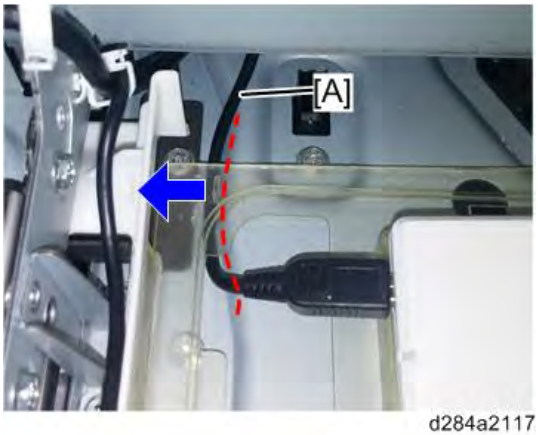
d284a2086

16. If the USB cable is sticking out, put the cable inside the upper front cover.

d284a2087

Note

- The cable [A] should be placed in the lower area in the left side.



d284a2117

17. Attach the reader cover [A].

d284a2088

18. Reattach the removed covers.

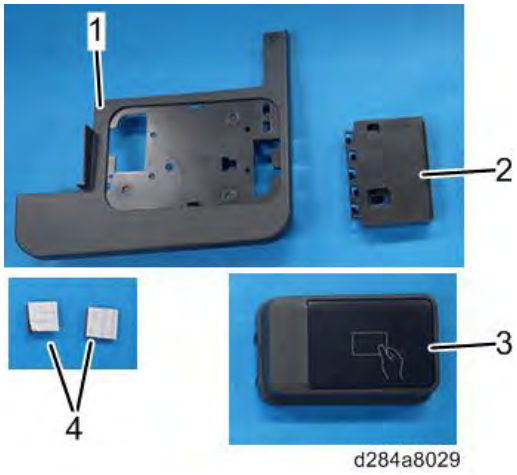
Smart Card Reader Built-in Unit Type M29

Accessory Check

No.	Description	Q'ty	Remark
1	Corner cover	1	
2	Reader spacer	1	
3	Reader cover	1	
4	Sponge: 20 x 20	2	
-	Decal	1	
-	Label	1	

Note

- An IC card reader and a USB cable are not provided with this option.



Installation Procedure

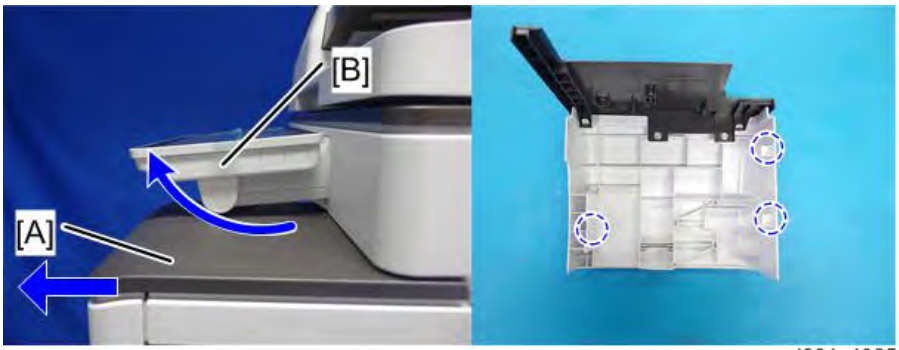
⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

1. Open the right cover, and then remove the upper front cover [A].

Note

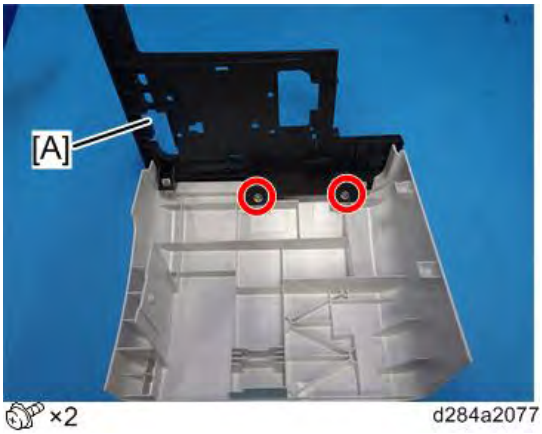
- When removing the upper front cover, release the hooks at the back of the cover.
- Tilt the operation panel [B] upward to a horizontal position, and then remove the upper front cover [A].



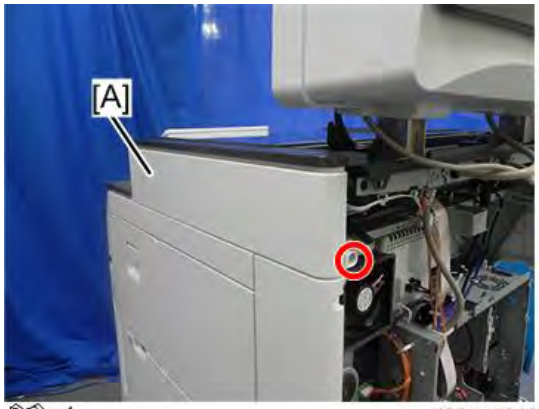
2. Remove the upper cover [A] of the upper front cover.

3. Attach the corner cover [A] provided with this option.

Use the screws removed in the previous step.



4. Remove the scanner right cover [A].



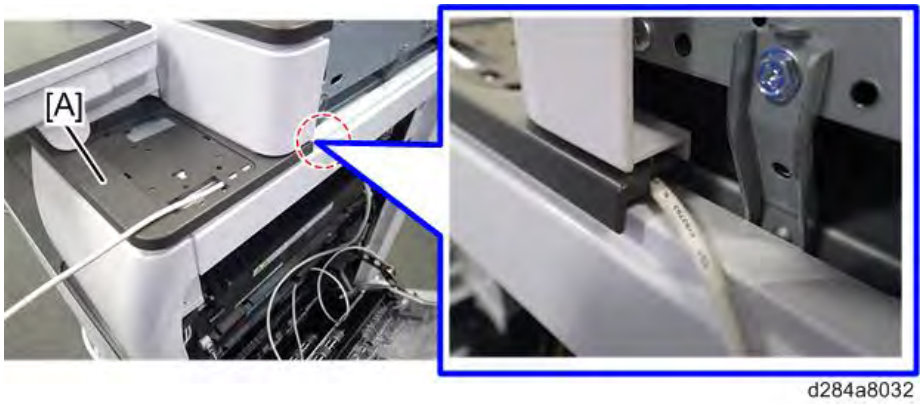
5. Pass the USB cable [A] through the hole.

Note

- This cable is not included in this unit. The user may need to provide it.

6. Route the cable [A] to the back of the cover.

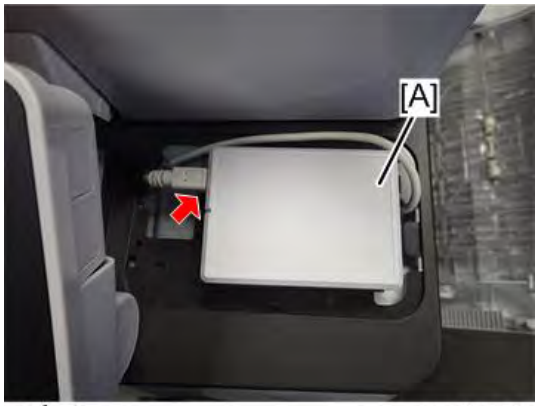
7. Attach the upper front cover [A].



8. Attach the spacer [A].

9. Attach the sponge [A].

10. Connect the cable to the IC reader [A] and attach the reader to the table.



Note

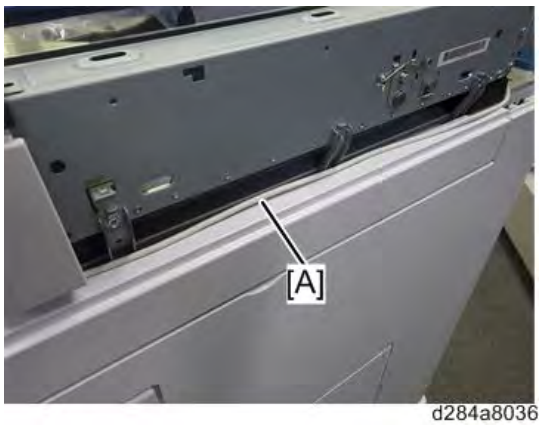
- This IC reader is not included in this unit. The user may need to provide it.

11. Attach the reader cover [A].

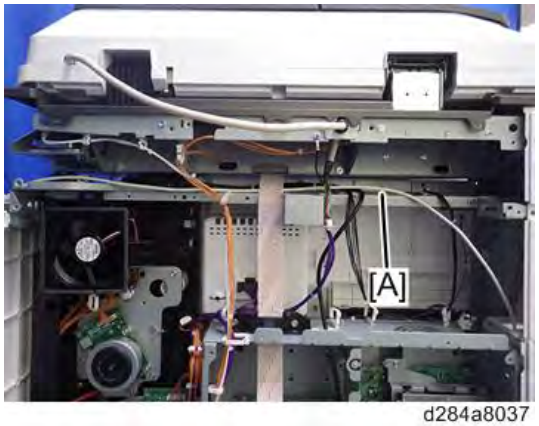
Note

- Do not sandwich the USB cable with this cover.
- Make sure that the reading area on the IC card reader is in contact with the IC card cover. If they do not contact each other, put the sponge(s) provided with the accessories underneath the IC card reader to fill the gap. Otherwise, the IC card reader will not work properly.

12. Route the cable [A] along the right side of the scanner unit as shown below.



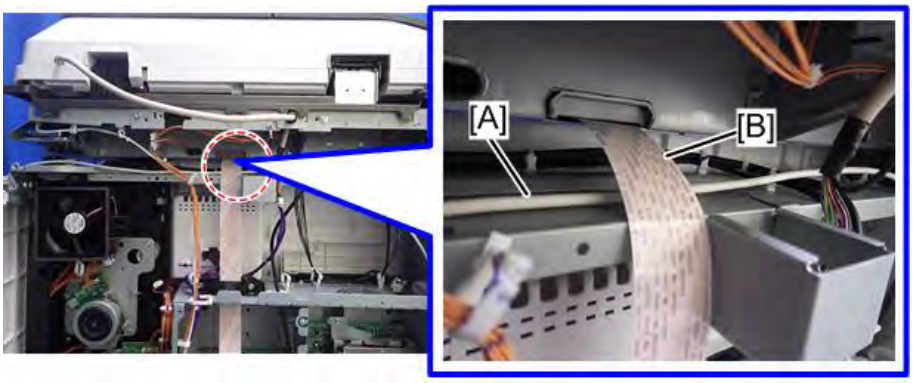
13. Route the cable [A] along the rear side of the scanner unit.



d284a8037

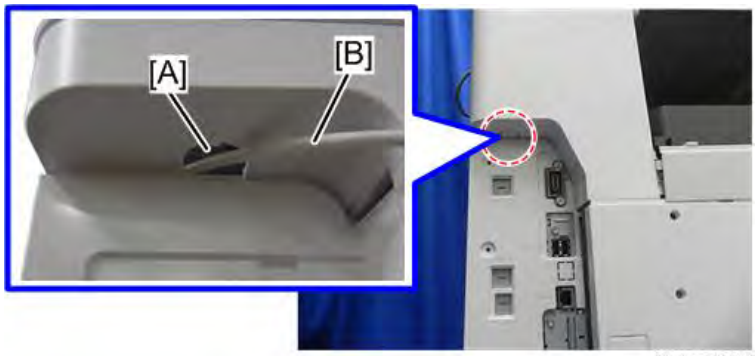
Note

- Route the cable [A] behind the FFC [B].



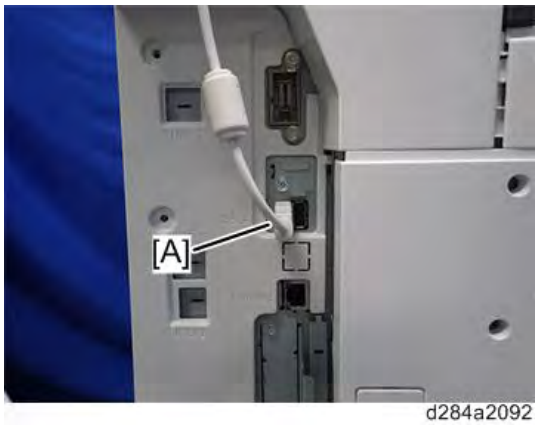
d284a8038

14. Remove the cutout [A] in the left rear cover to make a hole for the cable, and then pass the cable [B] through it.



d284a8016

15. Connect the keyboard cable [A] to the USB slot.

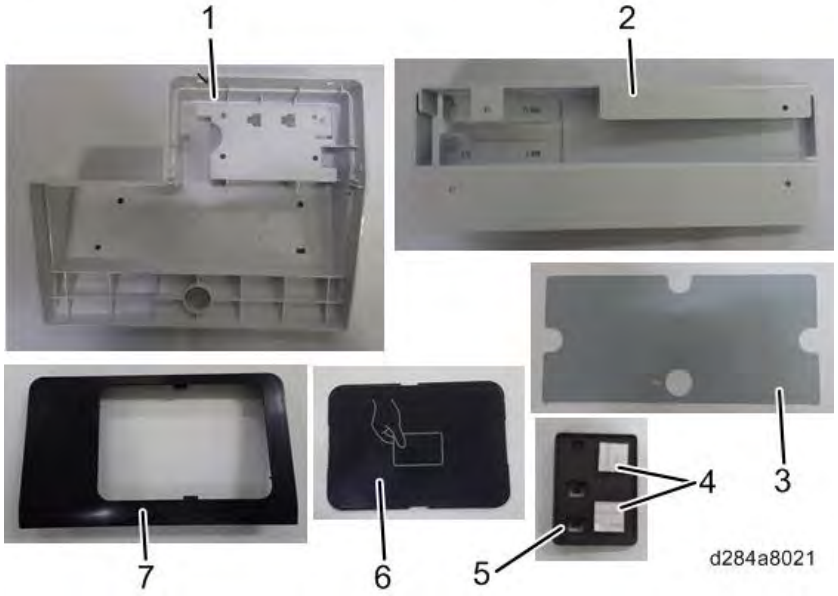


16. Reattach the removed covers.

External Keyboard Bracket Type M19 (D3BR-10)

Component Check

No.	Description	Q'ty
1	CASE:KEYBOARD:OPTION	1
2	BRACKET:KEYBOARD:OPTION	1
3	BASE:KEYBOARD	1
4	SPONGE:20X20	2
5	SPACER:IC CARD:DOM	1
6	COVER:UPPER:IC CARD	1
7	COVER:IC CARD	1
-	COVER:IC CARD:BLANK	1
-	TAPPING SCREW:4X14	2
-	TAPPING SCREW:ROUND POINT:3X8	4
-	TAPPING SCREW:3X14	1
-	WIRE BINDER	3
-	CLAMP:KS-15	1
-	PAN HEAD TAPPING SCREW:M5X13:PIAS	1



Note

- This optional unit is not supplied with a keyboard. Use a commercially available keyboard.

Installation Procedure

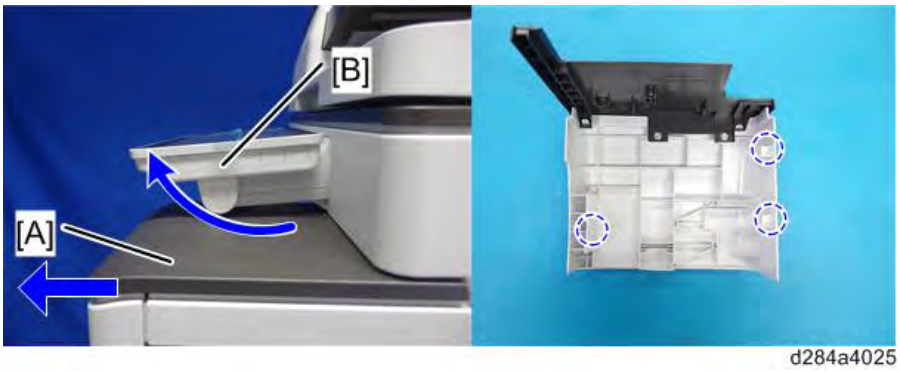
⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

1. Open the right cover.
2. Remove the upper front cover [A].

Note

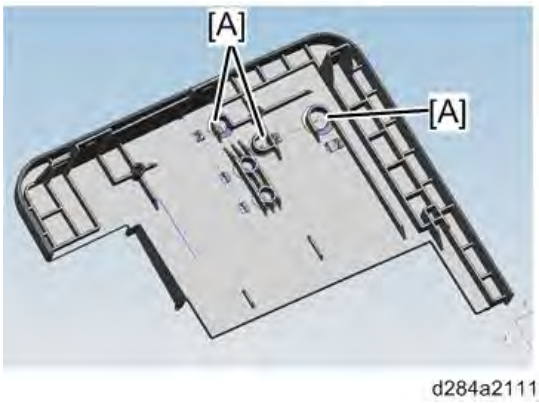
- When removing the upper front cover, release the hooks at the back of the cover.
- Tilt the operation panel [B] upward to a horizontal position, and then remove the upper front cover [A].



3. Thread holes in the positions [A] marked "2" on the back of the upper front cover, using the supplied tapping screw.

Important

- Position the screw at the center part of the guide rib and thread each hole. After threading each hole, use a tool such as a screwdriver to enlarge the hole so that the fastening screw (M4) can go through it. (There are dents of 0.2mm depth at the positions where you should thread the holes.)

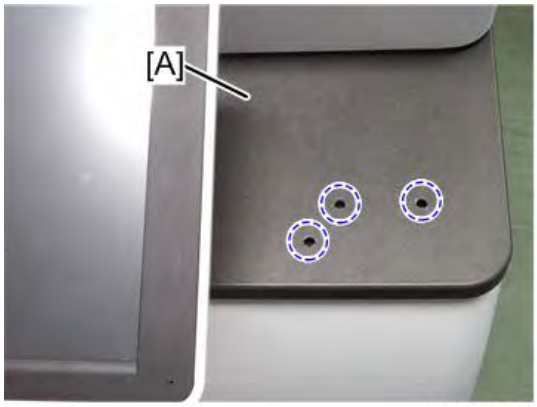


- Be careful not to drop the shavings into the machine (do not leave shavings around the holes).

- Make the holes a bit larger, because you cannot fix the cover with the screws if the holes are not in the exact position with respect to the screw holes in the main machine (the rib can be a guide for the hole size).

4. Remove the screw [A] on the frame of the machine.

5. Reattach the upper front cover to the machine.



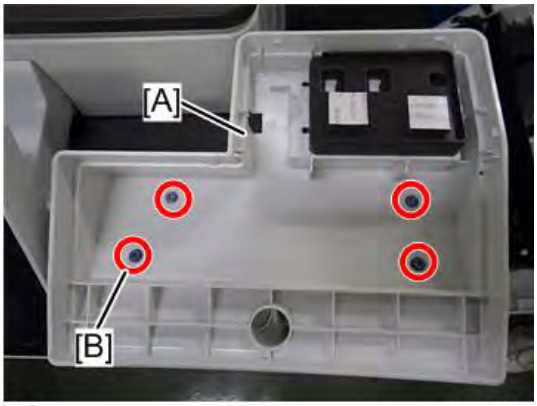
6. Attach the keyboard stand bracket [A] on the upper front cover.

Important

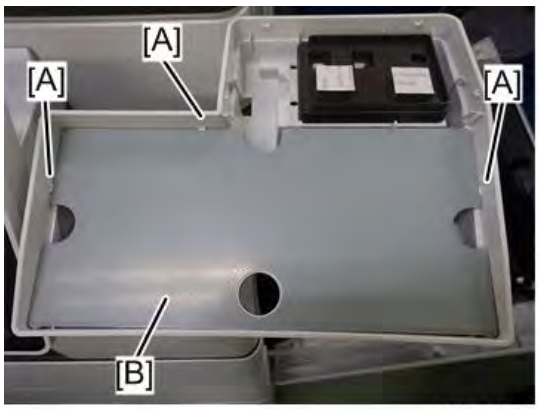
- Use the screw holes marked "B". Use 4×14 screws for the blue circles and use a 3×14 screw for the red circle in the picture below.
- Fasten the screw [B] first.

7. Attach the keyboard stand [A] on the keyboard stand bracket.

Fasten the screw [B] first.



8. Attach the partition board [B] so that it is below the hooks [A].

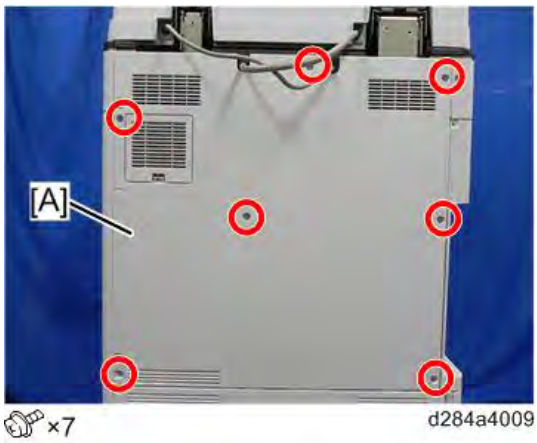


9. Place a keyboard on the keyboard stand, and then pass the keyboard cable through the hole in the keyboard stand.

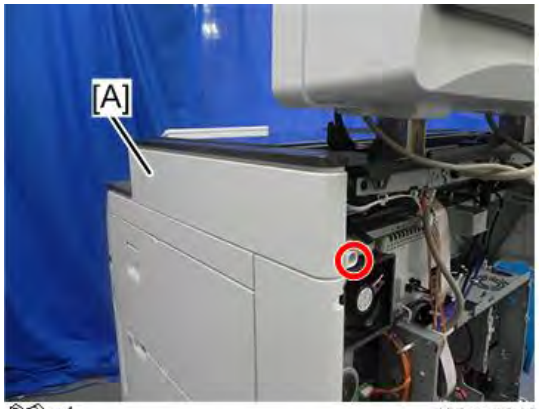
Note

- If the cable is too long, clamp with the supplied clamp.

10. Remove the rear cover [A].

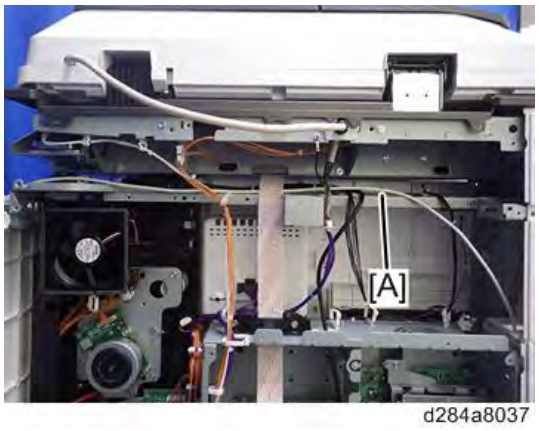


11. Remove the scanner right cover [A] (×1).



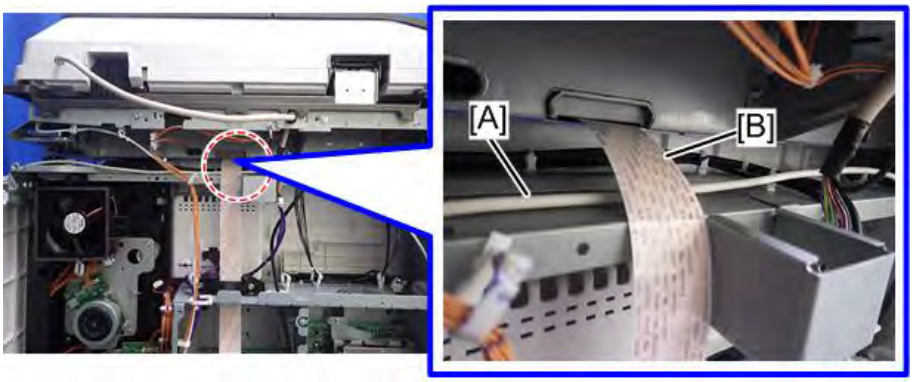
12. Route the keyboard cable [A] along the right side of the scanner unit as shown below.

13. Route the keyboard cable [A] along the rear side of the scanner unit.

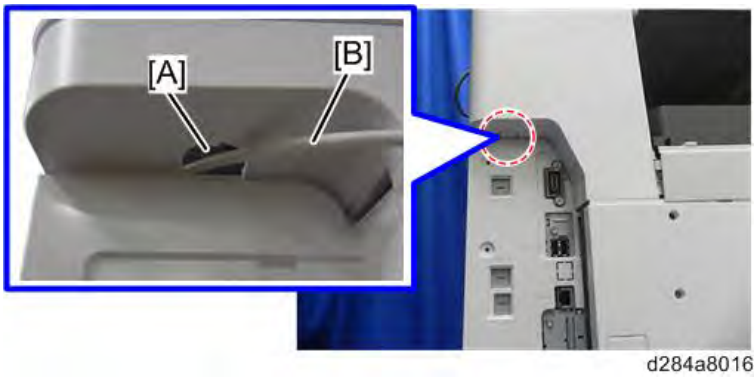


Note

- Route the cable [A] behind the FFC [B].



14. Remove the cutout [A] in the left rear cover to make a hole for the cable, and then pass the keyboard cable [B] through it.



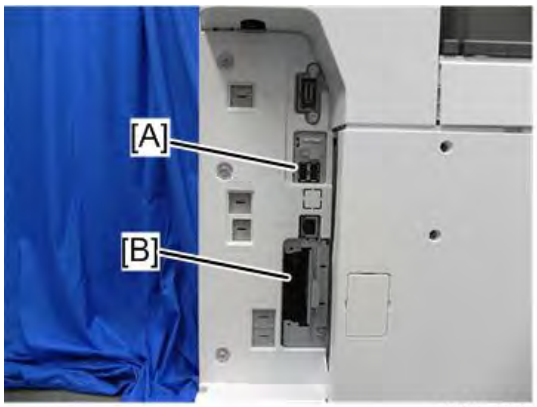
15. Connect the keyboard cable [A] to the USB slot.

16. Reattach the scanner right cover and the rear cover.

17. Close the right door.

Internal Options

List of Slots



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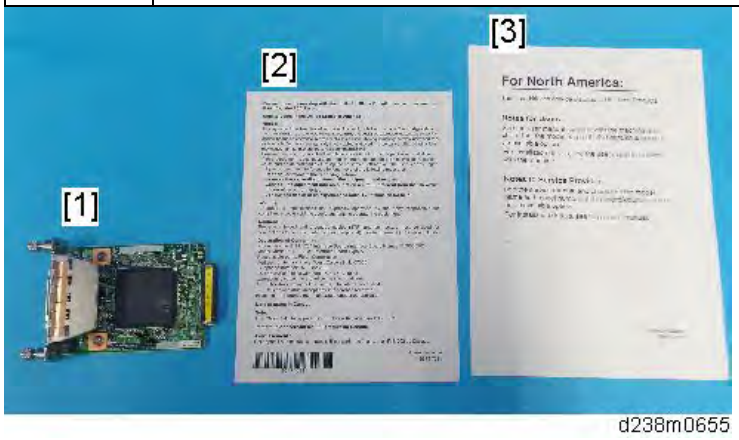
Slot		Option
[A]	USB ports *1	External Keyboard Bracket Type M19
		Smart Card Reader Built-in Unit Type M29
[B]	I/F slot A	IEEE 1284 Interface Board Type M19
		IEEE 802.11a/g/n Interface Unit Type M19
		File Format Converter Type M19
		USB Device Server Option Type M19
		Extended USB Board Type M19

*1 There is no difference between the left and right USB ports.

IEEE 1284 Interface Board Type M19 (D3C0)

Accessories

No.	Description	Qty	Remarks
1	IEEE 1284 Interface Board	1	
2	FCC document	1	
3	Notes for users	1	

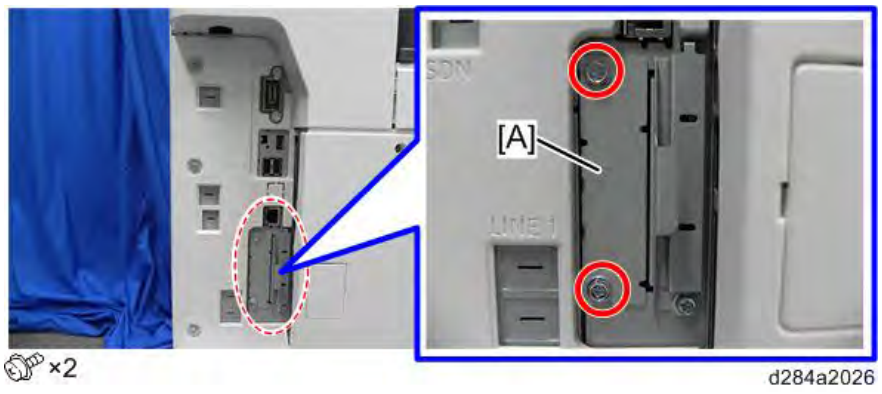


Installation procedure

⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.
- Do not put your hand into the controller box. It will result in a malfunction or injury.
- Before doing any work, touch a metal object to discharge static electricity from the body. There is a possibility that the IEEE 1284 Interface Board may malfunction due to static electricity.

1. Remove the I/F slot cover [A] (x2).



2. Install the IEEE 1284 Interface Board into the I/F slot (x2).

3. Turn ON the main power.

4. Check that the system settings list is output, and that the board is recognized correctly.

- User Tools > Machine Features > Printer Features > List/Test Page > Configuration Page

Note

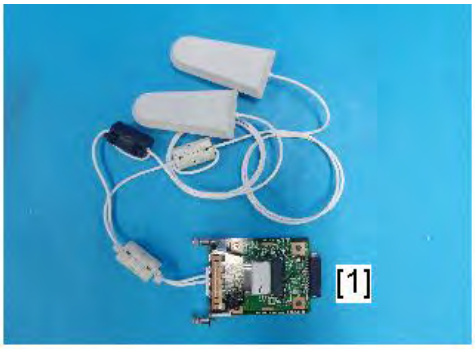
- The customer should keep the slot covers which were removed.

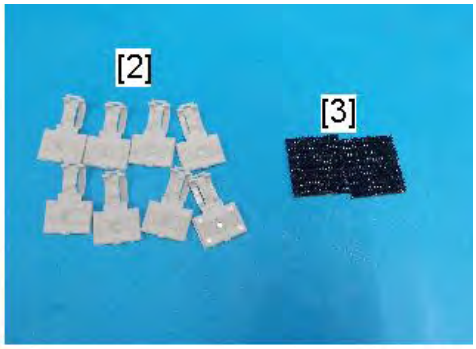
IEEE 802.11a/g/n Interface Unit Type M19

This option is not available in China, Taiwan, and Korea.

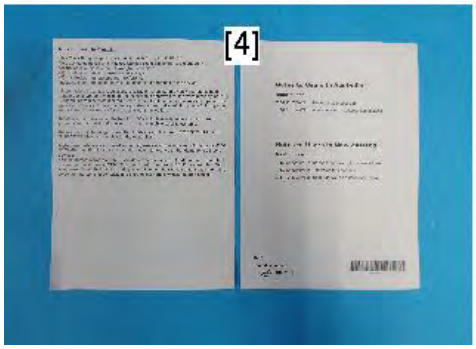
Accessory Check

No.	Description	Q'ty
1	IEEE802.11a/g/n Unit	1
2	Clamps	8
3	Velcro Fasteners	2
4	Notes for Users	2





d238m0663



Important

- Since disassembly/alteration of a wireless LAN board is illegal, during service replacements, replace the whole PCB assembly.
- Be sure to give the provided leaflet to the customer.

Installation procedure

⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.
- Do not put your hand into the controller box. It will result in a malfunction or injury.
- Before doing any work, touch a metal object to discharge static electricity from the body. There is a possibility that the extension wireless LAN board may malfunction due to static electricity.

⚠CAUTION

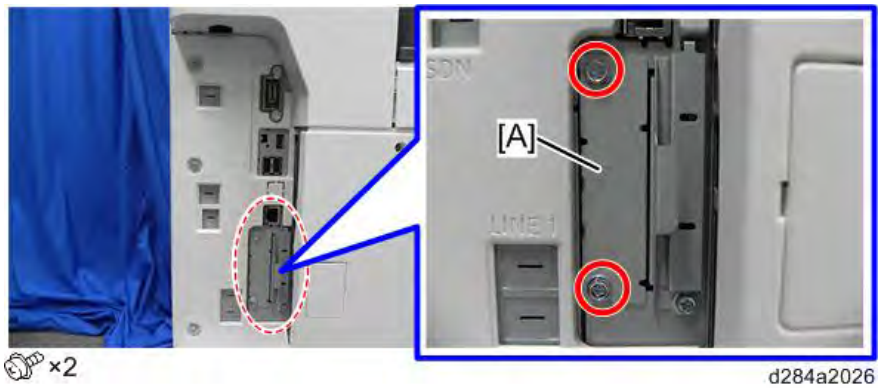
- When using wireless LAN (IEEE802.11 b/g/n:2.4-GHz band), this radio product uses the 2.4-GHz band.

Check that industrial, scientific and medical devices using the same frequency bands, such as a microwave oven or a cordless telephone, are not used nearby.

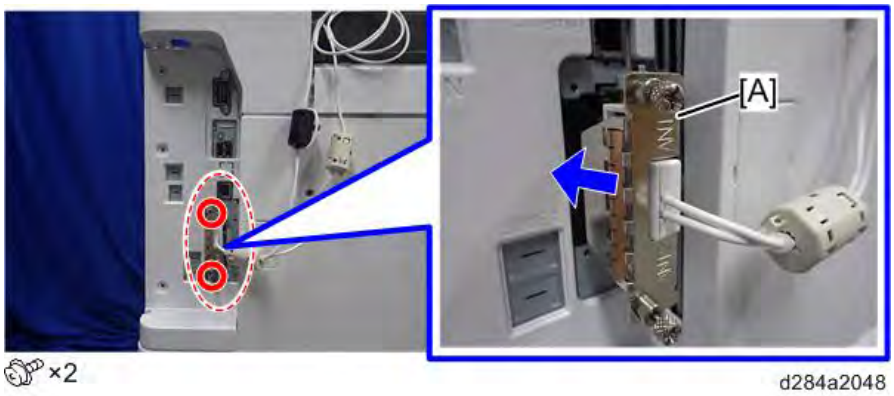
- If there is interference, communication may become unstable. Check that there are no devices likely to cause interference in the surrounding area.

Attaching the boards

1. Remove the slot cover [A].



2. Insert the extended wireless LAN board [A] into the slot.

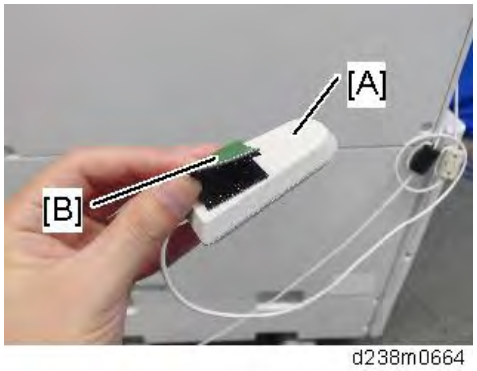


Note

- Press the extended wireless LAN board firmly in, and check it is firmly connected.
- The customer should keep the slot covers which were removed.

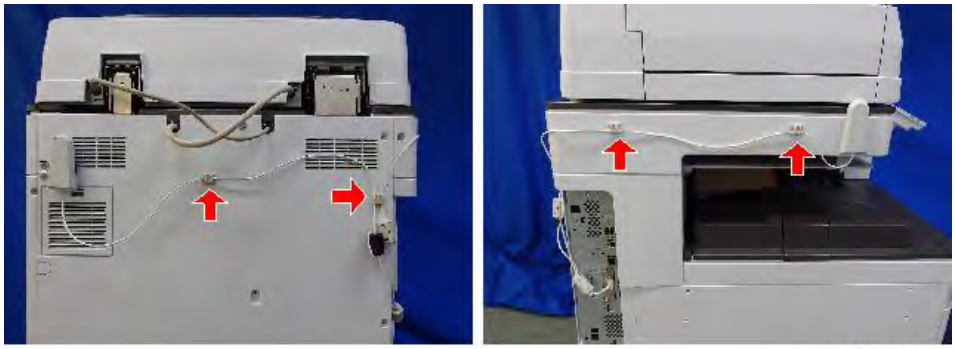
Attaching the antenna

1. Attach the velcro fastener [B] (provided with the accessories) to the antenna [A].



d238m0664

2. Peel the backing paper off the velcro fastener, and attach the antenna to the rear cover and scanner left cover as shown (x4).


d238m0909

Note

- Take care to loop it around so that it does not interfere with other options or I/F cables.

3. Turn ON the main power.
4. Check that the system settings list is output, and that the option is recognized correctly.
   - User Tools > Machine Features > Printer Features > List/Test Page > Configuration Page

User Tool Settings for IEEE 802.11a/g/n

Go into the User Tools mode and do the procedure below. These settings take effect every time the machine is powered on.

Note

- IEEE 802.11a/g/n function is disabled while using Ethernet.

1. Press the "User Tools" icon.
2. Press "Machine Features" > "System Settings".

Note

- Select "Interface Settings"> "Network" > "LAN Type". The "LAN Type" (default: Ethernet) must be set for either Ethernet or wireless LAN.

3. Select "Interface Settings"> "Wireless LAN". Only the wireless LAN options show.
4. Set the "Communication Mode".
5. Enter the "SSID setting". (The setting is case sensitive.)

6. Set the "Ad-hoc Channel". You need this setting when Ad Hoc Mode is selected. The allowed range for the channel settings may vary for different countries.

- For mainly Europe and Asia
  2412 - 2462 MHz (1 - 11 channels)
  5180 - 5240 MHz (36, 40, 44 and 48 channels)
  (default: 11)

Note

- In some countries, only the following channels are available: 2412 - 2462 MHz (1 - 11 channels)

- For mainly North America
  2412 - 2462 MHz (1 - 11 channels)
  5180 - 5240 MHz (36, 40, 44 and 48 channels)
  (default: 11)

7. Set the "Security Method" to specify the encryption of the Wireless LAN.

- The "WEP" (Wired Equivalent Privacy) setting is designed to protect wireless data transmission. The same WEP key is required on the receiving side in order to unlock encoded data. There are 64 bit and 128 bit WEP keys.
  - Range of Allowed Settings:
    64 bit: 10 characters
    128 bit: 26 characters
- Specify "WPA2" when "Communication Mode" is set to "Infrastructure Mode". Set the "WPA2 Authent. Method".
  - WPA2 Authent. Method:
    Select either "WPA2-PSK" or "WPA2".
    If you select "WPA2-PSK", enter the pre-shared key (PSK) of 8-63 characters in ASCII code.
    When "WPA2" is selected, authentication settings and certificate installation settings are required.

8. Press "Wireless LAN Signal" to check the machine's radio wave status using the operation panel.

- Press "Restore Factory Defaults" to initialize the wireless LAN settings.

SP Mode Settings for IEEE 802.11 Wireless LAN

The following SP commands and UP modes can be set for IEEE 802.11

SP No.	Name	Function
SP5-840-006	Channel MAX	Sets the maximum range of the channel settings for the country.
SP5-840-007	Channel MIN	Sets the minimum range of the channels settings allowed for your country.
SP5-840-008	Transmission Speed	Sets the transmission speed. Auto, 54 Mbps, 48 Mbps, 36 Mbps, 24 Mbps, 18 Mbps, 12 Mbps, 9 Mbps, 6 Mbps, 11 Mbps, 5.5 Mbps, 2 Mbps, 1 Mbps (default: Auto).

SP No.	Name	Function
SP5-840-011	WEP Key Select	Used to select the WEP key (Default: 00).
UP mode	Name	Function
	SSID	Used to confirm the current SSID setting.
	WEP Key	Used to confirm the current WEP key setting.
	WEP Mode	Used to show the maximum length of the string that can be used for the WEP Key entry.
	WPA2 Authent. Method	Used to confirm the current WPA authentication setting and preshared key.

File Format Converter Type M19 (D3BR-04)

Accessory Check

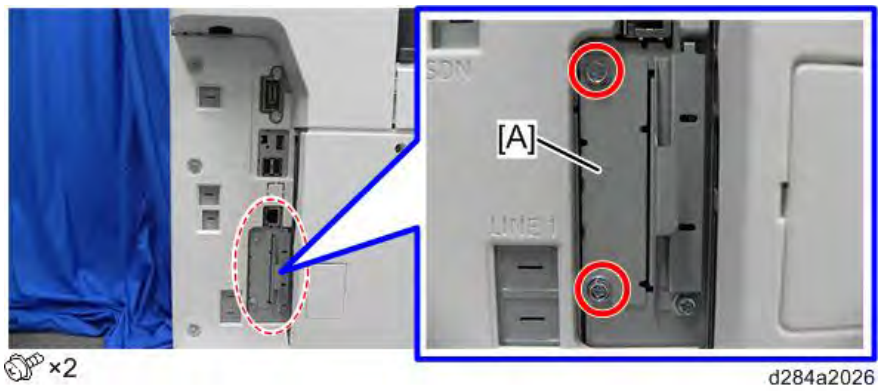
No.	Description	Q'ty
1	File Format Converter	1
2	Notes for Users	1

Installation procedure

⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.
- Do not put your hand into the controller box. It will result in a malfunction or injury.
- Before doing any work, touch a metal object to discharge static electricity from the body. There is a possibility that the board may malfunction due to static electricity.

1. Remove the I/F slot cover [A].



2. Insert the file format converter board into the I/F slot. (×2)

3. Turn ON the main power.

4. Check the system settings list is output, and that the option is recognized correctly.

- User Tools > Machine Features > Printer Features > List/Test Page > Configuration Page

Note

- The customer should keep the slot covers which were removed.

Enhanced Security HDD Option Type M10 (D792-09)

Accessory Check

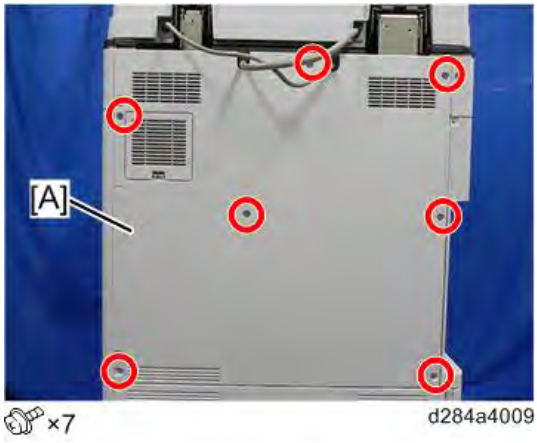
No.	Description	Q'ty	Remarks
1	Enhanced Security HDD	1	
-	EMC Address	1	

Installation Procedure

⚠CAUTION

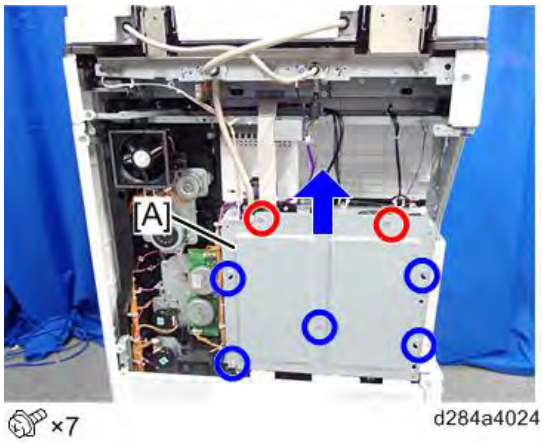
- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

1. Remove the rear cover [A].

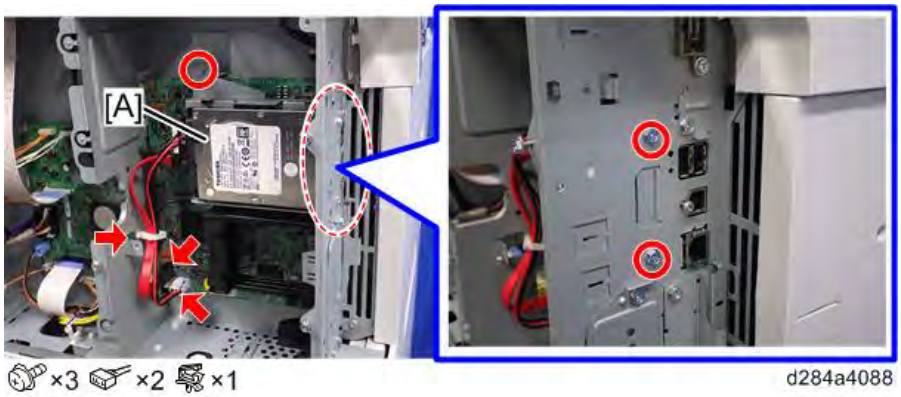


2. Remove the controller box cover [A].

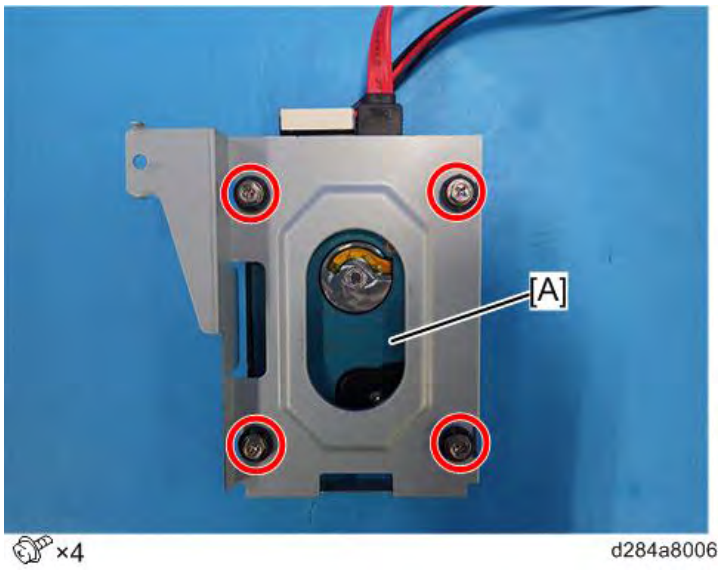
Red Circle: Remove / Blue Circle: Loosen



3. Remove the standard HDD [A] installed on the machine.



4. Separate the standard HDD from the bracket.



5. Disconnect the cables from the standard HDD.

6. Remove the enhanced security HDD from its protective pack.

7. Connect the two cables to the enhanced security HDD.

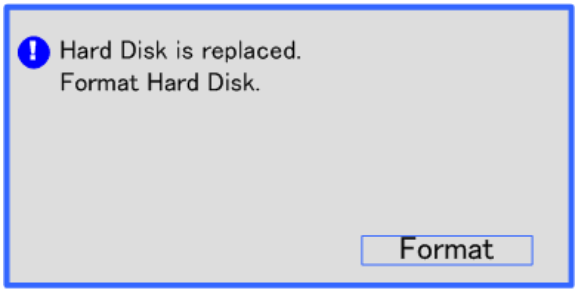
8. Fasten the HDD to the bracket.

9. Install the HDD bracket in the controller box.

10. Reassemble the machine.

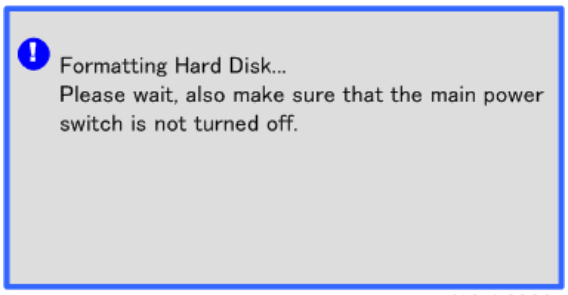
After Installing the HDD

1. Connect the power cord and turn the machine on. A message prompts you to format the hard disk.



d191b0081

2. Touch [Format].

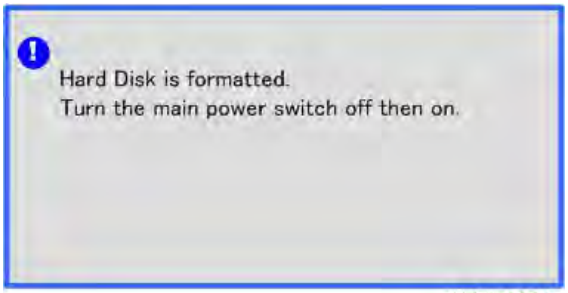


d191b0082

3. Wait for the machine to finish formatting the hard disk.

Note

- Do not touch the power switch while the hard disk format is in progress. Wait for the machine to tell you that the formatting is finished.



d191b0083

4. Turn the main power OFF and back ON again after the message tells you formatting is finished.
5. Ask an administrator to register an HDD authentication code in the machine.

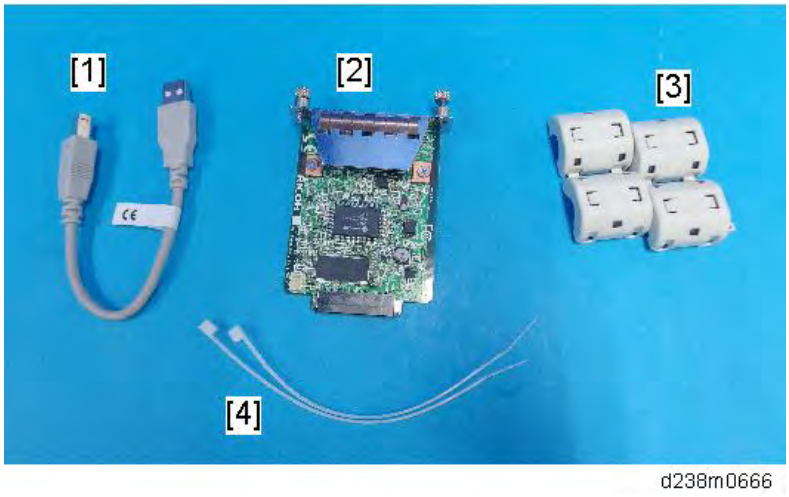
Important

- If the HDD Authentication Code is not registered, the function of the enhanced security HDD is not activated.

USB Device Server Option Type M19 (D3BC-28,-29)

Accessory Check

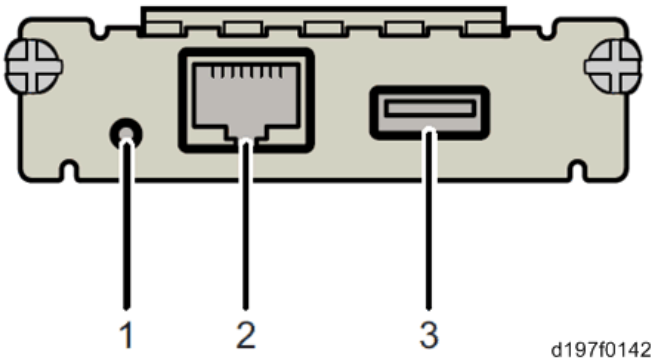
No	Items	Q'ty	Remarks
1	USB Cable	1	
2	Interface Board	1	
3	Ferrite Core	2	
4	Cable Ties	2	North America only



Note

- An Ethernet cable is not packed with this option.

Interface Board Surface



No.	Item	Description
1	Switch	Used to reset to the factory settings.
2	Ethernet port	Used to connect the Ethernet cable.
3	USB port	Used to connect this option to the main machine. Do not use this port with other options.

Note

- When installing the USB device server option, make sure that the labels 'USB-A' and 'Ethernet' are

upside down.

Installation Procedure

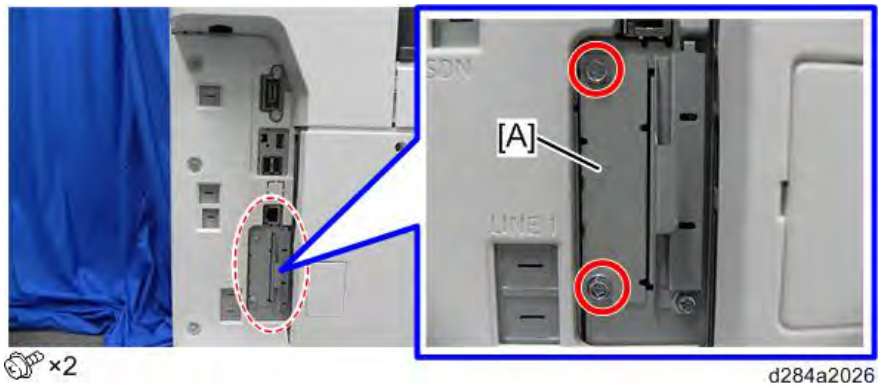
⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

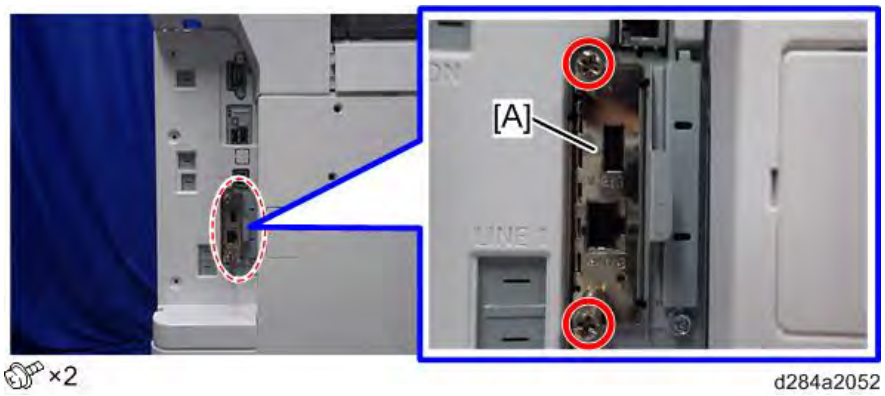
Important

- The USB device server option has an IP address stored on the PCB. This is different from the machine's IP address. The IP address and other network settings of the USB device server option must be configured after installing this option.

1. Remove the interface slot cover [A].



2. Install the interface board in the interface slot [A].



3. Remove the controller cover [A].

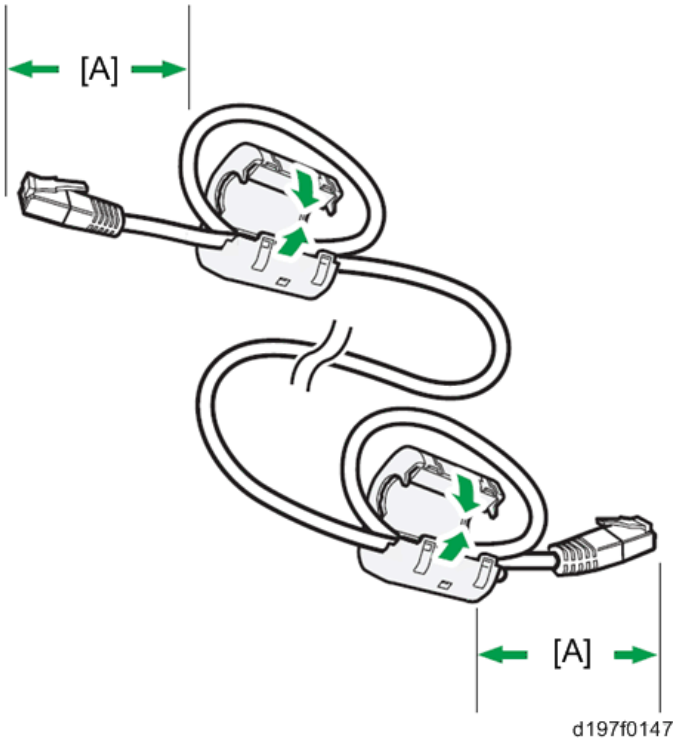
4. Cut off the USB port cover [A] with nippers or another such tool.

5. Reattach the covers.

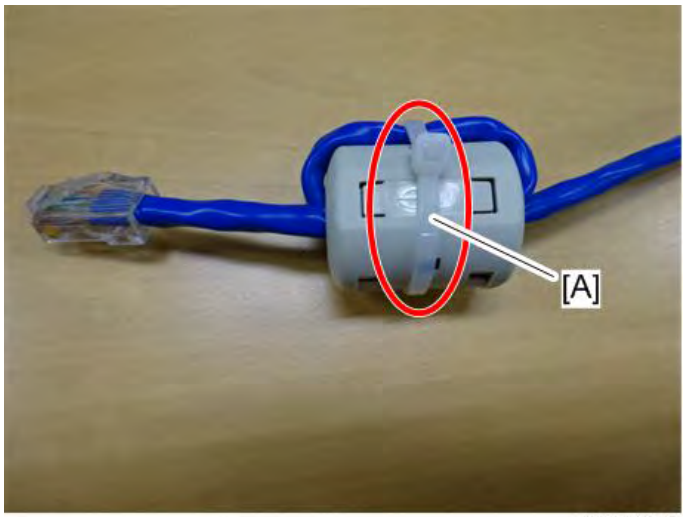
6. Insert the USB cable [A] into the USB port (Type A) on the machine I/F.

7. Insert the other side of the USB cable [B] into the USB port (Type B) on this option board.

8. Attach the ferrite cores to the Ethernet cable, while looping the cable at 3 cm (approx. 1.2 inch) [A] from each end of the cable.



9. Only for installing this option in North America, bind both cores with cable ties [A] as shown below.
The two binds are not included in options produced before March, 2015. To bind the cores, use the binds registered as service parts or similar ones.



d196z2302

10. Insert the Ethernet cable [A] into the Ethernet port on this option.

d284a2054

11. Insert the other end of the Ethernet cable to a PC for network setup.

12. Connect the power cord to the machine and turn on the main power of the machine.

Note

- Do not unplug the USB cable while the machine is recognizing this option. It may take between 30 seconds to 1 minute to finish recognizing it (the LEDs on the Ethernet port of this option light up after recognizing this option; see below). If unplugged, connect the cable again.

1. Make sure that the machine recognizes this option correctly by doing one of the following:

1. Access the option's IP address from a web browser.
2. Ping the option's IP address from a command prompt on a Windows PC in the same network as the mainframe.

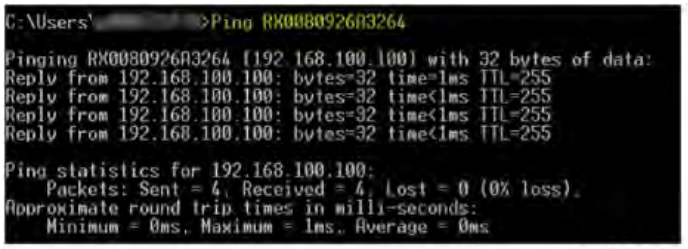
   If the IP address cannot be found (DHCP server), use the MAC address. This is the number printed on the seal attached to the printed circuit board for the USB server.

d196z2350

3. Use "RX" + the option’s MAC address and access a web browser.
   Example: http://RX0080926A3264

d196z2351

4. Ping "RX" + "MAC address" from the command prompt on a windows PC which is on the same network as the mainframe.



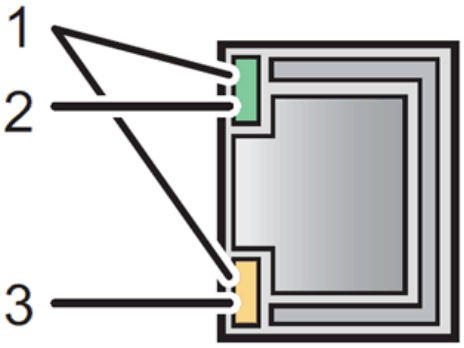
d196z2352

Note

- When installing the USB Device Server Option Type M19, the installation status is not shown on the Configuration Page.
- The customer should keep the slot covers which were removed.

What Do the LED Indications Mean?

When this option is properly installed and recognized by the main machine, the LED indicators light up under the following conditions.



d197f0149

No.	Light Color	Lights Up When:
1	Green and Yellow	1000BASE-T operates
2	Green	10BASE-T operates
3	Yellow	100BASE-TX operates

Notes for Energy Save Mode Setting

If the machine which has this option enters into the energy save mode, you cannot print because there will be a communication error. Follow the instructions below to disable the machine's entering into the energy save mode.

1. Set SP5-191-001 (Power Str Set) to a value of "0".
2. Exit SP mode.
3. Turn the machine main power OFF/ON.

IP Address Setting

This section describes how to set an IP address on this option manually. Note that you can set an IP address which is not only on the same network segment but also on a different network segment, to share a single printer with devices in multiple networks.

Important

- You cannot change the IP address for this option from the operation panel of the main machine. The setting must be done from a web browser on your PC.
- The network setting of this option is initially assigned as follows:
  IP address: 192.168.100.100 / Subnet mask: 255.255.255.0
- The network setting of your PC must be in the same network segment to change the network setting of this option.

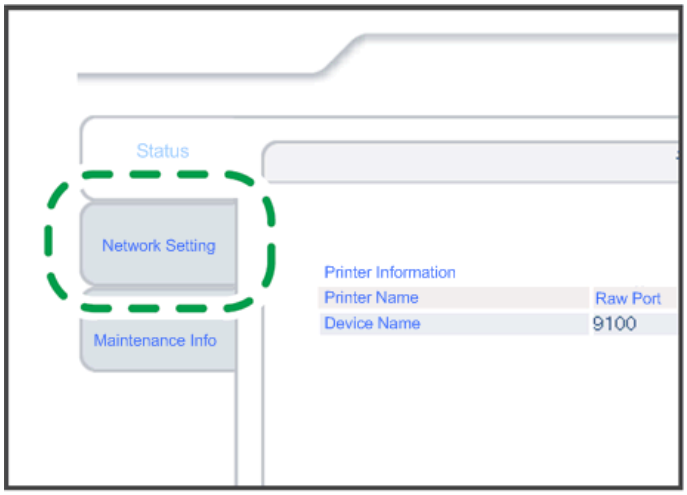
1. Make a note of the current network settings of your PC.
2. Change the IP address on your PC to [192.168.100.xxx (*0 - 255)].
3. Change the subnet mask on your PC to [255.255.255.0].
4. Open a web browser.
5. Type [http://192.168.100.100/] in the address bar.

6. Press the “Enter” key.

Note

- The setting screen for this option appears.

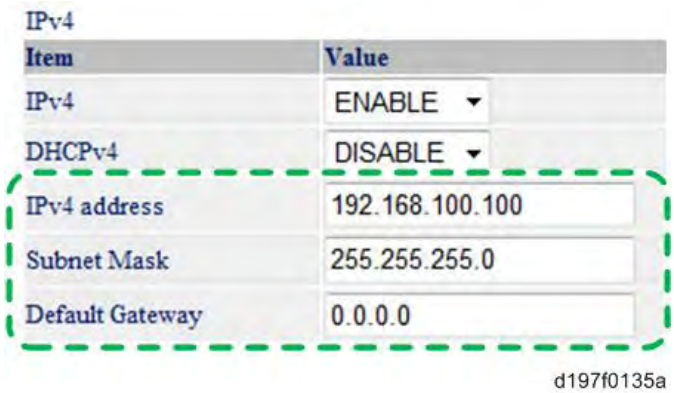
7. Click [Network Setting].



d197f0134

8. Type [root] in the user name textbox and click [OK].

9. Input [IP Address], [Subnet Mask] and [Default Gateway].



d197f0135a

10. Set other items if needed.

11. Press [Set]

12. Close the web browser.

13. Disconnect the Ethernet cable from the PC.

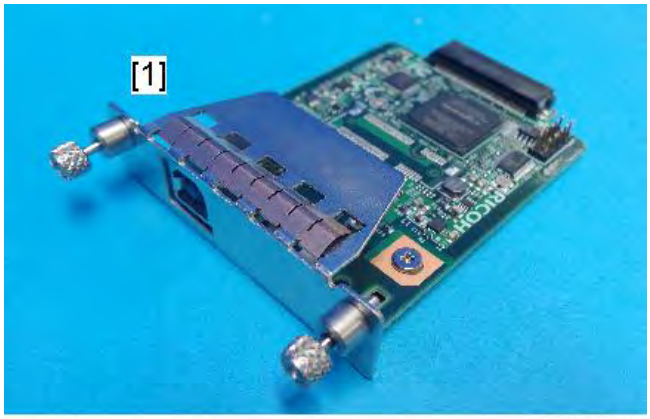
14. Connect the Ethernet cable to a network device (e.g. switching hub).

15. Set the IP address of this option in the printer driver which you use.

Extended USB Board Type M19 (D3BS-01)

Component Check

No.	Items	Q'ty	Remarks
1	Extended USB Board	1	



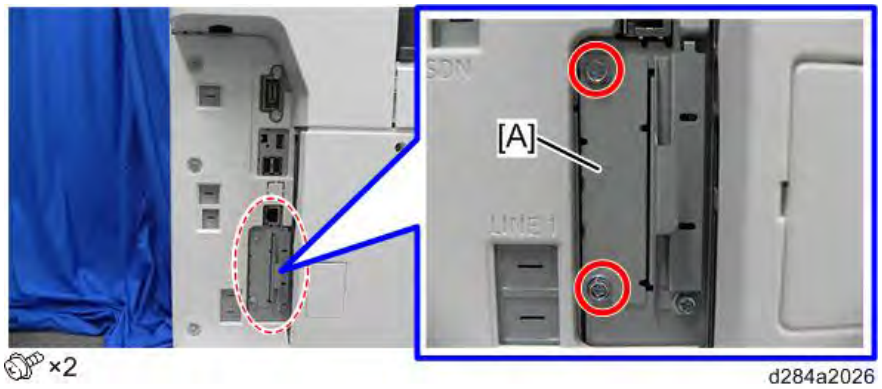
d238m0668

Installation Procedure

⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.
- Do not put your hand into the controller box. It will result in a malfunction or injury.
- Before doing any work, touch a metal object to discharge static electricity from the body.

1. Remove the slot cover [A].



d284a2026

2. Insert the Extended USB Board into the I/F slot. (x 2)

3. Turn ON the main power.

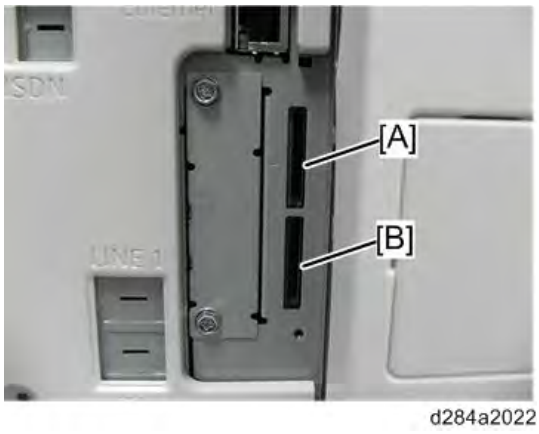
4. Check that the board is recognized correctly on Web Image Monitor.
Log in with an administrator account on Web Image Monitor > Device Management > Configuration > Interface Settings > USB > Active

Note

- The customer should keep the slot covers which were removed.

SD Card Options

SD Card Slots



[A]: SD card slot 1 (option slot)

[B]: SD card slot 2 (service slot)

List of Slots Used

Optional SD cards can be set in either slot 1 or slot 2. However, slot 2 is the service slot, so we recommend that you use slot 1 to install the SD card options.

Note

- In this machine, it is possible to transfer data from a "Postscript3 Unit" SD card, unlike in earlier models, due to a change in the software licensing (the part of the Postscript software that requires licensing is now built into the controller, so the portion on the SD card can be moved to another SD card).

	Option Name	Slot	Remarks
1	PostScript3 Unit Type M29	Slot 1 or Slot 2	
2	SD Card for Fonts Type D		
3	XPS Direct Print Option Type M29		
4	Fax Connection Unit Type M29		
5	OCR Unit Type M13		
6	DataOverwriteSecurity Unit Type M19		
7	IPDS Unit		
8	Unicode Font Package for SAP(R) 1 License		
9	Unicode Font Package for SAP(R) 10 Licenses		
10	Unicode Font Package for SAP(R) 100 Licenses		

SD Card Appli Move

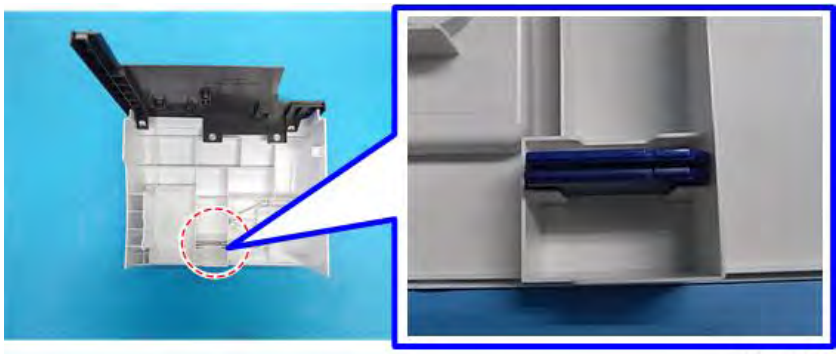
Overview

The service program "SD Card Appli Move" (SP5-873) lets you move application programs from one SD card to another SD card.

If more than one application is required, the applications must be moved to one SD card with SP5873-1 (PostScript 3, IPDS unit, etc.).

Be very careful when you do the SD Card Appli Move procedure:

- The data necessary for authentication is transferred with the application program from an SD card to another SD card. Authentication fails if you try to use the SD card after you move the application program from one card to another card.
- Do not use the SD card if it has been used before for other purposes. Normal operation is not guaranteed when such an SD card is used.



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- Store the vacant SD card in the storage space inside the upper front cover as shown above.
  This is done for the following reasons:
  - The SD card can be the only proof that the user is licensed to use the application program.
  - You may need to check the SD card and its data to solve a problem in the future.

Move Exec

The menu "Move Exec" (SP5-873-001) lets you move application programs from the original SD card to another SD card.

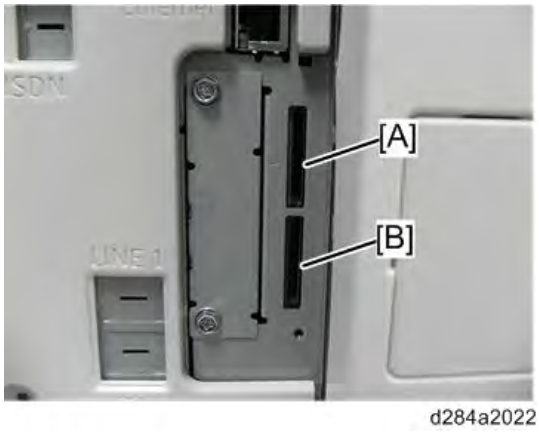
Important

- Do not turn ON the write protect switch of the system SD card or application SD card on the machine. If the write protect switch is ON, a download error (e.g. Error Code 44) occurs during a firmware upgrade or application merge.

1. Turn OFF the main power.

2. Remove the SD card slot cover [A].

3. Make sure that a target SD card is in SD Card Slot 1 [A]. The application program is moved to this SD card.
4. Insert the source SD card with the application program in SD Card Slot 2 [B]. The application program is copied from this source SD card.



5. Turn ON the main power.
6. Start the SP mode.
7. Select SP5-873-001 "Move Exec".
8. Follow the messages shown on the operation panel.
9. Turn OFF the main power.
10. Remove the source SD card from SD Card Slot 2.
11. Turn ON the main power.
12. Check that the application programs run normally.

Undo Exec

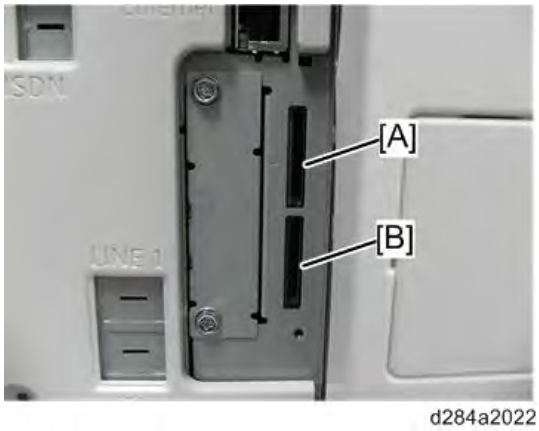
"Undo Exec" (SP5-873-002) lets you move back application programs from an SD card in SD Card Slot 1 to the original SD card in SD Card Slot 2. You can use this program when, for example, you have mistakenly copied some programs by using Move Exec (SP5-873-001).

Important

- Do not turn ON the write protect switch of the system SD card or application SD card on the machine. If the write protect switch is ON, a download error (e.g. Error Code 44) occurs during a firmware upgrade or application merge.

1. Turn OFF the main power.
2. Remove the SD card slot cover [A].

3. Insert the original SD card in SD Card Slot 2 [B]. The application program is copied back into this card.
4. Insert the SD card with the application program in SD Card Slot 1 [A]. The application program is copied back from this SD card.

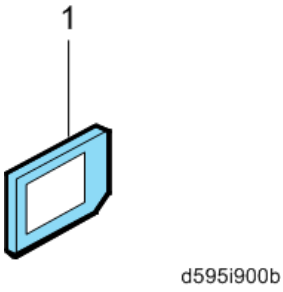


5. Turn ON the main power.
6. Start the SP mode.
7. Select SP5-873-002 "Undo Exec."
8. Follow the messages shown on the operation panel.
9. Turn OFF the main power.
10. Remove the SD card from SD Card Slot 2.
11. Turn ON the main power.
12. Check that the application programs run normally.

OCR Unit Type M13 (D3AC-23, -24, -25)

Accessory Check

No.	Description	Q'ty
1	SD Card	1



Searchable PDF function outline

This option adds a searchable PDF function to the scanning function.

- The searchable PDF function performs OCR by the MFP on a document read with the scanner, and embeds text data in the PDF. This permits PDF text browsing, automatic assignment of filenames, and automatic alignment of document orientation.
- This option is provided with an SD card. By installing an SD card in the MFP, a functional icon is added to the control unit. It is not necessary to install software in a PC.
- If this option is installed, various settings related to the searchable PDF function are available.
- After reading of the document is completed (after it is read by the SPDF/ARDF and output), OCR is performed. Therefore, after reading is completed, documents can be collected from the document glass or SPDF/ARDF.
- Other functions, such as the copy function and printer function, can be used during OCR.

Installation Procedure

⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

Note

- When installing more than one SD card, perform the merge operation. (SD Card Appli Move)

1. Remove the SD card slot covers [A].

2. Insert the OCR Unit SD card in SD card slot 1 [A: Upper Slot].

3. Turn ON the main power.
4. Enter the SP mode, and then press "Enter" in SP5-878-004 (Option Setup: OCR Dictionary).
   The SD card ID is saved in the NVRAM, and the ID of the MFP is saved on the SD card. The MFP and SD card are thereby linked.
5. When “operation complete” is displayed, press "Close”.

Note

- If installation fails, "Failed" is displayed.
- If installation fails, perform the following steps.
  1. Check whether it is a used SD card.
  2. Turn the main power OFF, and repeat steps 1-5.

6. Turn the machine OFF and back ON again.
7. Press “Enter” in SP5-878-004 (Option Setup: OCR Dictionary).
   Dictionary data is copied to the HDD.

Note

- On the first run, SP5-878-004 links the SD card, and on the second run, copies dictionary data.

8. Turn OFF the main power.
9. Remove the SD card from the SD card slot.

Note

- Keep the SD card in the SD card storage location of the MFP. The original SD card is needed in the

event of a HDD malfunction.

10. Reattach the SD card slot cover.

11. Turn ON the main power.

12. Press [File Format / File Name] on the scanner function screen.

13. Check that [OCR setting] is displayed on the "File format / "File Name" screen.

Note

- After installation, the OCR setting can be changed on the "OCR setting" screen.
- When setting OCR, set [OCR setting] to [Yes]. (Default setting: [No])

Recovery Procedure

When this option is installed, a function is saved on the HDD, and ID information on the SD card is saved in the NVRAM. Therefore, when replacing the HDD and/or NVRAM, this option must be reinstalled.

When storing the original SD card

- When only the HDD is replaced
  Reinstall using the original SD card.
- When only the NVRAM is replaced
  When performing upload/download of NVRAM data, reinstall using the original SD card.
  When not performing upload/download of NVRAM data, order and reinstall a new SD card (service part).
- When the HDD and NVRAM are replaced simultaneously
  Reinstall using the original SD card.

If the original SD card is lost

Order and reinstall a new SD card (service part).

PostScript3 Unit Type M29

Component Check

No.	Description	Q'ty
1	SD Card (PostScript3 Unit)	1
2	PS3 Decal	1

Overview of PostScript3 Unit Type M29 (Adobe PS)

This machine is equipped with a clone program for emulating Adobe PostScript/PDF (hereafter "Clone PS") as a standard feature. So, by factory default, it can perform printing using PostScript 3 and PDF Direct Print, in addition to RPCS.

However, the variety and number of built-in fonts (device fonts) differ between Adobe PS and Clone PS, sometimes resulting in different printing results.

To address the possible customer needs listed below, the PostScript3 Unit Type M29 is made available as an option.

- When you want to use device fonts supplied with Adobe PS.
- Since forms and ledgers have been created based on device fonts supplied with Adobe PS, a changeover to Clone PS requires redesign of these documents.
- From the viewpoint of precise printing operation, it is impossible to accept any differences in output results in comparison with Adobe PS.

  Note

  For details of the functions of Adobe PS and Clone PS, refer to Adobe PS vs. Clone PS.

Installation procedure (Adobe PS)

⚠CAUTION

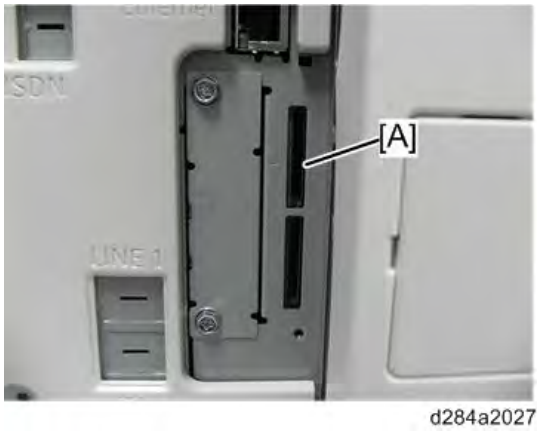
- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

Note

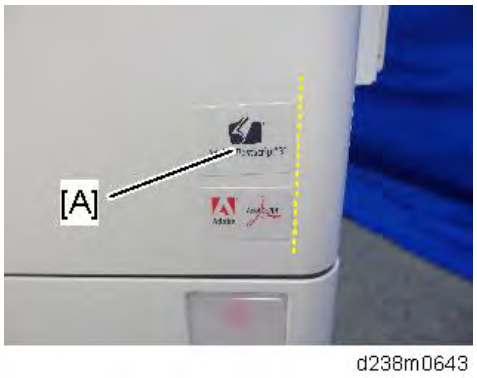
- Clone PS and Adobe PS cannot be run simultaneously. If PostScript3 Unit Type M29 (Adobe PS) is installed, Clone PS will be disabled.
- When installing more than one SD card, perform the merge operation (SD Card Appli Move).

1. Remove the SD card slot cover [A].

2. Insert the PS3 SD card in SD card slot 1 [A: Upper Slot].



3. Reattach the SD card slot cover (coin screw x 1).
4. Stick the "Adobe PostScript3" decal [A] on the front face of the machine.



5. Turn ON the main power.

   Adobe PostScript3 installation starts.

6. Press [Restart] when the following message appears.

m0ajm0311

7. Print out the "Configuration Page", and then check if this option is correctly recognized.

- User Tools > Machine Features > Printer Features > List/Test Page > Configuration Page
- Note that the description of Firmware Version shown in the printed Configuration Page differs between Clone PS and Adobe PS.

PS type	Description of Firmware Version
When PostScript3 Unit Type M29 (Adobe PS) is installed	RPCS [x.xx.xx] **Adobe PostScript 3** [x.xx], **Adobe PDF** [x.xx]
Clone PS	RPCS [x.xx.xx] **PS3** [x.xx], **PDF** [x.xx]

Initial Settings for the Printer Driver

After installation of an SD card, configure the settings for the printer driver in accordance with the type of PS to be used.

Note

The same printer driver, PS3 printer driver, can be used for printing either for Adobe PS or Clone PS.

- **Setting items (Windows):**

  In an environment where interactive communication is enabled, the machine attempts to acquire information to perform automatic configuration.

  When manual configuration is to be performed, select “Adobe PostScript” if Adobe PS is used, and choose “Emulated PostScript” if Clone PS is used.

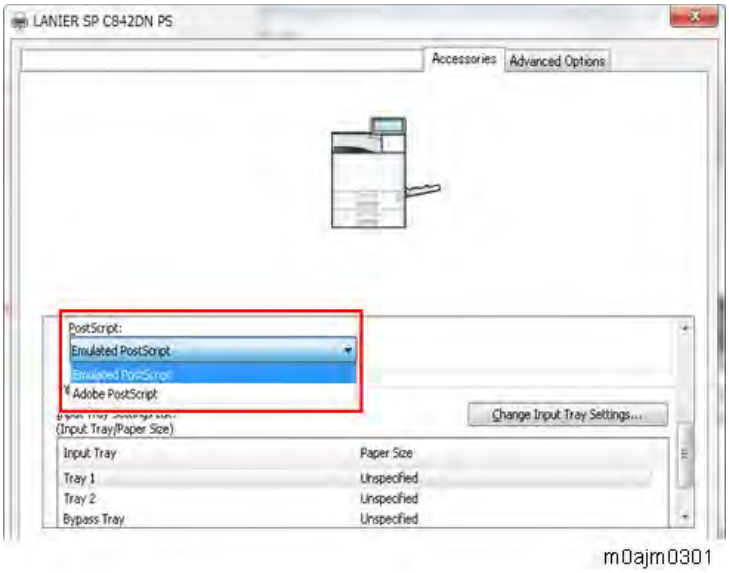
1. On the [Start] menu, click [Devices and Printers].

2. Right-click the icon of the printer you want to use.

3. Click [Printer properties].

4. Click the “Accessories” tab and configure settings for Adobe PS/Clone PS using the PostScript pull-down

menu.



- **Setting items (Mac OS X):**

  If the driver is installed by means of the Bonjour function or “HP Jetdirect - Socket”, the settings will be automatically configured.

  Automatic configuration will not work if any other protocol is used for installation. In this case, manual configuration is required.

  When manual configuration is to be performed, select “Adobe PostScript” if Adobe PS is used, and “Emulated PostScript” if Clone PS is used.

Switching back to Clone PS from Adobe PS

Clone PS can be resumed by removing the Adobe PS card from the SD card slot and applying the firmware for Clone PS/PDF (“.fwu” or “.rfu”).

Note: The work should be carried out by customer engineers.

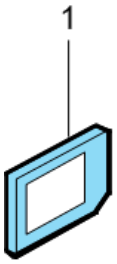
In doing this, be sure to apply both PS3 and PDF firmware modules. If only one of them is applied, the machine will not operate properly. (As a stopgap measure to fix the malfunction, insert the optional Adobe PS card again into the SD card slot to enable the use of Adobe PS. Then, Clone PS can be resumed by applying both the PS3 and PDF firmware modules once again.)

Classification	Firmware name	Software part number
Clone PS component firmware	Clone PS3	D2895594
	Clone PDF	D2895595
	IRIPS Font	D2895596
Adobe PS component firmware	Adobe PS3	D3DW5731
	Adobe PDF	D3DW5733
	PS3 Font	D2415681

XPS Direct Print Option Type M29

Component Check

No.	Description	Qty
1	XPS Direct Print SD Card	1



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Installation Procedure

⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

Note

- When installing more than one SD card, perform the merge operation. (SD Card Appli Move)

1. Remove the SD card slot cover [A].

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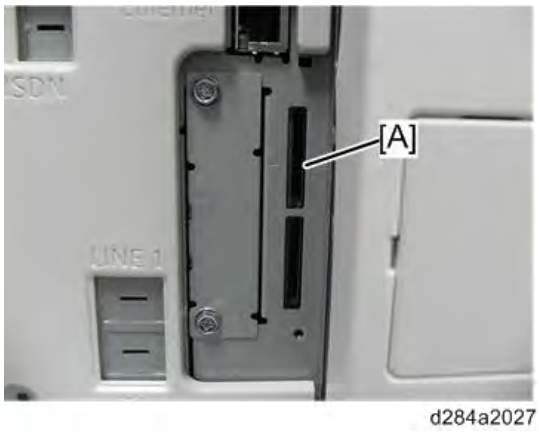
2. Insert the XPS SD card in SD card slot 1 [A: Upper Slot].



3. Reattach the SD card slot cover (x 1).

4. Turn ON the main power.

5. Print out the “Configuration Page”, and then check if this option is correctly recognized.

- User Tools > Machine Features > Printer Features > List/Test Page > Configuration Page

Data Overwrite Security Unit Type M19 (D3BS-03)

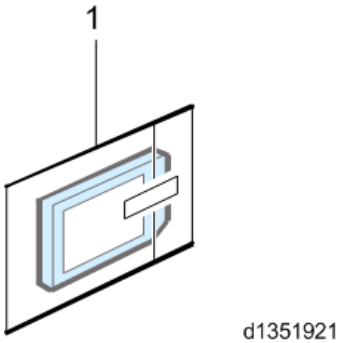
Overview

The machine's hard disk stores all document data from the Copier, Printer, and Scanner functions. It also stores the data of users' Document Server and code counters, and the Address Book. To prevent data on the hard disk being leaked before disposing of the machine, you can overwrite all data stored on the hard disk (Erase All Memory). You can also automatically overwrite temporarily-stored data (Auto Erase Memory).
The function of this option is completely the same as the Data Overwrite Security in Security Functions, which is standard on this machine (Security Setting)
This option should be installed only for the customer who requires the **CC certified Data Overwrite Security function**.

Component List

Check the quantity and condition of the accessories in the box against the following list.

No.	Description	Q'ty
1.	SD Card	1
-	Comments Sheet	1
-	Operating Instructions CD-ROM	1



Before You Begin the Procedure

1. Confirm that the Data Overwrite Security unit SD card is the correct type for the machine. The correct type for this machine is "Type M19".

Important

- If you install any version other than "**Type M19**" for this machine, you will have to replace the NVRAM and do this installation procedure again.

2. Make sure that the following settings are not at their factory default values.

- Supervisor login password
- Administrator login name
- Administrator login password

If any of these settings is at a factory default value, tell the customer these settings must be changed before

you do the installation procedure.

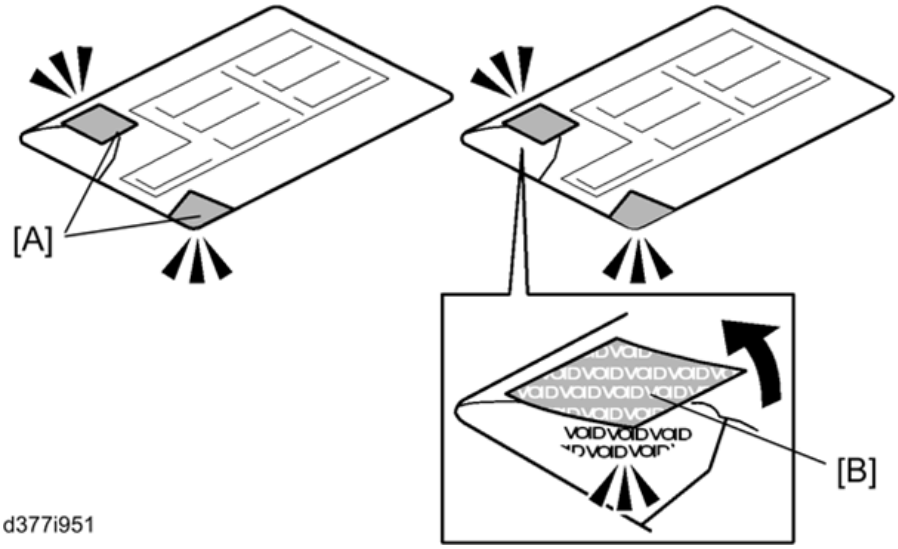
3. Make sure that "Admin. Authentication" is ON.
   User Tools > Machine Features > System Settings > Administrator Tools > Administrator Authentication Management > Admin. Authentication
   If this setting is OFF, tell the customer this setting must be ON before you do the installation procedure.
4. Make sure that "Administrator Tools" is enabled (selected).
   User Tools > Machine Features > System Settings > Administrator Tools > Administrator Authentication Management> Available Settings
   If this setting is disabled (not selected), tell the customer this setting must be enabled (selected) before you do the installation procedure.

Note

- See the Operating Instructions (Security Guide) for the factory default values.

Seal Check and Removal

Before opening the corrugated envelope, make sure that the seal has not been broken or peeled off. If the seal has been broken or peeled off (even partially), this is considered an arrival defect. Note that once the seal is peeled off, this will leave a mark on the bag.



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⚠CAUTION

- You must check the box seals to make sure that they were not removed after the items were sealed in the box at the factory before you do the installation.

1. Check the box seals [A] on each corner of the box.
   - Make sure that a tape is attached to each corner.
   - The surfaces of the tapes must be blank. If you see "VOID" on the tapes, do not install the components in the box.
2. If the surfaces of the tapes do not show "VOID", remove them from the corners of the box.
3. You can see the "VOID" marks [B] when you remove each seal. In this condition, they cannot be attached to the box again.

Installation Procedure

⚠CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

Note

- When installing more than one SD card, perform the merge operation. (SD Card Appli Move)

1. Turn the main power off, and then remove the power plug and cables that are connected.
2. Remove the SD card slot cover [A].

3. Insert the Data Overwrite Security Unit Type M19 SD card in SD card slot 1 [A: Upper Slot].

4. Reattach the SD card slot cover.(×1)
5. Insert the power cord into the outlet and turn ON the main power.
6. Enter the SP mode.
7. Do this step only if you are installing the option on a machine that is already in use (not a new machine):
   - **If the customer wishes to** continue using the same hard disk, execute all three SP modes below.
     - SP5-801-014 (Clear DCS Setting)
     - SP5-832-001 (HDD Formatting (ALL))
     - SP5-832-002 (HDD Formatting (IMH))
   - **If the customer wishes to** replace the hard disk with a new one, execute SP5-801-014 only.

Note

- If the customer continues using the same hard disk, the overwriting of the data stored on the disk

before the option is installed cannot be guaranteed. It is highly recommended to replace the hard disk with a new one.

8. Set SP5-836-001 (Capture Function (0:Off 1:On)) to a value of 0 (disable).

9. Execute SP5-878-001 ([Option Setup: Data Overwrite Security)
If the installation fails, "Installation failed" is displayed when this SP is executed.

10. Print out the System Settings List and make sure that the option was installed successfully.

11. Reconnect the network cable.

12. Execute SP5-990-005 (SP print mode Diagnostic Report).
Make sure to shut down and reboot the machine once before printing the SMC. Otherwise, the latest settings may not be collected when the SMC is printed.

13. Make sure that ROM number "D3BC5757A" and firmware version "1.02" appear in both of the following areas on the report (they must match):

- "ROM Number / Firmware Version" - "HDD Format Option"
- "Loading Program"

Configuring "Auto Erase Memory" (Performed by the Customer)

1. Press the [User Tools] icon.

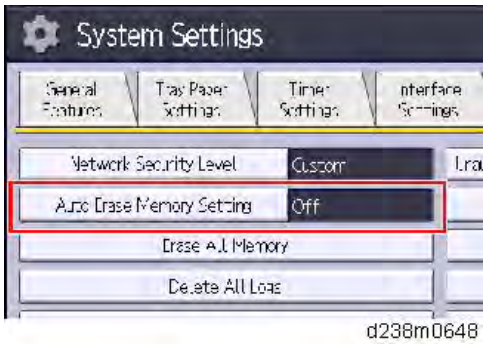
2. Press [Machine Features].

3. Press [System Settings].

4. Press [Administrator Tools].

5. Press [Next] three times.

6. Press [Auto Erase Memory Setting].



7. Press [On].

8. Select the method of overwriting.

- If you select [NSA] or [DoD], proceed to Step 11.
- If you select [Random Numbers], proceed to Step 9.

9. Press [Change].

10. Enter the number of times that you want to overwrite using the ten keys, and then press [#].

The Random Numbers method overwrites the data using random numbers. You can set the overwrite to be performed anywhere from 1-9 times, with a default of 3 times.

11. Press [OK].

12. Make sure that the Data Overwrite icon is displayed in the bottom right hand corner of the screen.

13. Take a test copy, and then make sure that the Data Overwrite icon changes from "Dirty" (solid) to "Dirty" (blinking), and then to "Clear".

- If the Data Overwrite icon does not change to Clear, check to see if there are any active Sample Print or Locked Print jobs. A Sample Print or Locked Print job can only be overwritten after it has been executed.
- The Dirty icon blinks while an overwrite is in progress.
- If you use your machine for a while with Auto Erase Memory disabled, and then suddenly enable it, the overwrite process may take 10 or more hours depending on HDD usage.

Data Overwrite icon:

	Icon [1]	This icon is lit when there is temporary data to be overwritten, and blinks during overwriting.

	Icon [2]	This icon is lit when there is no temporary data to be overwritten.

SP descriptions

- SP5-801-014 (Memory Clear: Clear DCS Setting)
  Initializes the DCS (Delivery Control Service) settings.
- SP5-832-001 (HDD Formatting : HDD Formatting (ALL))
  Initializes the hard disk.
- SP5-832-002 (HDD Formatting : HDD Formatting (IMH))
  Initializes the hard disk.
- SP5-836-001 (Capture Settings: Capture Function (0:Off 1:On))
  With this function disabled, the settings related to the capture feature cannot be initialized, displayed, or selected.
- SP5-878-001 (Data Overwrite Security)
  Enables the Data Overwrite Security unit. Press "EXECUTE" on the operation panel. Then turn the machine off and on.
- SP5-990-005 (SP Print Mode: Diagnostic Report).
  Prints the configuration sheets of the system and user settings : SMC.
  Make sure to shut down and reboot the machine once before printing the SMC. Otherwise, the latest settings may not be collected when the SMC is printed.

Security Setting

Security Function Installation

The machine contains the security functions (Data Overwrite Security and HDD Encryption unit) in the controller board.

If you are installing a new machine, it is recommended to activate Data Overwrite Security and HDD Encryption by selecting "Format All Data" from “System Settings” on the operation panel.

Note

- This method is recommended because there is no user data on the hard drive yet (Address Book data, image data, etc.).

If the customer wishes to activate Data Overwrite Security and HDD Encryption unit on a machine that is already running, it is recommended to activate the unit by selecting "All Data" from “System Settings” on the operation panel.

Important

- Selecting "All Data" will preserve the data that has already been saved to the HDD. (If "Format All Data" is selected, all user data saved to the HDD up to that point will be erased).

Immediately after encryption is enabled, the encryption setting process will take several minutes to complete before you can begin using the machine.

Note

- If encryption is enabled after data has been stored on the HDD, or if the encryption key is changed, this process can take up to three and a half hours or more.

The machine cannot be operated while data is being encrypted.

Once the encryption process begins, it cannot be stopped.

Make sure that the machine's main power is not turned off while the encryption process is in progress.

If the machine's main power is turned off while the encryption process is in progress, the HDD will be damaged and all data on it will be unusable.

Print the encryption key and keep the encryption key (which is printed as a paper sheet).

Keep the encryption key in a safe place. If the encryption key is lost and is needed, the controller board, HDD and NVRAM must all be replaced at the same time.

Note

- "NVRAM" mentioned in here means the NVRAM on the Controller Board.
- "NVRAM" or EEPROM on the BCU has nothing to do with this.

Please use the following procedure when the Data Overwrite Security and HDD Encryption are reinstalled.

Data Overwrite Security

Before You Begin the Procedure

1. Make sure that the following settings (1) to (3) are not at their factory default values.

(1) Supervisor login password

(2) Administrator login name

(3) Administrator login password

If any of these settings is at a factory default value, tell the customer these settings must be changed before you do the installation procedure.

2. Make sure that “Admin. Authentication” is on.

[User Tools] icon -> [Machine Features] -> [System Settings] -> [Administrator Tools] -> [Administrator Authentication Management] -> [Admin. Authentication]

If this setting is off, tell the customer this setting must be on before you do the installation procedure.

3. Make sure that “Administrator Tools” is enabled (selected).

[User Tools] icon -> [Machine Features] -> [System Settings] -> [Administrator Tools] -> [Administrator Authentication Management] -> [Available Settings]

If this setting is disabled (not selected), tell the customer this setting must be enabled (selected) before you do the installation procedure.

Installation Procedure

1. Connect the network cable if it needs to be connected.

2. Turn ON the main power.

3. Go into the SP mode and push "EXECUTE" in SP5-878-001.

4. Exit the SP mode and turn off the operation switch. Then turn off the main power switch.

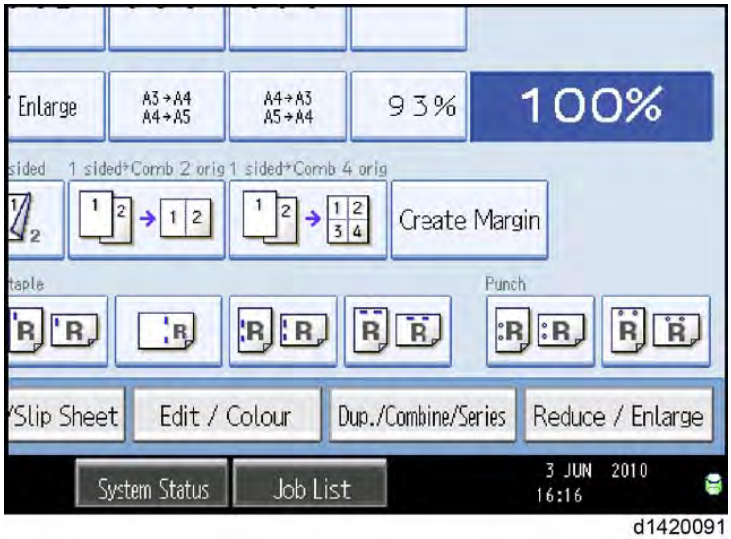
5. Turn on the machine power.

6. Do SP5-990-005 (SP print mode Diagnostic Report).

Make sure to shut down and reboot the machine once before printing the SMC. Otherwise, the latest settings may not be collected when the SMC is printed.

7. Go into the User Tools mode, and select [Machine Features] → [System Settings] →[Administrator Tools] →[Auto Erase Memory Setting] →[On].

8. Exit the User Tools mode.



d1420091

	Icon [1]	This icon is lit when there is temporary data to be overwritten, and blinks during overwriting.
	Icon [2]	This icon is lit when there is no temporary data to be overwritten.

9. Check the display and make sure that the overwrite erase icon appears.

10. Check the overwrite erase icon.

The icon [1] is lit when there is temporary data to be overwritten, and blinks during overwriting.

The icon [2] is lit when there is no temporary data to be overwritten.

Using Auto Erase Memory

The Auto Erase Memory function can be enabled by the following procedure.

1. Log in as the machine administrator from the control panel.

2. Press the [User Tools] icon.

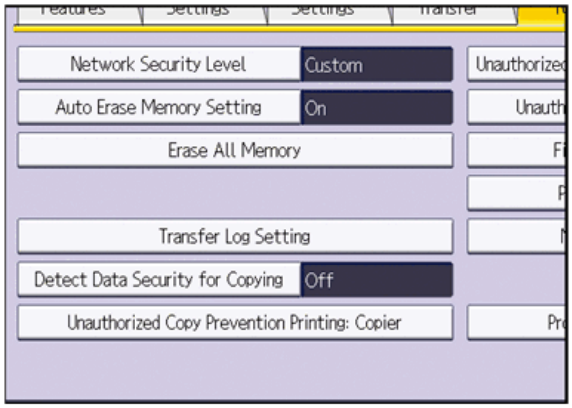
3. Press [Machine Features].

4. Press [System Settings].

5. Press [Administrator Tools].

6. Press [Next] three times.

7. Press [Auto Erase Memory Setting].



d1822517

8. Press [On].

9. Select the method of overwriting.

If you select [NSA] or [DoD], proceed to step 12.

If you select [Random Numbers], proceed to step 10

10. Press [Change].

11. Enter the number of times that you want to overwrite using the number keys, and then press [#].

12. Press [OK]. Auto Erase Memory is set.

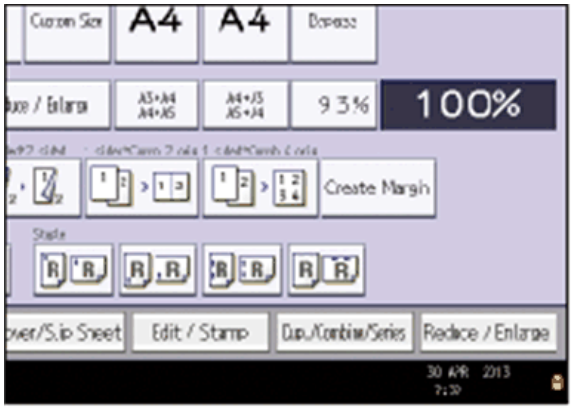
13. Log out.

14. Check the display and make sure that the overwrite erase icon appears.

15. Check the overwrite erase icon.

The icon [1] is lit when there is temporary data to be overwritten, and blinks during overwriting.

The icon [2] is lit when there is no temporary data to be overwritten.



d1822516

	Icon [1]	This icon is lit when there is temporary data to be overwritten, and blinks during overwriting.
	Icon [2]	This icon is lit when there is no temporary data to be overwritten.

HDD Encryption

Before You Begin the Procedure:

1. Make sure that the following settings (1) to (3) are not at the factory default settings.

(1) Supervisor login password

(2) Administrator login name

(3) Administrator login password

If any of these settings is at a factory default value, tell the customer these settings must be changed before you do the installation procedure.

2. Confirm that "Admin. Authentication" is on:

[User Tools] icon - [Machine Features] - [System Settings] - [Administrator Tools] - [Administrator Authentication Management] - [Admin. Authentication] - [On]

If this setting is off, tell the customer that this setting must be on before you can do the installation procedure.

3. Confirm that "Administrator Tools" is selected and enabled.

[User Tools] icon - [Machine Features] - [System Settings] - [Administrator Tools] - [Administrator Authentication Management] - [Available Settings]

"Available Settings" is not displayed until step 2 is done.

If this setting is not selected, tell the customer that this setting must be selected before you can do the

installation procedure.

Installation Procedure:

1. Turn ON the main power, and then enter the SP mode.
2. Select SP5-878-002, and then press "Execute" on the LCD.
3. Exit the SP mode after "Completed" is displayed on the LCD.
4. Turn OFF the main power.

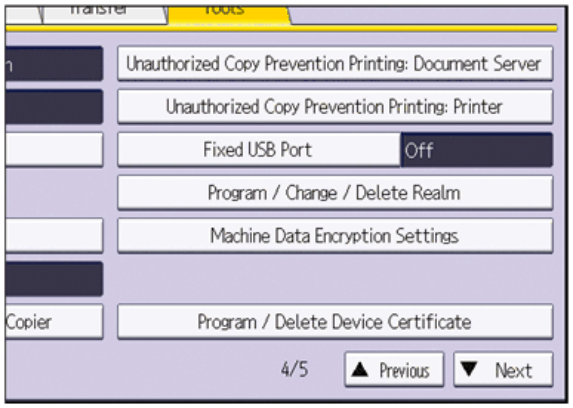
Enable Encryption Setting

Machine Data Encryption Settings can be enabled by the following procedure.

Important

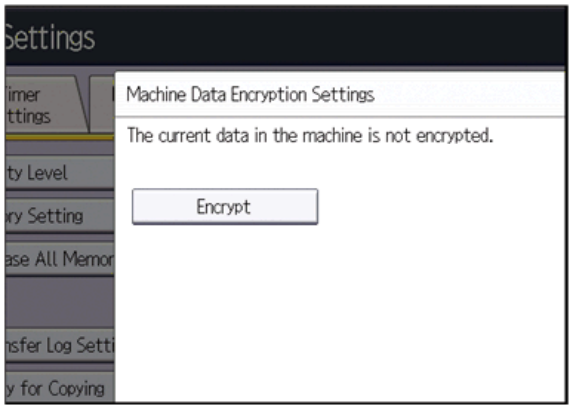
- When setting up encryption, specify whether to start encryption after deleting data (initialize) or encrypt and retain existing data. If data is retained, it may take some time to encrypt it.

1. Turn on the main power.
2. Log in as the machine administrator from the control panel.
3. Press the [User Tools] icon.
4. Press [Machine Features].
5. Press [System Settings].
6. Press [Administrator Tools].
7. Press [Next] three times.
8. Press [Machine Data Encryption Settings].



d1822518

9. Press [Encrypt].



d1822519

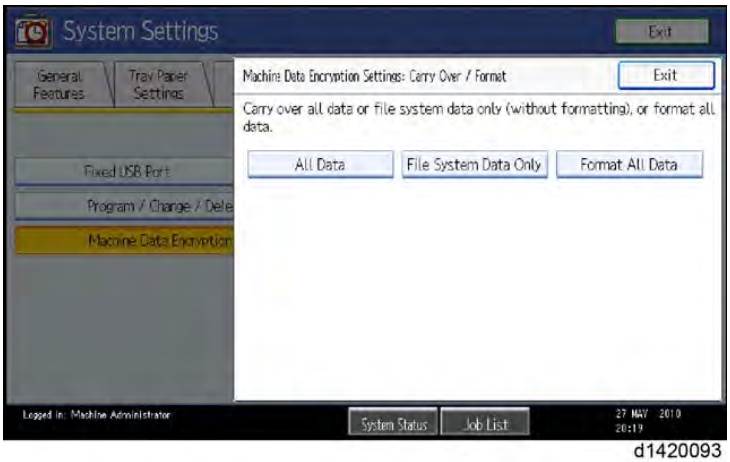
10. Select the data to be carried over to the HDD and not be reset.

To carry all of the data over to the HDD, select [All Data].

To carry over only the machine settings data, select [File System Data Only].

To reset all of the data, select [Format All Data].

11. Select the backup method.



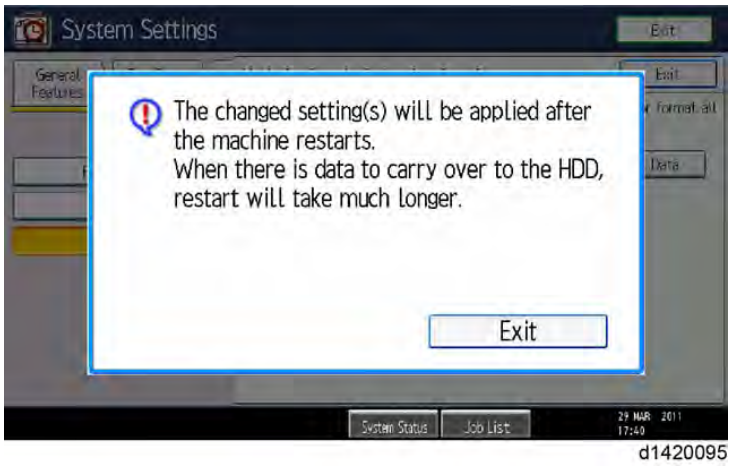
d1420093

If you have selected [Save to SD Card], load an SD card into the media slot on the side of the control panel and press [OK] to back up the machine's data encryption key.

If you have selected [Print on Paper], press the [Start] key. Print out the machine's data encryption key.

12. Press [OK].

13. Press [Exit].



d1420095

14. Press [Exit].

15. Log out.

16. Turn off the main power, and then turn the main power back on.

The machine will start to convert the data on the memory after you turn on the machine. Wait until the message "Memory conversion complete. Turn the main power switch off." appears, and then turn the main power off again.

Check the Encryption Settings

1. Press the [User Tools] icon.

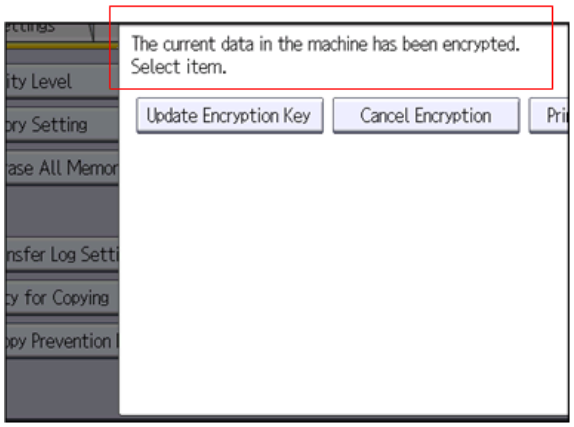
2. Press [Machine Features].

3. Press [System Settings].

4. Press [Administrator Tools].

5. Press [Machine Data Encryption Settings].

6. Confirm whether the encryption has been completed or not on this display.



d1822520

Print the encryption key

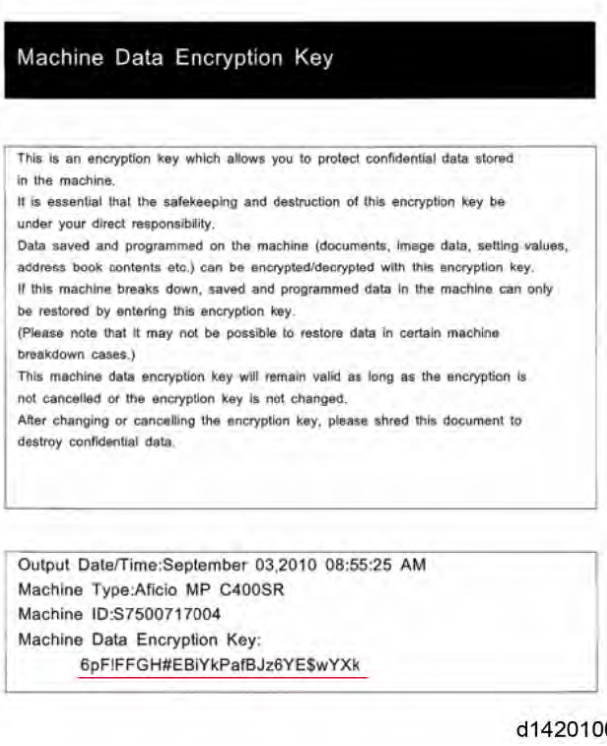
Use the following procedure to print the key again if it has been lost or misplaced.

1. Press the [User Tools] icon.
2. Press [Machine Features].

3. Press [System Settings].
4. Press [Administrator Tools].
5. Press [Machine Data Encryption Settings].

   If this item is not visible, press [Next] to display more settings.
6. Press [Print Encryption Key].

Encryption key sample



d1420100

The encryption key is printed out as a sheet of paper like the example shown above.

Please instruct the customer to keep it in a safe place.

Backing Up the Encryption Key

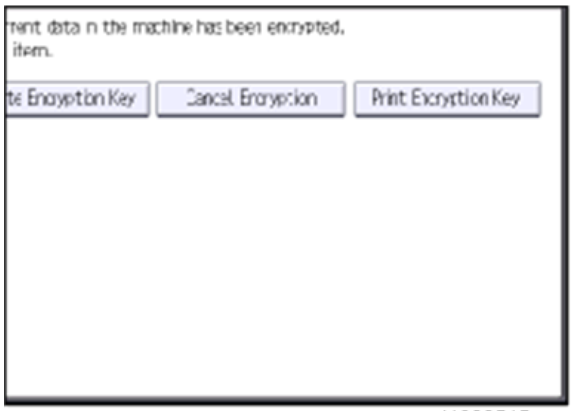
The encryption key can be backed up. Select whether to save it to an SD card or to print it.

Important

- The encryption key is required for data recovery if the machine malfunctions. Be sure to store the encryption key safely for retrieving backup data.

1. Log in as the machine administrator from the control panel.
2. Press the [User Tools] icon.
3. Press [Machine Features].
4. Press [System Settings].
5. Press [Administrator Tools].
6. Press [Next] three times.
7. Press [Machine Data Encryption Settings].

8. Press [Print Encryption Key].



d1822515

9. Select the backup method.

If you have selected [Save to SD Card], load an SD card into the media slot on the side of the control panel and press [OK]; once the machine's data encryption key is backed up, press [Exit].

If you have selected [Print on Paper], press the [Start] key. Print out the machine's data encryption key.

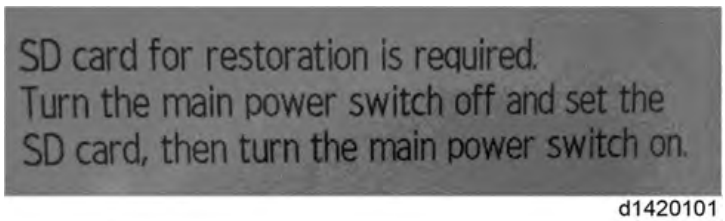
10. Press [Exit].

11. Log out.

Encryption Key Restoration

How to restore the old encryption key to the machine

The following message appears after the controller board is replaced. In such a case, it is necessary to restore the encryption key to the new controller board.



d1420101

To do this, follow the procedure below.

1. Prepare an SD card that has been initialized in FAT16 format.

2. Using a PC, create a folder in the SD card and name it "restore_key".

3. Create a folder in the “restore_key” folder and name it the same as machine’s serial number, “xxxxxxxxxxx” (11 digits).

4. Create a text file called "key_xxxxxxxxxxx.txt" and save it in the "xxxxxxxxxxx“ folder. Write the encryption key in the text file.

/restore_key/xxxxxxxxxxx/key_xxxxxxxxxxx.txt

Note

- Ask an Administrator to enter the encryption key. The key has already been printed out by the user and may have been saved in the "key_xxxxxxxxxxx.txt" file. (The function of back-up the encryption key to the SD card directly is provided 11A products or later.)

5. Turn ON the machine’s main power.

6. Confirm that a message is displayed on the LCD telling to insert the SD card that contains the encryption key.
7. Turn OFF the main power.
8. Insert the SD card that contains the encryption key into SD card slot 2 (the lower slot).
9. Turn ON the main power.

Note

- The machine will automatically restore the encryption key to the flash memory on the controller board.

10. Turn OFF the main power when the machine has returned to normal status.
11. Remove the SD card from SD card slot 2.

How to do a forced start up with no encryption key

If the encryption key back-up has been lost, follow the procedure below to do a forced start-up.

Important

- The HDD will be formatted after the forced start-up.
- Encrypted data will be deleted.
- User settings will be cleared.

1. Prepare an SD card.
2. Create a directory named “restore_key” inside the root directory of the SD card. Then, save the “nvram_key.txt” file using the following name:
   /restore_key/nvram_key.txt
3. Create a text file and write "nvclear".

Important

- Write this string at the head of the file.
- Use all lower-case letters.
- Do not use quotation marks or blank spaces.
- It is judged that a forced start has been selected when the content of "nvclear" is executed and the machine shifts to the alternate system (forced start).

4. Confirm that a message is displayed on the LCD telling to insert the SD card that contains the encryption key.
5. Turn OFF the main power.
6. Insert the SD card that contains the encryption key into SD card slot 2 (the lower slot).
7. Turn ON the main power.
   The machine automatically clear the HDD encryption.
8. Turn OFF the main power when the machine has returned to normal status.
9. Remove the SD card from SD card Slot 2.
10. Turn ON the main power.
11. Memory clear SP5-801-xxx (Exclude SP-5-801-001: All Clear and SP-5-801-002: Engine), and clear SP5-846-046: address book.
12. Set necessary user settings in User Tools.

SP descriptions

- **SP5-878-002 (Option Setup: HDD Encryption)**
  Executes the setup for encryption.
- **SP5-990-005 (SP Print Mode: Diagnostic Report)**
  Prints the configuration sheets of the system and user settings : SMC.
  Make sure to shut down and reboot the machine once before printing the SMC. Otherwise, the latest settings may not be collected when the SMC is printed.
- **SP5-801-001 (Memory Clear: All Clear)**
  Resets all correction data for process control and all software counters, and returns all modes and adjustments to their default values.
- **SP5-801-002 (Memory Clear: Engine)**
  Clears non-volatile memory of engine.
- **SP5-846-046 (UCS Setting: Addr Book Media)**
  Displays the slot number where an address book data is in.
  0: Unconfirmed
  1: SD Slot 1
  2: SD Slot 2
  3: SD Slot 3
  4: USB Flash ROM
  10: SD Slot 10
  20: HDD
  30: Nothing

@Remote Settings

Note

- Prepare and check the following check points before you visit the customer site. For details, ask the @Remote key person.

Check points before making @Remote settings

1. The setting of SP5816-201 in the mainframe must be "0".
2. Print the SMC with SP5990-002 and then check if a device ID2 (SP5811-003) must be correctly programmed.
   - 6 spaces must be put between the 3-digit prefix and the following 8-digit number (e.g. xxx_____xxxxxxxx).
   - ID2 (SP5811-003) and the serial number (SP5811-001) must be the same (e.g. ID2: A01_____23456789 = serial No. A0123456789)
   - Make sure to shut down and reboot the machine once before printing the SMC. Otherwise, the latest settings may not be collected when the SMC is printed.
3. The following settings must be correctly programmed.
   - Proxy server IP address (SP5816-063)
   - Proxy server Port number (SP5816-064)
   - Proxy User ID (SP5816-065)
   - Proxy Password (SP5816-066)
4. Get a Request Number

Execute the @Remote Settings

1. Enter the SP mode.
2. Input the Request number which you have obtained from @Remote Center GUI, and then enter [OK] with SP5816-202.
3. Confirm the Request number, and then click [EXECUTE] with SP5816-203.
4. Check the confirmation result with SP5816-204.

Value	Meaning	Solution/ Workaround
0	Succeeded	-
3	Communication error (proxy enabled)	Check the network condition.
4	Communication error (proxy disabled)	Check the network condition.
5	Proxy error (authentication error)	Check Proxy user name and password.
6	Communication error	Check the network condition.
8	Other error	See "SP5816-208 Error Codes" below this.
9	Request number confirmation executing	Processing… Please wait.
11	Already registered	-

Value	Meaning	Solution/ Workaround
12	Parameter error	-
20	Dial-up authentication error	* These errors occur only in the modems that support @Remote.
21	Answer tone detection error	
22	Carrier detection error	
23	Invalid setting value (modem)	
24	Low power supply current	
25	unplugged modem	
26	Busy line	

5. Make sure that the screen displays the Location Information with SP5816-205 only when it has been input at the Center GUI.

6. Click [EXECUTE] to execute the registration with SP5816-206.

7. Check the registration result with SP5816-207.

Value	Meaning	Solution/ Workaround
0	Succeeded	-
1	Request number error	Check the request number again.
2	Already registered	Check the registration status.
3	Communication error (proxy enabled)	Check the network condition.
4	Communication error (proxy disabled)	Check the network condition.
5	Proxy error (Authentication error)	Check Proxy user name and password.
8	Other error	See "SP5816-208 Error Codes" below this.
9	Request number confirmation executing	Processing… Please wait.
11	Already registered	-
12	Parameter error	-
20	Dial-up authentication error	* These errors occur only in the modems that support @Remote.
21	Answer tone detection error	
22	Carrier detection error	
23	Invalid setting value (modem)	
24	Low power supply current	
25	unplugged modem	
26	Busy line	

8. Exit the SP mode.

SP5816-208 Error Codes

Caused by Operation Error, Incorrect Setting

Code	Meaning	Solution/ Workaround
-12002	Inquiry, registration attempted without acquiring Request No.	Obtain a Request Number before attempting the Inquiry or Registration.
-12003	Attempted registration without execution of a confirmation and no previous registration.	Perform Confirmation before attempting the Registration.
-12004	Attempted setting with illegal entries for certification and ID2.	Check ID2 of the mainframe.
-12005	@Remote communication is prohibited. The device has an Embedded RC gate-related problem.	Make sure that "Remote Service" in User Tools is set to "Do not prohibit".
-12006	A confirmation request was made after the confirmation had been already completed.	Execute registration.
-12007	The request number used at registration was different from the one used at confirmation.	Check Request No.
-12008	Update certification failed because mainframe was in use.	Check the mainframe condition. If the mainframe is in use, try again later.
-12009	The ID2 in the NVRAM does not match the ID2 in the individual certification.	Check ID2 of the mainframe.
-12010	The certification area is not initialized.	Initialize the certification area.

Error Caused by Response from GW URL

Code	Meaning	Solution/ Workaround
-2385	Other error	
-2387	Not supported at the Service Center	
-2389	Database out of service	
-2390	Program out of service	
-2391	Two registrations for the same mainframe	Check the registration condition of the mainframe
-2392	Parameter error	
-2393	External RCG not managed	
-2394	Mainframe not managed	
-2395	Box ID for external RCG is illegal.	
-2396	Mainframe ID for external RCG is illegal.	
-2397	Incorrect ID2 format	Check the ID2 of the mainframe.
-2398	Incorrect request number format	Check the Request No.

SP descriptions

- **SP5-816-201 (Remote Service: Regist Status DFU(SSP))**

  Displays a number that indicates the status of the @Remote service device.

  0: Neither the registered device by the external nor embedded RCG device is set.

1: The embedded RCG device is being set. Only Box registration is completed. In this status, this unit cannot answer a polling request from the external RCG.

2: The embedded RCG device is set. In this status, the external RCG unit cannot answer a polling request.

3: The registered device by the external RCG is being set. In this status the embedded RCG device cannot be set.

4: The registered module by the external RCG has not started.

- **SP5-990-002 (SP Print Mode: SP(Mode Data List)**
  Prints the configuration sheets of the system and user settings : SMC.
  Make sure to shut down and reboot the machine once before printing the SMC. Otherwise, the latest settings may not be collected when the SMC is printed.
- **SP5-811-003 (Machine No. Setting: ID2 Code Display)**
  Sets the ID-2 code used to identify the @remote device at installation.
- **SP5-816-063 (Remote Service: Proxy server IP address)**
  This SP sets the address of the proxy server used for communication between the RCG device and the gateway. Use this SP to set up or display the customer proxy server address.
  The address is necessary to set up the embedded RCG-N.
  The address display is limited to 127 characters. Characters beyond the 127 characters are ignored.
  This address is customer information and is not printed in the SMC report.
- **SP5-816-064 (Remote Service: Proxy server Port number)**
  This SP sets the port number of the proxy server used for communication between the embedded RCG-N and the gateway. This setting is necessary to set up the embedded RC Gate-N.
  This port number is customer information and is not printed in the SMC report.
- **SP5-816-065 (Remote Service: Proxy User ID)**
  This SP sets the HTTP proxy certification user name.
  The length of the name is limited to 31 characters. Any character beyond the 31st character is ignored.
  This name is customer information and is not printed in the SMC report.
- **SP5-816-066 (Remote Service: Proxy Password)**
  This SP sets the HTTP proxy certification password.
  The length of the password is limited to 31 characters. Any character beyond the 31st character is ignored.
  This name is customer information and is not printed in the SMC report.
- **SP5-816-202 (Remote Service: Letter Number DFU(SSP))**
  Allows entry of the number of the request needed for the RCG-N device.
- **SP5-816-203 (Remote Service: Confirm Execute)**
  Executes the inquiry request to the @Remote GW URL.
- **SP5-816-204 (Remote Service: Confirm Result DFU(SSP))**
  Displays a number that indicates the result of the inquiry executed with SP5816 203.
- **SP5-816-205 (Remote Service: Confirm Place DFU(SSP))**
  Displays the installed section informed from G/W for response of request number inquiry if the section is enrolled on the G/W.

- **SP5-816-206 (Remote Service: Register Execute)**
  Executes "Embedded RCG Registration".
- **SP5-816-207 (Remote Service: Register Result DFU(SSP))**
  Displays a number that indicates the registration result.

Operation Guidance for Users

Function/Operation	Instruction to provide
Basic machine functions, operations	• How to load the toner bottle • How to load paper and other consumables/supplies • How to turn the main power switch ON/OFF • How to clear paper jams • How to program, modify, and delete Address Book entries • How to customize the UI and home screen • Overview of machine options/peripherals • How to take the proper action for SC errors (clearing the error, contacting service and support, etc.), how to interpret @Remote notifications • Important notes to keep in mind whenever moving the machine • Product limitations
Copier	• Basic Copier operations • How to load an original in the ARDF or place it on the exposure glass for scanning • How to use thick paper and other specialized paper/media • How to configure the Copier main screen (duplex/simplex, auto color selection, User Codes, etc.) • Basic Document Server operations
Fax (when installed)	• How to send a fax (Memory Transmission, Direct Transmission)
Printer	• How to install printer drivers (using the recommended method) • How to connect to a PC (performing the port settings) • How to print out a test page • Overview of various settings inside each tab in the printer driver (e.g. duplex printing)
Scanner	• How to install printer drivers (using the recommended method) • How to connect to a PC and perform a test scan

3. Preventive Maintenance

PM Parts Settings

Replacement procedure of the PM parts

When you replace the PM parts, you need to reset the PM counter manually.

There are two ways to reset the PM counter for this machine.

- Method 1: Reset by SP3-701 (Manual New Unit Set). This is the conventional method.
- Method 2: Reset by [PM Counter / New Unit Set] Menu.

"Method 2" is recommended for its ease of operation.

Note

- For the following units, there is a new unit detection mechanism. It is not necessary to reset PM counters.
  - Fusing unit
  - PCDU
  - Waste Toner Bottle (When the machine stopped because the waste toner bottle was full)

Note

- If you only replace the development unit (not replacing the PCU), the PCU counter will not be cleared when you set SP3-701-023 (Manual New Unit Set: Development Unit) in advance.

Note

- Toner recycling mode is disabled by default.

Replacing the Fusing Unit

For MP 2555 SP/MP 3055 SP/MP 3555 SP

- After the PM counter for the Fusing Belt (heating sleeve belt unit) reaches 260K pages or the PM counter distance reaches 139,378,000 mm, the machine stops automatically.
- Replace the heating sleeve belt unit before the machine stops (stop warning: 240K pages, stop: 260K pages).

For MP4055 SP/MP 5055 SP/MP 6055 SP

- After the PM counter for the Fusing Belt (heating sleeve belt unit) reaches 350K pages or the PM counter distance reaches 165,936,000 mm, the machine stops automatically.
- Replace the heating sleeve belt unit before the machine stops (stop warning: 320K pages, stop: 350K pages).

Method 1: By SP3701

1. Enter the SP mode.
2. Output the SMC logging data with SP5-990-004.
   Make sure to shut down and reboot the machine once before printing the SMC. Otherwise, the latest settings may not be collected when the SMC is printed.

3. Set the following SPs (New Unit Detection) to "1".

Item	SP
PCU	PCU: SP3-701-002 Cleaning Blade: SP3-701-009 Charge Roller: SP3-701-018 Cleaner: Charge Roller (Cleaning Roller): SP3-701-019 OPC: SP3-701-021 Separation Pawl (Pick-off Pawls): SP3-701-022
Development Unit	Development Unit: SP3-701-023 Development (Developer): SP3-701-024 Development Filter: SP3-701-025 Bearings: Development Screw (Development Mixing Auger Bearings): SP3-701-028
PTR (Paper Transfer) Unit	SP3-701-108
Fusing Unit	Fusing Unit: SP3-701-115 Fusing Belt (Heating Sleeve Belt Unit): SP3-701-116 Pressure Roller: SP3-701-118 Pressure Roller Bearings: SP3-701-119
Waste Toner Bottle (When the bottle is replaced before the machine detects bottle full and stops)	SP3-701-142
ADF	ADF: Pick-up Roller: SP3-701-206 ADF: Feeding Belt: SP3-701-207 ADF: Reverse Roller: SP3-701-208

4. Turn the main power switch OFF, and disconnect the power cord from the outlet.

5. Replace the PM parts and turn the main power ON.

The machine will reset the PM counters automatically. In the case of the development unit, developer initialization will also be done automatically.

6. Exit the SP mode.

Method 2: By [PM Counter / New Unit Set] Menu

1. Enter the SP mode.

2. Output the SMC logging data with SP5-990-004.

Make sure to shut down and reboot the machine once before printing the SMC. Otherwise, the latest settings may not be collected when the SMC is printed.

3. Press [PM Counter / New Unit Set].

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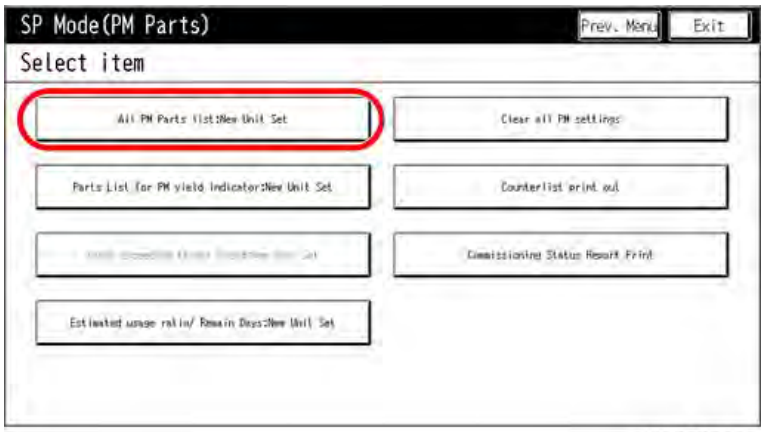
4. Press [All PM Parts List : New Unit Set].



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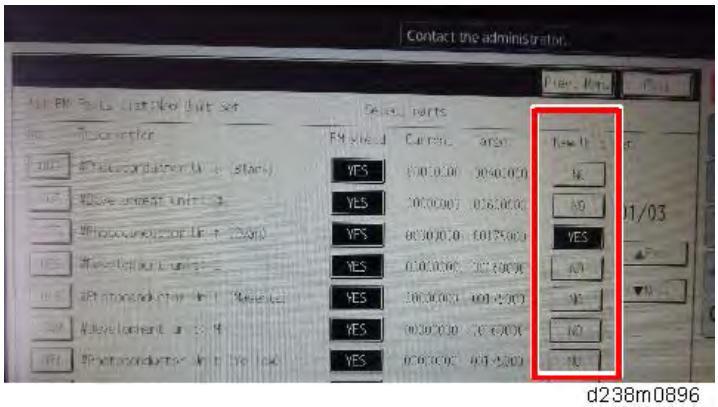
5. Set the PM part that you want to replace to "YES" under "New Unit Set".
After pressing "YES", the [Exit] key will not be available.
[TBD: Screen]



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6. Turn OFF the main power and unplug the power cord from the wall outlet.

7. Replace the PM parts and turn the main power ON.
The machine will reset the PM counters automatically. In the case of the development unit, developer initialization will also be done automatically.

8. Exit the SP mode.

After installing the new PM parts

1. Output the SMC logging data with SP5-990-004 and check the counter values.
   Make sure to shut down and reboot the machine once before printing the SMC. Otherwise, the latest settings may not be collected when the SMC is printed.
2. Make sure that the PM counters for the replaced units are "0" with SP7-621, or SP7-944. If the PM counter for a unit was not reset, then execute the new unit detect setting with SP3-701 again and turn the machine OFF/ON.
3. Make sure that the exchange counter counts up with SP7-853.
4. Make sure that the counters for the previous units (SP7-908) on the new SMC logging data list (from step 2 above) are equal to the counters (SP7-621, or SP7-944) for these units on the previous SMC logging data list (the list that was output in the "Before removing the old parts" section).
5. Make sure that the unit replacement date is updated with SP7-950.

SP descriptions

- **SP7-621-001 (PM Counter Display: Paper)**
  Displays the number of sheets printed for each current maintenance unit.
  When a unit is replaced, the machine automatically detects that the new unit is installed.
  Then, the current PM counter value is automatically moved to the PM Counter – Previous (SP7-906-1 to 10) and is reset to "0".
- **SP7-853 (Replace Counter)**
  Displays the number of times each PM part has been replaced.
- **SP7-908 (Previous Unit Counter: Pages (%))**
  Displays the PM counter of the previous PM Part which was replaced last time.
- **SP7-950 (Unit Replacement Date)**
  Displays the replacement date of each PM unit.
- **SP5-990**
  Prints the configuration sheets of the system and user settings : SMC.
  Make sure to shut down and reboot the machine once before printing the SMC. Otherwise, the latest settings may not be collected when the SMC is printed.

Operation Check

Check if the sample image has been copied normally.

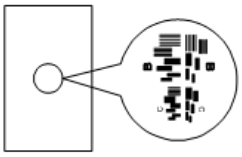
PM Parts List

See “Appendices” for the following information:

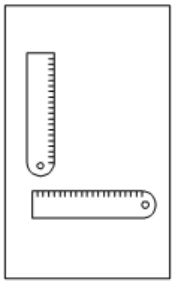
- Preventive Maintenance Tables

Image Quality Standards

Resolution

Item	Specification	Chart	Measuring method
Copy (100%/Enlargement), Black and White (1C)	Ave 5.0 lines/mm or more Min 4.5lines/mm or more	Book: S-5 (revised)	Copy onto plain paper using Auto Image Density/5 notches and then determine resolution.  d1354027
Copy (Reduction), Black and White (1C)	Min 4.5×M lines/mm or more	DF: S-5Y (revised)	

Magnification ratio error margin

Item	Specification	Chart	Measuring method
Engine, Main Scan, Black and White (1C)	±0.50% or less	Mono_CCD	Copy the scale and compare it with the scale at 100 mm to see if it is within specification. Leave the sheet for 3 minutes or more after it has been output before measuring.  d1354028 The swelling/shrinkage of paper caused by humidity are excluded. First side of the sheet only.
Engine, Sub Scan, Black and White (1C)	±0.50% or less	Scale chart	
Copy (100%), Main Scan, Black and White (1C)	±0.80% or less		
Copy (100%), Sub Scan, Black and White (1C)	±1.00% or less		
Copy (Reduction), Main Scan/Sub Scan, Black and White (1C)	±1.00% or less		
Copy (Enlargement), Main Scan/Sub Scan, Black and White (1C)	±1.00% or less		

Magnification ratio error margin deviation

Item	Specification	Chart	Measuring method
Copy (100% / Enlargement / Reduction), Black and White (1C)	1.00% or less	Scale chart	Leave the sheet for 3 minutes or more after it has been output before measuring.

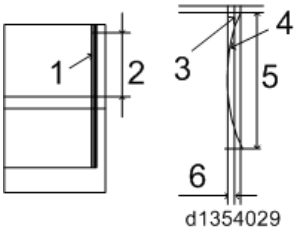
Pitch error margin

Item	Specification	Chart	Measuring method
Engine, Black and White(1C)	1.50% or less	Mono_CCD	For a line of about 1/2 inch in length.

Perpendicularity

Item	Specification	Chart	Measuring method
Engine, Black and White(1C)	±1.25mm/200mm or less (90° ± 0.35°)	Mono_CCD	Measure with the full length and width of the image.
Copy (100%), Black and White (1C)	±1.75mm/200mm or less (90° ± 0.5°)	Scale chart	

Linearity

Item	Specification	Chart	Measuring method
Engine, Black and White(1C)	±0.20mm/100mm or less	Mono_CCD	Measure with the full length and width of the image.
Copy, Black and White (1C)	±0.50mm/100mm or less	Scale chart	 1. Inner line 2. 100mm 3. Base line 4. Copy 5. 100mm 6. 0.5mm

Parallelism

Item	Specification	Chart	Measuring method
Engine, Black and White(1C)	± 1.8mm or less	Mono_CCD	Measure with the full length and width of the image.

Missing Image Area

Item	Specification	Chart	Measuring method
Engine/Copy (leading edge), Black and White(1C)	4.2±1.5%	Trim	Since there is a variability of about 1 mm in the sizes of sheets of paper, correct the size of the sheet before measuring.
Engine/Copy (left/right), Black and White(1C)	0.5 to 4.0mm		
Engine/Copy (trailing edge), Black and	0.5 to 6.0mm (Duplex: 3.0 to		

Item	Specification	Chart	Measuring method
White(1C)	6.0mm)		

Margin position

Item	Specification	Chart	Measuring method
Engine (simplex), Main Scan/Sub Scan, Black and White (1C)	0±1.5mm	Mono_CCD	
Engine (duplex), Main Scan/Sub Scan, Black and White (1C)	0±3mm		

Paper Transfer Quality Standards

Registration

Item	Specification	Note
Simplex (1st print side), 100% or reduction	0±2mm (Vertically and horizontally)	
Simplex (1st print side), enlargement	0±2mm × M mm (Vertically and horizontally)	M: Magnification ratio
Duplex (2nd print side), 100% or reduction	0±4mm (Vertically and horizontally)	
Duplex (2nd print side), enlargement	0±2mm × (2×M+2) mm (Vertically and horizontally)	M: Magnification ratio

Skew

Exposure glass

Item	Specification	Note
1st side, B5 SEF or less	0±1.3mm/100mm or less	
1st side, B5 SEF or more	0±0.9mm/100mm or more	
2nd side, B5 SEF or less	0±1.8mm/100mm or less	
2nd side, B5 SEF or more	±1.3mm/100mm or more	

ADF

Item	Specification	Note
1st side, B5 SEF or less	Main and Sub: 0±2.30mm/100mm	
1st side, B5 SEF or more	Main scanning: 0±1.65mm/100mm Sub scanning: 0±1.40mm/100mm	
2nd side, B5 SEF or less	Main and Sub: 0±2.80mm/100mm	
2nd side, B5 SEF or more, DF3100	Main scanning: 0±2.05mm/100mm Sub scanning: 0±1.80mm/100mm	
2nd side, B5 SEF or more, DF3090	Main and Sub: 0±2.30mm/100mm	

4. Replacement and Adjustment

Notes on the Main Power Switch

Push Switch

The main power button of this machine has been changed to a push-button switch from the conventional rocker switch. The push switch has characteristics and specifications different from the rocker switch. Care must be taken when replacing and adjusting parts.

Characteristics of the Push Switch (DC Switch)

Power is supplied to the machine even when the main power switch is turned OFF.

The push switch in this machine uses DC (direct current). Therefore, if the AC power cord is connected to an electrical outlet, power is supplied to the controller board, the operation unit and other modules even when the main power is turned OFF. When replacing the controller board and the operation unit in this state, not only these boards, it will damage other electrical components.
So, when performing maintenance work such as replacing parts, in addition to turning off the main power with the push switch, always unplug the AC power cord.

When you disconnect the power cord from the AC wall outlet, inside the machine there is still residual charge.

When you disconnect the power cord from the AC wall outlet, inside the machine for a while there is still residual charge. Therefore, if you remove boards in this state, it can cause a blown fuse or memory failure.

- How to remove the residual charge inside the machine
  After you unplug the power cord from the AC wall outlet, in order to remove the residual charge from inside the machine, be sure to press the main power switch. Thus, the charge remaining in the machine is released, and it is possible to remove boards.

When you reconnect the AC power cord into an AC wall outlet, the machine will start automatically.

In order to remove the residual charge, push the main power switch while you disconnect the AC power cord. At that time, the power ON flag inside the machine is set. Therefore, after you finish work on the machine and reconnect the power cord to the AC, even if you do not press the main power switch, the machine will start automatically and the moving parts will begin to move. **When working on moving parts, be careful that fingers or clothes do not get caught.**

Note

- Automatic restart deals with cases when you accidentally unplugged the AC power cord or unexpected power outages. By keeping the power flag ON, after the resumption of power, the machine will start up automatically.

In rare cases, when you reconnect the AC power cord to a power outlet, the machine does not start automatically.

In this case, the machine has not failed. The cause is due to the timing of releasing the residual charge. If you press the main power switch while the residual charge was already released, the power ON flag will not be set. At this time, start the machine manually by pressing the main power switch.

Shutdown Method

1. Press the main power switch [A] on the machine.

2. The shutdown message appears. After the shutdown process, the main power is turned off automatically. The operation panel and the main power indicator are turned off when the machine completes the shutdown.

Important

- Even after the shutdown message disappears, do not disconnect the power cord while the main power indicator [A] is flashing to indicate that the machine is still shutting down.

⚠CAUTION

- Before removing and adjusting electrical boards, do the following procedure. Otherwise, the board can be damaged by the residual charge inside the machine and must be replaced.

1. Take out the power cord after shutdown.

2. Press the power switch for a second to remove the residual charge inside the machine.

Forced Shutdown

In case normal shutdown does not complete for some reason, the machine has a forced shutdown function.
To make a forced shutdown, press and hold the main power switch for 6 seconds.
In general, do not use the forced shutdown.

Important

- Forced shutdown may damage the hard disk and memory, and can cause damage to the machine. Use a forced shutdown only if it is unavoidable.

Beforehand

⚠WARNING

- Turn off the main power switch and disconnect the power cord.
- After replacing, make sure that all removed harnesses are connected up again and secured in their clamps.

Special Tools and Lubricants

The following special tools should be prepared for maintenance of this model in the field.

Unique or Common:

U: Unique for this model

C: Common with listed model

Special Tools

No.	Part Number	Description	Q'ty	Unique or Common
1	A0069104	Scanner Positioning Pin (4pcs/set)	1	C (General)
2	D1979010	Adjustment Seal (4pcs/set) – Laser Unit	1	U
3	B6455020	SD Card (1GB)	1	C (General)
4	C4019503	20X Magnification Scope	1	C (General)
5	VSSG9002	FLUOTRIBO MG GREASE: 100G	1	C (General)
6	A2929500	Test Chart – S5S(10pcs/set)	1	C (General)

Note

- A PC (Personal Computer) is required for creating the Encryption key file to an SD card when replacing the controller board for a model in which HDD encryption has been enabled.

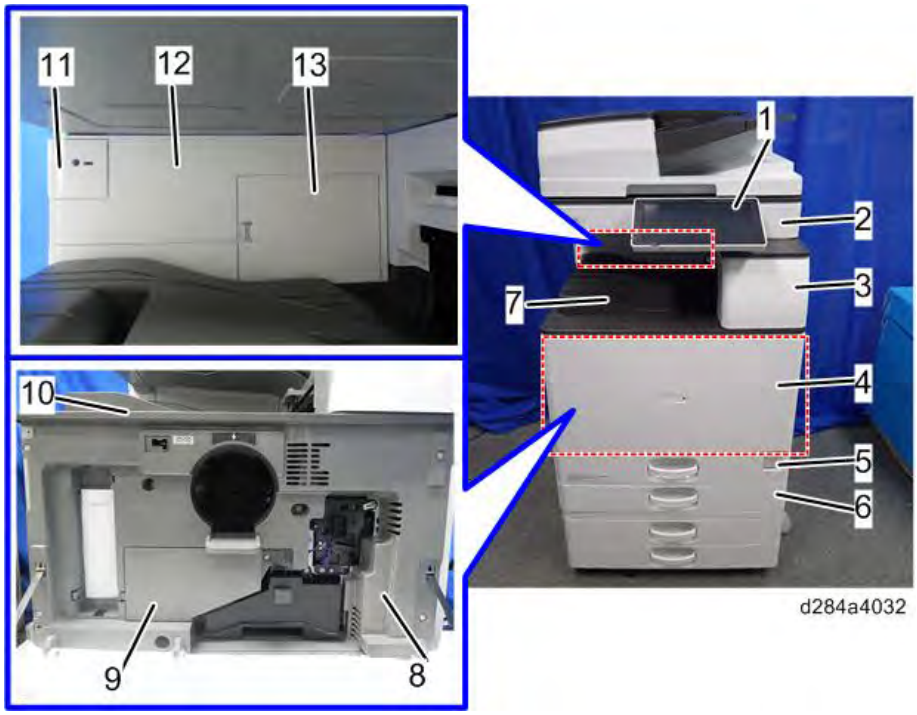
Lubricants

No.	Part No.	Description	Q'ty	Unique or Common
1	52039502	Silicone Grease G-501	1	C (General)
2	A2579300	Grease Barrierta – S552R	1	C (General)

Cover Removal Order

Cover Layouts

Front



No.	Name
1	Operation Panel
2	Scanner Front Cover
3	Upper Front Cover
4	Front Cover
5	1st Paper Feed Tray
6	2nd Paper Feed Tray
7	Paper Exit Tray
8	Inner Cover
9	Laser Unit Cover
10	Paper Exit Front Cover
11	Tray Support Rod Cover
12	Upper Inner Cover
13	Connector Cover

Right

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No.	Name
1	Scanner Right Cover
2	Right Upper Cover
3	Right Rear Cover
4	Right Cover
5	Bypass Tray

Left

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No.	Name
1	Left Upper Cover
2	Left Cover
3	Controller Cover
4	Left Rear Cover
5	Scanner Left Cover

Rear

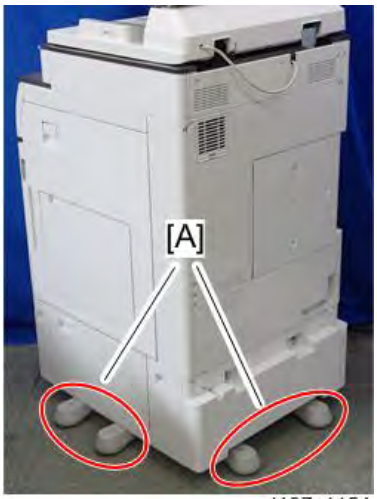
d284a4031

No.	Name
1	Scanner Upper Cover
2	Rear Cover
3	Rear Lower Cover
4	Rear Lower Gap Cover

Exterior Covers

Precautions concerning Stabilizers

The stabilizers [A] are necessary for meeting the requirements of IEC60950-1, the international standard for safety.



d197z1154

The aim of these components is to prevent the products, which are heavy, from toppling as a result of people running into or leaning onto the products, which can lead to serious accidents such as persons becoming trapped under the product. (U.S.: UL60950-1, Europe: EN60950-1)

Front Cover

1. Open the front cover [A].

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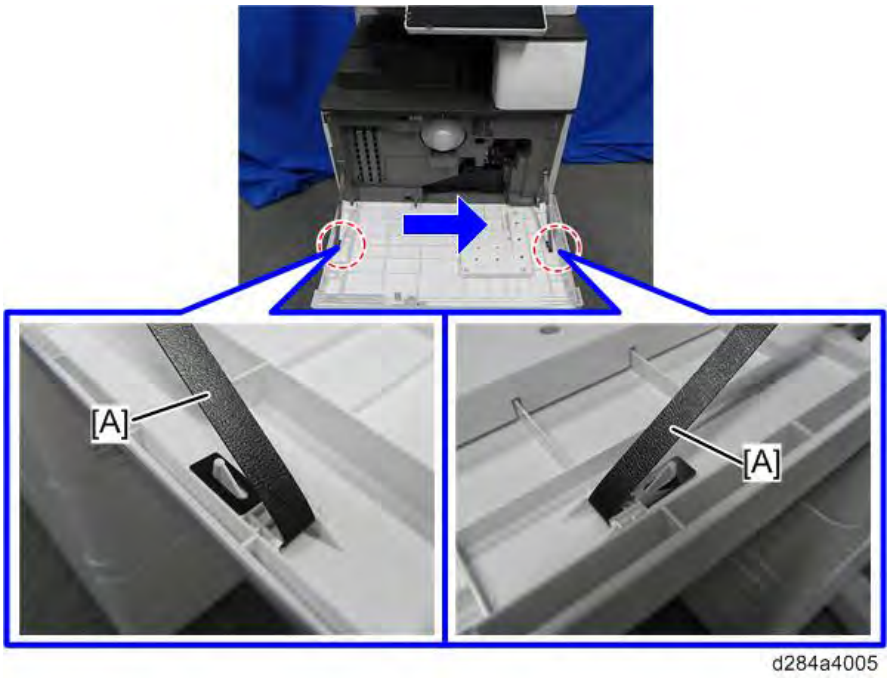
2. Remove the belt [A], and the front cover.

Note

- The front cover can be removed by sliding it in the direction of the blue arrow.



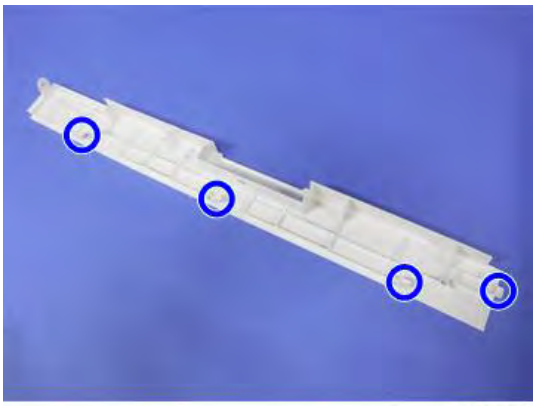
Controller Cover

1. Remove the controller cover [A].

Left Upper Cover

⚠CAUTION

- Each part enclosed by a blue circle has a tab. Be careful not to damage it when attaching and detaching.

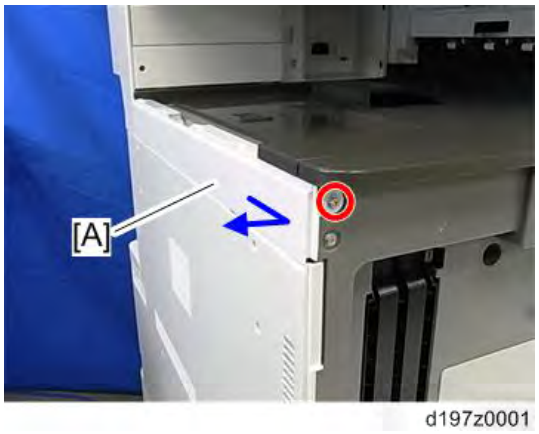


d1462009

1. Open the front cover. (Front Cover)
2. Remove the paper exit tray. (Paper Exit Tray)
3. Remove the left upper cover [A]. (×1)

Note

- Slide the cover in the direction of the blue arrow.

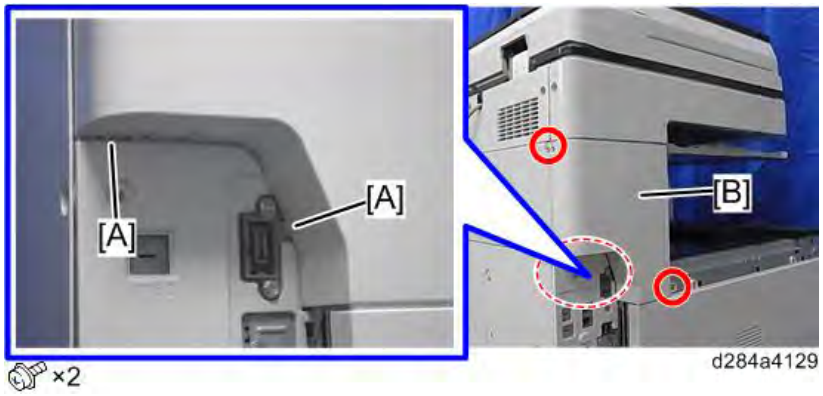


d197z0001

Left Rear Cover

1. Remove the left upper cover. (Left Upper Cover)

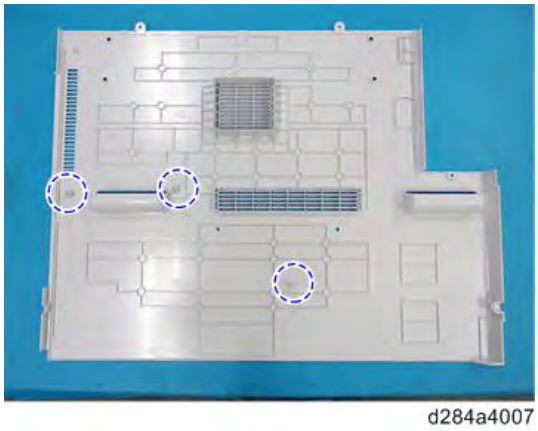
2. Release the hooks [A], and remove the left rear cover [B].



Left Cover

Note

- Each part enclosed by a blue circle has a tab. Be careful not to damage it when attaching and detaching.



1. Remove the left upper cover. (Left Upper Cover)
2. Remove the controller cover. (Controller Cover)
3. Remove the rear lower gap cover. (Rear Lower Gap Cover)
4. Pull out the 1st and 2nd paper feed trays.

5. Remove the left cover [A].

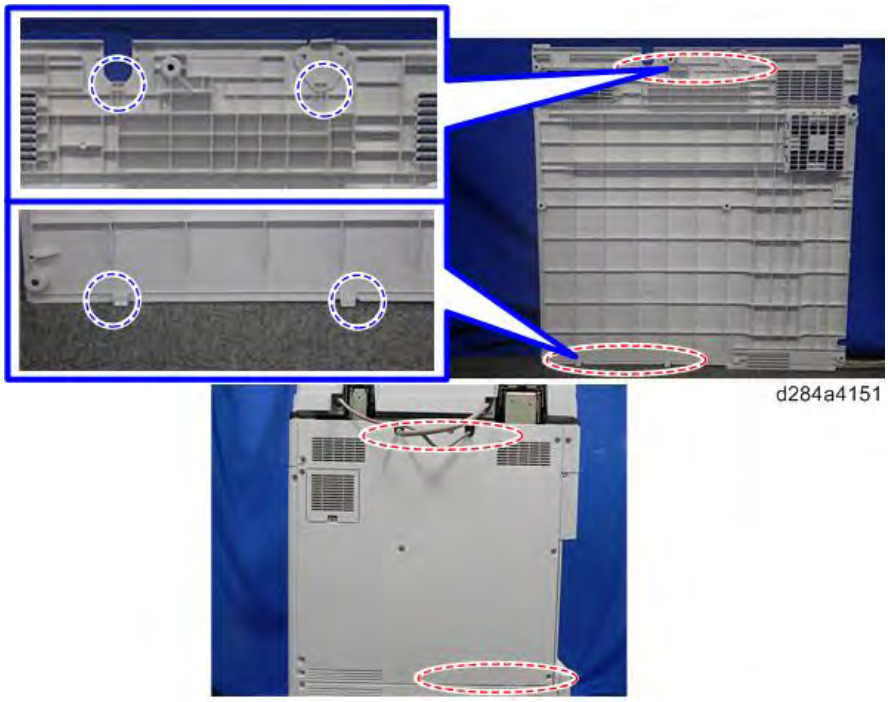
Order to remove

1. Front cover
2. Paper exit tray
3. Left upper cover
4. Controller cover
5. Rear lower gap cover
6. 1st paper feed tray
7. 2nd paper feed tray
8. Left cover

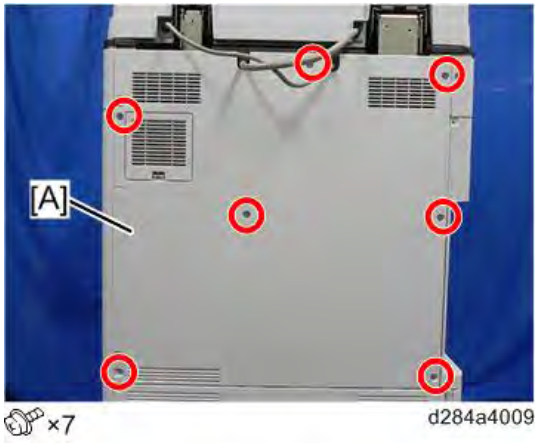
Rear Cover

Note

Each part enclosed by a blue circle has a tab. Be careful not to damage it when attaching and detaching.

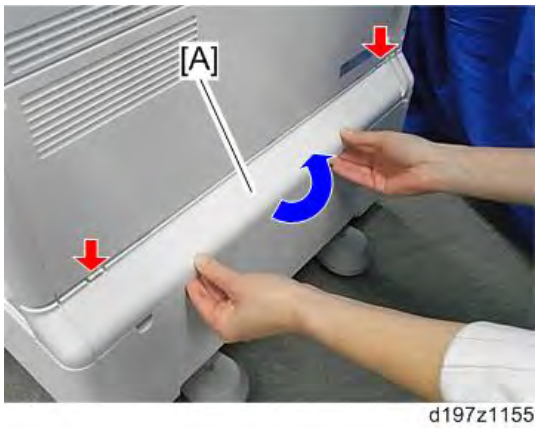


1. Remove the rear cover [A].



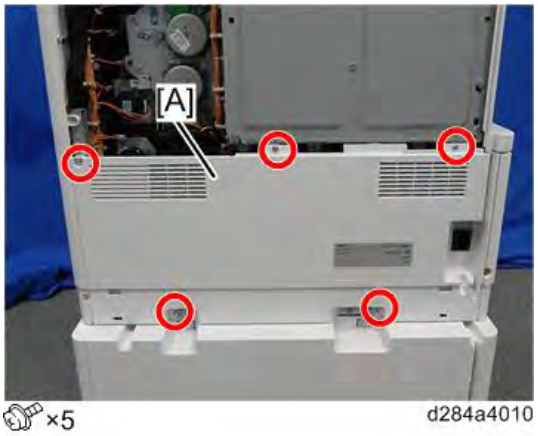
Rear Lower Gap Cover

1. Remove the rear lower gap cover [A]. (hook×2)



Rear Lower Cover

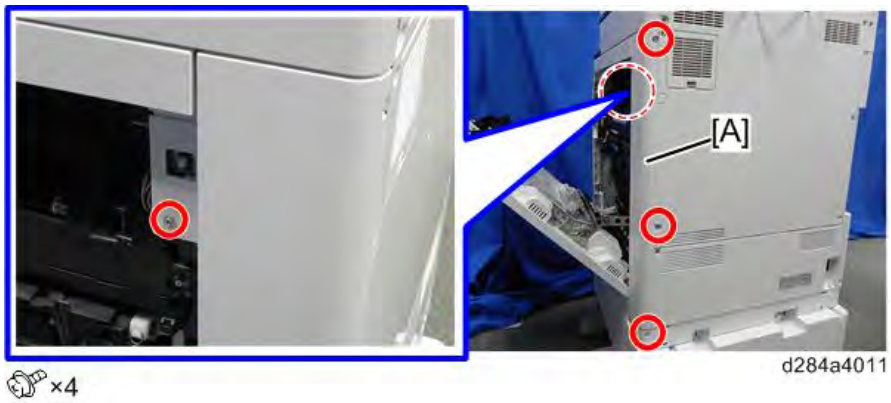
1. Remove the rear cover. (Rear Cover)
2. Remove the rear lower gap cover. (Rear Lower Gap Cover)
3. Remove the rear lower cover [A].



Right Rear Cover

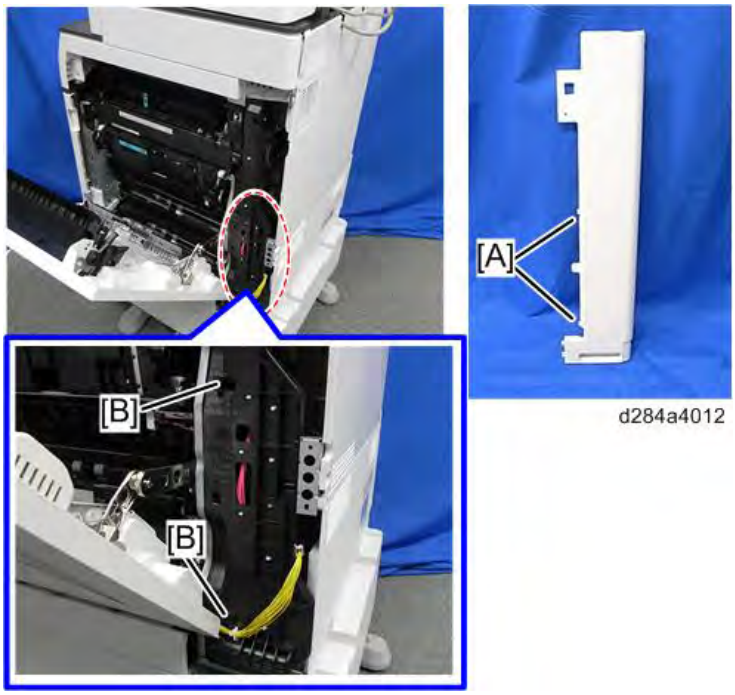
1. Open the right cover.
2. Remove the rear lower gap cover. (Rear Lower Gap Cover)

3. Remove the right rear cover [A].



Note

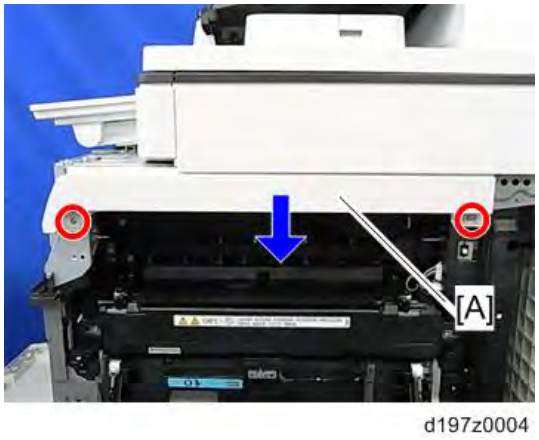
- When installing, insert the projections [A] in the holes [B], taking care not to trap the harness.



Right Upper Cover

1. Remove the upper front cover. (Upper Front Cover)

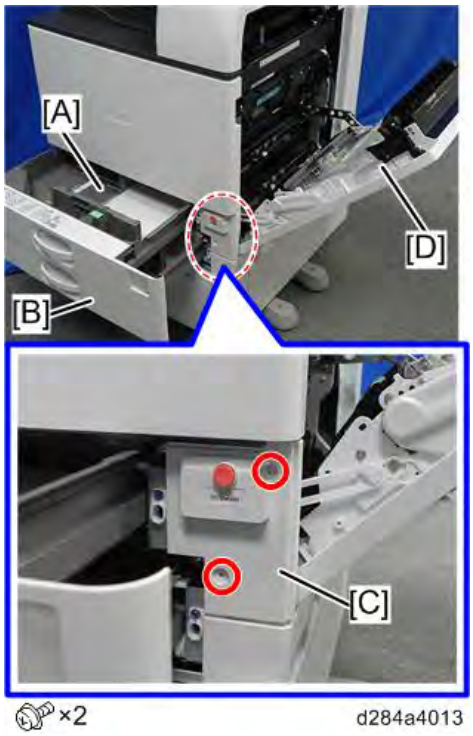
2. Remove the right upper cover [A] (×2)



Right Cover

1. Open the 1st paper feed tray [A], 2nd paper feed tray [B], and right cover [D].

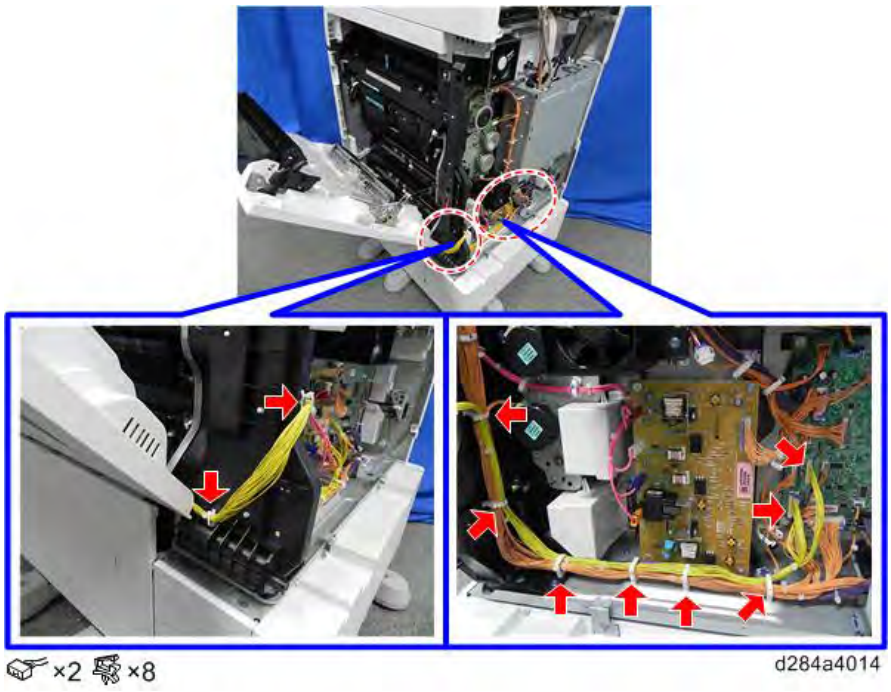
2. Remove the 1st paper feed tray right cover [C].



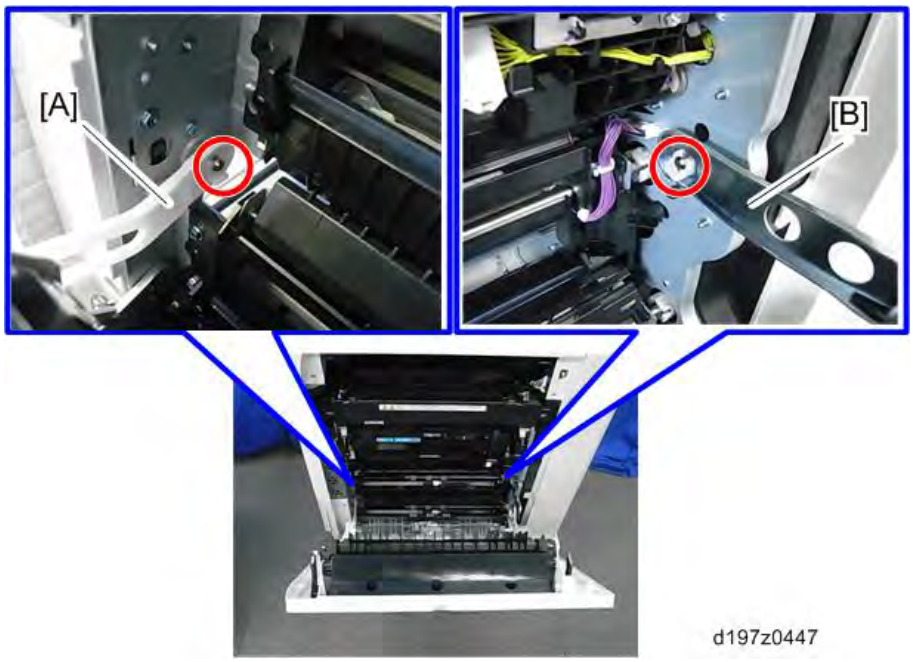
3. Remove the right rear cover. (Right Rear Cover)

4. Remove the rear cover. (Rear Cover)

5. Remove clamps and connectors.



6. Release the right cover arms [A] [B]. (×2)



7. Slide to the left and remove the right cover [A]. (×1)

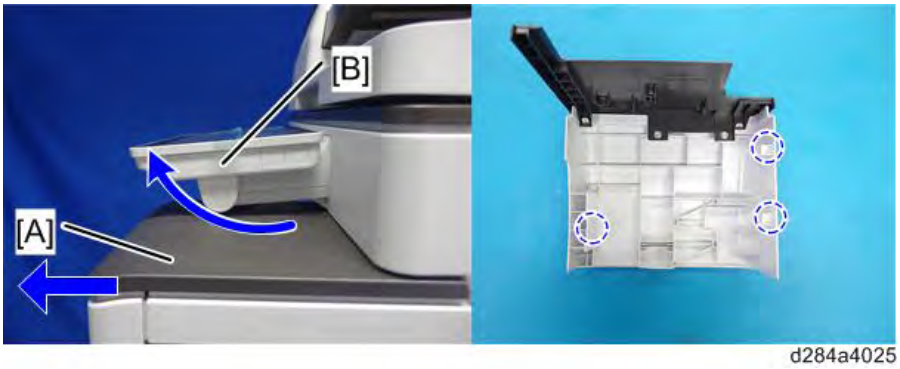
Upper Front Cover

1. Open the right cover.

2. Remove the upper front cover [A].

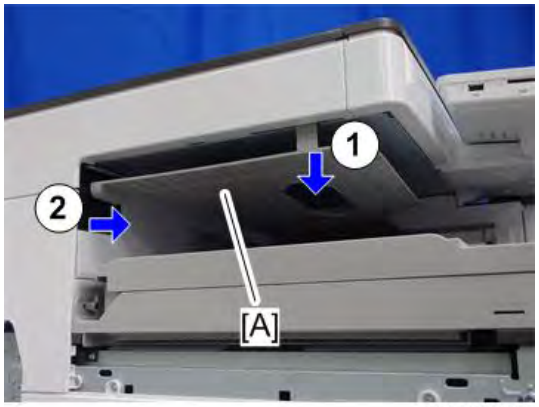
Note

- When removing the upper front cover, release the hooks at the back of the cover.
- Tilt the operation panel [B] upward to a horizontal position, and then remove the upper front cover [A].



Inverter Tray

1. Remove the inverter tray [A].



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Paper Exit Tray

1. Remove the paper exit tray [A].

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Paper Exit Cover

1. Remove the upper front cover. (Upper Front Cover)

2. Remove the paper exit tray. (Paper Exit Tray)

3. Remove the inverter tray. (Inverter Tray)

4. Remove the paper exit cover [A]. (×1)

d197f0104

Paper Exit Lower Cover

1. Remove the left rear cover. (Left Rear Cover)
2. Remove the paper exit cover. (Paper Exit Cover)
3. Remove the connector cover [A].

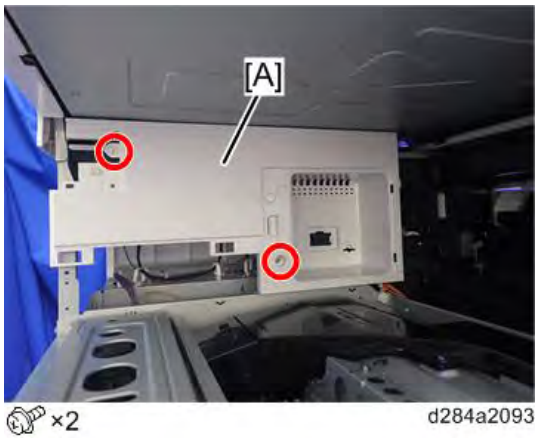
4. Remove the paper exit lower cover [A].

Upper Inner Cover

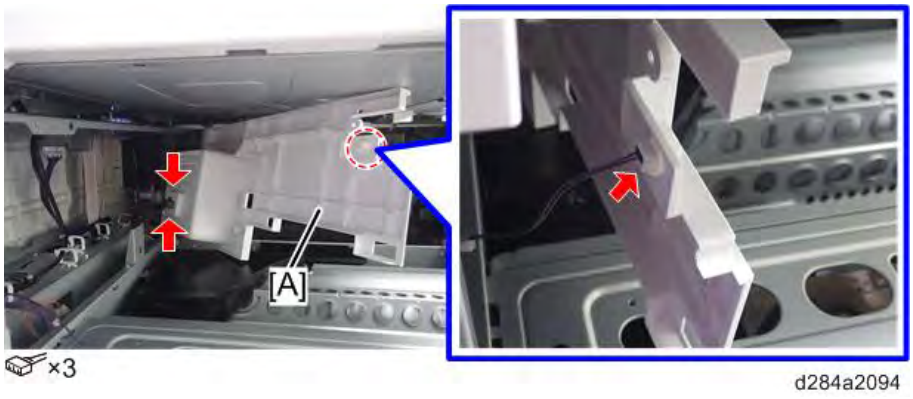
1. Remove the left upper cover. (Left Upper Cover)
2. Remove the paper exit cover. (Paper Exit Cover)
3. Remove the paper exit lower cover. (Paper Exit Lower Cover)

4. Remove the tray support rod cover [A]. (×1)

5. Remove the fixing screws on the upper inner cover [A].



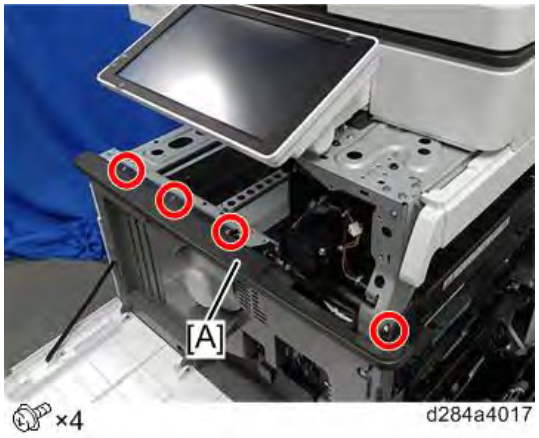
6. Remove the upper inner cover [A].



Paper Exit Front Cover

1. Remove the paper exit lower cover. (Paper Exit Lower Cover)

2. Remove the paper exit front cover [A].

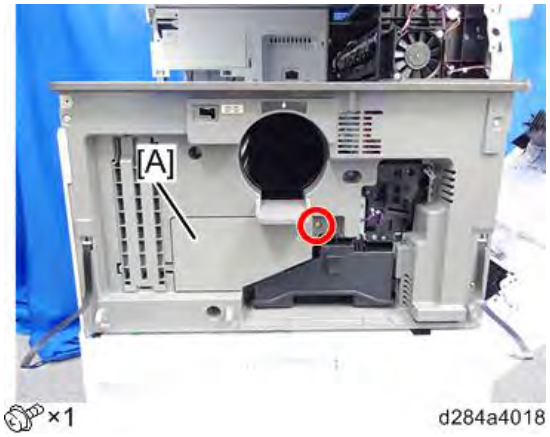


Inner Cover

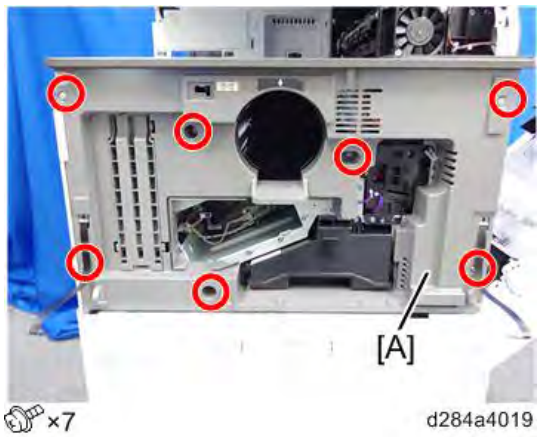
1. Remove the front cover. (Front Cover)

2. Open the right cover.

3. Remove the laser unit cover [A].



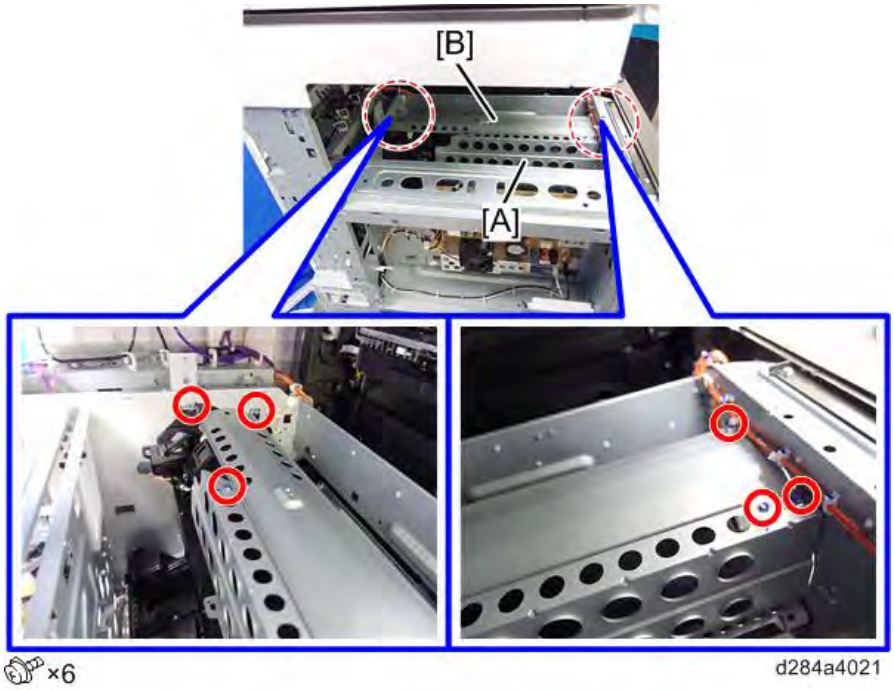
4. Remove the inner cover [A].



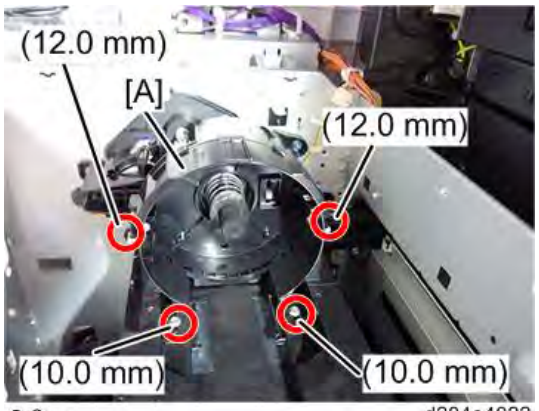
Toner Supply Housing

1. Pull out the toner bottle.
2. Remove the paper exit lower cover. (Paper Exit Lower Cover)
3. Remove the upper inner cover. (Upper Inner Cover)
4. Remove the development exhaust fan. (Development Exhaust Fan)
5. Remove the duct [A].

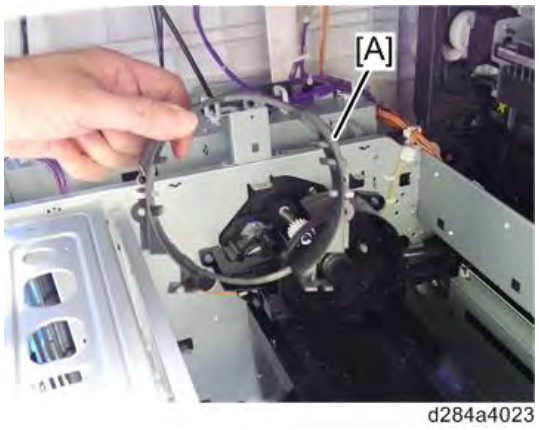
6. Remove the brackets [A] and [B].



7. Remove the screws on the toner supply housing [A].



8. Remove the toner supply housing [A].

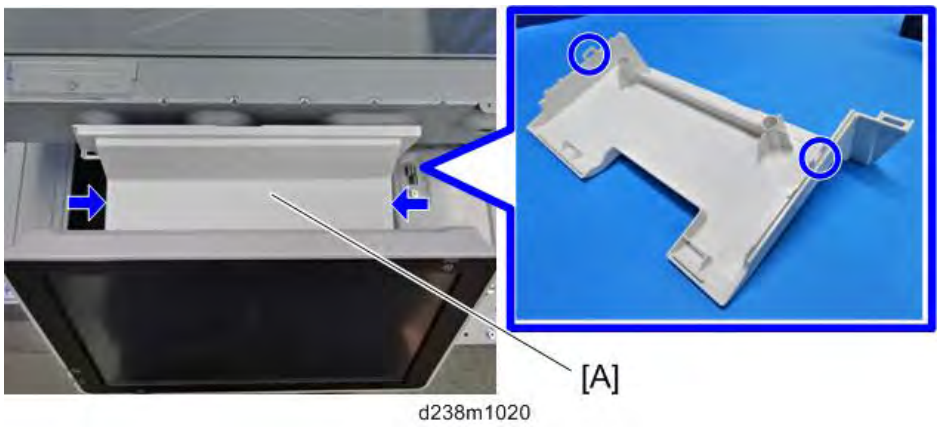


Smart Operation Panel

This section explains how to remove the Smart Operation Panel from the machine. For details about disassembling the Smart Operation Panel, See the service manual for Smart Operation Panel 2nd Generation.

Operation Panel Unit

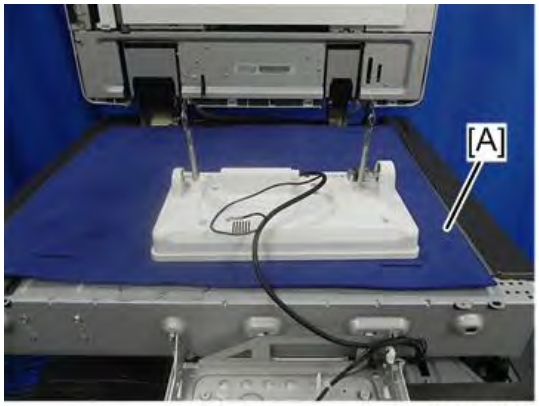
1. Remove the scanner front cover. (Scanner Front Cover)
2. Holding down both the sides of the operation panel upper cover [A], unhook the tabs (indicated by blue circles) and remove the cover.



3. Remove the operation panel [A].

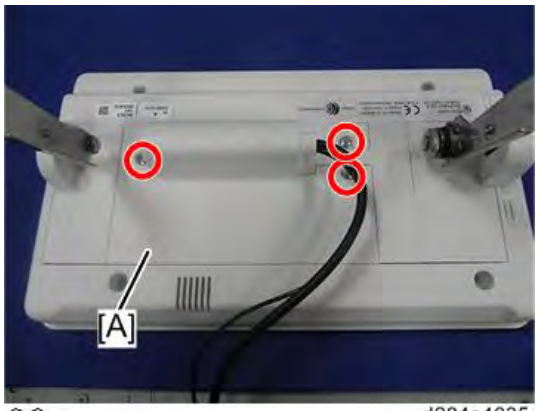
4. Open the platen cover or ADF.
5. Spread a cloth or service mat [A] on the exposure glass to protect the display. Place the operation panel on

the exposure glass so that the display faces down.



d284a4034

6. Remove the rear center cover [A].

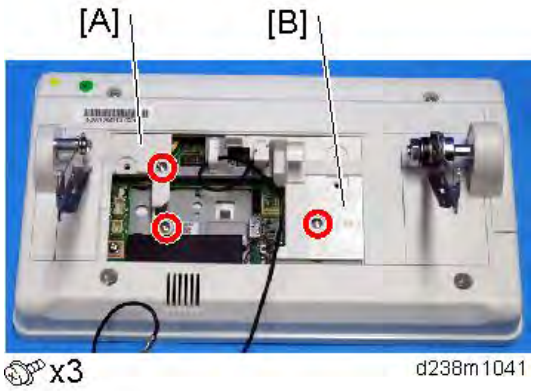


×3 d284a4035

7. Disconnect the connectors.

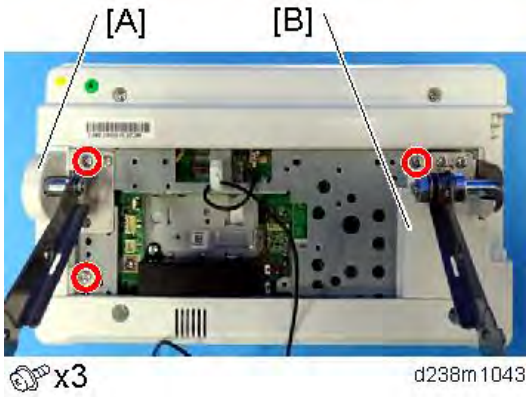
×2 d284a4036

8. Remove the left small cover [A] and right small cover [B].



9. Release the hooks, and remove the right hinge cover [A]. (Hook x 2)

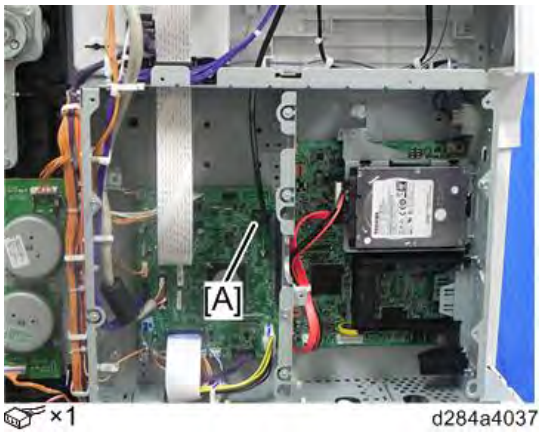
10. Remove the left hinge cover [A] and right cover [B].



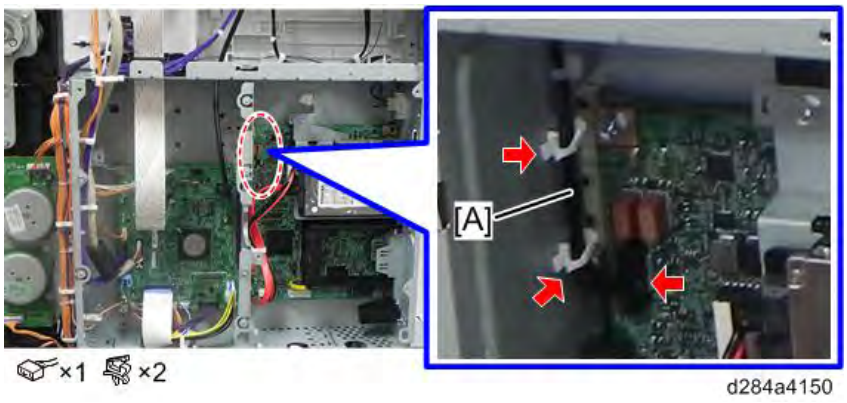
11. Remove the hinges [A] [B].

USB Cable / Harness

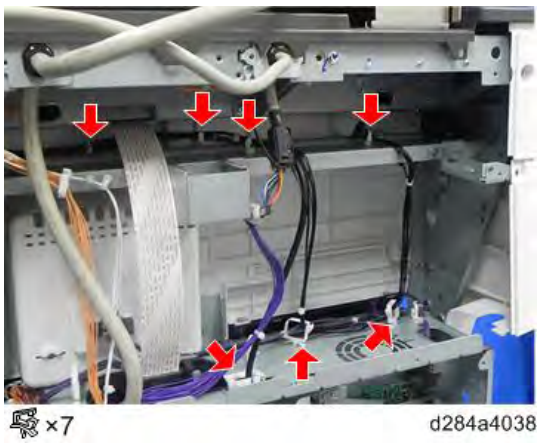
1. Remove the rear cover. (Rear Cover)
2. Remove the scanner upper cover. (Scanner Upper Cover)
3. Remove the controller box cover. (Controller Box Cover)
4. Disconnect the USB cable [A].



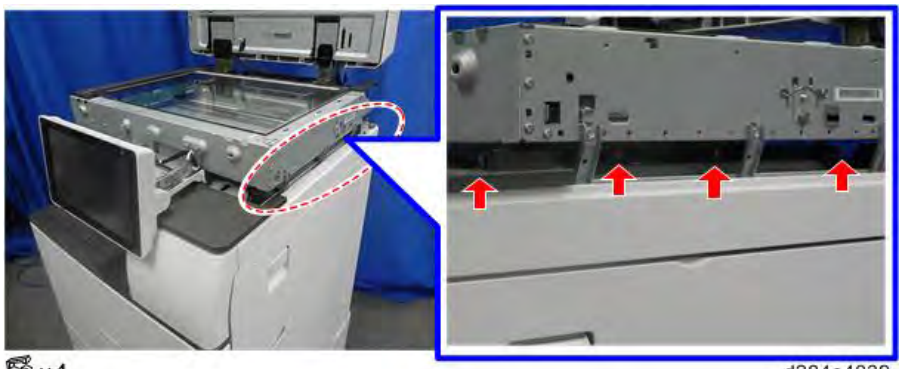
5. Remove the harness [A].



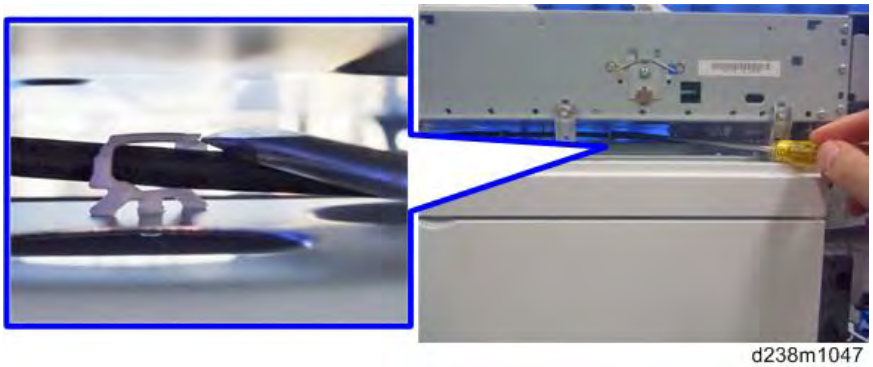
6. Remove the clamps on the cables above the controller box.



7. Remove the clamps on the cables under the scanner unit.

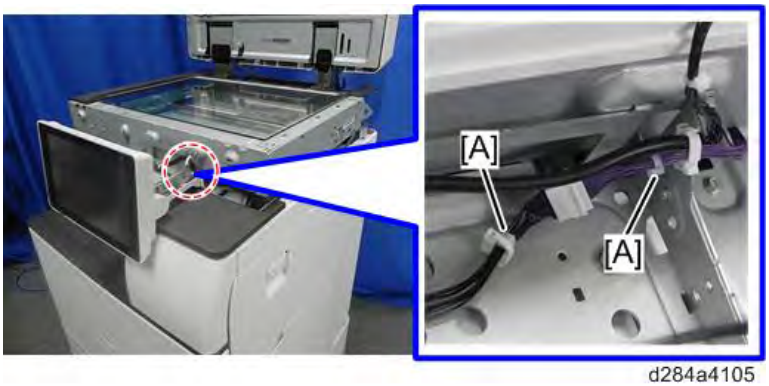


When removing a clamp, insert a long flathead screwdriver or such a tool from the side to remove it.



Important

- The cable has a set of 2 cable ties [A]. When attaching the cable, position the clamp outside the two cable ties.

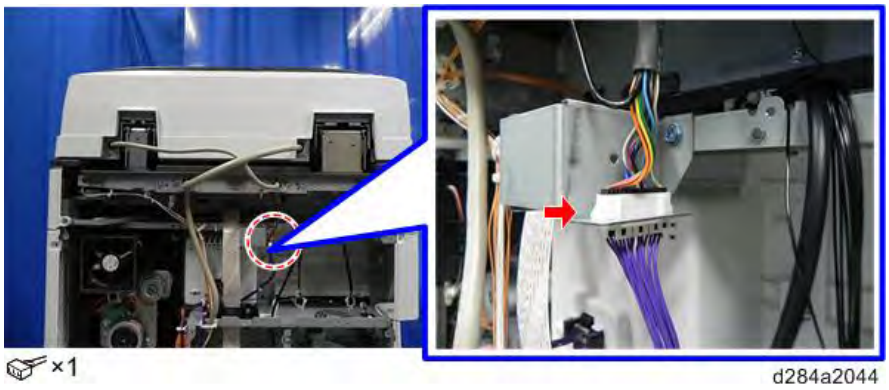


ADF

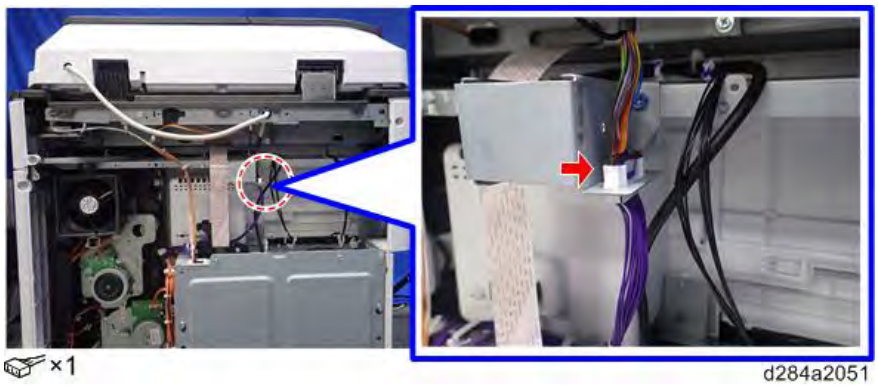
ADF Removal

1. Remove the rear cover.
2. Remove the controller box cover (for SPDF DF3100 only)(Controller Box Cover).
3. Remove the connector.

SPDF DF3100

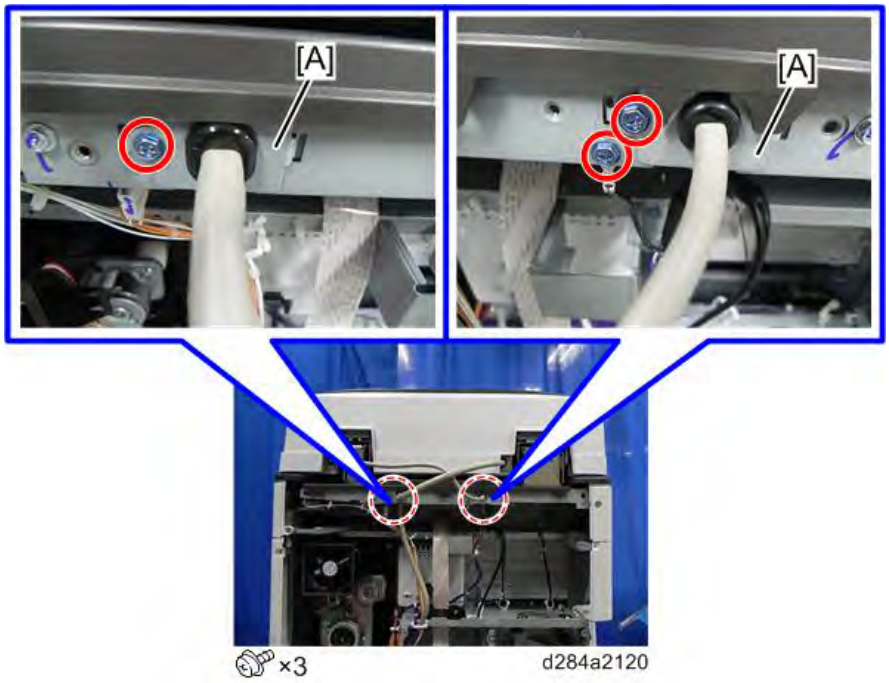


ARDF DF3090

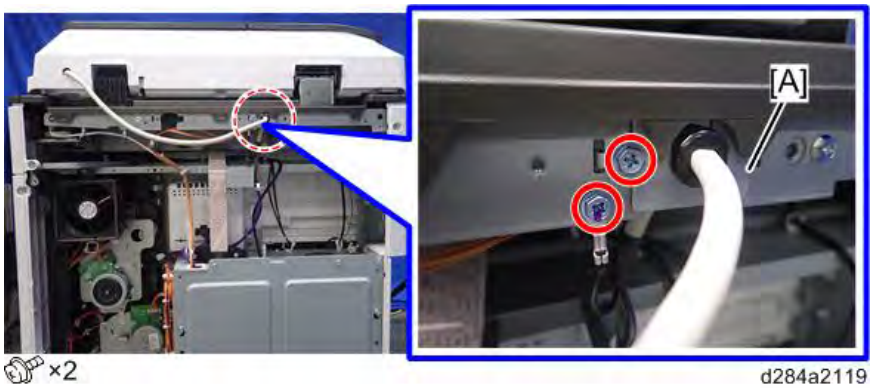


4. Remove the bracket [A].

SPDF DF3100

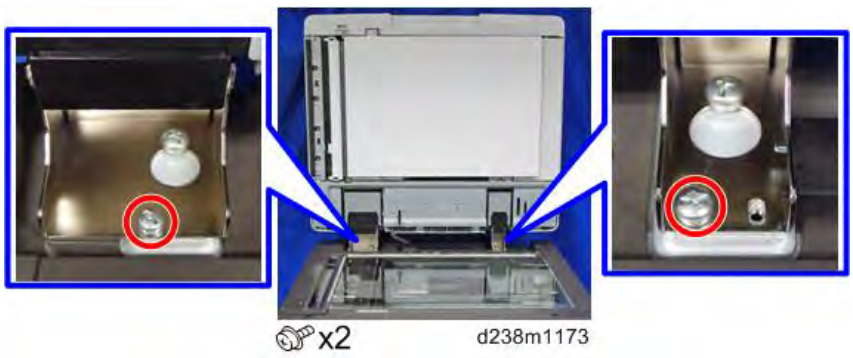


ARDF DF3090



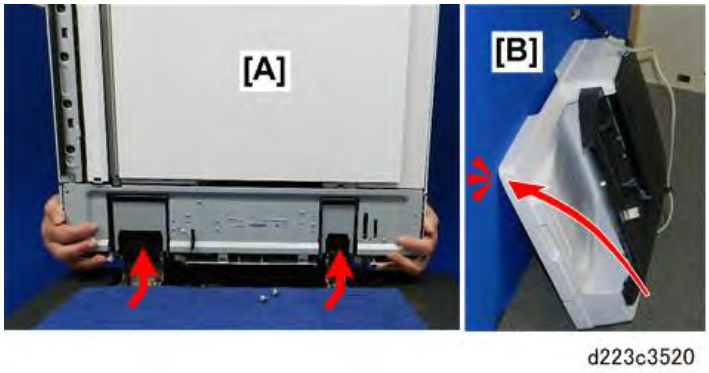
5. Remove the screws on the ADF base.

SPDF DF3100



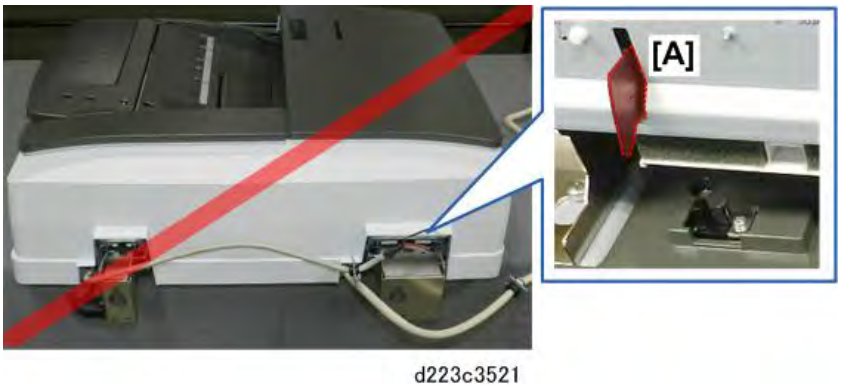
ARDF DF3090

6. Slowly and carefully (the ADF is heavy) lift the ADF [A] off the machine.
7. Set the ADF on its edge on the floor, and then lean it against a wall [B].



Important

- To prevent damage to the fragile feelers [A] of the ADF position sensor, never lay the ADF on a flat surface as shown below.



- If the SPDF DF3100 is being replaced, do SP4-730-002 after the new SPDF has been installed.

SP descriptions

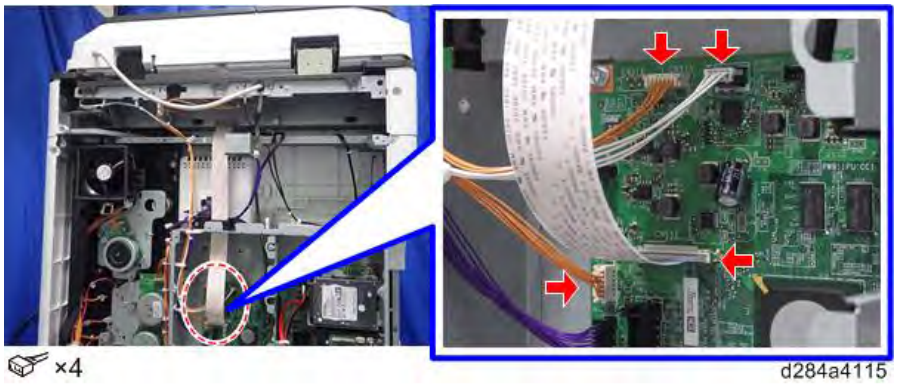
- **SP4-730-002 (FROM Main Factory Setting Execution ON/OFF)**
  Copies the parameters written in FROM in the SPDF to the engine board in the MFP. This SP is only for the SPDF models.

SPDF DF3100

Scanner Unit

Before You Begin

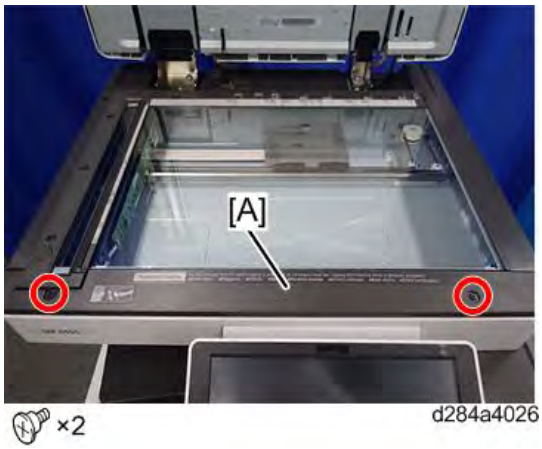
There is no SIO (Scanner Interface Board) in this machine. The functions of the SIO of the previous machine are controlled by the IPU. Harnesses of the scanner unit connect directly to the IPU in the controller box on the back of the machine.



Scanner Exterior

Scanner Front Cover

1. Open the ARDF or platen cover.
2. Remove the scanner front cover [A].



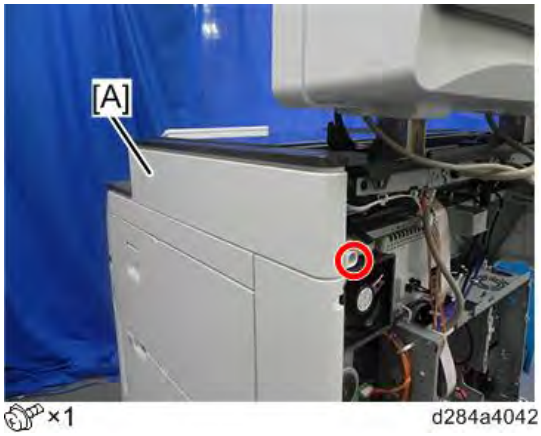
Note

- There are a tab and bosses inside the cover. Be careful not to damage them when attaching and

detaching.

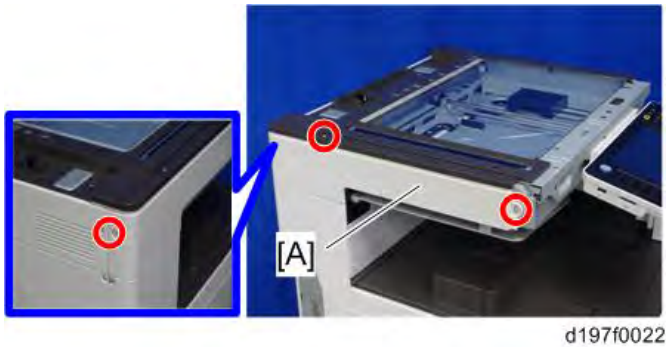
Scanner Right Cover

1. Remove the rear cover. (Rear Cover)
2. Remove the scanner right cover [A].



Scanner Left Cover

1. Remove the scanner front cover. (Scanner Front Cover)
2. Remove the scanner left cover [A]. (×3)



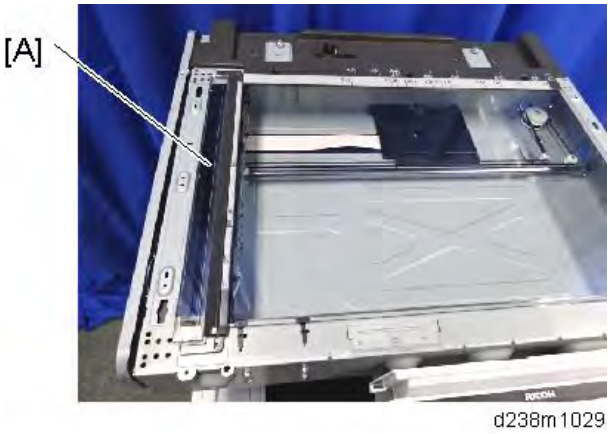
Scanner Upper Cover

1. Remove the rear cover. (Rear Cover)
2. Remove the scanner right cover. (Scanner Right Cover)
3. Remove the scanner left cover. (Scanner Left Cover)
4. Remove the platen cover or ADF.
5. Remove the scanner upper cover [A].

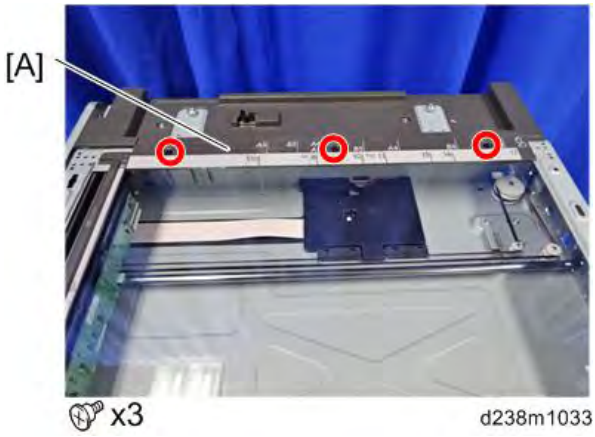
Exposure Glass

1. Open the platen cover or ADF.
2. Remove the scanner front cover. (Scanner Front Cover)
3. Remove the scanner right cover. (Scanner Right Cover)
4. Remove the guide scale [A].

5. Remove the ADF exposure glass [A]



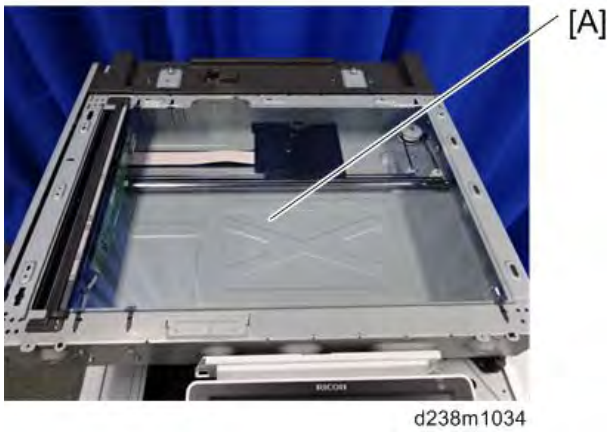
6. Remove the rear scale [A]



7. Remove the left scale and exposure glass [A].

⚠CAUTION

- The exposure glass and the left scale are attached with double-sided tape.

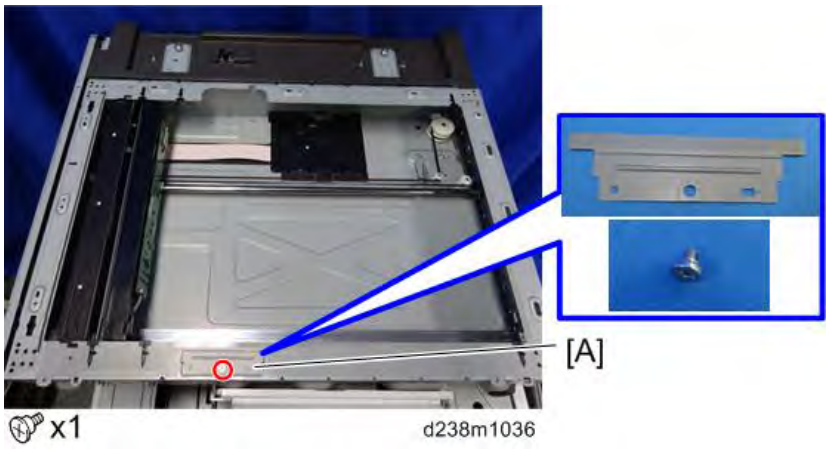


Note

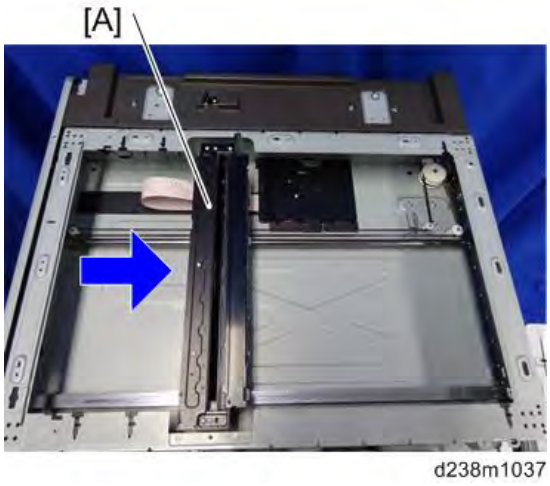
- When installing, please follow the points below:
  - The red mark [A] of the ADF exposure glass must be on the left at the rear of the operation panel.
  - The locating holes of the left scale must fit over the locating bosses of the front/rear frame.

Scanner Carriage

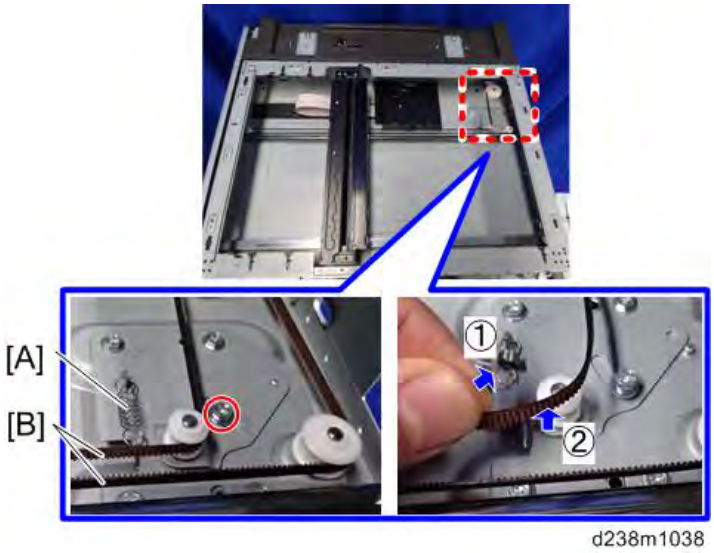
1. Remove the exposure glass. (Exposure Glass)
2. Remove the scanner front cover. (Scanner Front Cover)
3. Remove the scanner carriage front cover [A].



4. Move the scanner carriage [A] to the indicated position as shown below.



5. Loosen the screw, remove the spring [A], and then remove the belt [B].



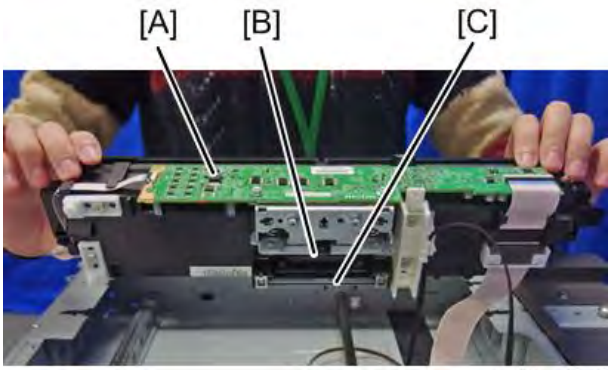
d238m1038

6. Turn the scanner carriage over to the other side and place it on the frame [A].

d238m1039

Important

- When holding the scanner carriage, be careful not to touch the circuit board [A], lens [B], and mirror [C].

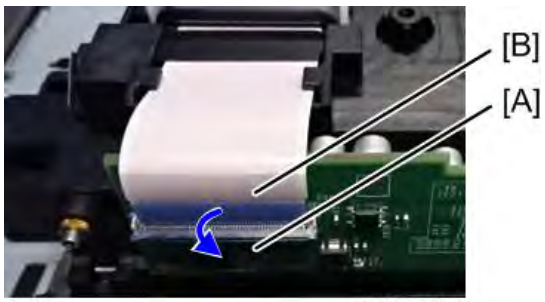


d238m1061

7. Remove the belt [A].

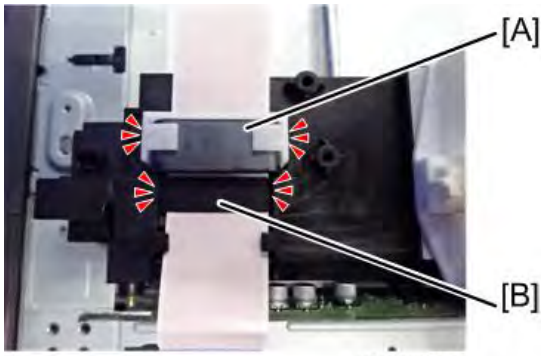
d238m1050

8. Lower the lock lever [A] and disconnect the FFC [B].



d238m1051

9. Remove the ferrite core [A] and the mylar [B]. (Hook x 4)



d238m1052

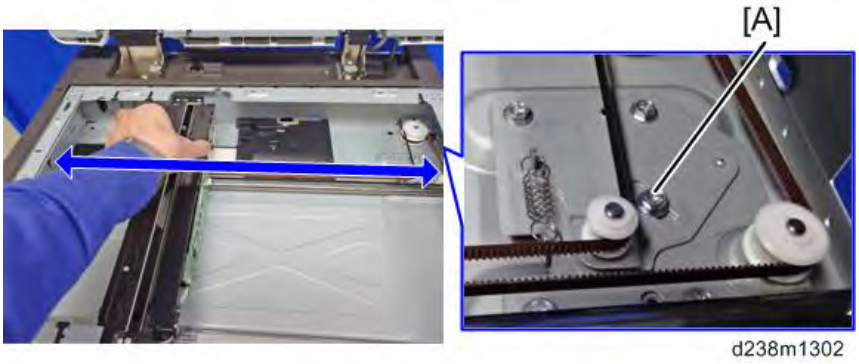
10. Remove the scanner carriage.

d238m1053

Important

- When attaching the scanner carriage, hold the carriage with the screw [A] loosened, and move the carriage back and forth to the sides twice to have the belt stretch evenly. Then, fasten the screw

[A].



Important

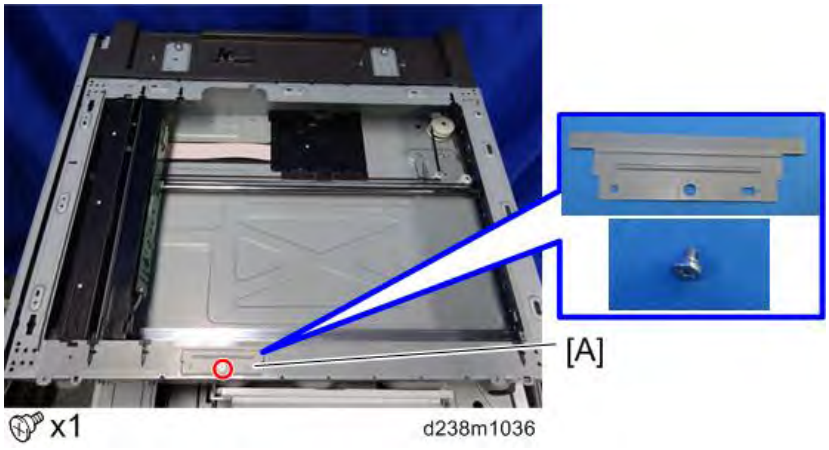
- After replacing the scanner carriage, enter the values supplied with the carriage in the following SPs:
  - SP4-871-002 (Distortion Correction Distortion Initialization)
  - SP4-880-001 (Dot shift amount between R Line and G Line).
  - SP4-880-002 (Dot shift amount between G Line and B Line).

  To apply the specified settings, turn the power off and then back on.

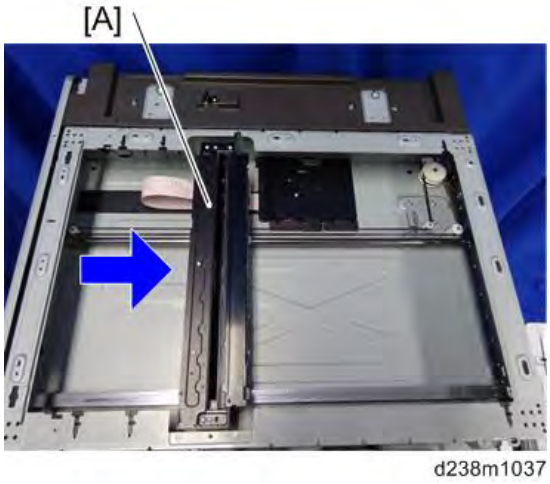
  The specified values are cleared when the NVRAM is initialized, so be sure to keep the supplied sheet showing the values in the machine.

Cleaning the scanner carriage mirror

1. Remove the exposure glass. (Exposure Glass)
2. Remove the scanner carriage front cover [A].

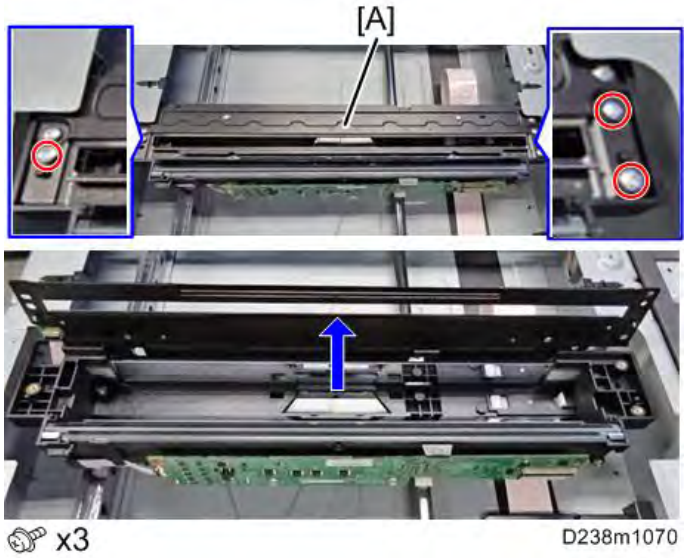


3. Move the scanner carriage [A] to the indicated position as shown.

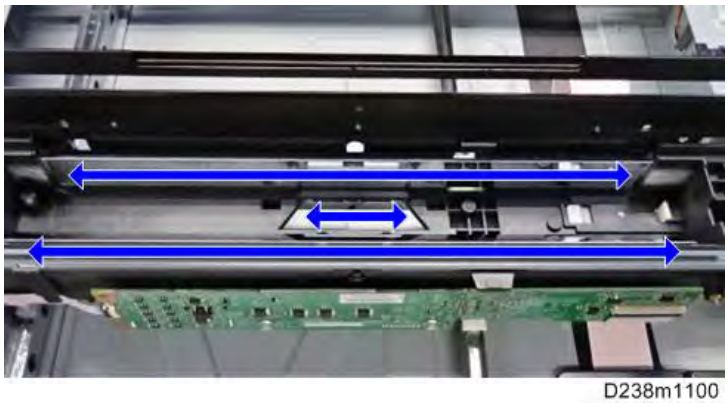


4. Remove the resin cover [A]. (Hook x 3)

5. Open the metal cover [A].



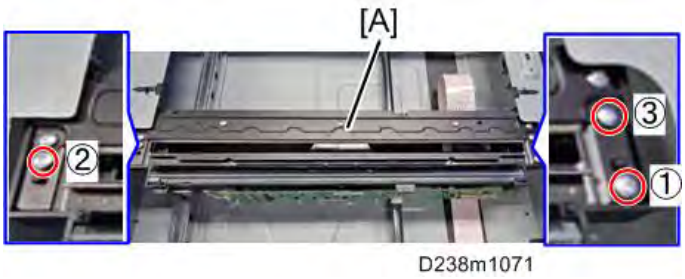
6. Wipe clean the mirror with a dry cloth.



D238m1100

Important

- When reattaching the metal cover [A], fasten the screws in the order of "1", "2", and "3".



D238m1071

Note

- When attaching the resin cover, insert its tip under the metal frame.

D238m1072

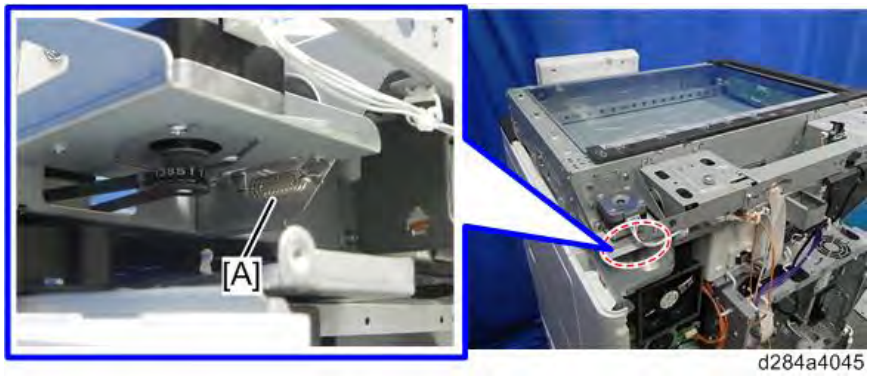
Scanner Motor

1. Remove the scanner upper cover. (Scanner Upper Cover)

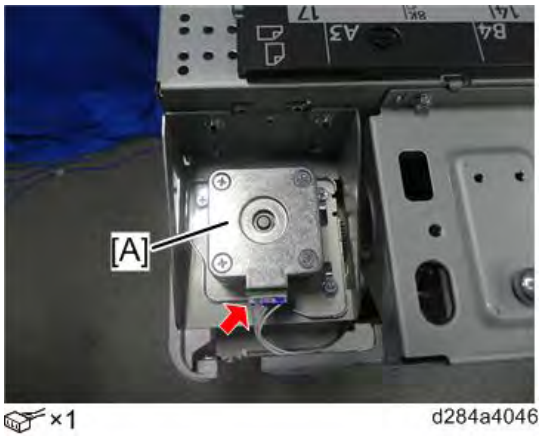
2. Remove the rear cover. (Rear Cover)

3. Remove the grounding plate [A].

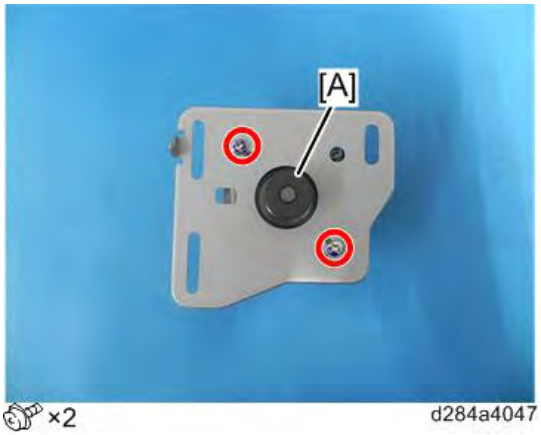
4. Remove the spring [A].



5. Remove the scanner motor unit [A].

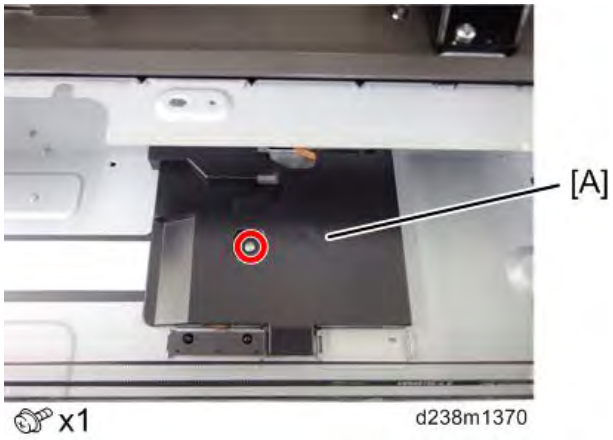


6. Remove the scanner motor [A].

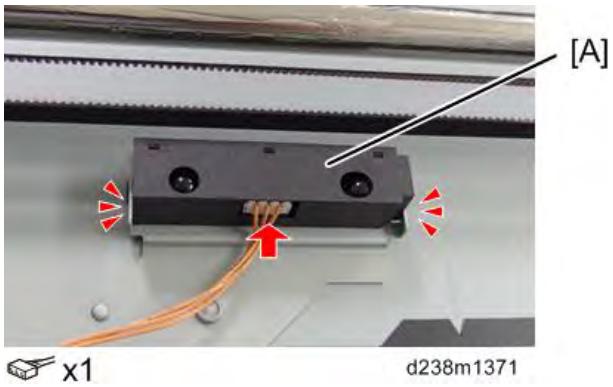


Original Size Sensors (APS)

1. Remove the exposure glass (Exposure Glass)
2. Remove the original size sensor harness cover [A].

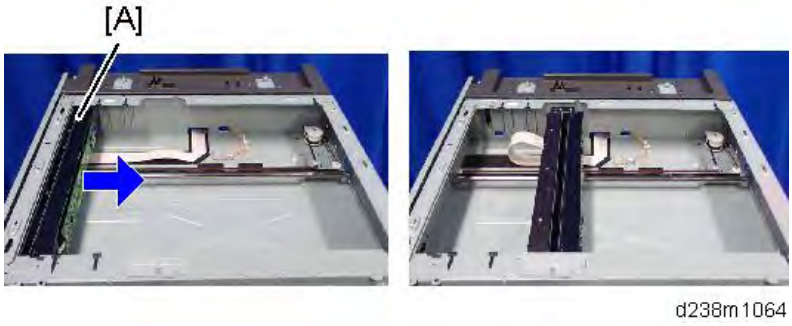


3. Remove the original size sensors [A]. (Hook x 2)

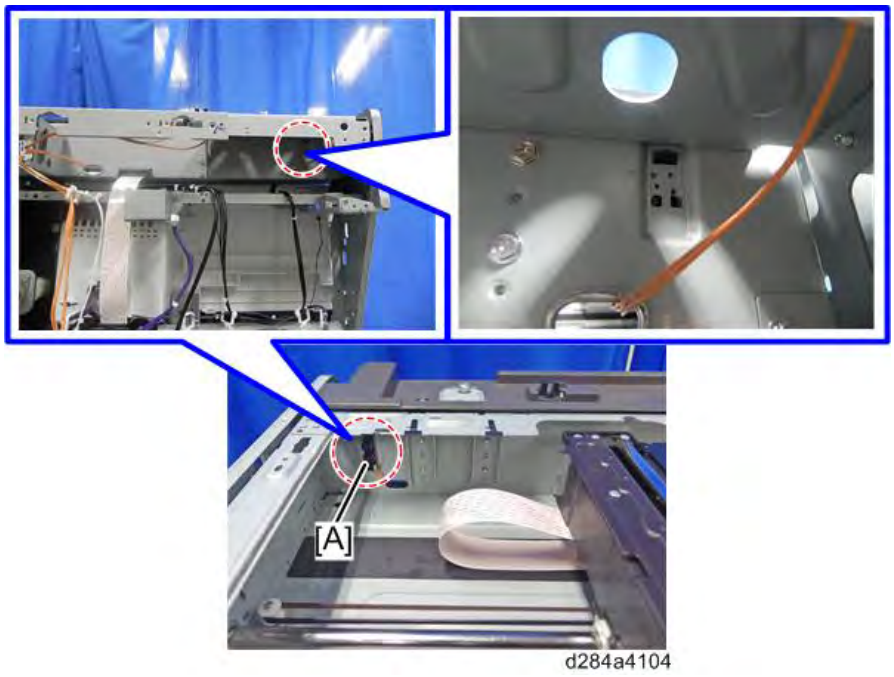


Scanner HP Sensor

1. Remove the ADF or platen cover.
2. Remove the exposure glass (Exposure Glass)
3. Slide the scanner carriage [A] in the direction of the arrow.



4. Remove the scanner HP sensor [A].



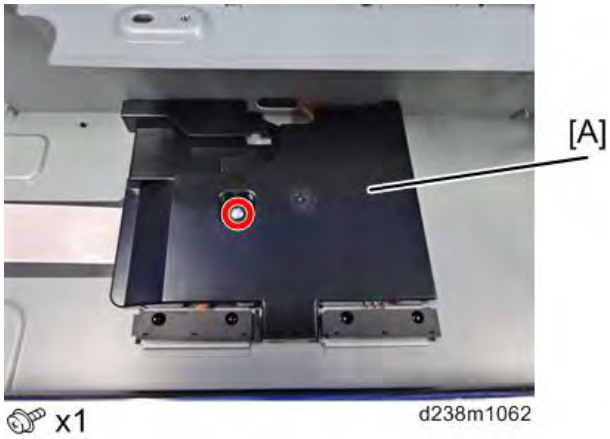
ARDF/Platen Cover Sensor

1. Remove the scanner upper cover. (Scanner Upper Cover)
2. Remove the ARDF/Platen cover sensor [A].

Scanner FFC

1. Remove the exposure glass. (Exposure Glass)
2. Remove the FFC from the scanner carriage. (Scanner Carriage)

3. Remove the original size sensor harness cover [A].



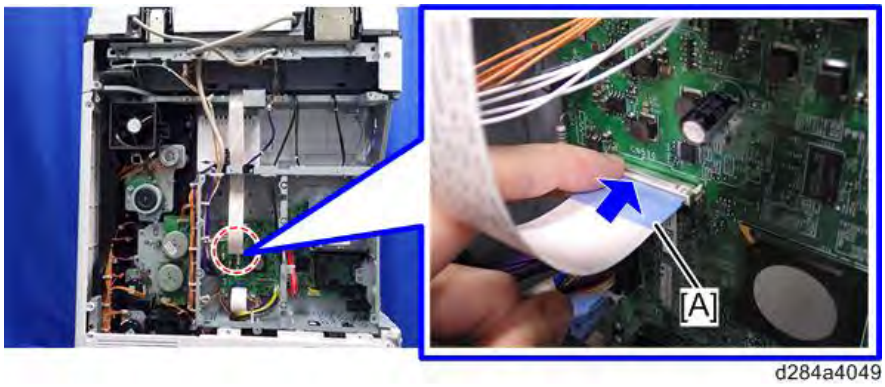
4. Remove the double-sided tape.

When reattaching the same part, apply a double-sided tape again.

5. Remove the rear cover. (Rear Cover)

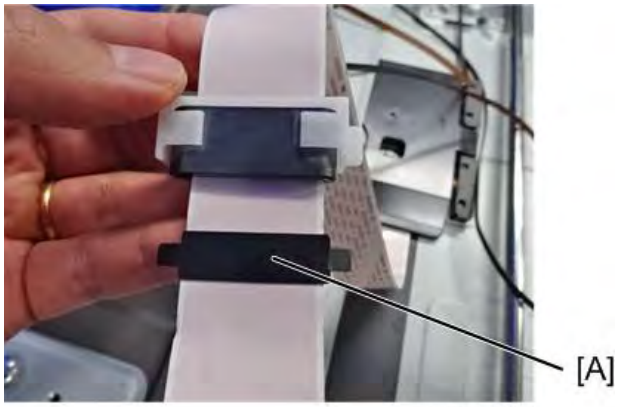
6. Remove the controller box cover. (Controller Box Cover)

7. While pressing the lock release lever, pull out the FFC [A].



When Changing the FFC

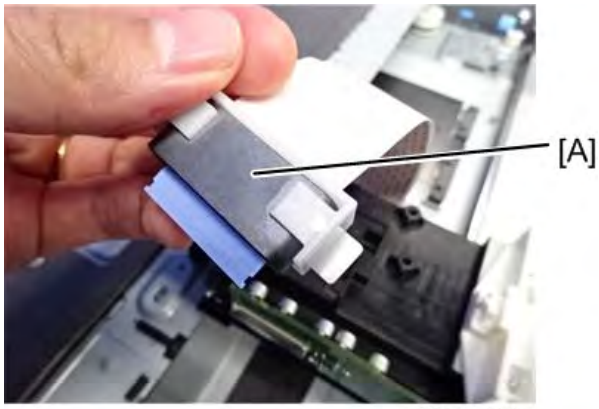
When changing the FFC, attach the Mylar [A] to the new FFC.



D238m1077

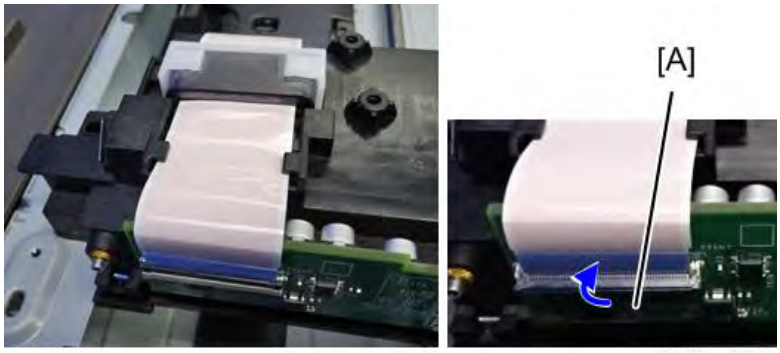
When attaching the Mylar, follow the steps below.

1. Feed the FFC through the ferrite core [A].



D238m1074

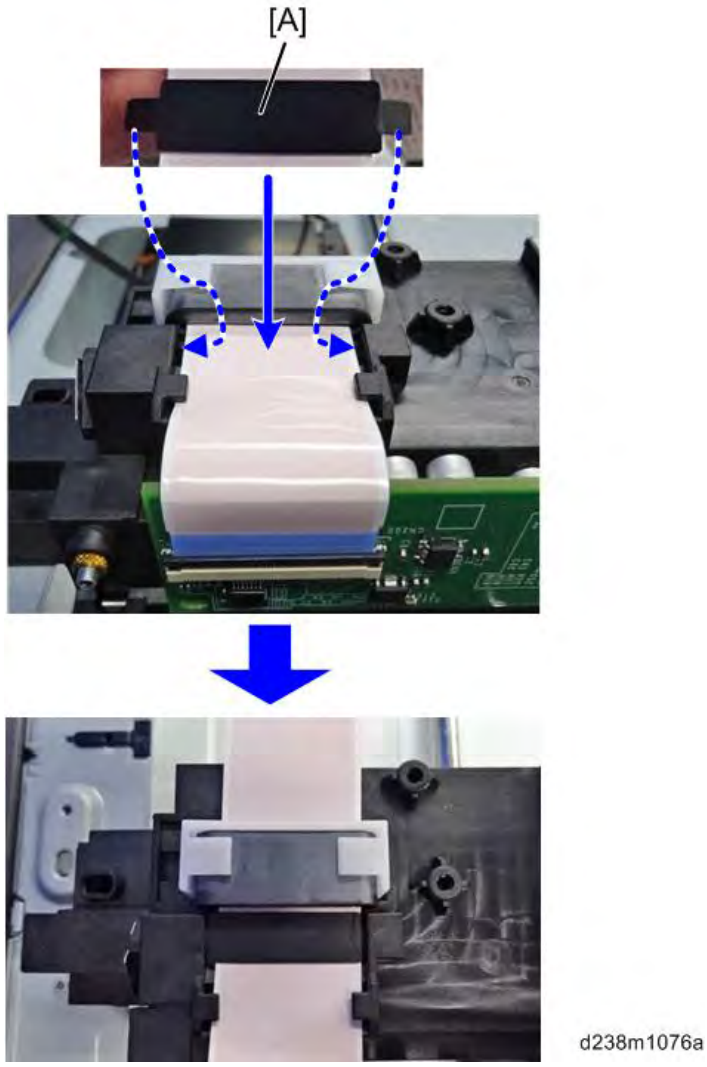
2. Connect the FFC to the scanner carriage's connector, and then lift the lever [A] to lock it.



D238m1075

3. Attach the Mylar [A] to the FFC from above, and then insert the tabs at both ends of the Mylar into the gaps

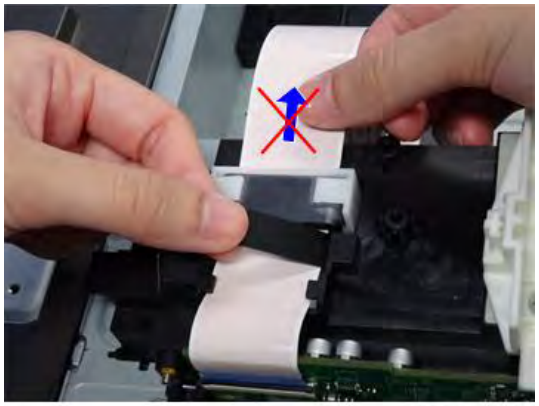
in the FFC holder to secure it in position.



d238m1076a

When applying the Mylar, do not stretch the FFC.

Applying the Mylar while stretching the FFC causes the circuit board to be deformed.



D238m1073

Modifying the Scanner (Contact/Contactless) when Using the ARDF

Procedure for the ADF

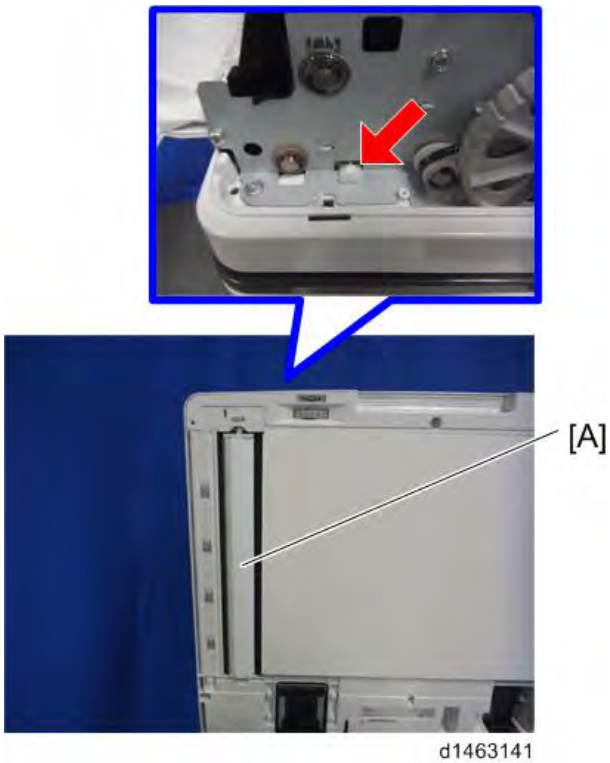
1. Remove the ADF front cover [A] (×1)

Note

- Remove with the document table lifted up.

d1463140

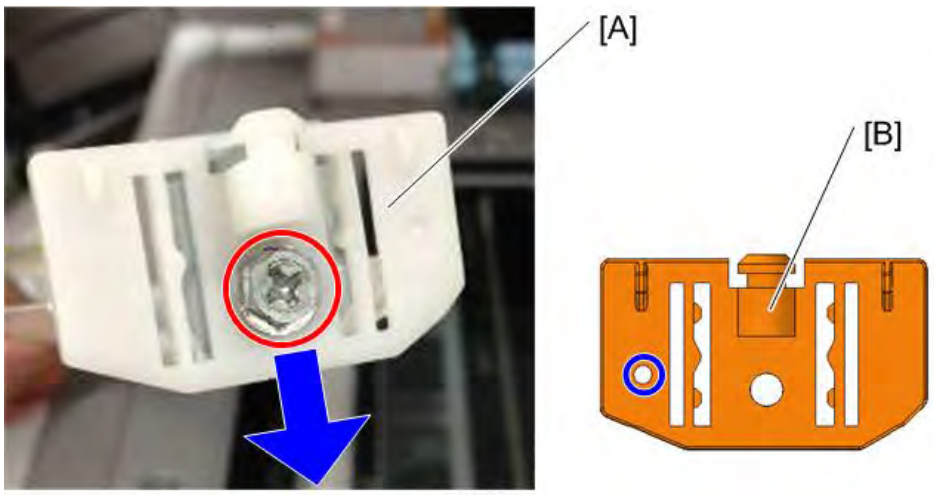
2. Remove the document reader guide plate [A]. (×1)



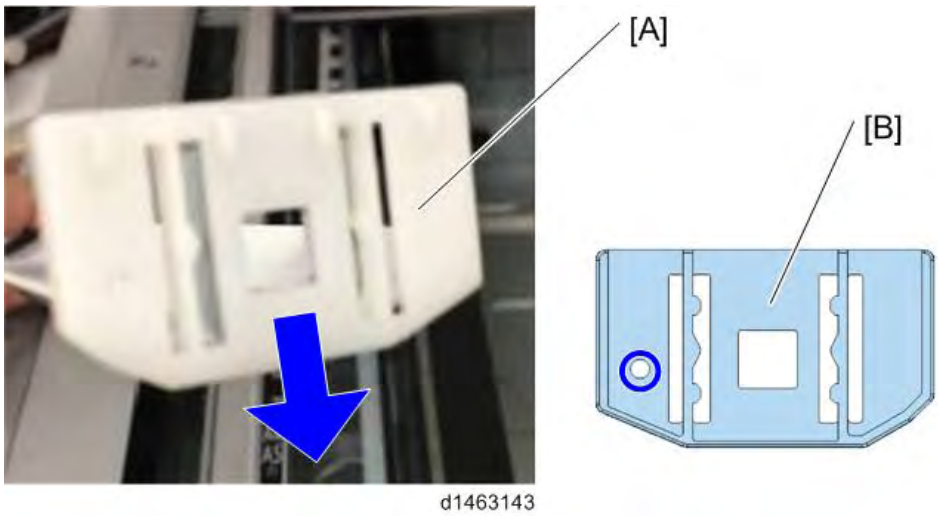
d1463141

3. Replace the contactless guide plate (front) [A] with the contact guide plate (front) [B]. (×1).

There is a hole in the contact guide plate (front).



4. Replace the contactless guide plate (rear) [A] with the contact guide plate (rear) [B].
There is a hole in the contact guide plate (rear).



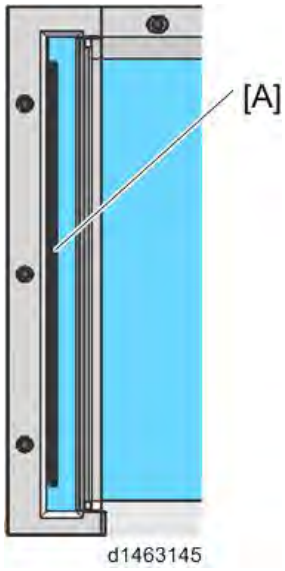
5. Attach the document reader guide plate. Be careful not to scratch the sheet [A].

6. Attach the ADF front cover, and return the ADF to its original position.

7. Enter SP mode, and then change the DF density setting (SP4-688-001) from [102%] to [97%].

Procedure for the Scanner

1. Remove the exposure glass, and peel off the black sheet [A].



2. Wipe the exposure glass with general alcohol glass cleaner so that no glue remains from the double-sided tape.

Note

- Remember that if any glue remains, it will cause a paper jam in the ADF.

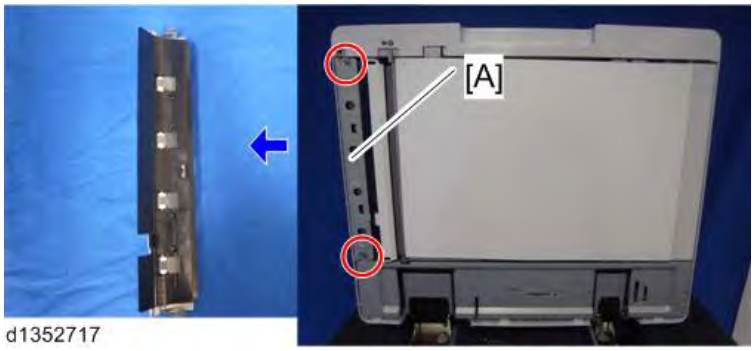
Modifying the Scanner (Contact/Contactless) when Using the SPDF

When changing from contactless to contact original feed, some parts of the ADF and scanner must be replaced.

Procedure for the SPDF

1. Open the SPDF.

2. Remove the lower entrance guide unit [A]. (×2)



Note

- The part below the contactless lower entrance guide unit is black [A].
- The part below the contact lower entrance guide unit is colorless and transparent [B].

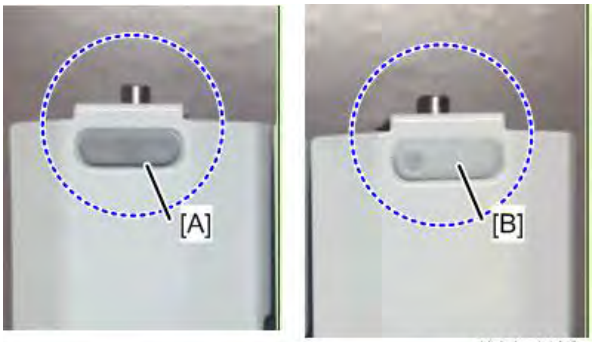
d1352723

3. Remove the document reader guide plate [A]. (×1)

d1352718

Note

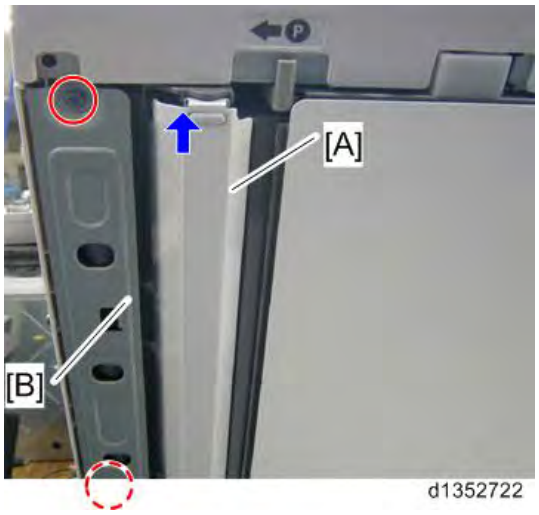
- The part below the contactless document reader guide plate is gray [A].
- The part below the contact document reader guide plate is white [B].



d284a4132

4. Attach the contact document reader guide plate [A].

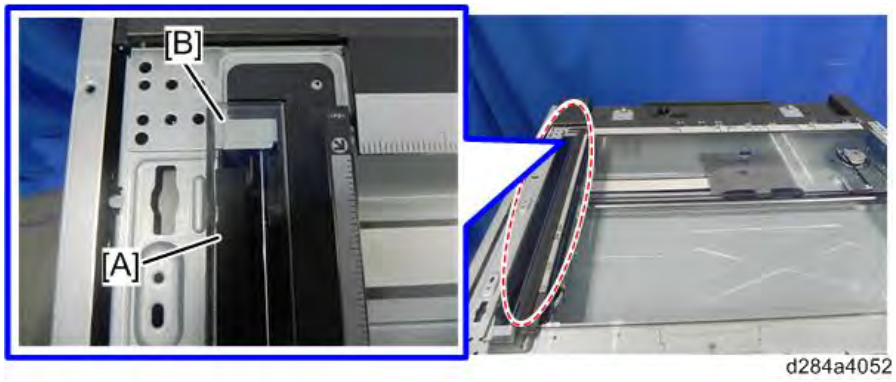
5. Attach the contact lower entrance guide unit [B]. (×2)



6. Enter SP mode, and then change the Scan Image Density Adjustment (SP4-688-002) from [103] to [96].

Procedure for the Scanner

1. Remove the exposure glass. (Exposure Glass)
2. Peel off the gap sheet (black) [A] from the sheet-through glass [B].



3. Wipe the exposure glass with general alcohol glass cleaner, so that no glue remains from the double-sided tape.

Note

- Remember that if any glue remains, it will cause a paper jam in the ADF.

Laser Unit

⚠WARNING

- Turn off the main power switch and unplug the machine before beginning any of the procedures in this section. Laser beams can cause serious eye injury.

Caution Decal Location

Caution decals are placed as shown below.

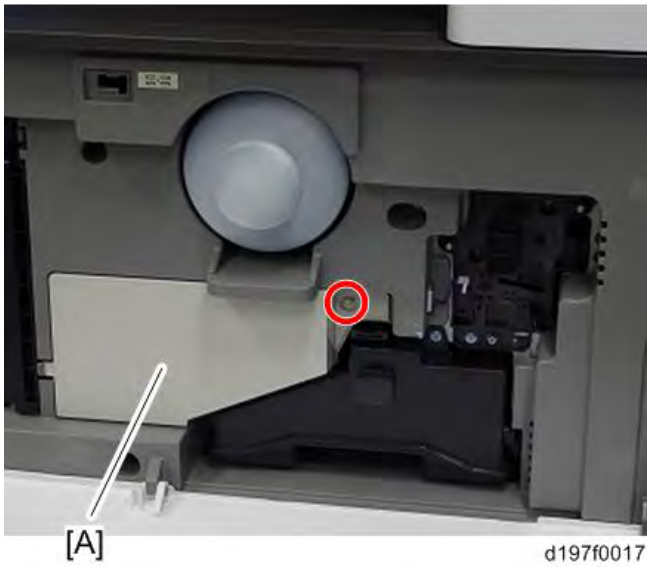
⚠WARNING

- Be sure to turn off the main power switch and disconnect the power plug from the power outlet before beginning any disassembly or adjustment of the laser unit. This copier uses a class IIIb laser beam with a wavelength of 660 nm and an output of 17 mW. The laser can cause serious eye injury.

Laser Unit

Removing the Laser Unit

1. Open the front cover.
2. Remove the laser unit cover [A]. (x 1)



3. Release the stopper [A].

d197f0003

4. Pull out the laser unit [A]. (x 3)

d197f0004

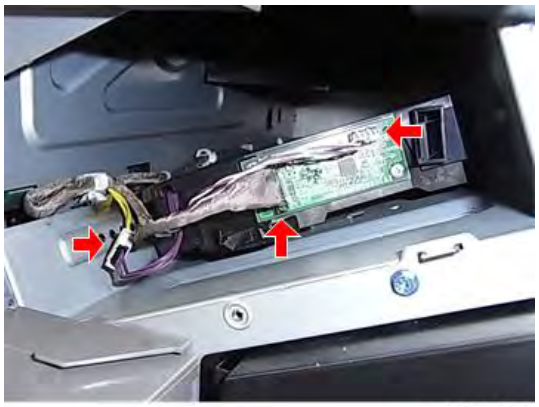
Installing a New Laser Unit

1. Replace the laser unit with a new laser unit.

2. Insert the new laser unit [A] halfway.

d197f0005

3. Connect three harnesses to the new laser unit (x 3).



d197f0006

4. Insert the new laser unit along the guide frame [A].

Note

- Make sure that the new laser unit claws fit into two mainframe claws as shown below.

Mainframe Claws

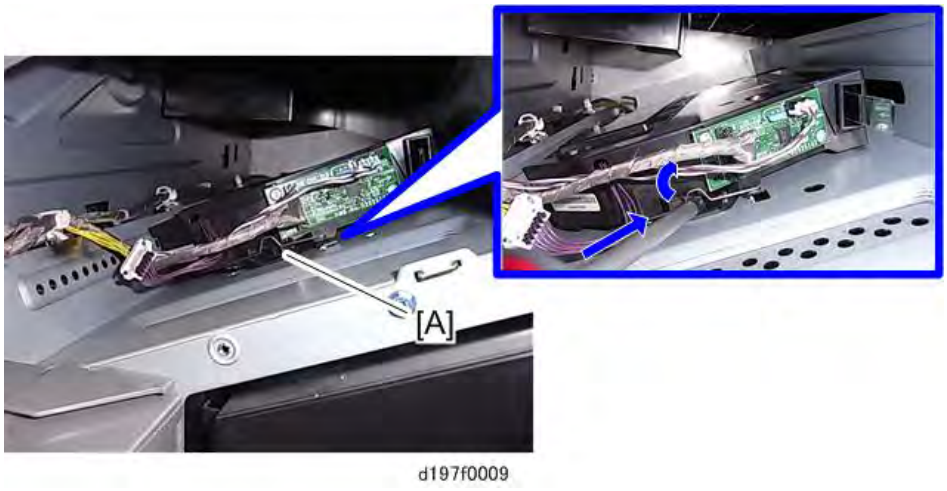
d197f0007

Laser Unit Claws

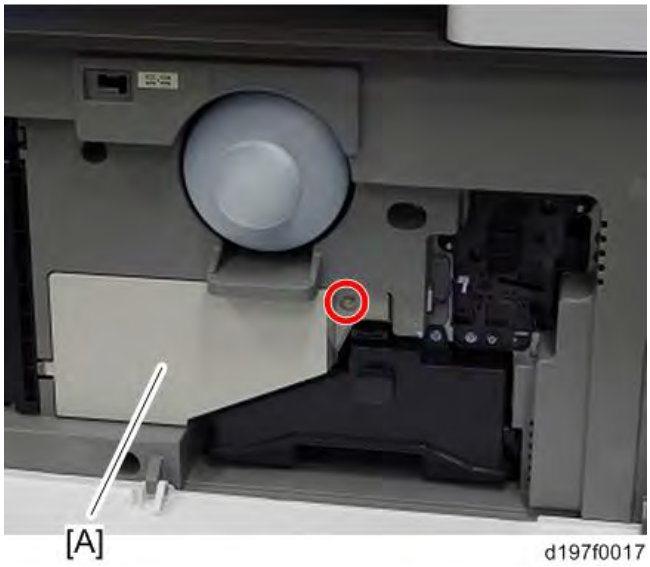
d284a4108

5. Set the laser unit with the stopper [A].

- Use a screw driver to pry in the stopper.



6. Attach the laser unit cover [A] (x 1).



After Installing the New Laser Unit

Download new data stored in a new laser unit to the mainframe.

1. Close the front cover.

2. Plug in and turn on the main power switch.

3. Enter the SP mode.

4. Download the new data stored in the new laser unit to the mainframe with SP2-110-005.

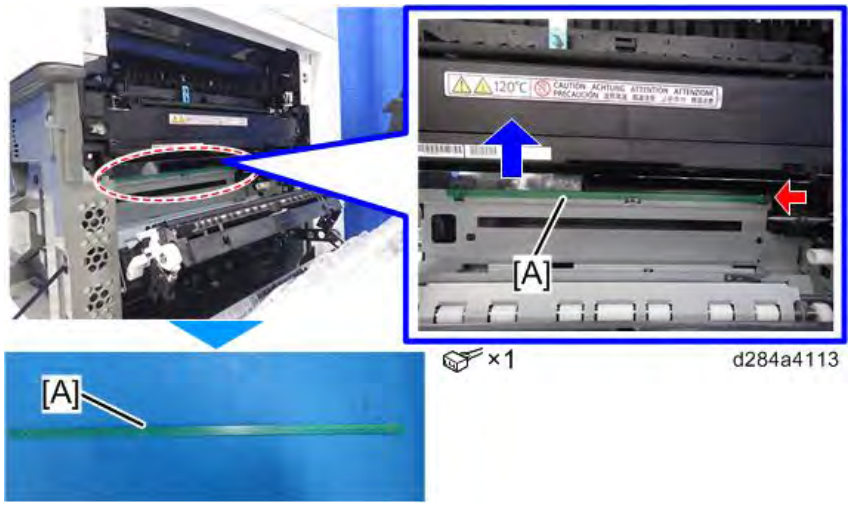
Note

- If the error message indicating the failure of the data download appears, execute SP2-110-005 again.
- If this step is not correctly done, an image problem may occur on printouts.

5. Perform image adjustments if needed (ADF Image Adjustment).

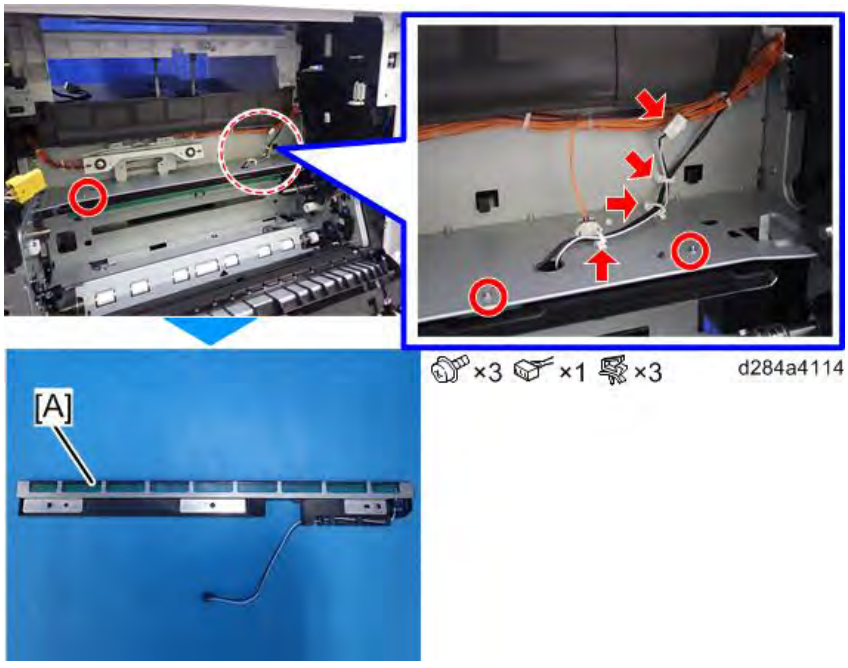
Quenching Lamp

1. Remove the PCDU. (PCDU)
2. Remove the quenching lamp [A].



PCL (Pre Cleaning Light)

1. Remove the PCDU. (PCDU)
2. Remove the fusing unit. (Fusing Unit)
3. Remove the PCL [A].



PCDU

Important

- To prevent damage from toner spillage during the PCDU removal, be sure to place a ground cloth on the floor.
- To prevent damage from excess light, wrap the OPC drum with protective paper and store the OPC drum in a cool dark place.
- **Do not** touch the OPC drum, cleaning blade, or any seals or tapes.
- **Do not** use any alcohols or solvents to clean the OPC drum; Be sure to wipe with a dry cloth. If excess dirt exists, first wipe with a damp cloth, and next wipe off completely with a dry cloth.
- **Do not** rotate the OPC drum clockwise after the PCDU has been installed.

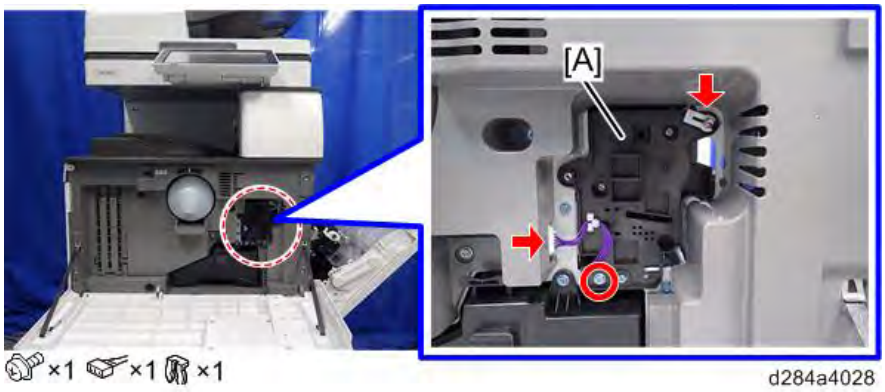
PCDU

Note

- If you install a complete new PCDU, you do not need to perform SP 3-701. This is because the machine detects a new unit automatically when you cycle the main power off/on, and performs the initial adjustment automatically.

1. Open the front cover.
2. Open the right cover.
3. Tilt the transfer unit [A].

4. Remove the PCDU [A].



Note

- Carefully and slowly pull out the PCDU without tilting, to prevent toner spillage.

d197z0074

Important

- When installing the PCDU, push the PCDU into the machine while screwing it in, as shown below, and then secure the PCDU. If the PCDU is not installed straight, the transfer roller contact and release mechanism does not work properly and dirt may appear on the 2nd side of outputs.

d197f0609

PCU/Development Unit

Before Replacing the PCU or Development Unit

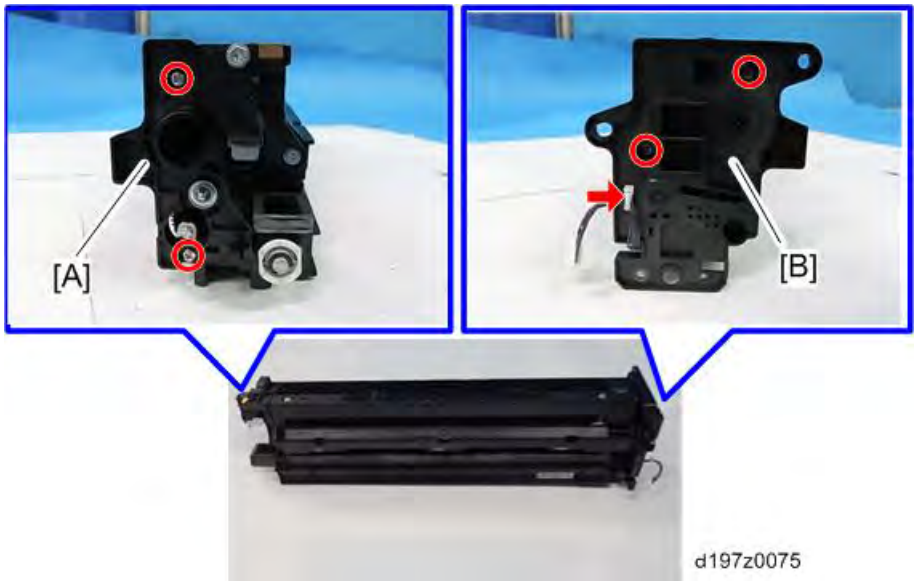
Important

- Before replacing the PCU, set SP3-701-002 (Manual New Unit Set: PCU) to “1” and turn off the main power switch. After replacing the PCU, turn on the main power.
- Before replacing the development unit, set SP3-701-023 (Manual New Unit Set: Development Unit) to "1" and turn off the main power switch. After replacing the development unit, turn on the main power.

Replacement Procedure

1. Remove the PCDU. (PCDU)

2. Remove the face plates [A][B]. (x4, x1)



3. Split the assembly into the PCU [A] and development unit [B].

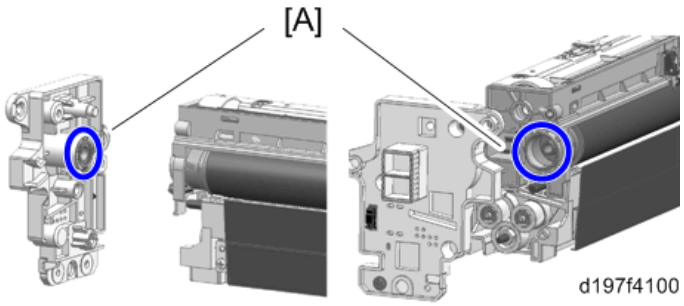
Notes When Installing the Face Plates

When installing the face plates, check the fitting points as shown below.

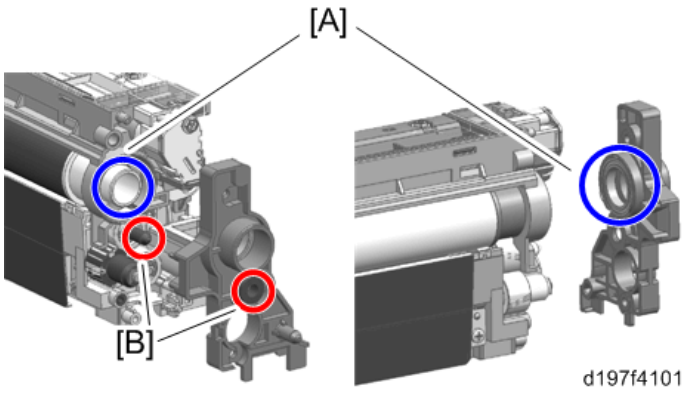
[A]: The bearing of the face plate fits the OPC drum.

[B]: The bearing of the face plate fits the bearing of the development roller.

Face plate for front side



Face plate for rear side

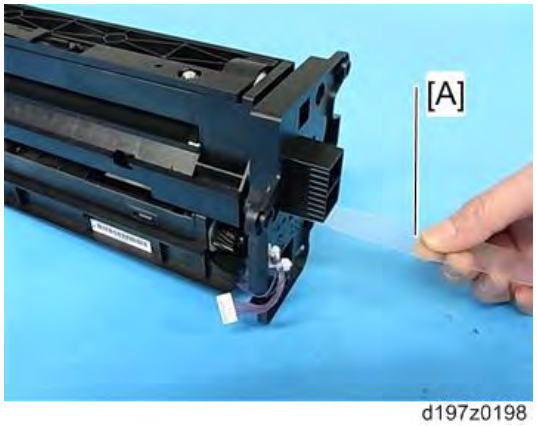


Installing a PCU

1. Disassemble the PCDU into PCU and development unit (PCU/Development Unit).
2. Replace the used PCU with a new one.
3. Reassemble the PCDU.

Installing a Development Unit

1. Disassemble the PCDU into PCU and development unit (PCU/Development Unit).
2. Replace the used development unit with a new one.
3. Reassemble the PCDU.
4. Pull out the heat seal [A].



5. Remove the cap [A].

Note

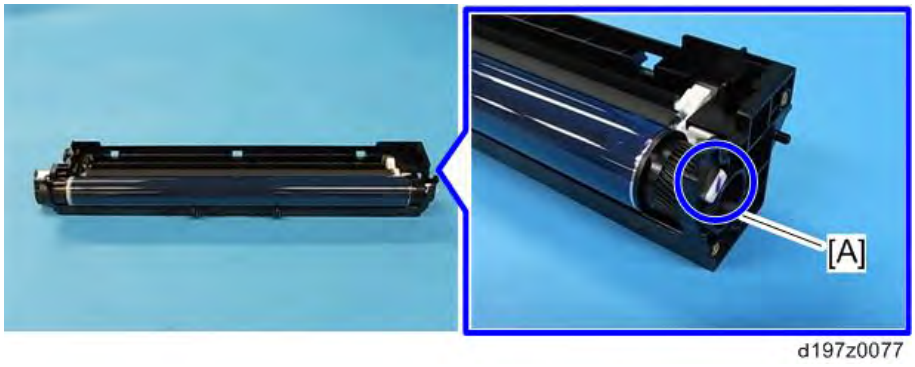
- Attach the removed cap to the used development unit.

OPC Drum

Important

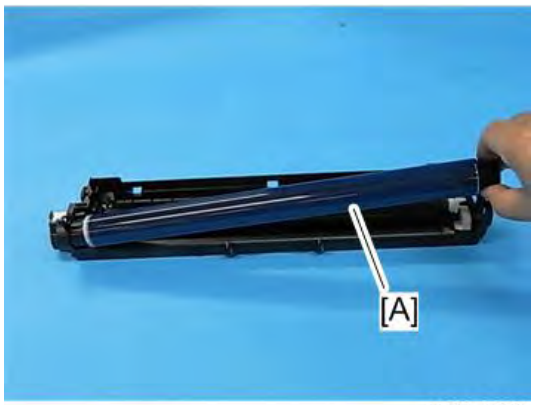
- Before replacing the OPC drum, set SP3-701-021 to “1” and turn off the main power switch.
- If you have to turn the power on again before replacing the part, execute the SP again before replacing the part.
- After replacing the OPC drum, turn on the main power on.

1. Remove the PCU. (PCU/Development Unit)
2. Remove the stopper [A] for the PCU.



d197z0077

3. Pull out the OPC drum [A].



d197z0078

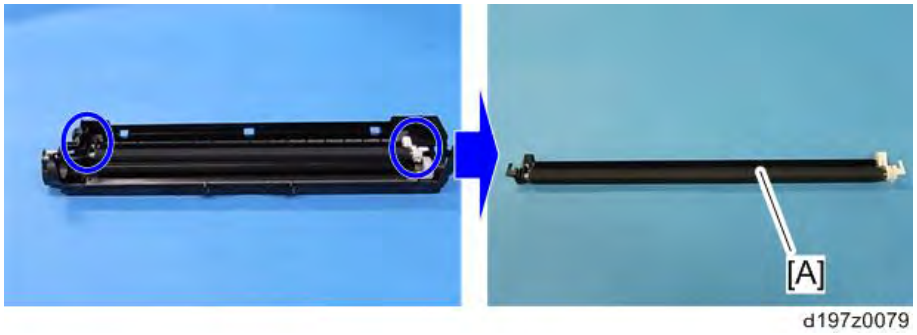
Charge Roller, Cleaning Roller

Important

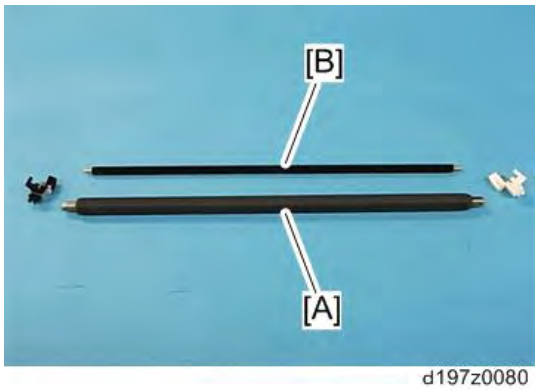
- Before replacing these rollers, set SP3-701-018 for the charge roller and/or SP3-701-019 for the cleaning roller to “1” and turn the main power switch OFF.
- If you have to turn the power on again before replacing the part, execute the SP again before replacing the part.
- After replacing the rollers, turn the main power switch ON.

1. Remove the PCU. (PCU/Development Unit)

2. Remove the OPC drum. (OPC Drum)
3. Remove the charge roller and cleaning roller [A] with its bearing.



4. Split the assembly into the charge roller [A] and cleaning roller [B].



Pick-off Pawls

Important

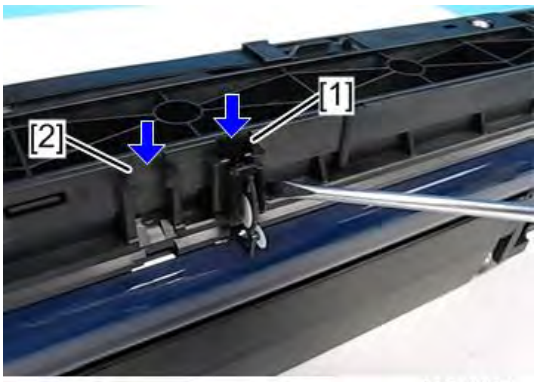
- Before replacing the pick-off pawls, set SP3-701-022 to “1” and turn off the main power switch.
- If you have to turn the power on again before replacing the part, execute the SP again before replacing the part.
- After replacing the pick-off pawls, turn on the main power on.

1. Remove the PCU. (PCU/Development Unit)
2. Remove the pick-off pawls [A].

Note

- Use a screw driver to pry away the tabs of the pick-off pawl. If the pick-off pawl has marked the

drum with a line, the pick-off pawl position can be moved from 1 to 2.



d197z0081a

Cleaning Blade

Important

- Before replacing the cleaning blade, set SP3-701-009 to “1” and turn the main power switch OFF.
- If you have to turn the power on again before replacing the part, execute the SP again before replacing the part.
- After replacing the cleaning blade, turn the main power switch ON.

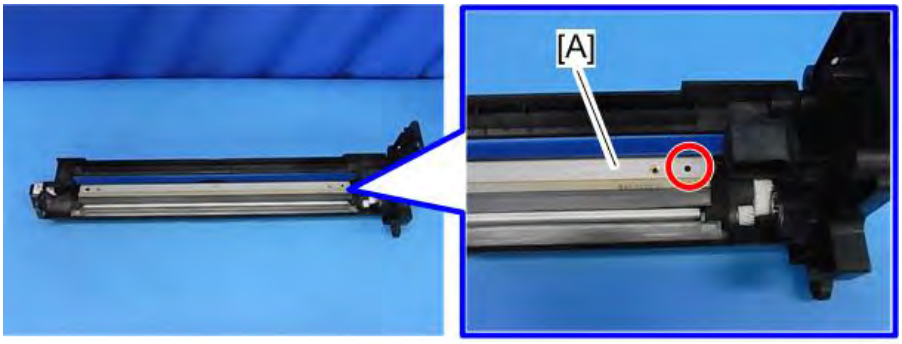
1. Remove the PCU. (PCU/Development Unit)
2. Remove the OPC drum. (OPC Drum)
3. Remove the charge roller and cleaning roller. (Charge Roller, Cleaning Roller)
4. Remove the cleaning blade [A]. (x2)

d197z0083

Note

- The cleaning blade [A] has two different types of holes: a circle (), and an oval (). Remove

the screw on the circle side first, and then, remove the oval side.



d197z0487

Developer

Preparation

- These sheets used in steps 6, 11, and 12 are not provided as accessories; please do not forget to order them with the developer.

d197f0608

Important

- Before replacing the developer, set SP3-701-024 to “1” and turn the main power switch OFF.
- If you have to turn the power on again before replacing the part, execute the SP again before replacing the part.
- After replacing the developer, turn the main power switch ON.

Note

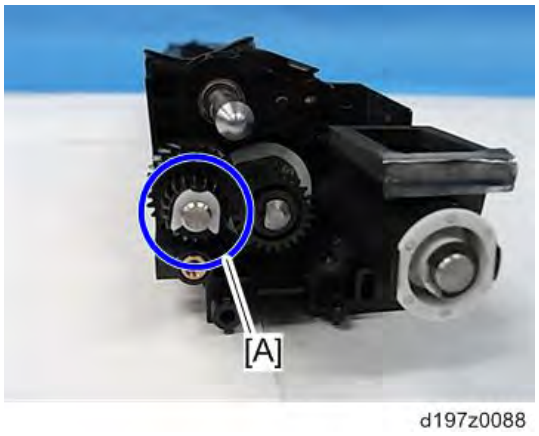
- If you replace developer together with the development filters, first replace the developer, then replace the filters.

1. Remove the development unit. (PCU/Development Unit)
2. Remove the bearing (front) [A]. (E-ring x1)

d197z0087

3. Pull the shaft toward the blue arrow shown below, then remove the pin [A] and the gear [B].

4. Remove the gear [A]. (x1)

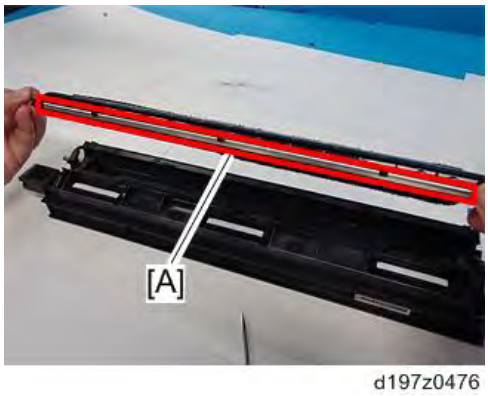


5. Remove the bearing (rear) [A].

6. Remove the development side seal and development case entrance seal [A] at each end.

7. Lift up the development sleeve unit [A].

⚠CAUTION



- Do not touch or hold the development sleeve edge [A] when holding the sleeve unit. Otherwise, it may cause an injury.

8. Remove the developer after turning the development unit upside down in the reverse direction of the development filter.

Note

- Rotate the gear to remove as much toner as you can.

d197z0090

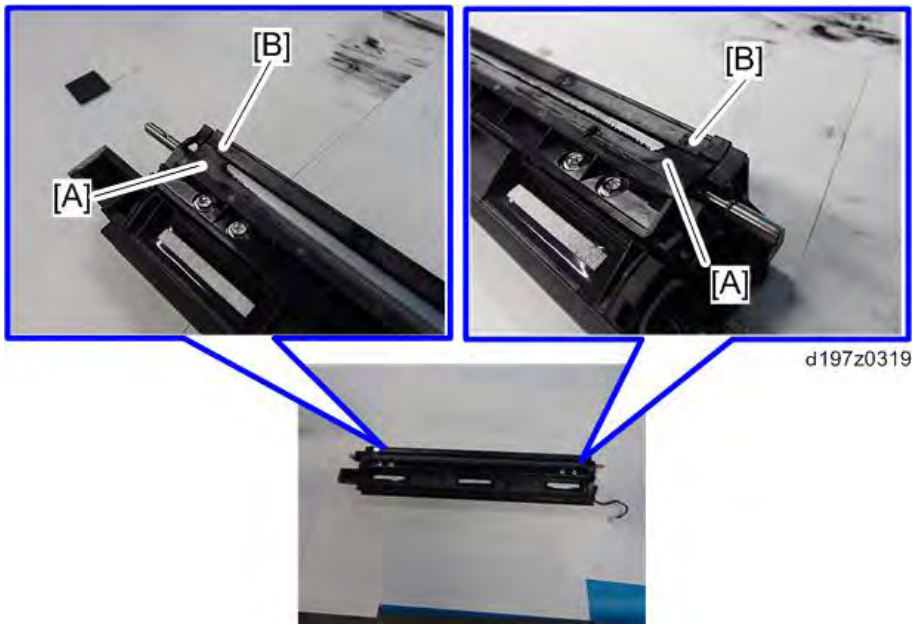
9. Stand the development unit up, and add new developer evenly across the width of the development unit while rotating the gear.

d197f4081

10. Reassemble the development sleeve unit, gear and bearing.

Note

- The sheets for the development sleeve unit [A] must be under the sheets [B] for the development unit.

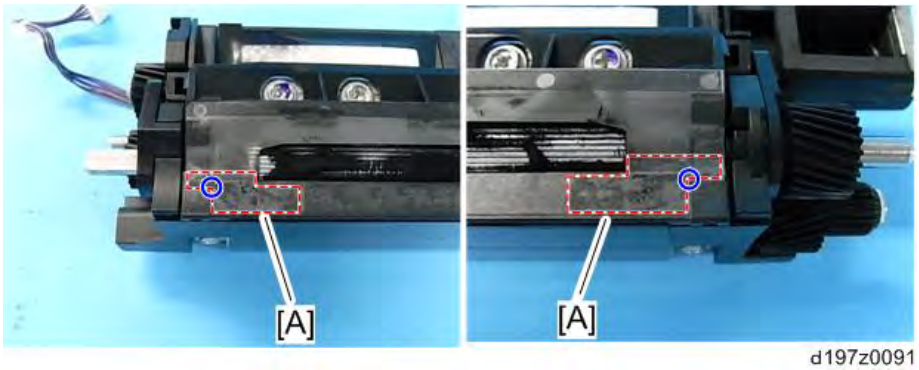


d197z0319

Correct	Wrong
d197f0605	d197f0606

11. Wipe off the areas [A] indicated by the red-dashed line and paste new development case entrance seals to cover the blue-circled position.

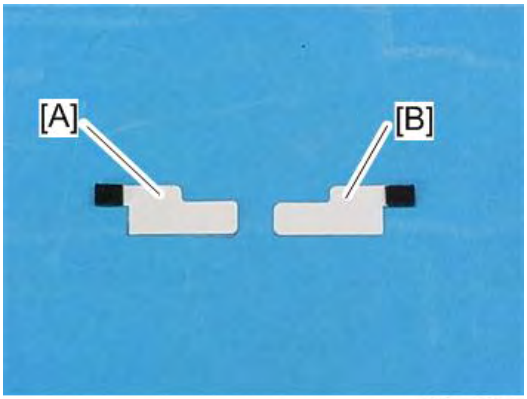
- These seals are part of the development seal set, which must be ordered together with the new developer.



d197z0091

Note

- The seal [A] for the front side is not the same shape as the one [B] for the rear side, as shown below. Be careful when you paste them.



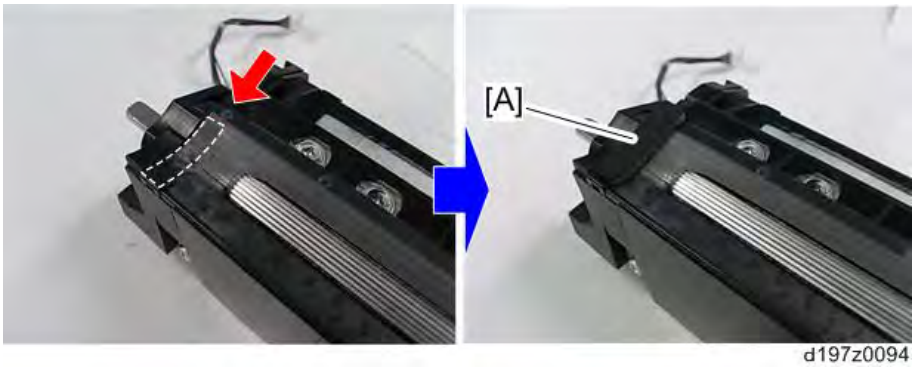
d197z0405

12. Paste the new development side seals [A] on the face of the development sleeve unit as shown below.

- These seals are part of the development seal set, which must be ordered together with the new

developer.

d197z0093



d197z0094

13. Reassemble the PCU and development unit.

14. Turn on the main power switch.

The machine detects the new developer and starts the initial adjustment.

Development Filters

Important

- Before replacing the development filters, set SP3-701-025 to “1” and turn the main power switch OFF.
- If you have to turn the power on again before replacing the part, execute the SP again before replacing the part.
- After replacing the development filters, turn the main power switch ON.

Note

- If you replace the development filter together with developer, first replace the developer, then replace the filters.

1. Remove the development unit. (PCU/Development Unit)

2. Remove the development filters [A].

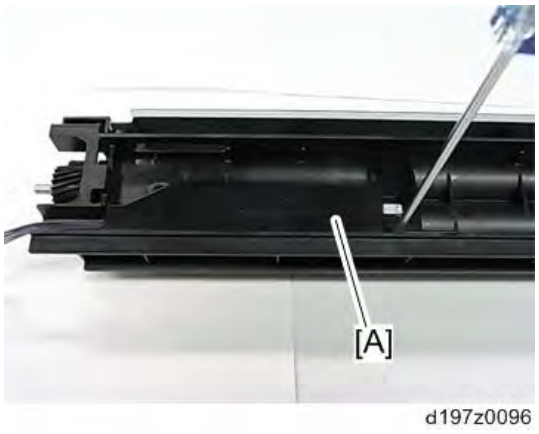
TD Sensor

1. Remove the development unit. (PCU/Development Unit)

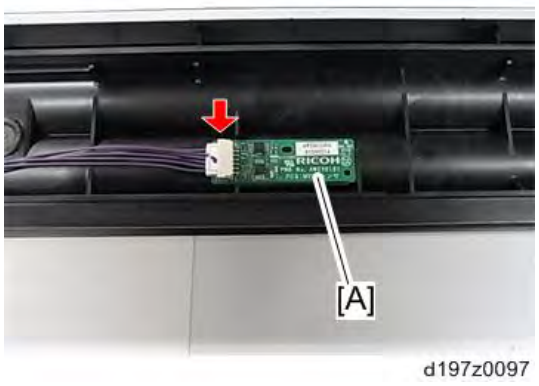
2. Remove the TD sensor cover [A].

Note

- Use a screw driver to release the tab(s) of the cover.



3. Remove the TD sensor [A]. (x1)



Development Mixing Auger Bearings

Important

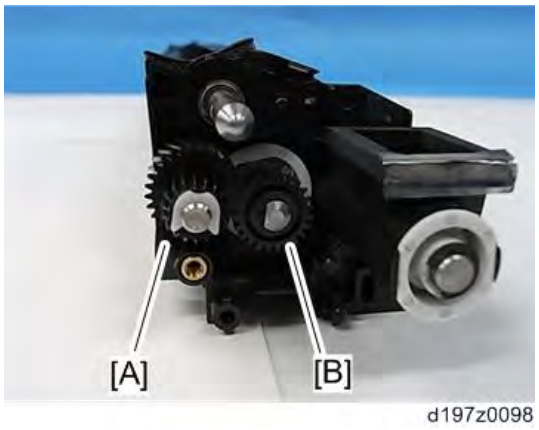
- Before replacing the development mixing auger bearings, set SP3-701-028 to “1” and turn the main

power switch OFF.

- If you have to turn the power on again before replacing the part, execute the SP again before replacing the part.
- After replacing the development mixing auger bearings, turn the main power switch ON.

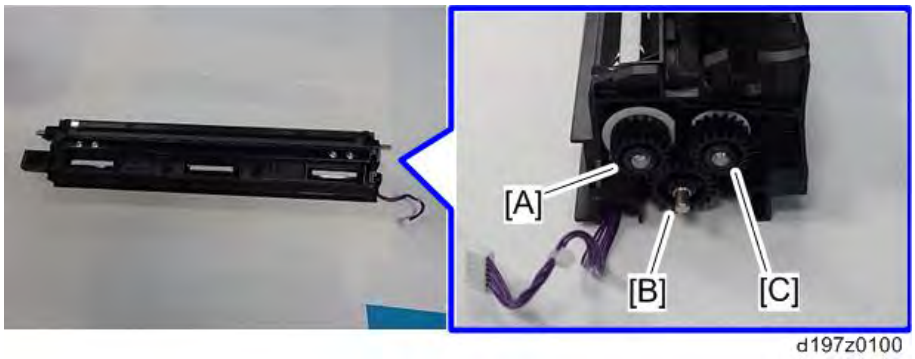
1. Remove the development unit. (PCU/Development Unit)
2. Pull the shaft toward you, and then pull out the pin [A] and remove the gear [B].

3. Remove the gears [A] [B]. (x1, E-ring x1)

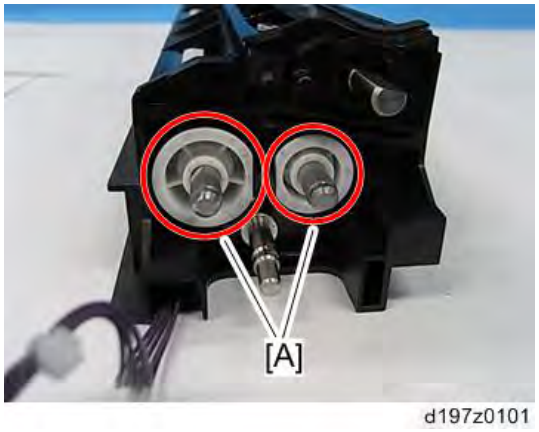


4. Remove the two development mixing auger bearings [A] (E-ring x1).

5. Remove the gears [A] [B] [C]. (E-ring x2)



6. Remove the two development mixing auger bearings [A].



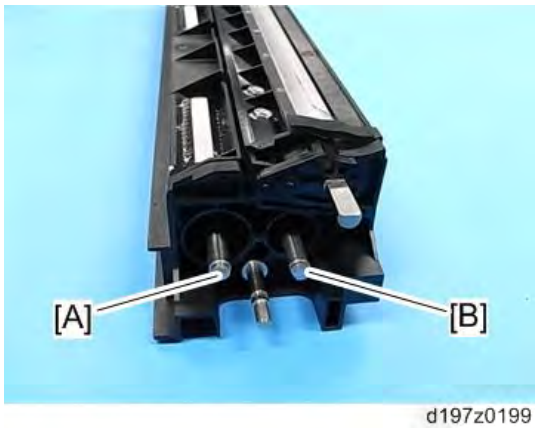
Note

- The development mixing auger bearings are D-shaped. Make sure that you install them in the orientation exactly as shown above.

Development Mixing Auger (L / R)

Note

- [A]: Development Mixing Auger (L)
- [B]: Development Mixing Auger (R)

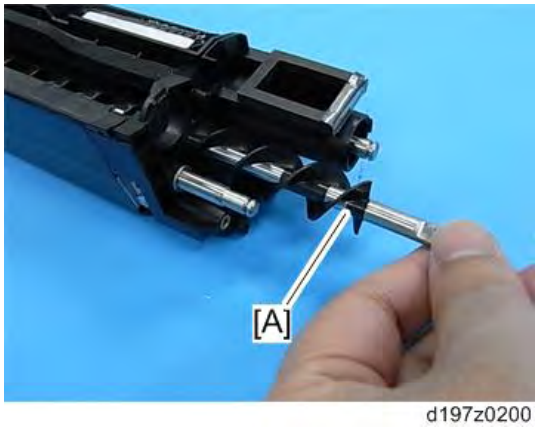


1. Remove the development unit. (PCU/Development Unit)

2. Remove the developer. (Developer)

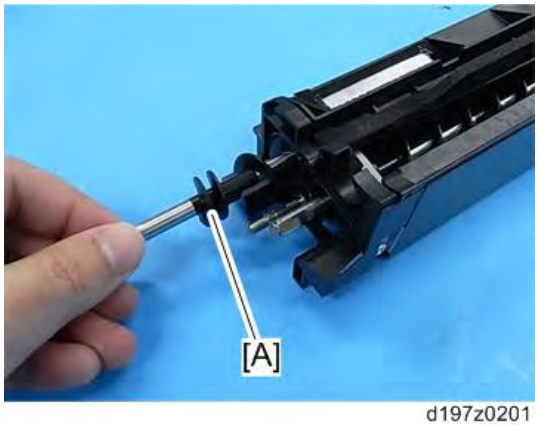
3. Remove the development mixing auger bearings. (Development Mixing Auger Bearings)

4. Remove the development mixing auger (L) [A].



d197z0200

5. Remove the development mixing auger (R) [A].



d197z0201

Note

- Each auger is different; please make sure that the augers are attached correctly.
- [A]: Development Mixing Auger (L)
- [B]: Development Mixing Auger (R)

d197z0202

Waste Toner

Waste Toner Bottle

Before Replacing the Waste Toner Bottle

When the bottle is replaced after the machine detects that the waste toner bottle is full and stops, the counter for the Waste Toner Bottle is reset automatically.

When the bottle is replaced before the machine stops due to a full bottle, it is necessary to reset the PM counter manually (set SP3-701-142 to “1” before replacing the bottle, then switch the power off).

SP3-701 (Manual New Unit Set)

This SP is the new unit detection flag.

0: new unit detection flag OFF, 1: new unit detection flag ON

Item	SP
Waste toner bottle	SP3-701-142

1. Open the front cover.
2. Pull out the waste toner bottle [A] (x1, ×1).

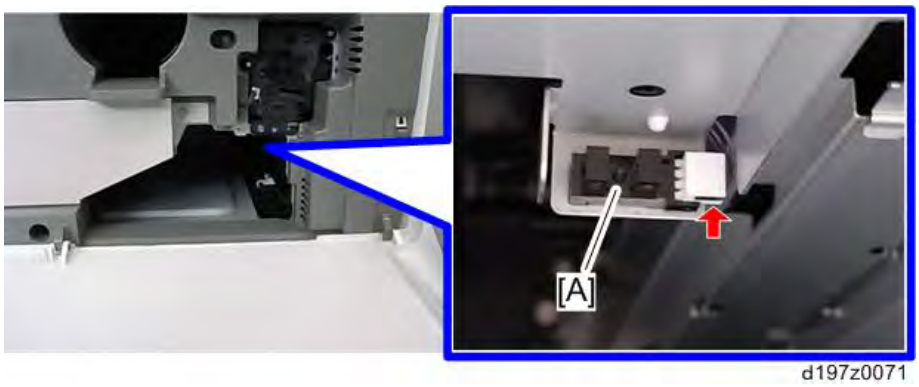
Note

- There is no waste toner bottle set switch. If you remove the waste toner bottle, be sure to replace it before you finish work on the machine.

Toner Collection Full Sensor

1. Remove the waste toner bottle. (Waste Toner Bottle)

2. Remove the toner collection full sensor [A]. (×1)

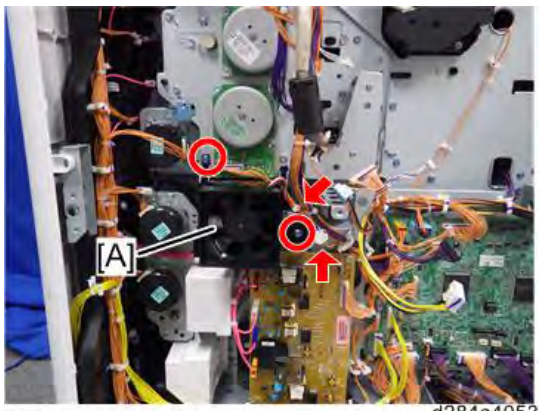


Recycling Shutter

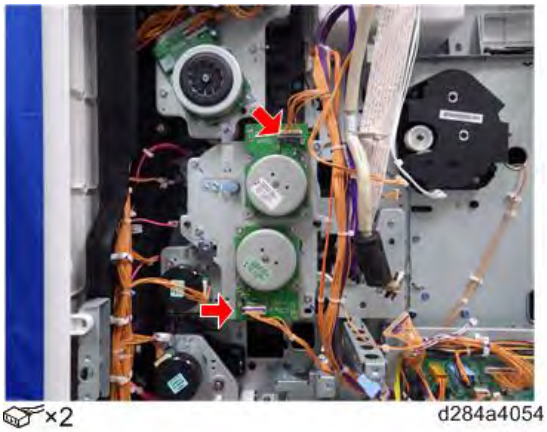
1. Remove the waste toner bottle. (Waste Toner Bottle)
2. Remove the PCDU. (PCDU)
3. Remove the controller box. (Controller Box)
4. Remove the duct [A].

Note

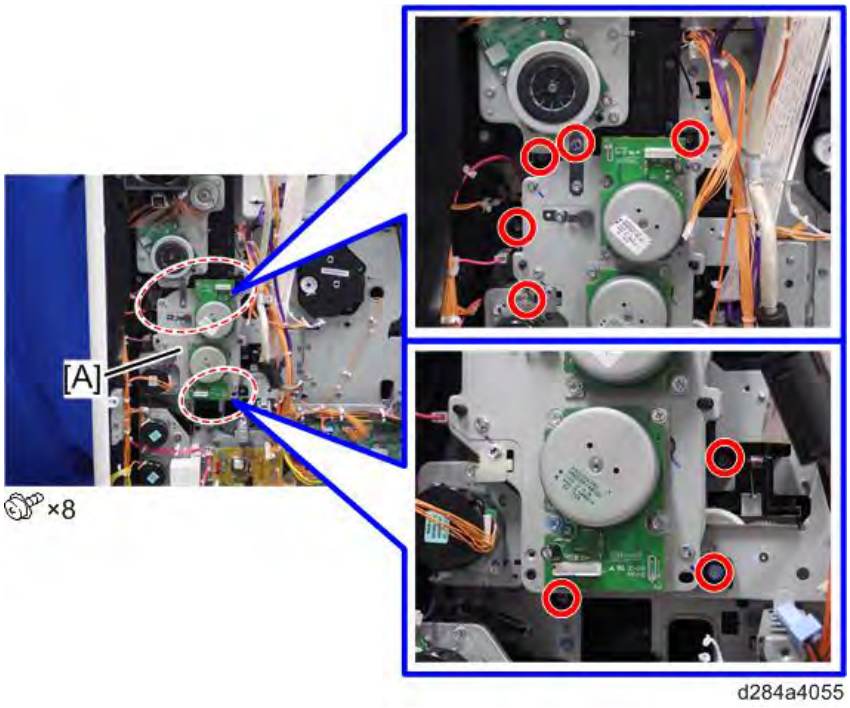
- Remove the Development Bearing Cooling Fan along with the duct (for MP 4055 SP/MP 5055 SP/MP 6055 SP only).



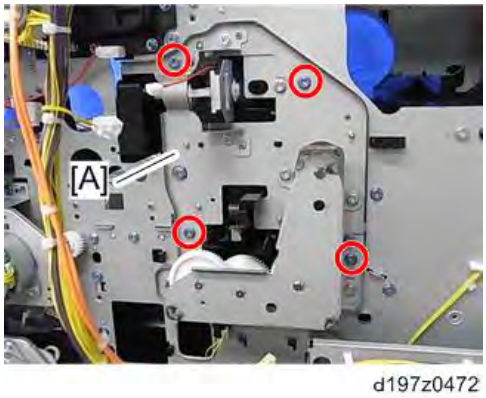
5. Remove the connectors.



6. Remove the motor unit [A].



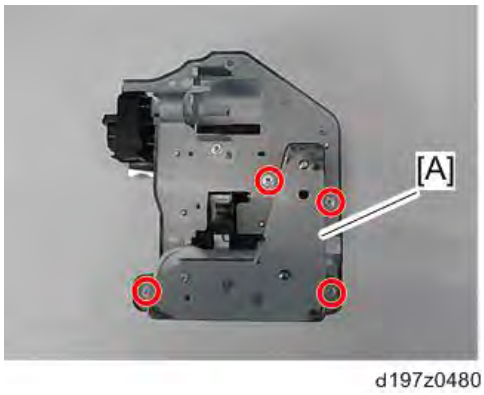
7. Remove the recycling shutter bracket [A]. (×4)



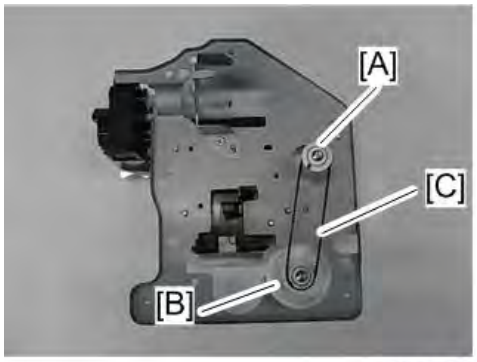
Note

- Spread paper on the floor to catch possible toner spills.

8. Remove the bracket [A] (×4).

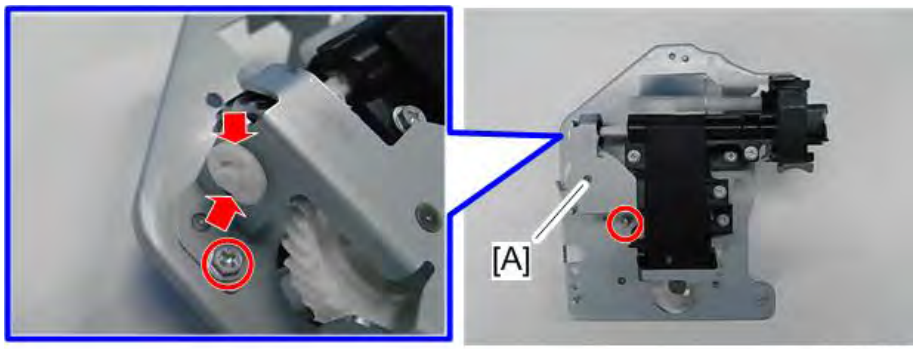


9. Remove the two pulleys [A] [B] and the belt [C]. (×1)



d197z0481

10. Remove the bracket [A]. (×2, ×1, bearing × 1)

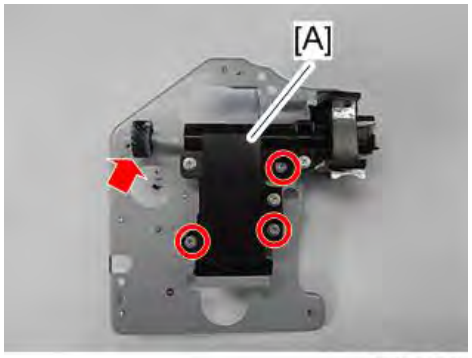


d197z0482

Note

- Place a sheet of paper underneath the bracket, and then put the bracket on the sheet. Otherwise, the grease applied to the gear in the bracket may adhere to the floor.

11. Remove the recycling shutter unit [A]. (×3, Gear × 1)



d197z0483

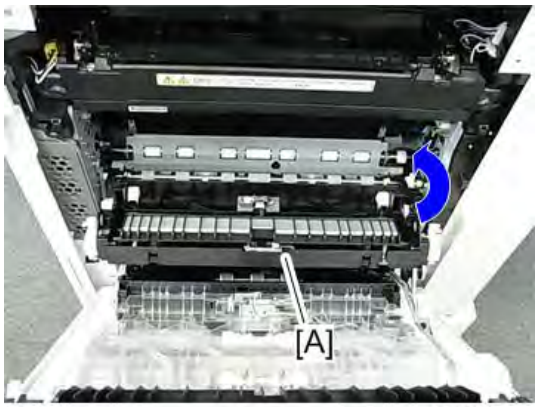
Note

- Place a sheet of paper underneath the recycling shutter unit, and then put the recycling shutter unit on the sheet. Otherwise, the grease applied to the gear in the unit may adhere to the floor.

Transfer Unit

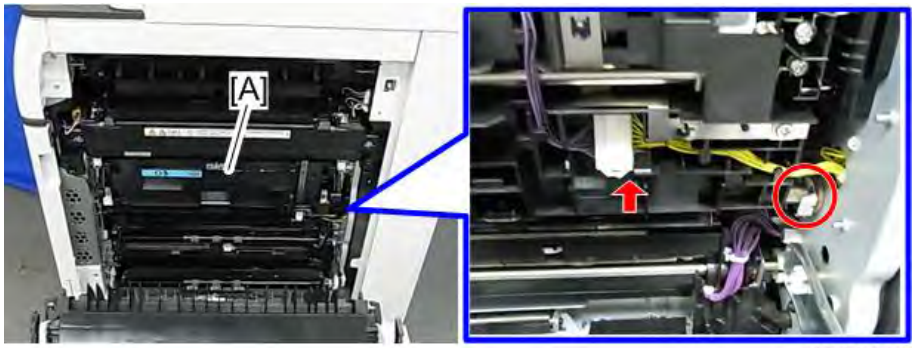
Transfer Unit

1. Open the right cover.
2. Close the transfer unit [A].



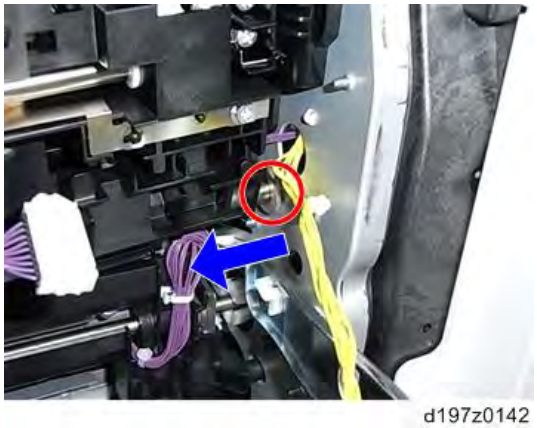
d197z0140

3. Remove the clip of the transfer unit [A] and disconnect the connector. (×1, ×1)



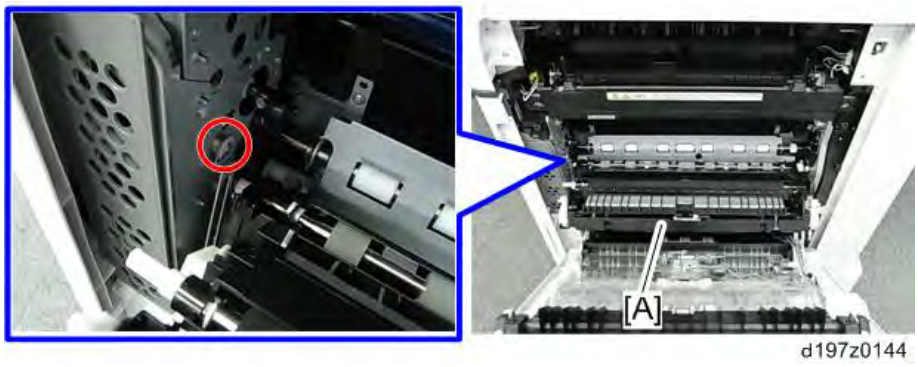
d197z0141

4. Slide the bearing in the blue arrow direction to release it from the frame of the main machine.


d197z0142

5. Open the transfer unit [A].

6. Release the arm of the transfer unit [A] (×1).



7. Remove the transfer unit [A].

Transfer Roller Unit

Important

- Before replacing the transfer roller unit, set SP3-701-108 to “1” and turn off the main power switch.
- If you have to turn the power on again before replacing the part, execute the SP again before replacing the part.
- After replacing the transfer roller unit, turn on the main power on.

1. Open the right cover.

2. Release the claws of the transfer roller unit [A].

3. Remove the transfer roller unit [A].

ID Sensor

Before Replacing the ID Sensor

Note

- You must take note of the original value of SP3-331-061 to prepare for the possibility that the process control after replacement will not be done properly.

A QR-code is pasted on the sensor head of an ID sensor, which includes the characteristic value for the sensor. This characteristic value must be input into SP3-331-061 before replacing the ID sensor.

1. Take a note of the characteristic value on the new ID sensor (surrounded by a red dashed line in the following

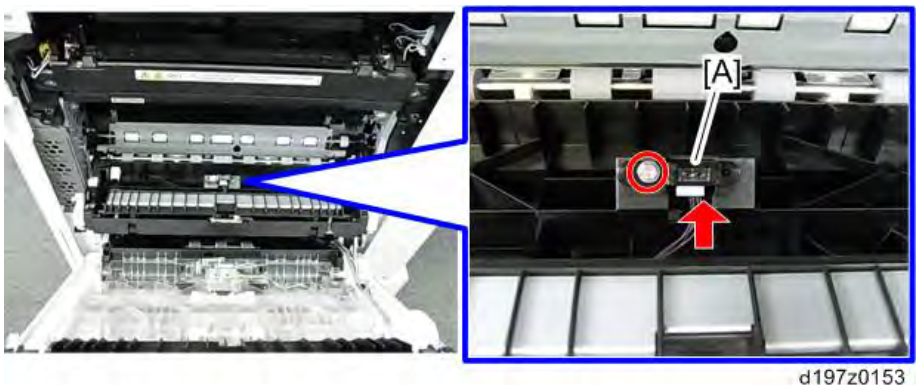
photo).

d197z0181

2. Turn the main power ON and enter SP mode.
3. Input the characteristic value into SP3-331-061.

Replacement Procedure

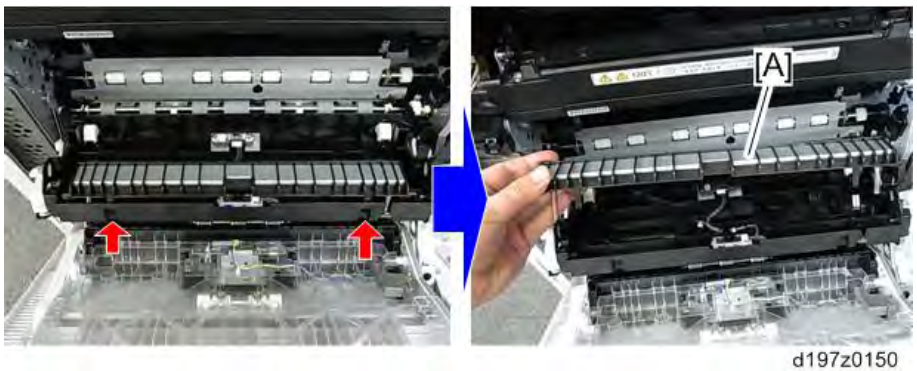
1. Open the right cover.
2. Remove the ID sensor [A]. (×1, ×1)



d197z0153

Transfer Unit Open/Closed LED

1. Open the right cover.
2. Remove the guide plate [A]. (×2)



d197z0150

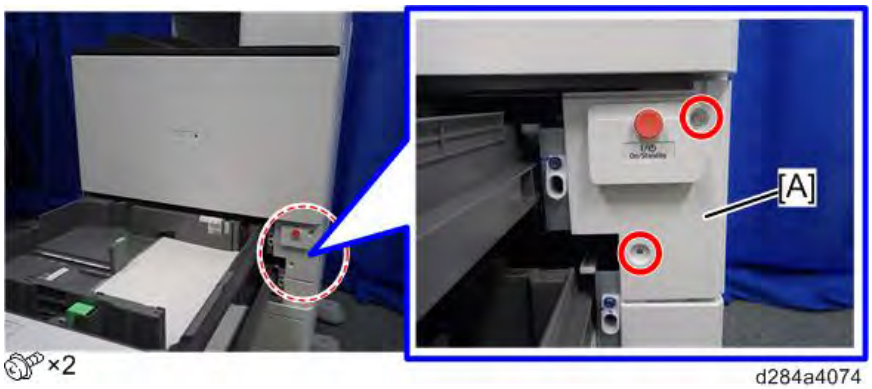
3. Remove the LED cover [A]. (×1)

4. Remove the transfer unit open/closed LED [A]. (×1)

Temperature/Humidity Sensor

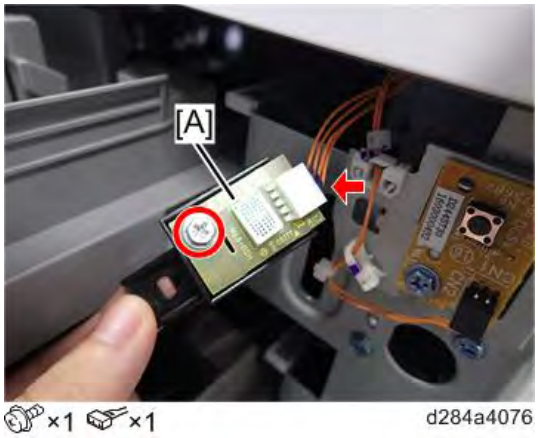
1. Pull out the 1st and 2nd paper feed trays.

2. Remove the right lower cover [A].



3. Inserting a driver through the frame hole, remove the screw of the temperature/humidity sensor.

4. Remove the temperature/humidity sensor [A].



Fusing Entrance Sensor

1. Open the right cover.

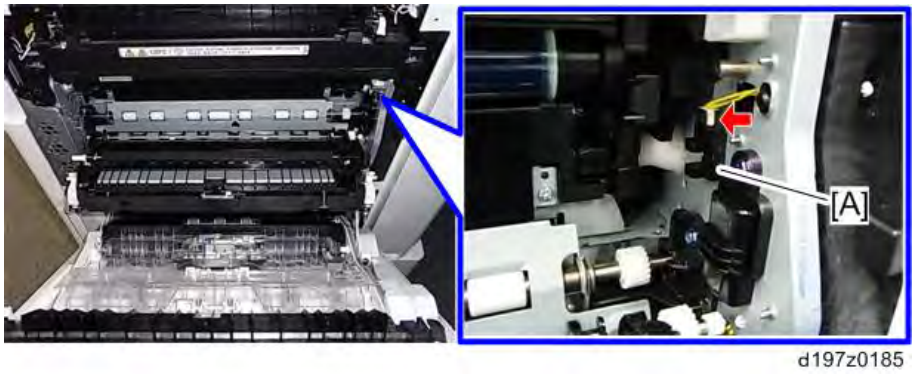
2. Remove the fusing entrance sensor [A] with bracket. (×1)

3. Remove the fusing entrance sensor [A]. (×1)

Transfer Unit Open/Closed Sensor

1. Open the right cover.

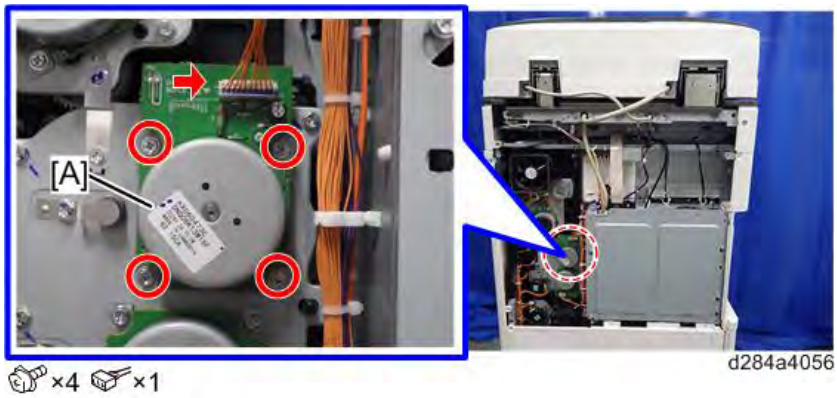
2. Remove the transfer unit open/closed sensor [A]. (×1, hooks)



Drive Unit

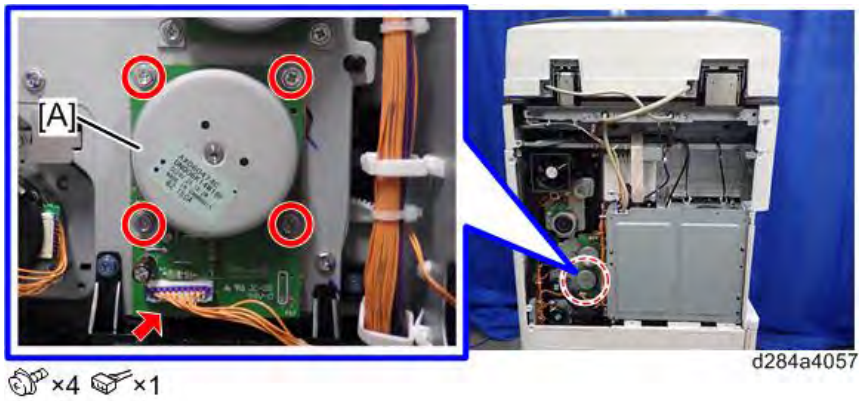
Drum/Waste Toner Motor

1. Remove the rear cover. (Rear Cover)
2. Remove the drum/waste toner motor [A].



Development Motor

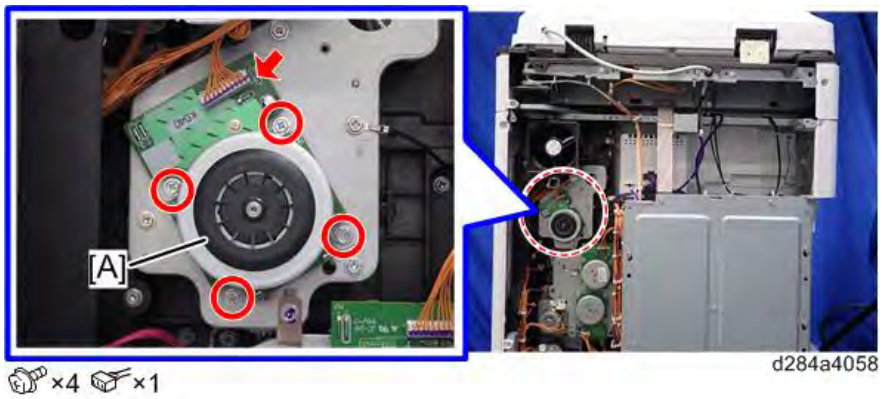
1. Remove the rear cover. (Rear Cover)
2. Remove the development motor [A].



Fusing/Paper Exit Motor (MP 2555 SP/3055 SP/3555 SP Only)

1. Remove the rear cover. (Rear Cover)

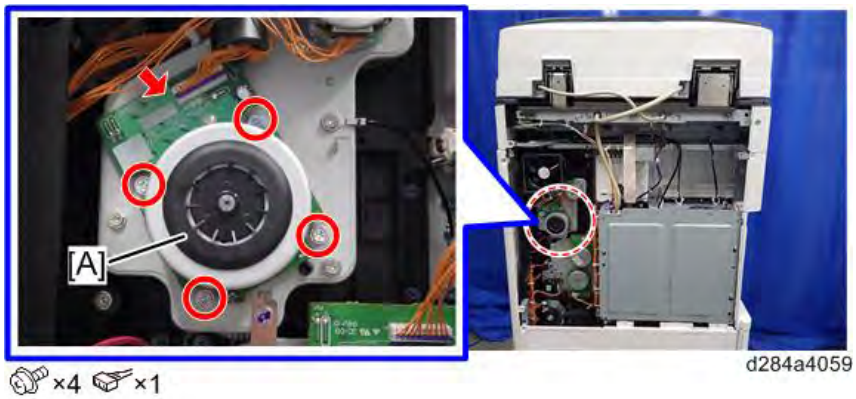
2. Remove the fusing/paper exit motor [A].



Fusing Motor (MP 4055 SP/5055 SP/6055 SP Only)

1. Remove the rear cover. (Rear Cover)

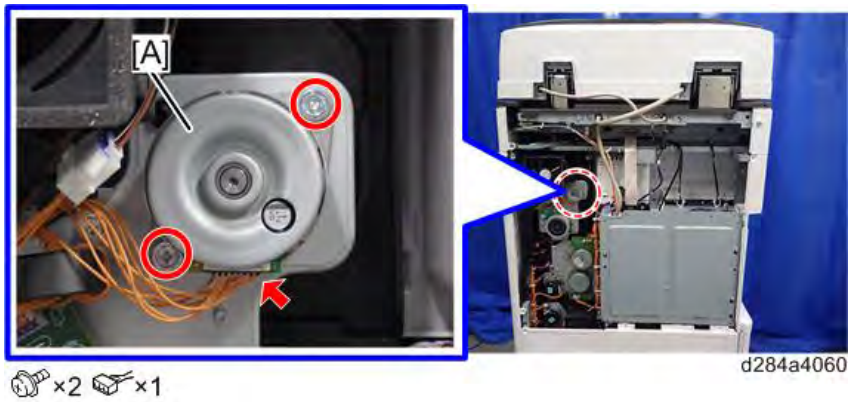
2. Remove the fusing motor [A].



Paper Exit Motor (MP 4055 SP/5055 SP/6055 SP Only)

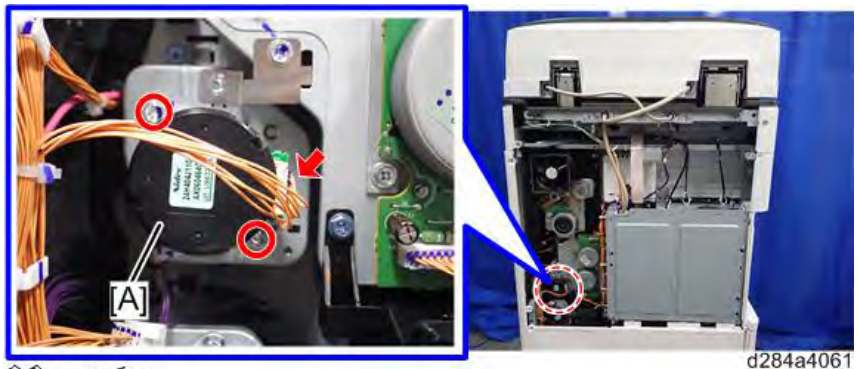
1. Remove the rear cover. (Rear Cover)

2. Remove the paper exit motor [A].



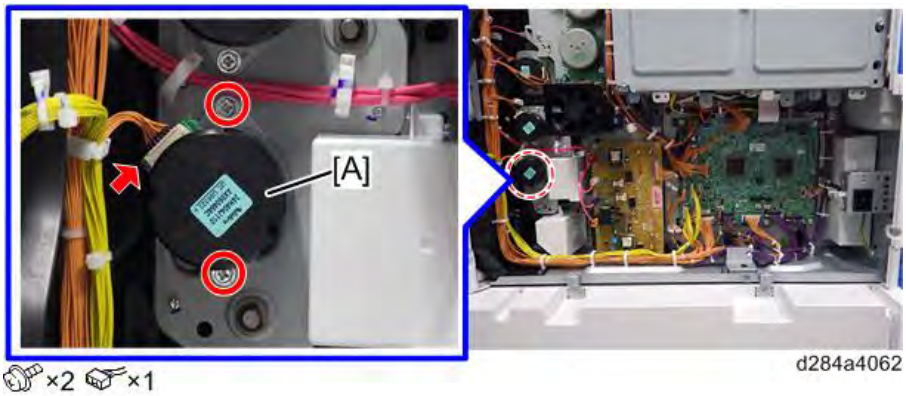
Registration Motor

1. Remove the rear cover. (Rear Cover)
2. Remove the registration motor [A].



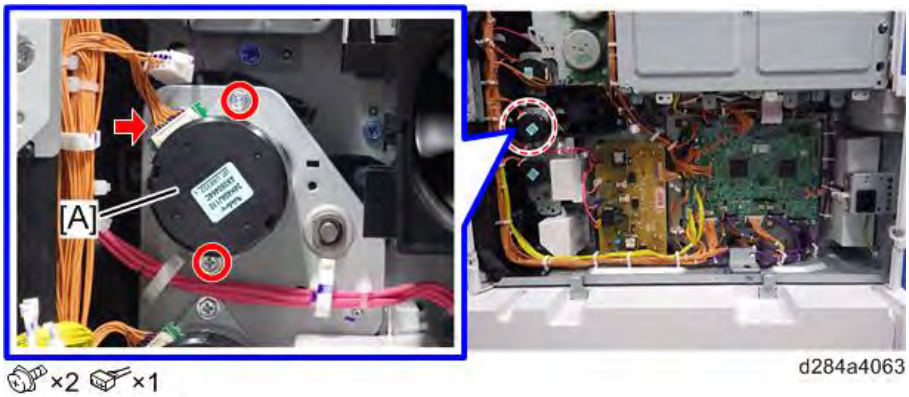
Paper Feed Motor

1. Remove the rear lower cover. (Rear Lower Cover)
2. Remove the paper feed motor [A].



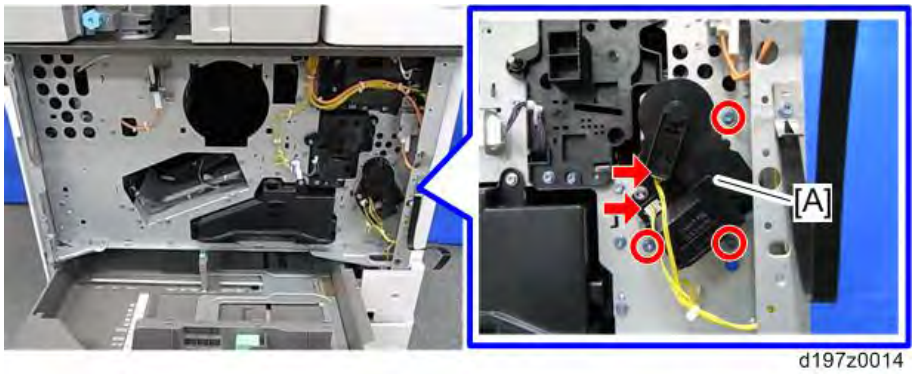
Vertical Transport Motor

1. Remove the rear lower cover. (Rear Lower Cover)
2. Remove the vertical transport motor [A].



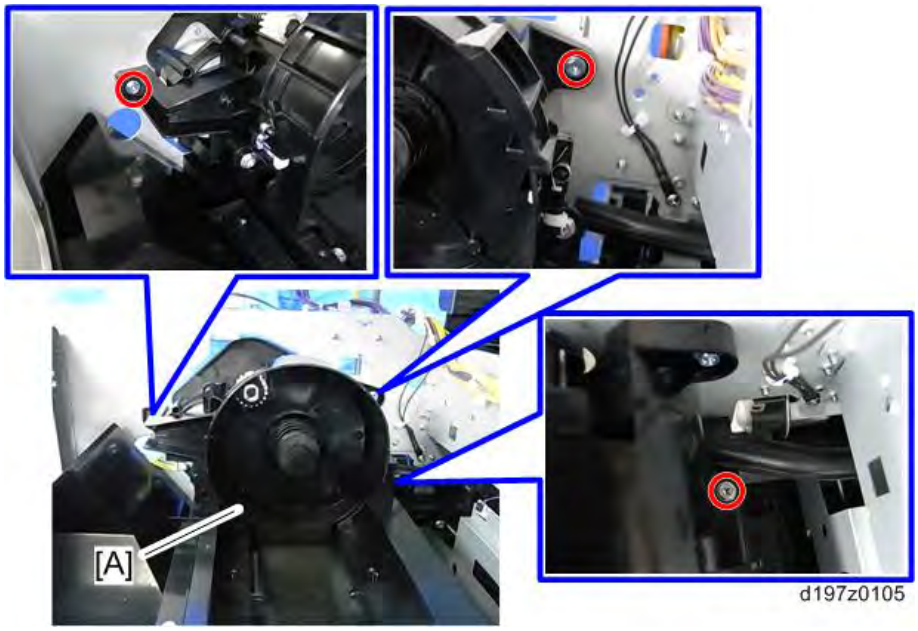
Transfer Roller Contact Motor

1. Remove the front cover. (Front Cover)
2. Remove the inner cover. (Inner Cover)
3. Remove the transfer roller contact motor [A]. (×3, ×2)

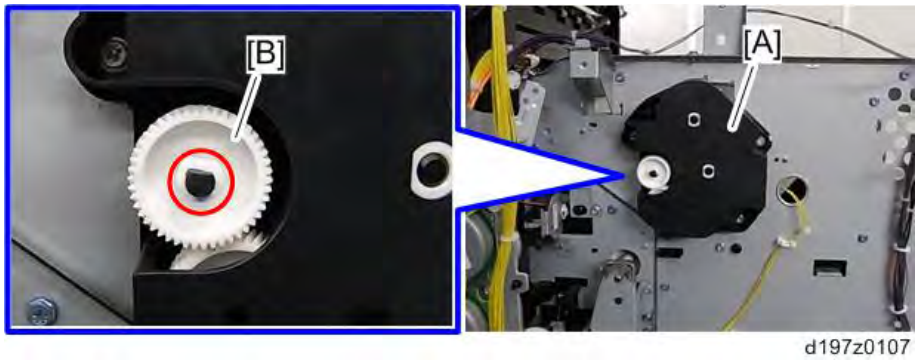


Toner Hopper

1. Pull out the toner bottle.
2. Remove the paper exit lower cover. (Paper Exit Lower Cover)
3. Remove the upper inner cover. (Upper Inner Cover)
4. Remove the development exhaust fan. (Development Exhaust Fan)
5. Remove the toner supply housing. (Toner Supply Housing)
6. Remove the controller box. (Controller Box)
7. Remove the screws on the toner hopper [A]. (×3)

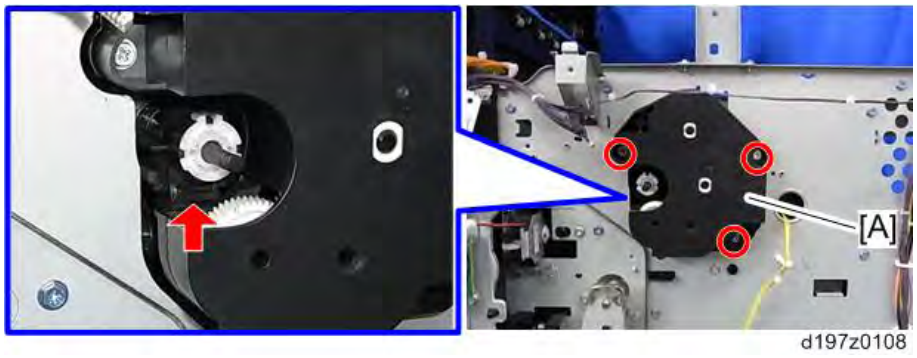


8. Remove the gear [B] on the gearbox [A]. (×1)



d197z0107

9. Remove the screws and tab on the gearbox [A]. (×3, tab×1)



d197z0108

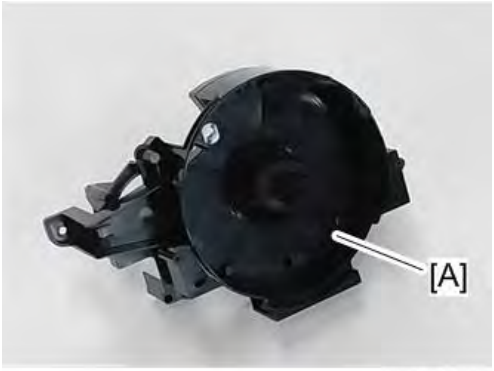
10. Remove the toner hopper [A].

d197z0109

Note

- Toner remains in the toner hopper [A]. Be sure to place the toner hopper on a sheet of paper to

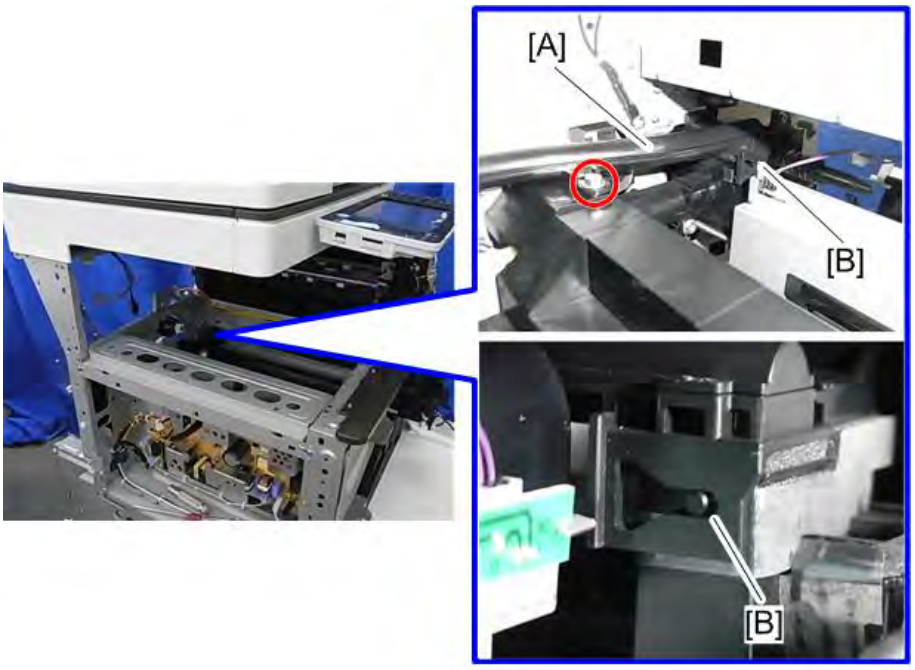
protect against toner spillage.



d197z0110

Important

- Attach the toner supply pipe [A] before installing the gear box and toner hopper.
- Fit the hole of the supply pipe to the pin [B] and then stabilize the pipe (x1).

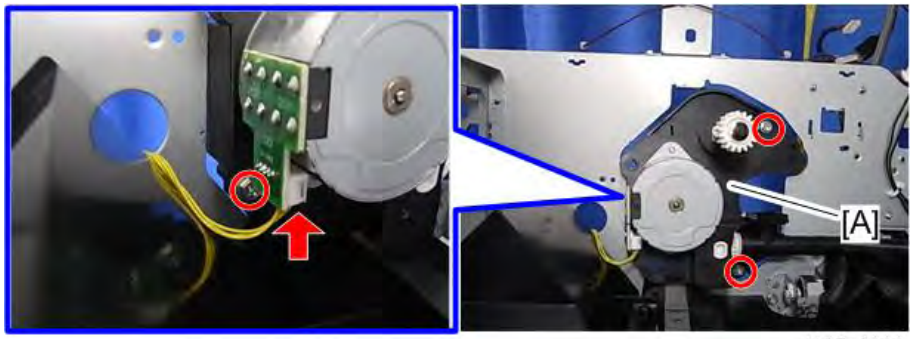


d197z0475

Toner Supply Motor

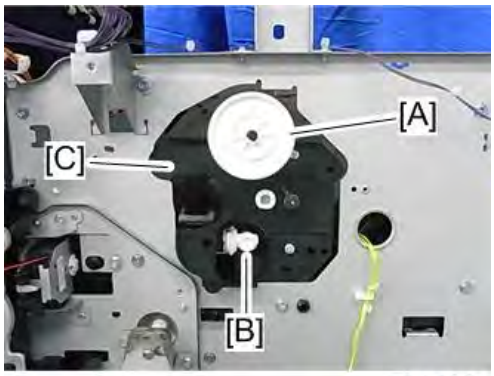
1. Remove the toner hopper. (Toner Hopper)

2. Remove the screws and connector on the gearbox [A]. (×3, ×1)



d197z0111

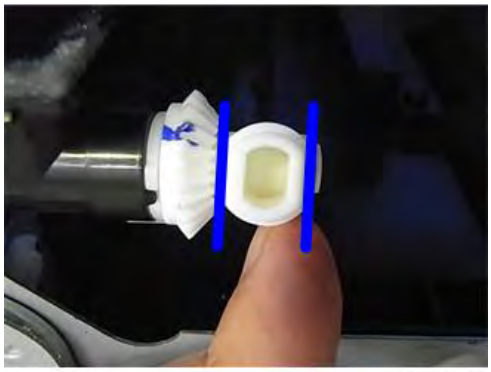
3. Remove the gear [A] and part [B] from the gear box cover [C].



d197z0462

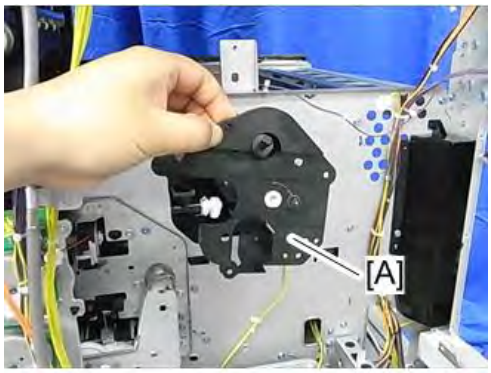
Note

- Make sure that the angle of the part [B] is as shown below when attaching the part [B] to the gear box cover.



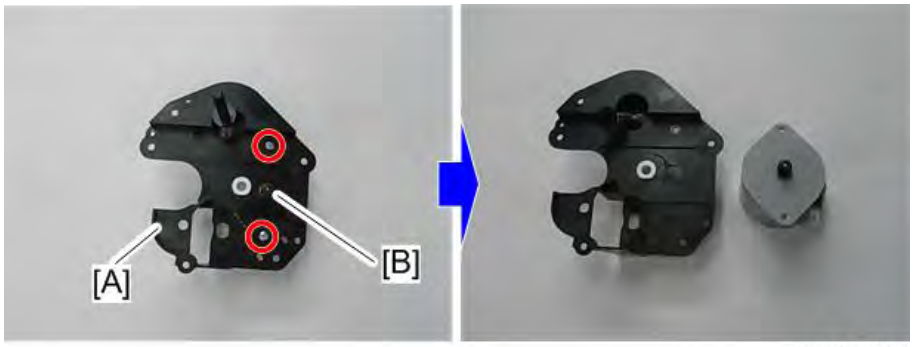
d197z0463

4. Remove the gear box cover [A].



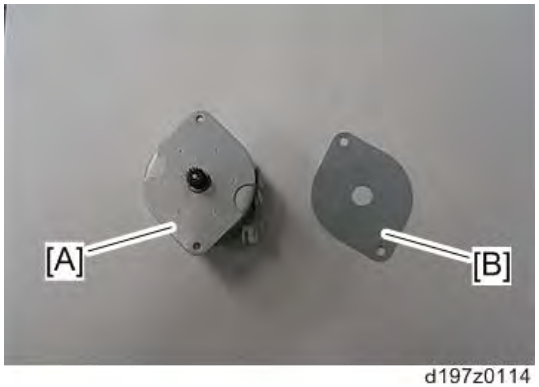
d197z0464

5. Remove the toner supply motor [B] with its spacer from the gear box cover [A]. (×2)



d197z0465

6. Remove the spacer [B] from the toner supply motor [A].



d197z0114

Fusing Unit

Fusing Unit

Replacement

⚠CAUTION

- In 100 V models, only one of the AC lines for the fusing unit is shut off when you turn off the main power; the other line carries current even when you turn off the main power switch. Because of this, turn off the main power switch, and also always pull out the AC power cord from the wall socket before doing replacement.
- Because there is a danger of burns on contact with hot parts of the fusing unit, start work when the temperature drops to a low enough temperature.
- To clear SC544-02 or SC554-02, replace the fusing unit or install a fuse (provided in the heating sleeve belt unit) in the fusing unit. If you will install a new fusing unit, follow the procedure below to clear SC544-02 or SC554-02.
  1. Install a new fusing unit.
  2. Clear SC544-02 or SC554-02 with SP5-810-002
  3. Turn the machine off and on.

Note

- MP 2555 SP/3055 SP/3555 SP
  When the fusing unit is used past its PM cycle, the fusing unit may break, causing a service call. Therefore, the machine displays a warning on the operation panel at 240K pages and stops at 260K pages.
- MP 4055 SP/5055 SP/6055 SP
  When the fusing unit is used past its PM cycle, the fusing unit may break, causing a service call. Therefore, the machine displays a warning on the operation panel at 320K pages and stops at 350K pages.

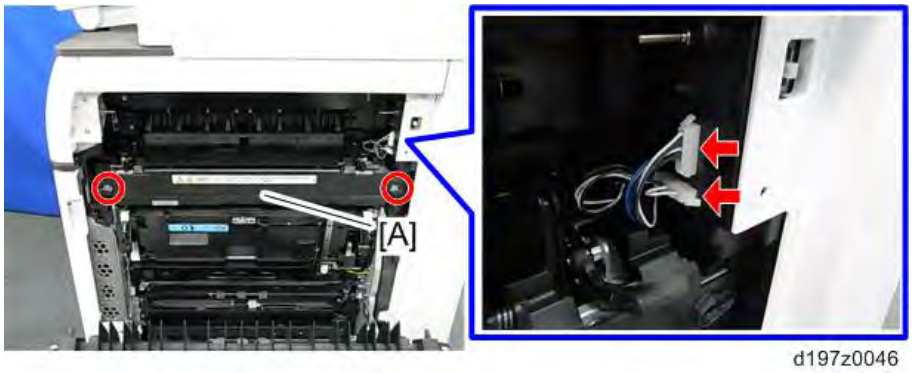
Note

- If you replace a whole fusing unit, you do not need to perform SP3-701. This is because the machine detects a new unit automatically. If you replace only a part of the fusing unit, however, such as the pressure roller, you must set SP3-701 for that part.

1. Open the right cover.

2. Remove the screws on the fusing unit [A] and disconnect the connectors (x2, x2).

- Do not pull out the fusing unit now. The fusing unit is still connected to the machine.



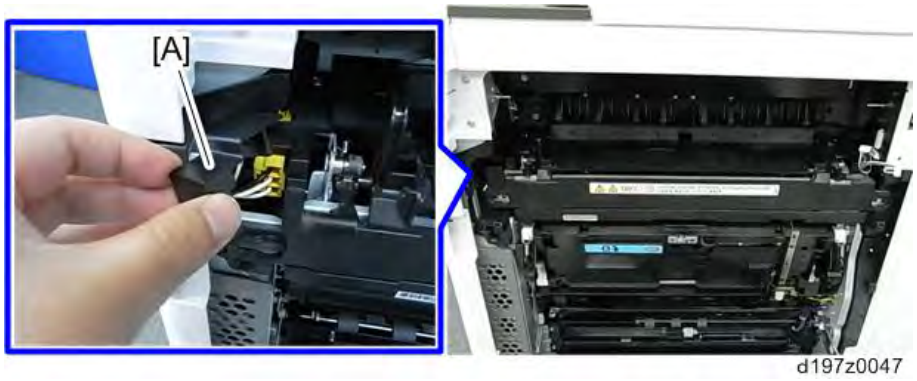
d197z0046

Note

- When disconnecting the harness, hold the connector as shown below in order to avoid breaking the connector pins.

d284a4109

3. Remove the fusing unit connector cover [A].

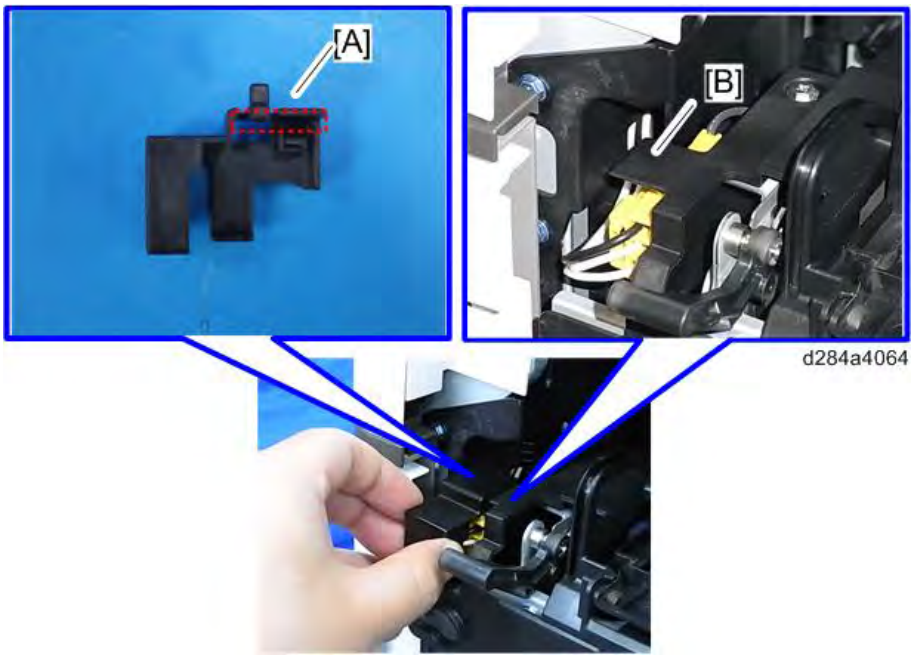


d197z0047

Note

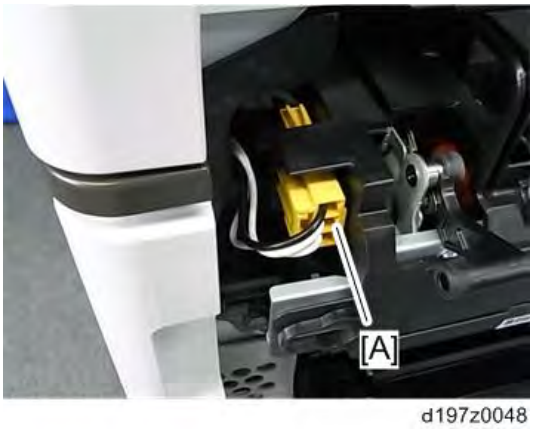
- Attach the fusing unit connector cover by fitting the space on the connector cover [A] (surrounded

by red dashes in the diagram) and the frame of the fusing unit [B] together when installing.

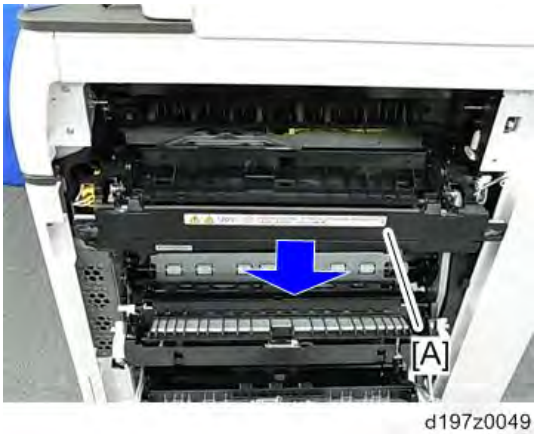


- The connector cover must be attached **before** screwing in the fusing unit.

4. Remove the connector [A]. (x1)



5. Pull out the fusing unit [A].

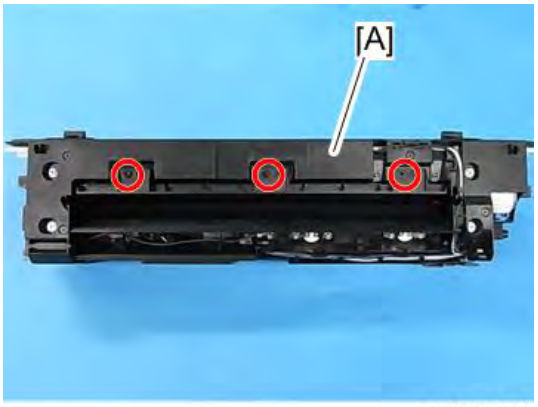


Note

- When installing the fusing unit, attach the rear screw first, then attach the front screw.

Fusing Entrance Guide Plate

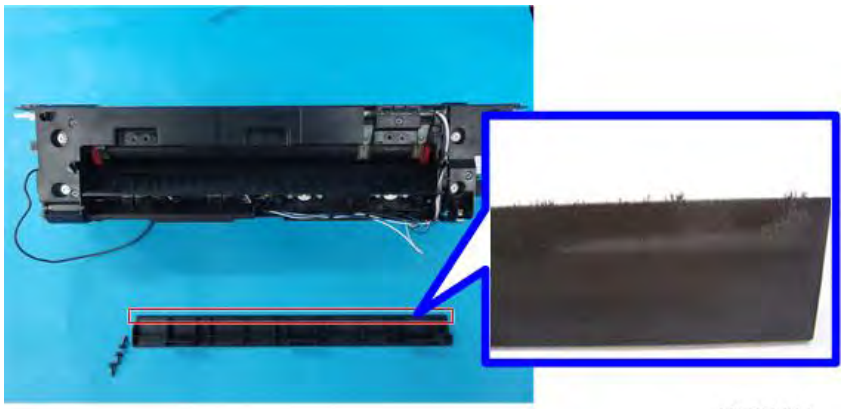
1. Remove the fusing unit. (Fusing Unit)
2. Remove the fusing entrance guide plate [A]. (x3)



d197z0050

Cleaning the Fusing Entrance Guide Plate

Carefully remove toner adhering as shown in the diagram below with a dry cloth. Then, wipe with a cloth moistened with alcohol.


d197f4001

Fusing Exit Guide Plate

1. Remove the fusing unit. (Fusing Unit)
2. Open the fusing exit guide plate [A].

d197z0051

Note

- Wipe clean with a dry cloth. Then wipe clean with a cloth dampened with alcohol.

Fusing Upper Cover

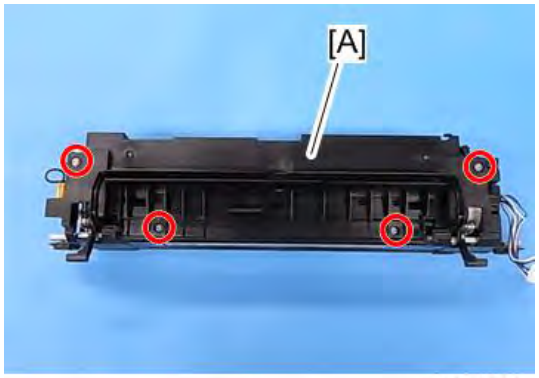
1. Remove the fusing unit. (Fusing Unit)
2. Release the two harnesses [A].

d197z0054

3. Remove the connector [A] while holding its sides. (x1)

d197z0055

4. Remove the fusing upper cover [A]. (x4)



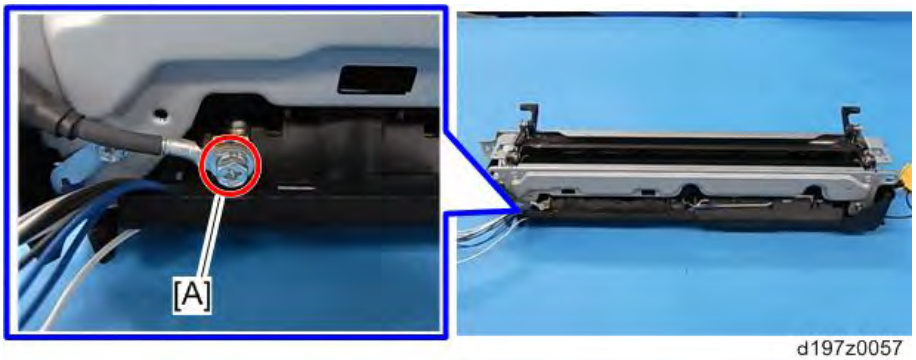
d197z0056

Note

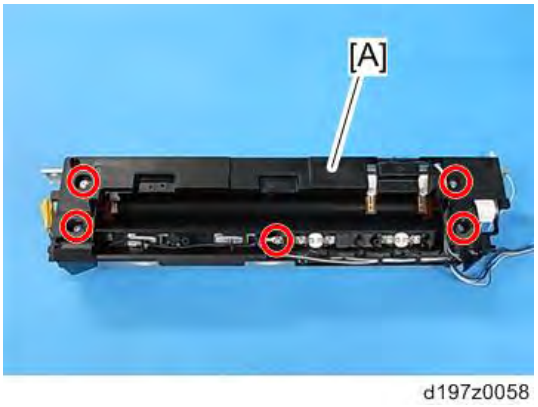
- You must route the harnesses for the pressure roller temperature sensor and the fusing roller temperature sensor correctly when reassembling the fusing unit. See the notes when reassembling the fusing unit. (Notes When Reassembling the Fusing Unit)

Fusing Lower Cover

1. Remove the fusing unit. (Fusing Unit)
2. Remove a screw of the grounding wire [A]. (x1)

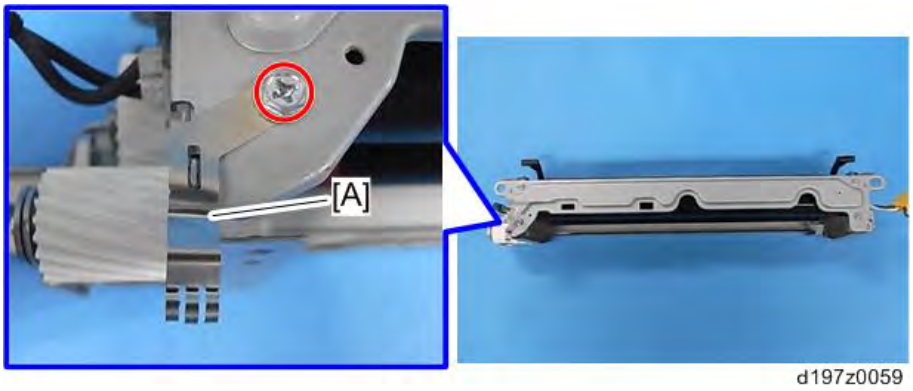


3. Remove the fusing lower cover [A]. (x1, x5)



Note

- The grounding plate [A] is uncovered after the fusing lower cover is removed. Be careful not to damage it. (x1)



Note

- You must route the harnesses for the pressure roller temperature sensor and the fusing roller temperature sensor correctly when reassembling the fusing unit. See the notes when reassembling the fusing unit. (Notes When Reassembling the Fusing Unit)

Heating Sleeve Belt Unit

Preparation

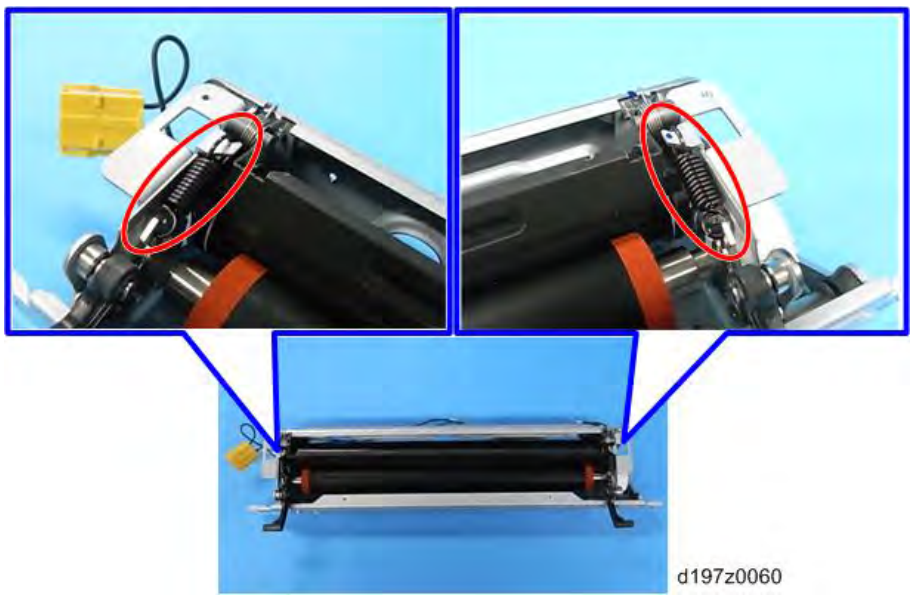
- Set SP3-701-116 to “1” and turn the main power OFF before replacing.
- If you have to turn the power on again before replacing the part, execute the SP again before replacing the part.
- After replacing the unit, turn the main power ON.

⚠CAUTION

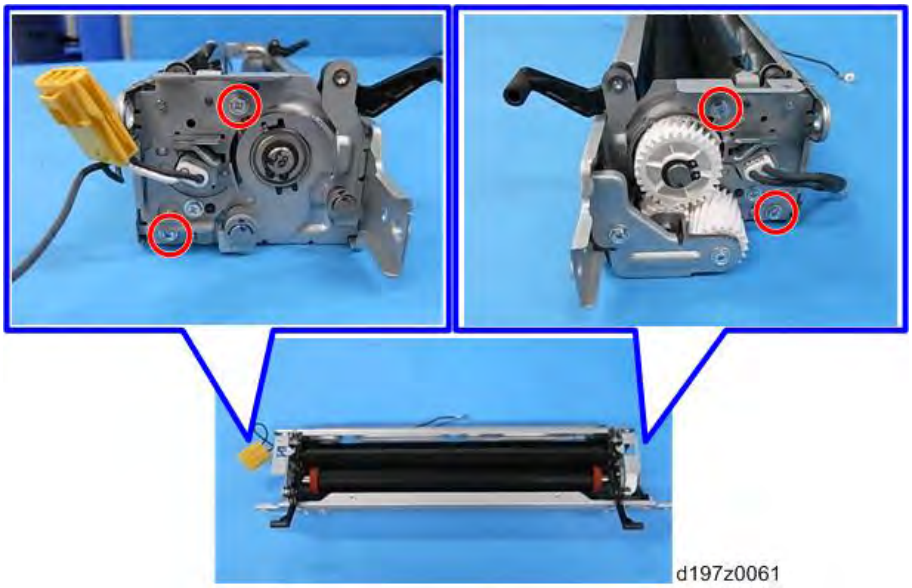
- To clear SC544-02 or SC554-02, replace the fusing unit or install a fuse (provided in the heating sleeve belt unit) in the fusing unit.
- When clearing SC544-02 or SC554-02 by installing a fuse (provided in the heating sleeve belt unit) in the fusing unit, see To Clear SC544-02 or SC554-02.
- The new unit detection fuse packed with the heating sleeve belt unit is used to cancel SC544-02/554-02. Discard the fuse if these SCs did not occur.
- When replacing the heating sleeve belt unit at EM replacement, installing a fuse is not necessary. Do not use the fuse for EM replacement.

Replacement

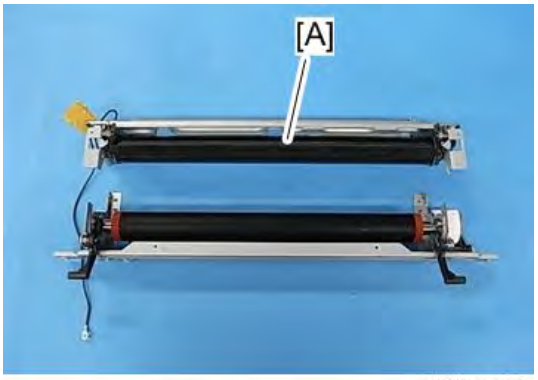
1. Remove the fusing upper cover. (Fusing Upper Cover)
2. Remove the fusing lower cover. (Fusing Lower Cover)
3. Remove the two pressure springs. (x2)



4. Remove the screws from left and right frames. (x2 for each frame)



5. Remove the heating sleeve belt unit [A].



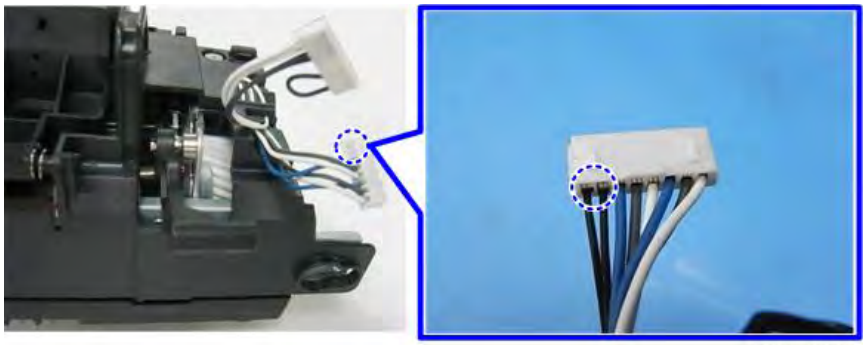
To Clear SC544-02 or SC554-02

⚠CAUTION

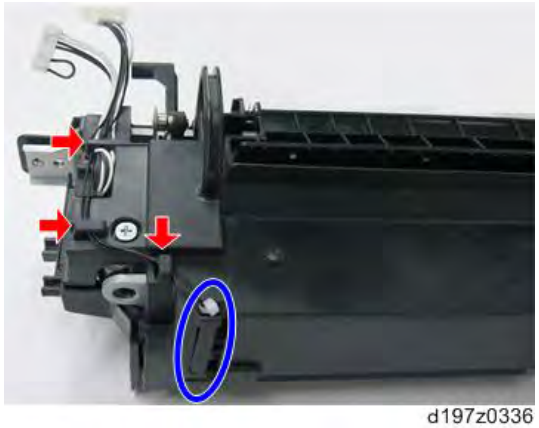
- To clear SC544-02 or SC554-02, attach the new unit detection fuse provided with the heating sleeve belt unit or replace the fusing unit.

1. Prepare a new fuse provided with the heating sleeve belt unit.

2. Connect the fuse pins into the fusing unit connector.



3. Route the harness of the fuse through the slits (indicated by arrows).
4. Install the fuse in the notch (indicated by a blue circle).



5. Reassemble the fusing unit.
6. Install the fusing unit in the machine.
7. Enter the SP mode, and then clear SC544-02 or SC554-02 with SP5-810-002.
8. Turn the machine off and on.

Pressure Roller and Pressure Roller Bearings

Adjustment before Replacing the Pressure Roller and Pressure Roller Bearings

Before replacing the pressure roller, set SP3-701-118 to "1" and switch the power OFF. Then replace the pressure roller and turn the main power ON.

Before replacing the pressure roller bearings, set SP3-701-119 to "1" and turn the main power OFF. Then replace the pressure roller bearings and turn the main power ON.

If you have to turn the power on again before replacing the part, execute the SP again before replacing the part.

Replacement

1. Remove the heating sleeve belt unit. (Heating Sleeve Belt Unit)

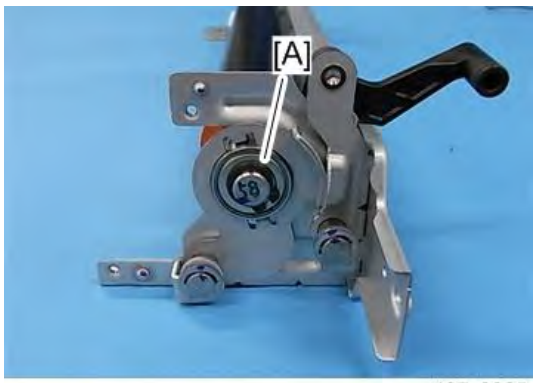
2. Remove the pressure roller gear [A]. (C-ring x1)

d197z0063

3. Remove the pressure roller rear bearing [A].

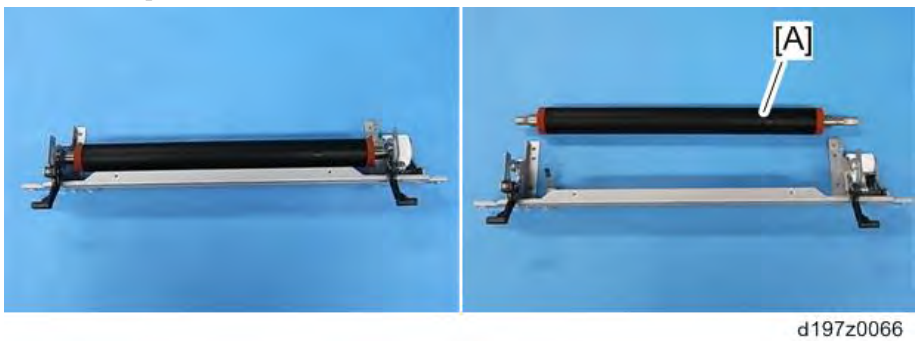
d197z0064

4. Remove the pressure roller front bearing [A]. (C-ring x1)



d197z0065

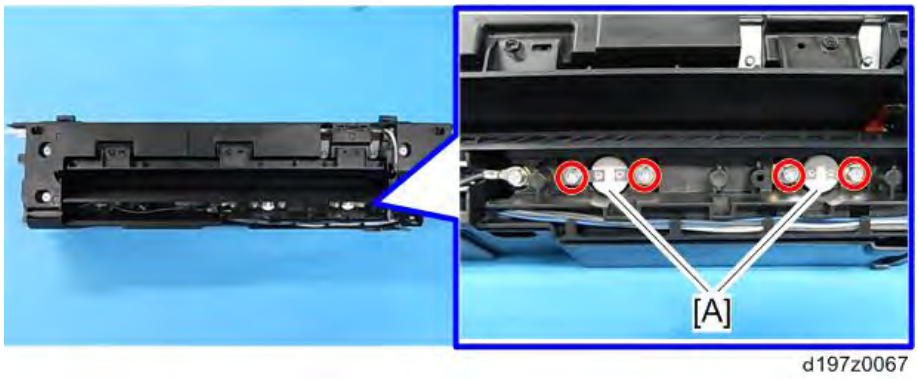
5. Remove the pressure roller [A].



d197z0066

Thermostat Unit

1. Remove the fusing unit. (Fusing Unit)
2. Remove the thermostats [A]. (x2 for each thermostat)

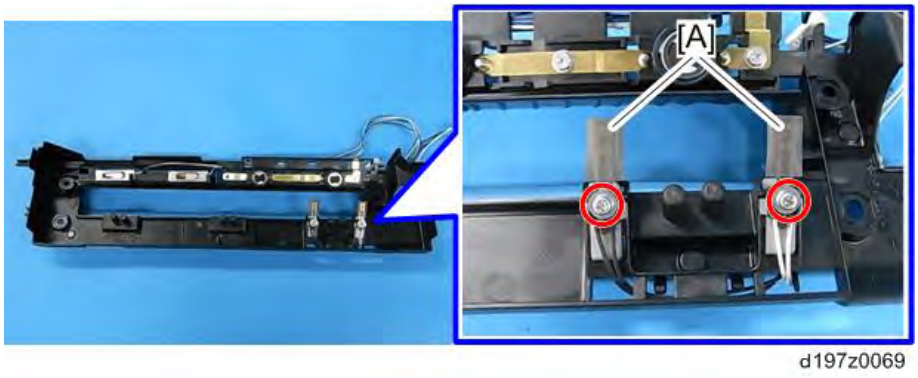


Fusing Roller Temperature Sensors

1. Remove the fusing lower cover. (Fusing Lower Cover)
2. Remove the fusing roller temperature sensors [A].

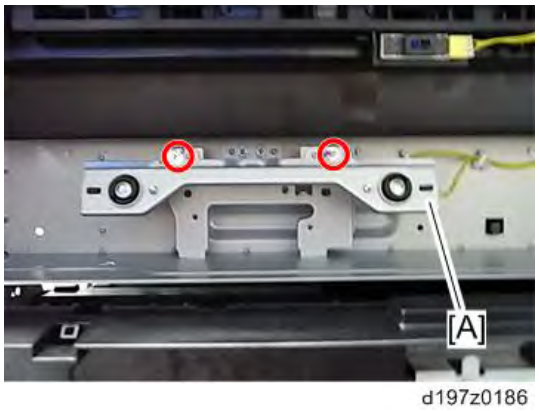
Pressure Roller Temperature Sensors

1. Remove the fusing lower cover. (Fusing Lower Cover)
2. Remove the pressure roller temperature sensors. (x1, for each)

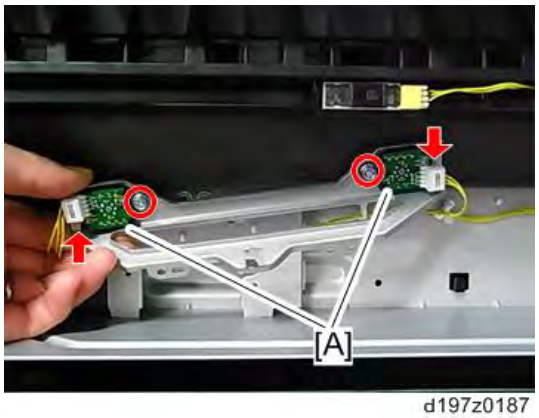


Fusing Thermopiles

1. Remove the fusing unit. (Fusing Unit)
2. Remove the fusing thermopile unit [A]. (x2)



3. Remove the fusing thermopiles [A]. (x2, x2)



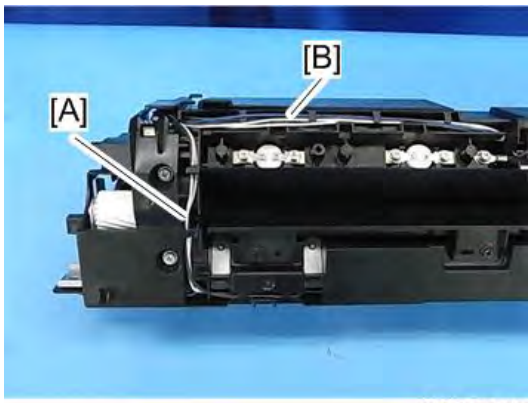
Notes When Reassembling the Fusing Unit

Route the harnesses for the pressure roller temperature sensor [A] and the fusing roller temperature sensor [B] correctly when reassembling the fusing unit.

Harness [A] for the pressure roller temperature sensor has black and white wires. Routing starts from the bottom of the fusing unit, then the rear, and to the side.

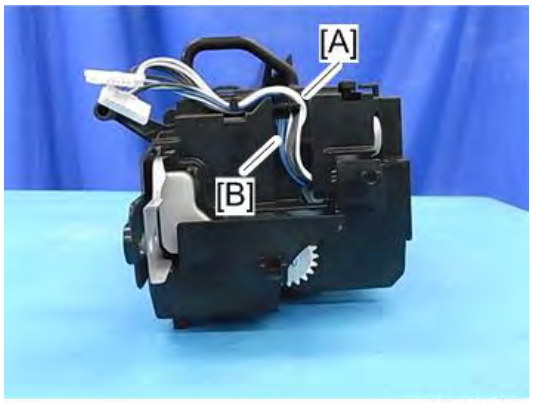
Harness [B] for the fusing roller temperature sensor has black, white, and blue wires. Routing starts from the bottom of the fusing unit, then the rear, and to the top.

Harness route: when looking at the bottom of the fusing unit



d197z0438

Harness route: when looking at the side of the fusing unit



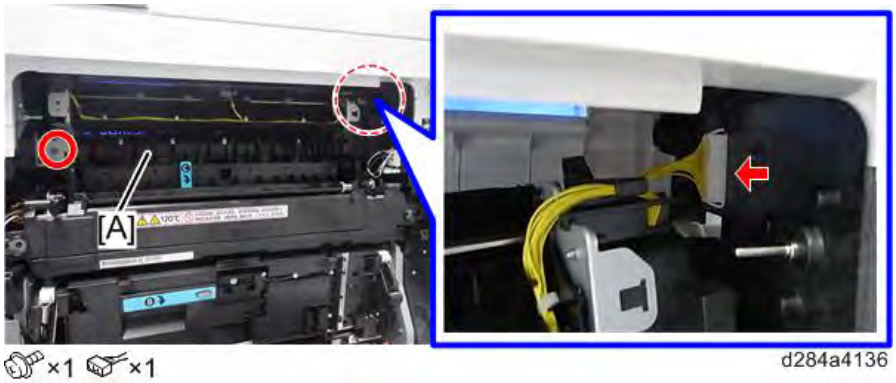
d197z0437

Paper Exit

Paper Exit Unit

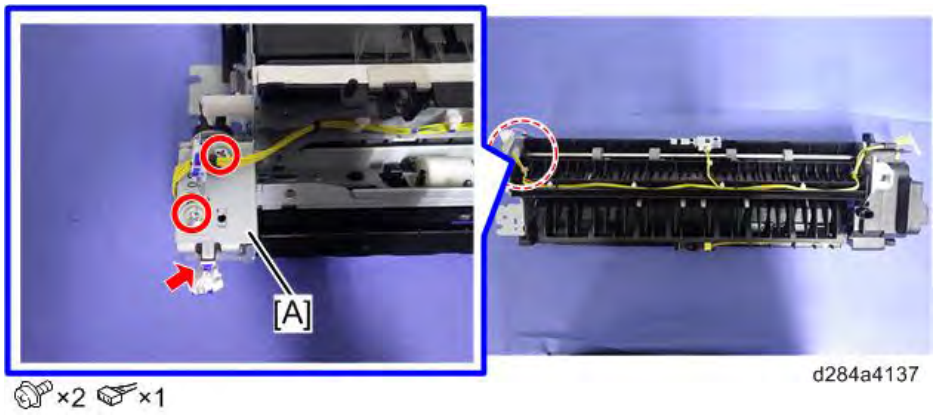
1. Open the right cover.
2. Remove the fusing unit. (Fusing Unit)
3. Remove the inner cover [A].

4. Remove the paper exit cover. (Paper Exit Cover)
5. Remove the paper exit unit [A].



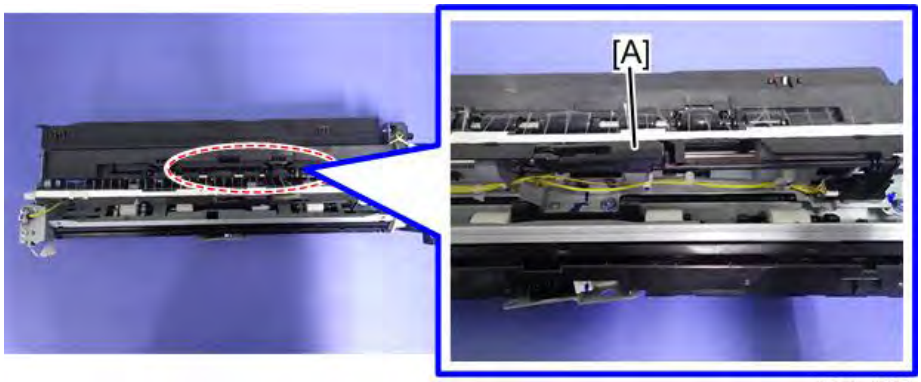
Paper Exit Switching Solenoid

1. Remove the paper exit unit. (Paper Exit Unit)
2. Remove the paper exit switching solenoid [A].



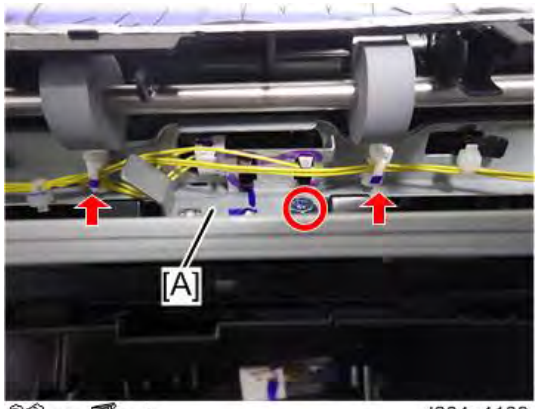
Paper Exit Sensor

1. Remove the paper exit unit. (Paper Exit Unit)
2. Remove the feeler [A].



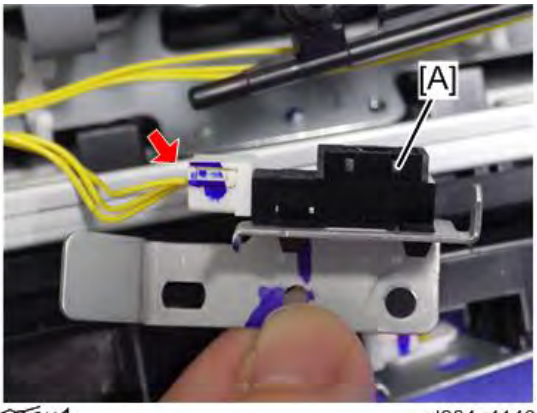
d284a4138

3. Remove the paper exit sensor with bracket [A].



×1 ×2 d284a4139

4. Remove the paper exit sensor [A].

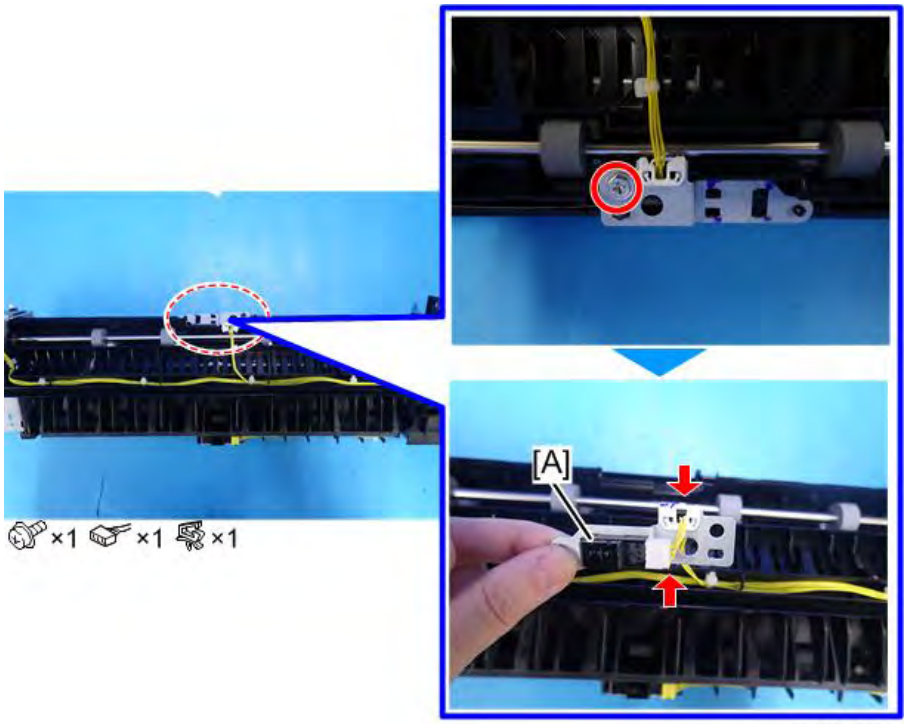


×1 d284a4140

Reverse Sensor

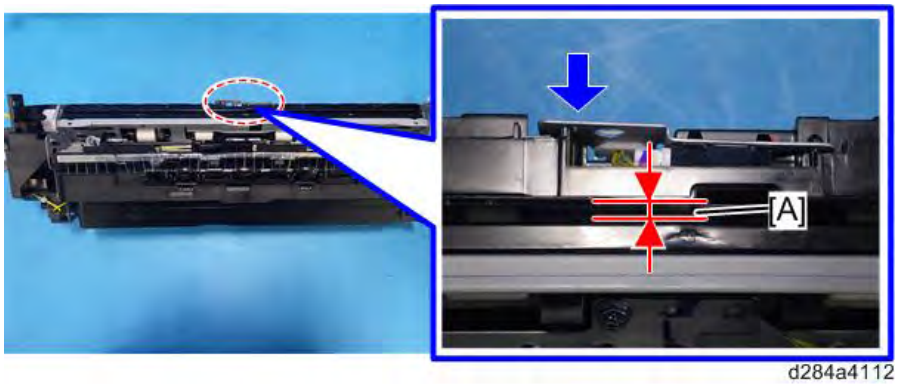
1. Remove the paper exit unit. (Paper Exit Unit)

2. Remove the reverse sensor [A].



d284a4065

When attaching the reverse sensor, if you screw too tightly in the direction of the blue arrow, it may cause the gap between the guide plates [A] to be too narrow, resulting in paper jams. Make sure that there is a gap [A] of 3mm or more after you fasten the screw.

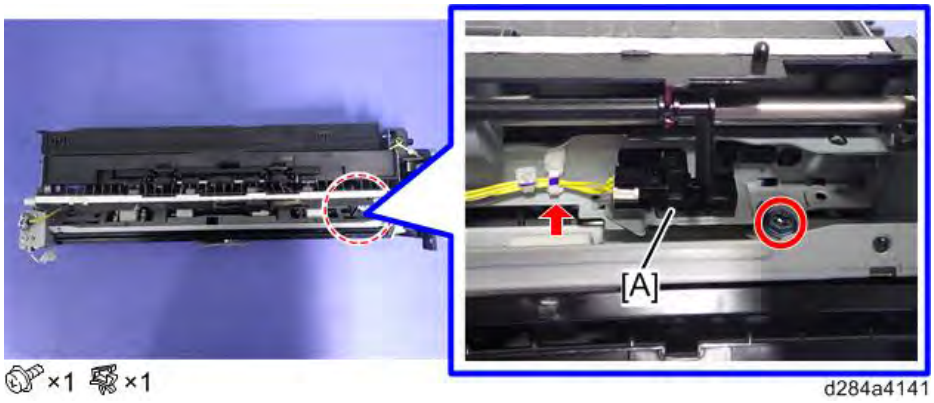


d284a4112

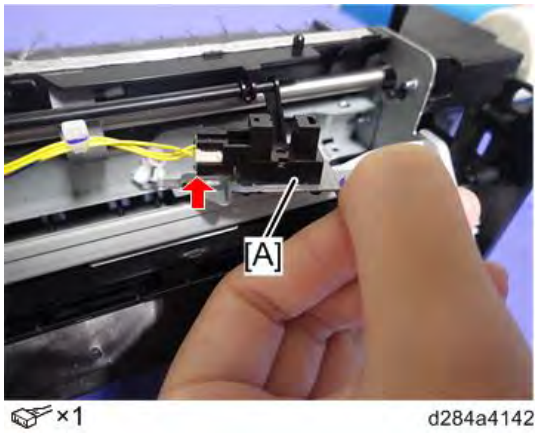
Paper Exit Full Sensor

1. Remove the paper exit unit. (Paper Exit Unit)

2. Remove the paper exit full sensor with bracket [A].



3. Remove the paper exit full sensor [A].



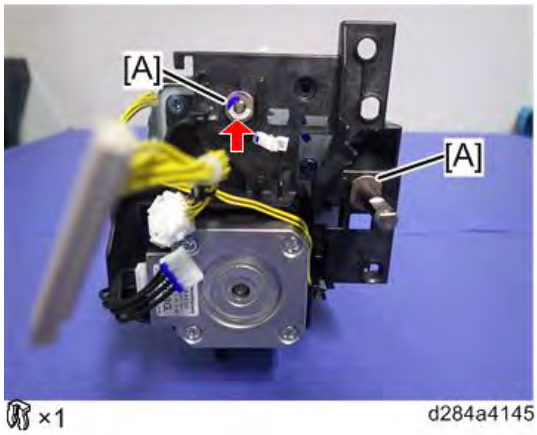
Reverse Motor

1. Remove the paper exit unit. (Paper Exit Unit)

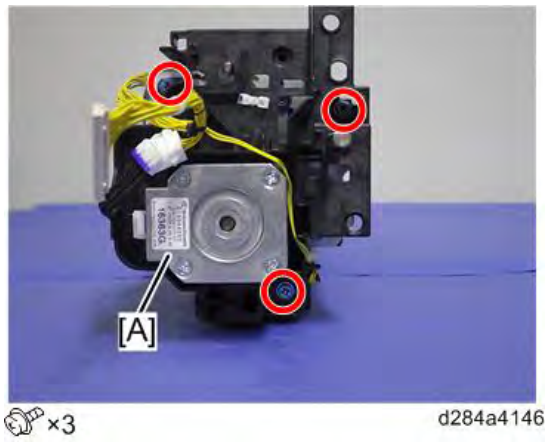
2. Remove the gear [A].

3. Release the harness.

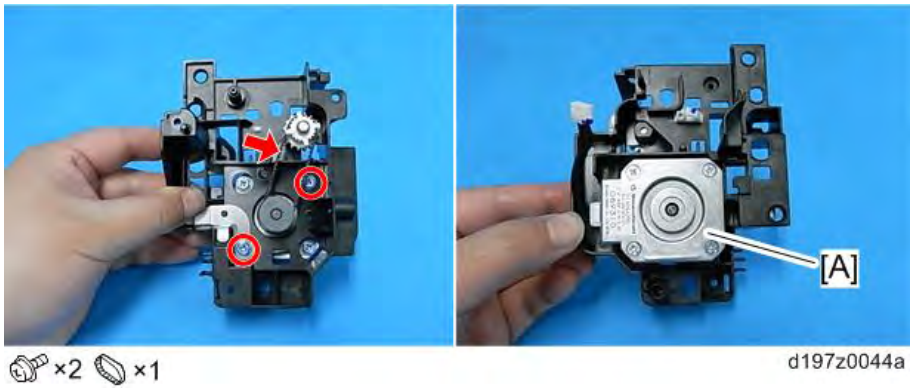
4. Remove the bearings [A].



5. Remove the reverse motor with bracket [A].



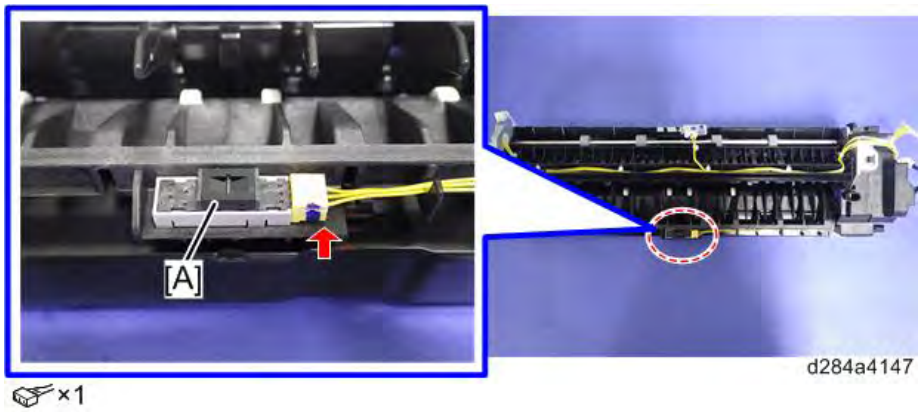
6. Remove the reverse motor [A].



Fusing Exit Sensor

1. Remove the paper exit unit. (Paper Exit Unit)

2. Remove the fusing exit sensor [A].



Paper Feed

Note

- The 1st paper feed unit can be removed without removing the duplex unit (just open the right cover), and you can remove the paper feed unit after pulling out the paper tray.
- Note that the 1st paper feed unit and 2nd paper feed unit are not interchangeable.

Paper Feed Unit

1st Paper Feed Unit

1. Remove the right cover. (Right Cover)
2. Pull out the 1st paper feed tray.
3. Remove the screws attached to the 1st paper feed unit [A] (x2).

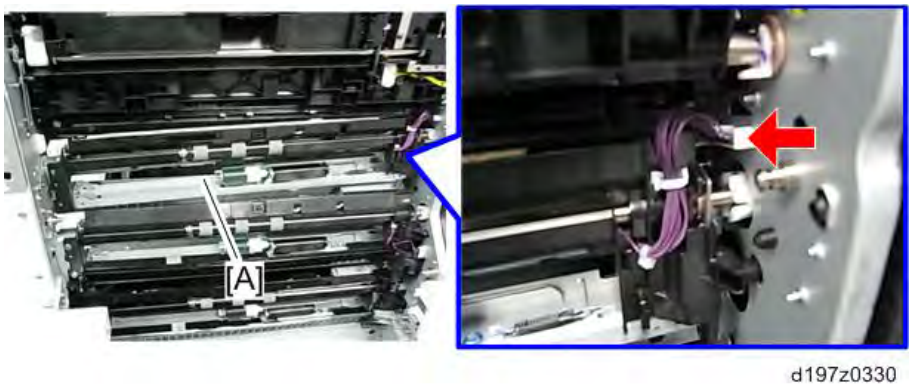
4. Pull out the 1st paper feed unit [A] slightly toward the front, and then take off the paper feed guide plate [B].
   - Release the rear side first to remove the paper feed guide plate.

Note

- The following picture shows the shape of the guide plate at the rear side.

d197z0007

5. Remove the 1st paper feed unit [A]. (x1)

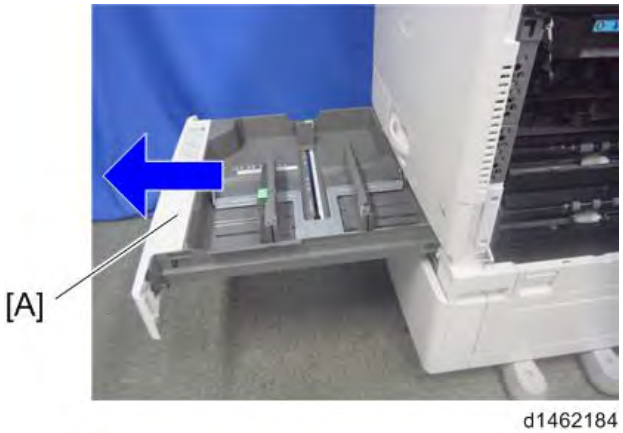


d197z0330

2nd Paper Feed Unit

1. Remove the right cover. (Right Cover)

2. Pull out the 2nd paper feed tray [A].

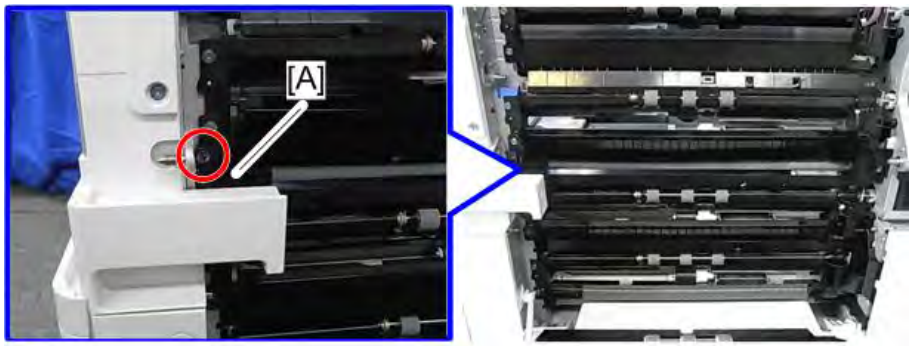


d1462184

Note

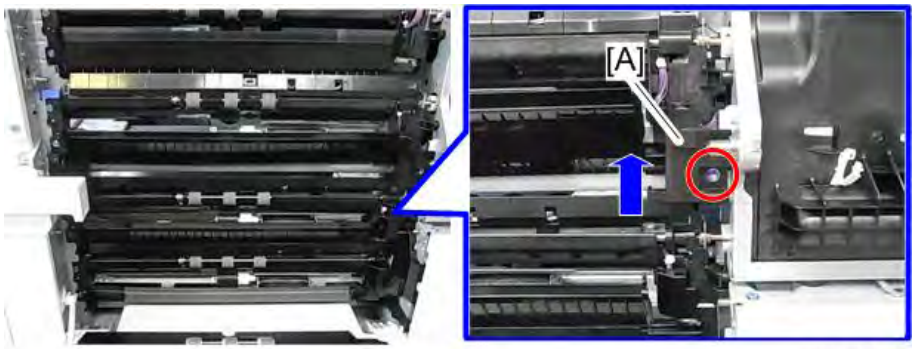
- Depending on the model, remove the right lower cover or open the paper transport cover.

3. Remove the bracket [A]. (×1)



d197z0441

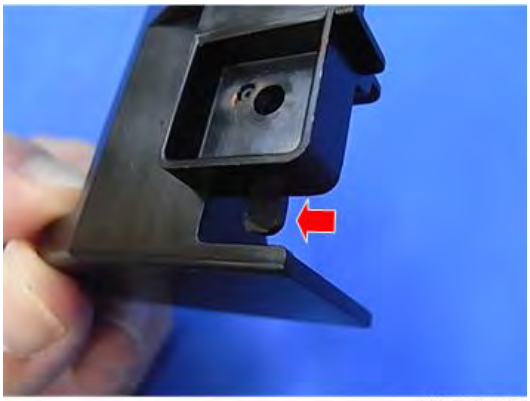
4. Lift the harness guide [A], and then remove it (×1).



d197z0442

Note

- The harness guide has a claw, so make sure that you do not break it when removing.



d197z0443

5. Remove the paper feed guide plate [A].

- Release the rear side first to remove the paper feed guide plate.

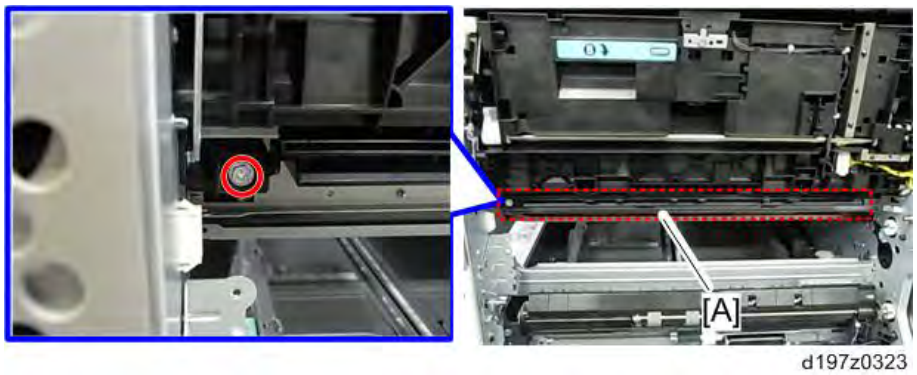
d197z0444

6. Remove the 2nd paper feed unit [A]. (×2, x1)

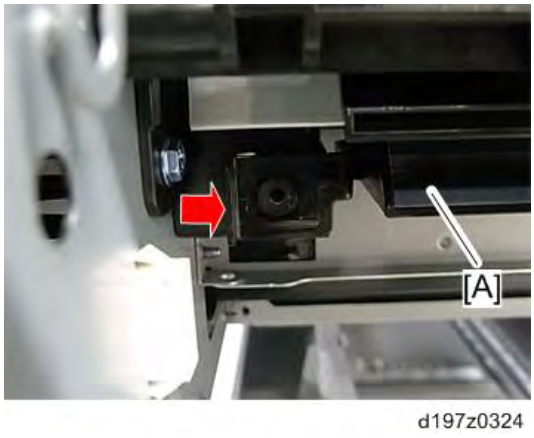
Paper Dust Collection Unit

1. Open the right cover.

2. Remove the screw on the paper dust collection unit [A]. (×1)

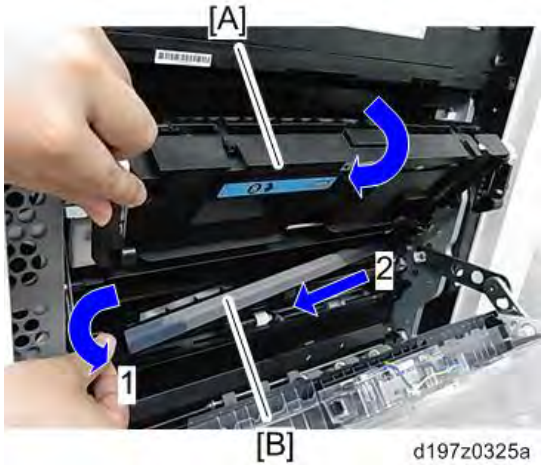


3. Release the tab on the paper dust collection unit [A] (×1).



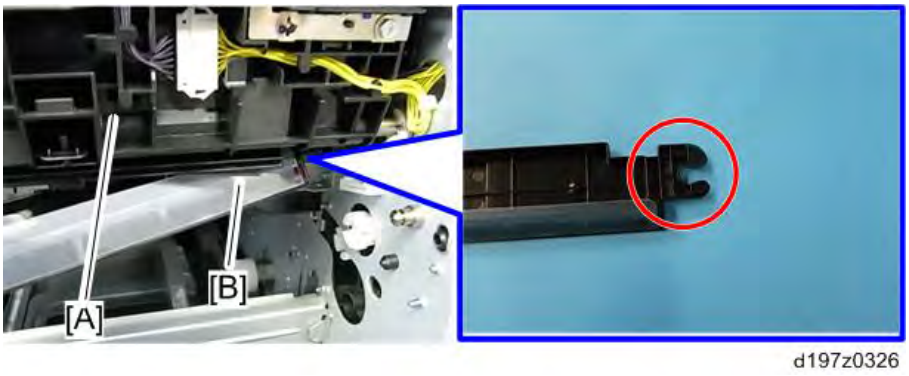
4. While slightly opening and holding the transfer unit [A] with your hand, remove the paper dust collection

unit [B] in the order shown in the picture below.



Note

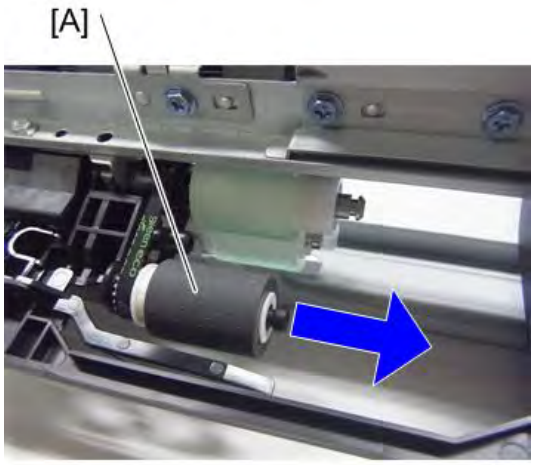
- The right side of the paper dust collection unit has a C-shaped cutout. Do not pull the unit by force during removal. When installing, open the transfer unit [A] to prevent the sheet [B] from breaking.



Pick-up Roller, Paper Feed Roller, Separation Roller, Torque Limiter

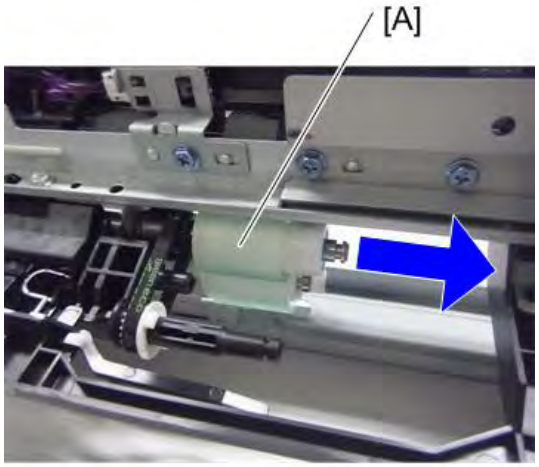
1. Remove the roller holder [A]. (×1)

2. Remove the pickup roller [A].



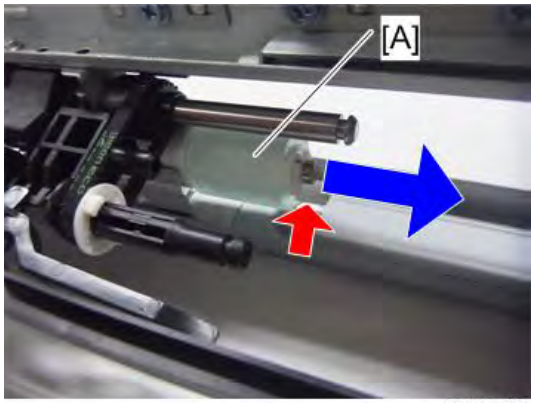
d1462189

3. Remove the paper feed roller [A].



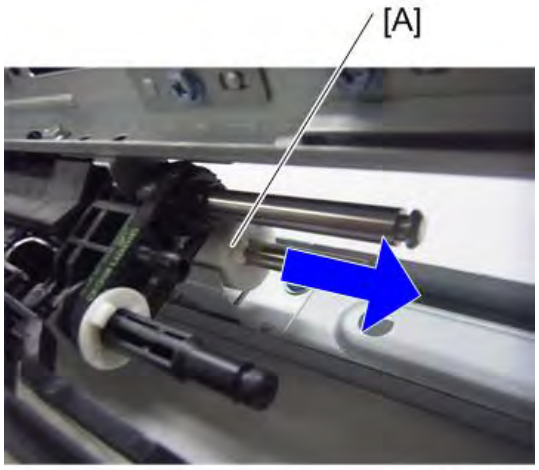
d1462190

4. Remove the separation roller [A]. (×1)



d1462191

5. Remove the torque limiter [A].

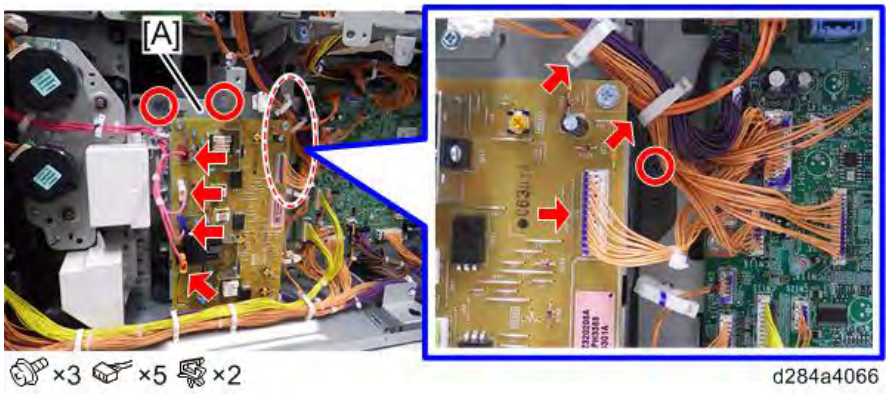


1st / 2nd Paper Feed Tray Lift Motor

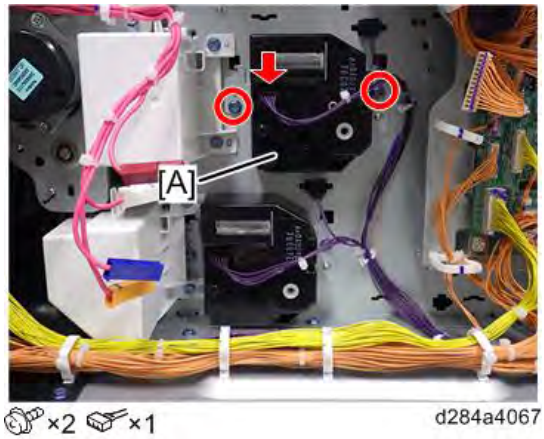
1. Remove the rear lower cover. (Rear Lower Cover)

2. Remove the development bearing cooling fan. (Development Bearing Cooling Fan (MP 4055 SP/5055 SP/6055 SP Only))

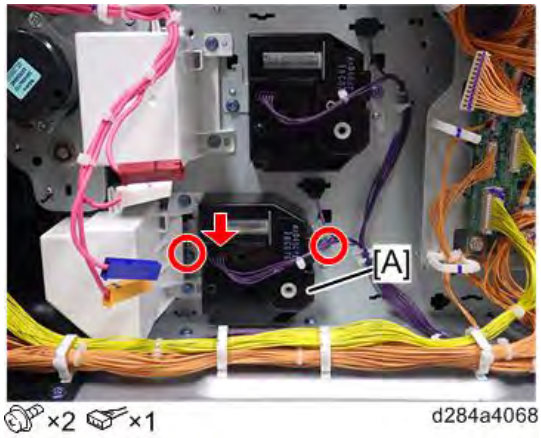
3. Remove the HVPS [A] along with the bracket.



4. Remove the 1st paper feed tray lift motor [A].



5. Remove the 2nd paper feed tray lift motor [A].



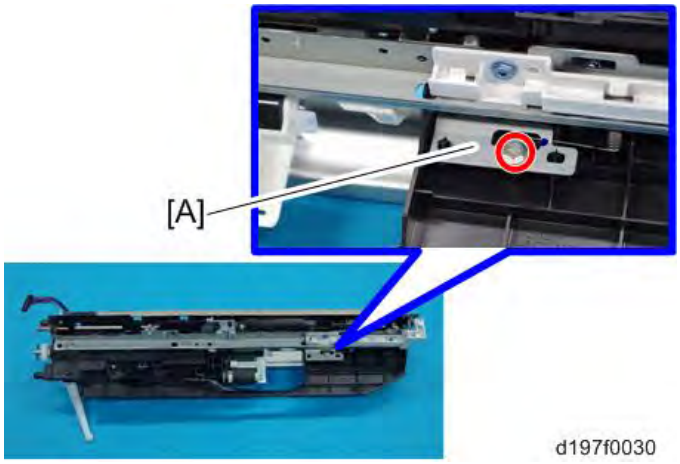
1st / 2nd Paper Feed Sensor

Note

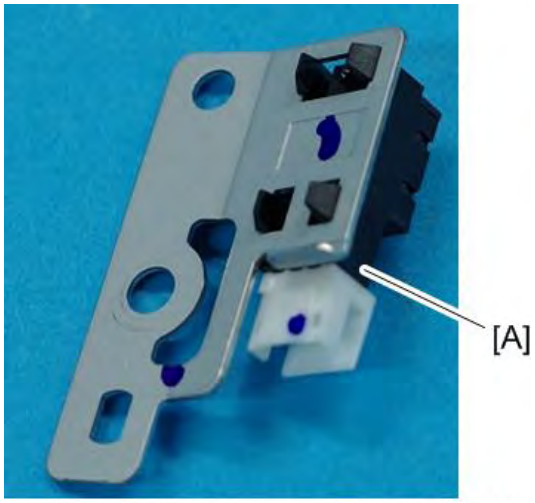
- There is no difference in removal procedure between 1st paper feed sensor and 2nd paper feed sensor.

1. Remove the paper feed unit. (Paper Feed Unit)

2. Remove the paper feed sensor bracket [A]. (×1, ×1)



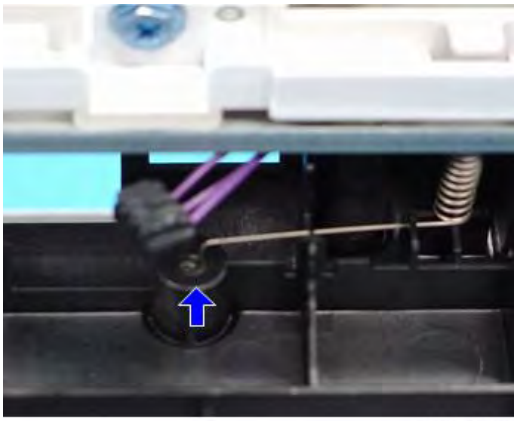
3. Remove the paper feed sensor [A] (hooks).



d197f0031

Note

- Make sure that the end of the spring on the sensor unit is in the hole.

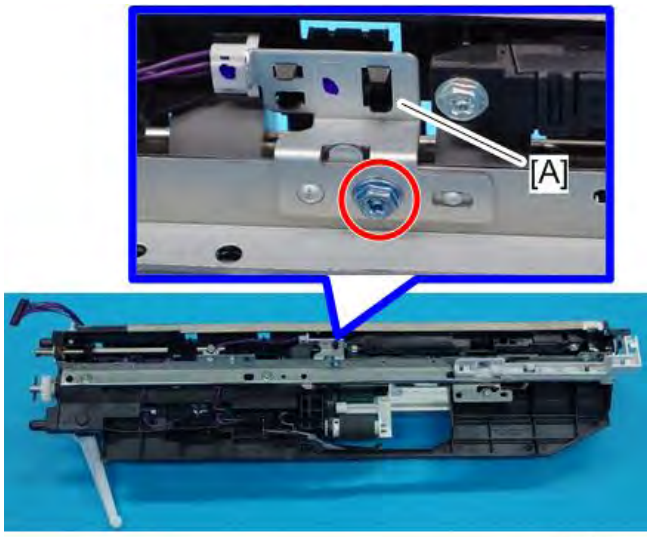


d197f0032

Vertical Transport Sensor

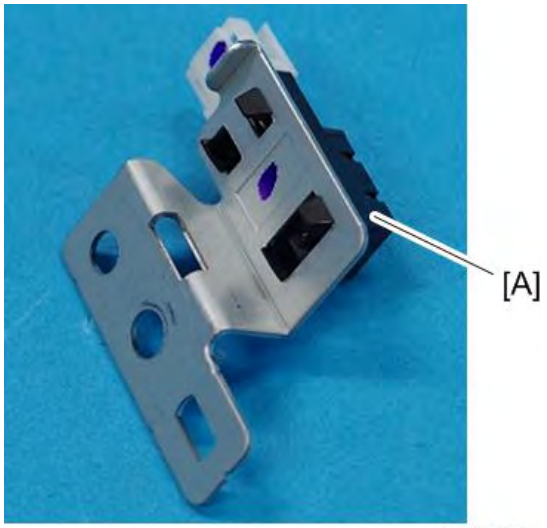
1. Remove the paper feed unit. (Paper Feed Unit)

2. Remove the vertical transport sensor unit [A]. (×1, ×1)



d197f0033

3. Remove the vertical transport sensor [A] (hooks).



d197f0034

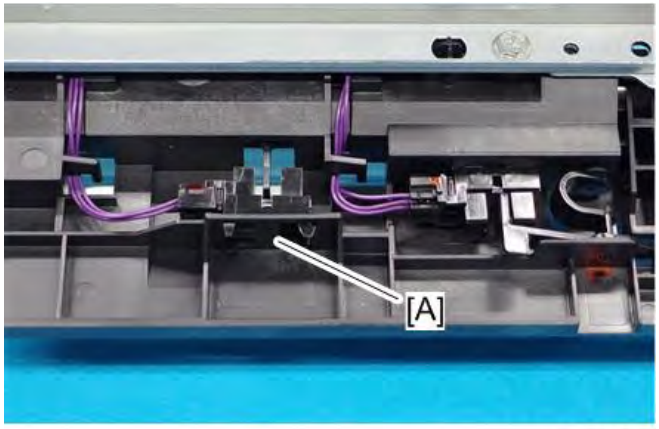
Limit Sensor

Note

- There are two limit sensors in this model but the removal procedure is the same.

1. Remove the paper feed unit. (Paper Feed Unit)

2. Remove the limit sensor [A]. (×1)



d197f0035

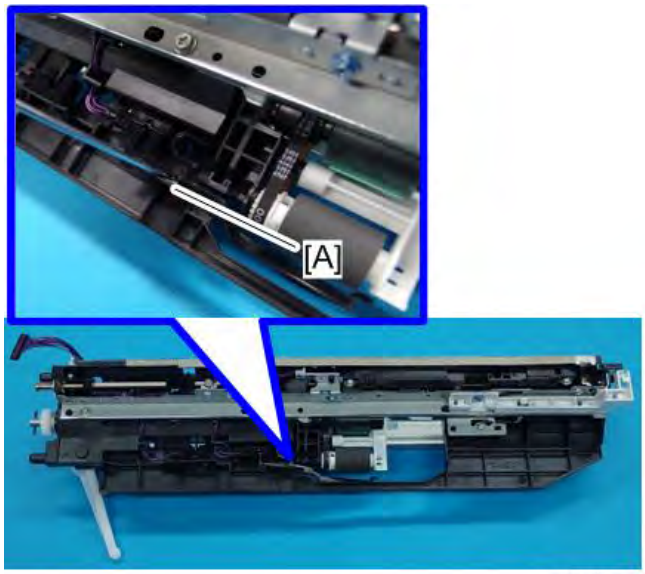
1st Paper End Sensor / 2nd Paper End Sensor

Note

- There is no difference in removal procedure between 1st paper end sensor and 2nd paper end sensor.

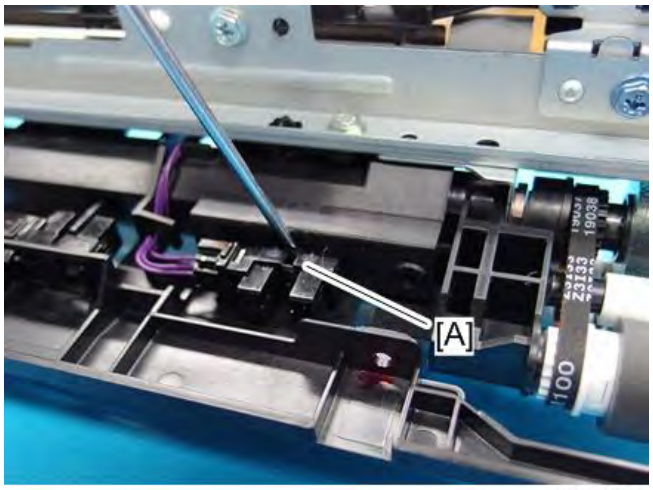
1. Remove the paper feed unit. (Paper Feed Unit)

2. Remove the feeler [A]. (×1)



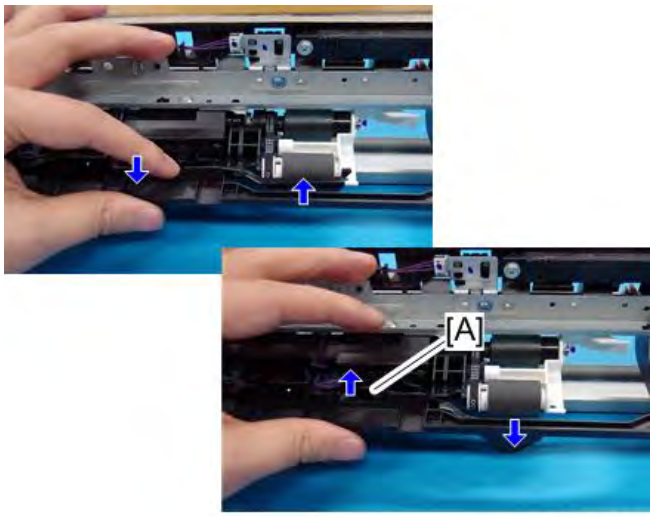
d197f0036

3. Remove the paper end sensor [A]. (×1)



d197f0037

4. After reinstalling the paper end sensor, check the operation of the actuator [A].



d197f0038

Registration Sensor

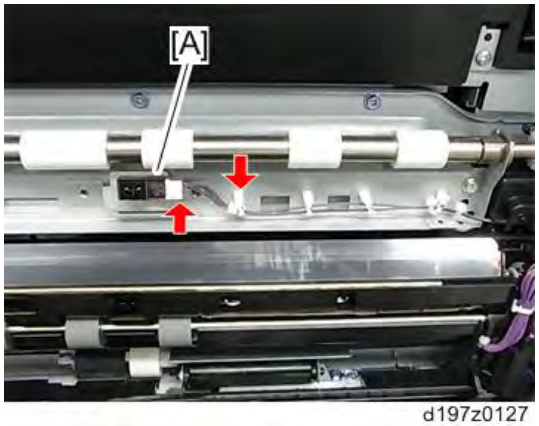
1. Open the right cover (Right Cover).

2. Remove the transfer unit. (Transfer Unit)

3. Remove the inner guide bracket [A]. (×2)

d197z0126

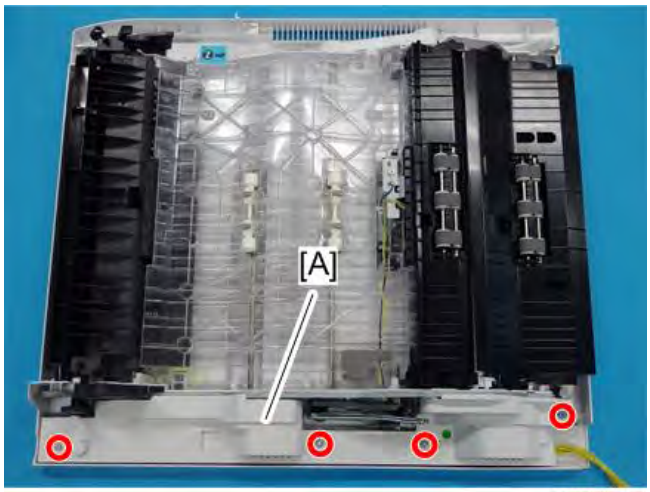
4. Remove the registration sensor [A](hooks, ×1, x1).



Duplex Unit

Duplex/By-pass Motor

1. Remove the right cover. (Right Cover)
2. Remove the duplex inner cover [A]. (×4)

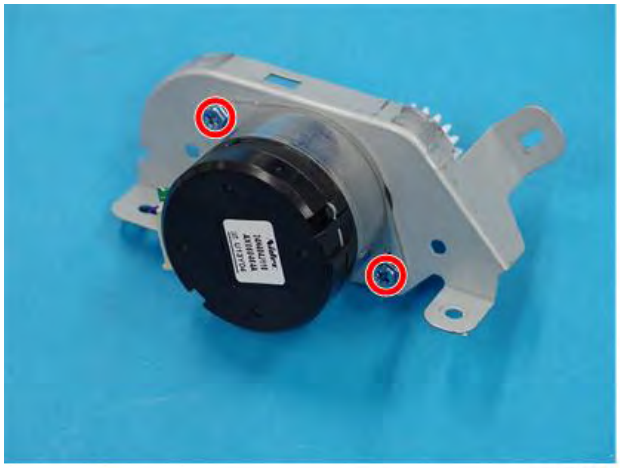


d197f0057

3. Remove the duplex/by-pass motor unit [A] (×3, ×1)

d197f0058

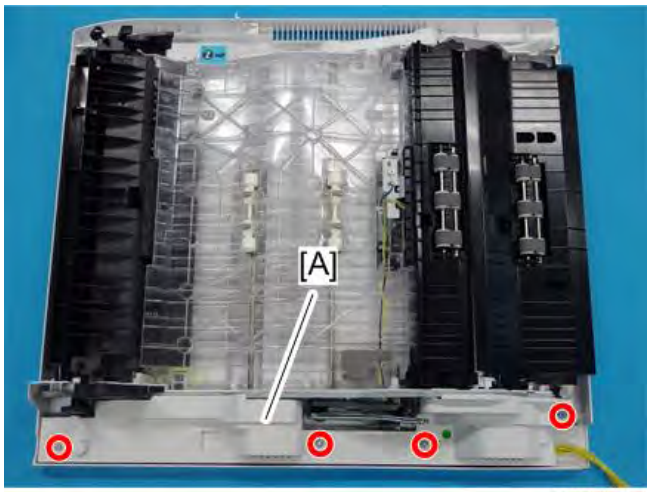
4. Remove the duplex/by-pass motor. (×2)



d197f0059

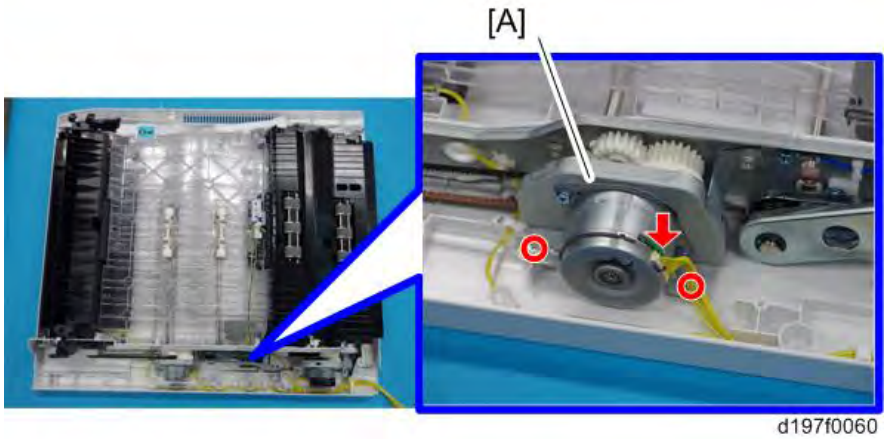
Duplex Entrance Motor

1. Remove the right cover. (Right Cover)
2. Remove the duplex inner cover [A]. (×4)



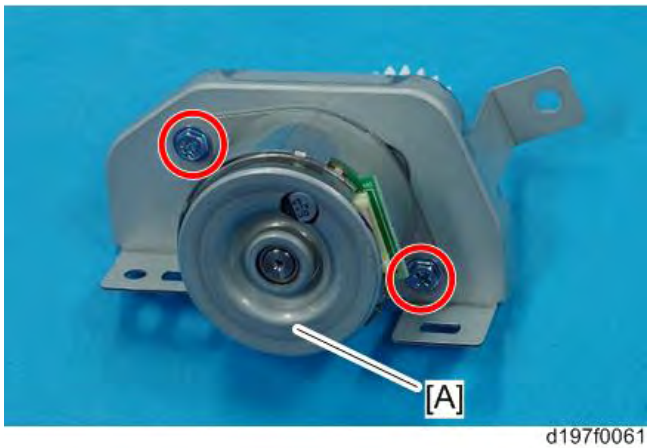
d197f0057

3. Remove the duplex entrance motor bracket [A]. (×2, ×1)



d197f0060

4. Remove the duplex entrance motor [A]. (×2)



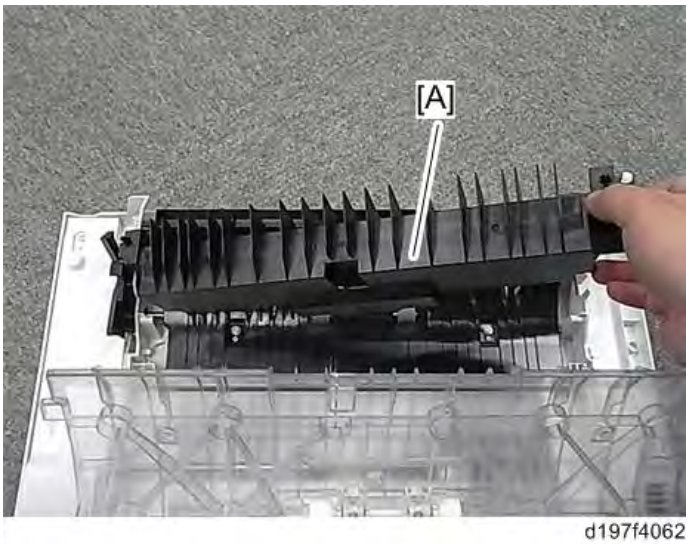
d197f0061

Duplex Entrance Sensor

1. Remove the right cover. (Right Cover)
2. Remove the screws and stoppers for the paper transfer guide plate [A]. (×2, ×1)

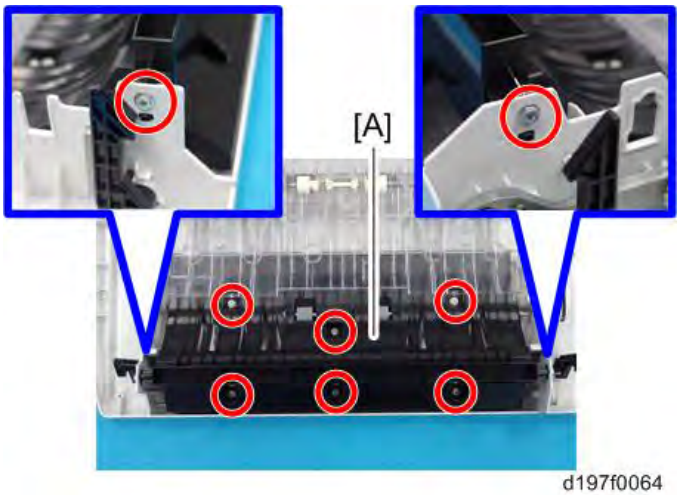
d197f0062

3. Remove the duplex inner entrance guide [A].

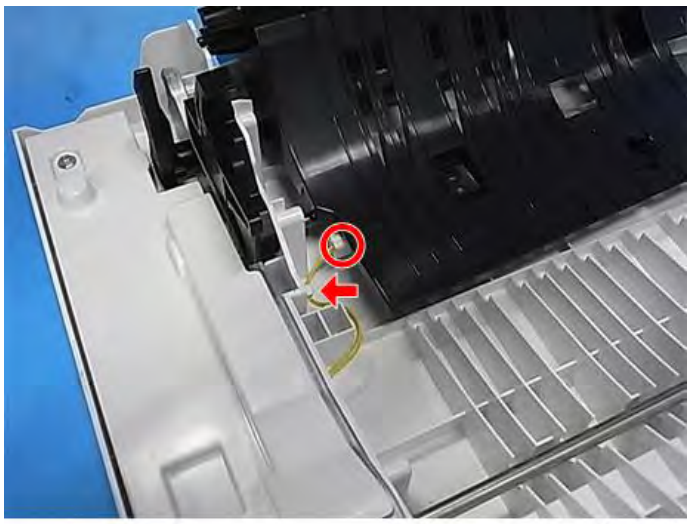


d197f4062

4. Remove the duplex outer entrance guide [A]. (×8, ×1, ×1)

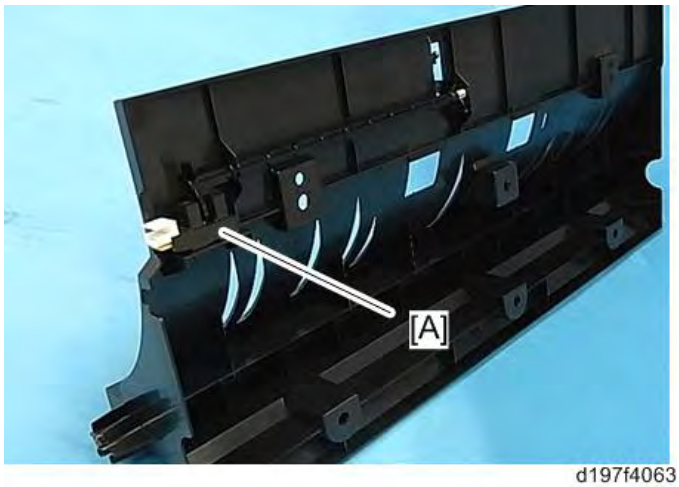


d197f0064



d197f0065

5. Remove the duplex entrance sensor [A] (hooks).

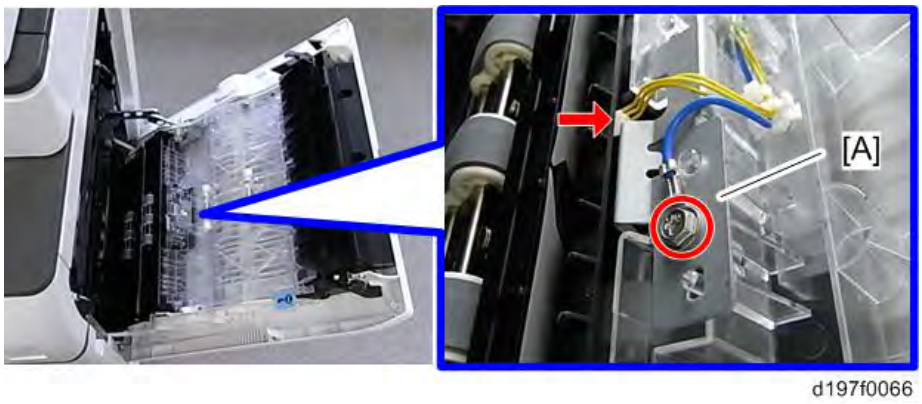


d197f4063

Duplex Exit Sensor

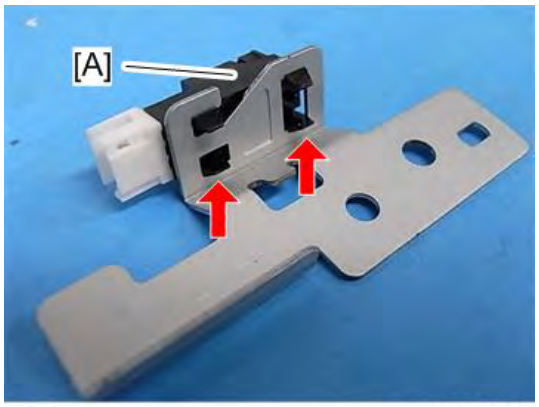
1. Open the right cover.

2. Remove the duplex exit sensor bracket [A]. (×1, ×1)



d197f0066

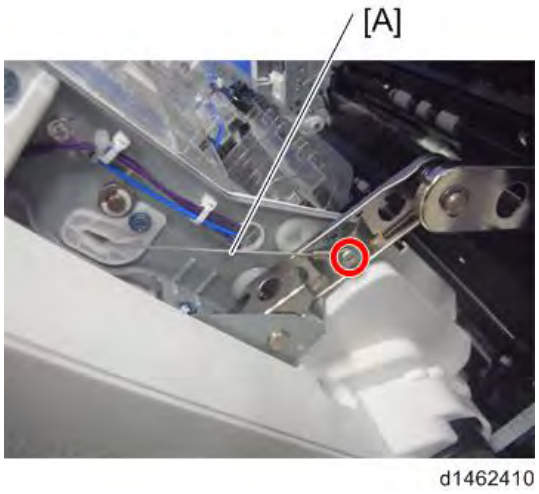
3. Remove the duplex exit sensor [A] (hooks).



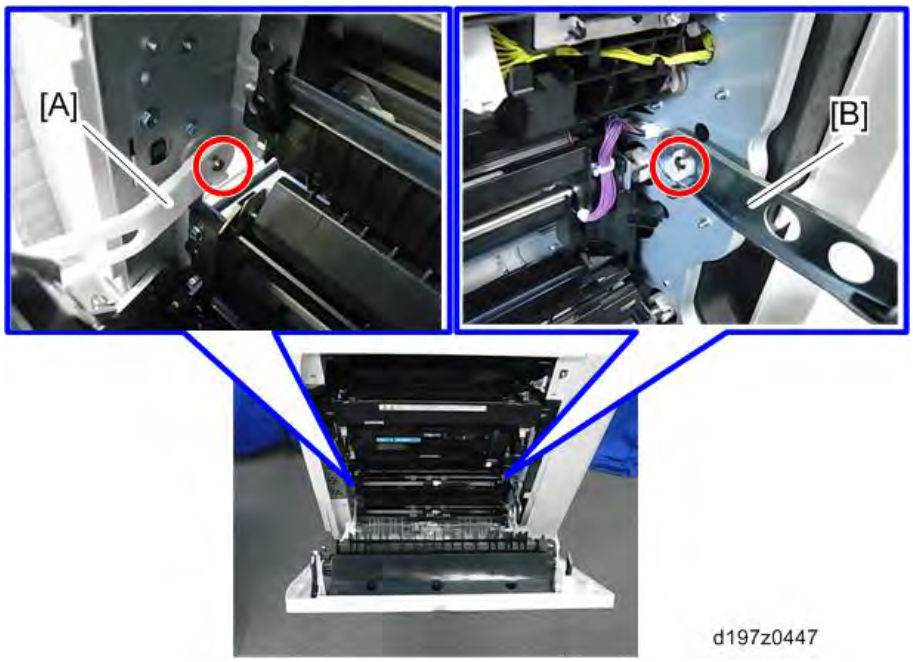
Bypass Tray Unit

Bypass Tray

1. Open the right cover.
2. Remove the wire [A]. (×1)



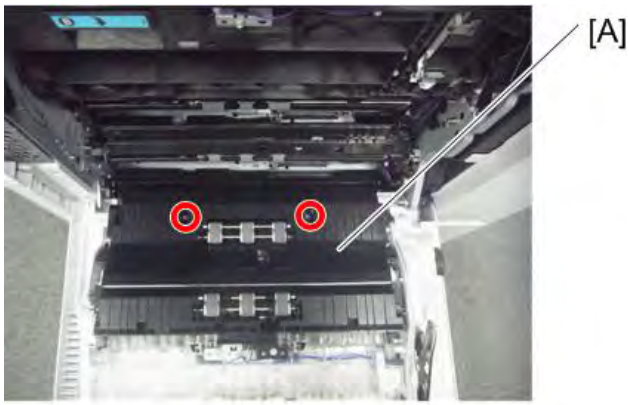
3. Release two arms [A] [B]. (×2)



4. Open the right cover wide.

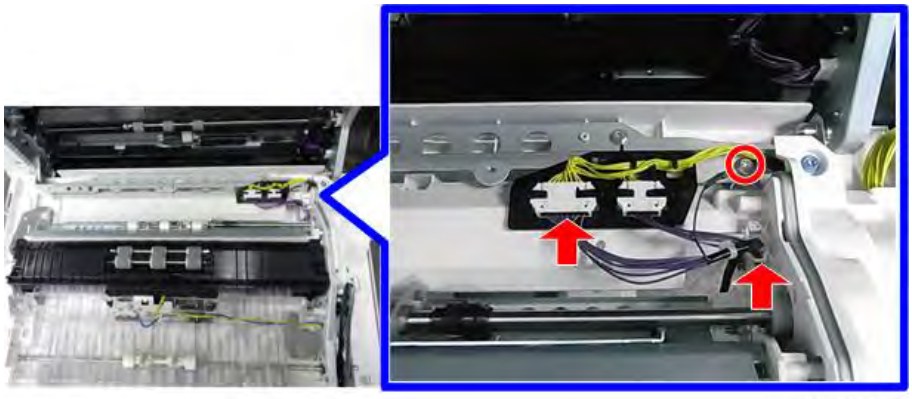
d197z0448

5. Remove the paper transport guide [A]. (×2)



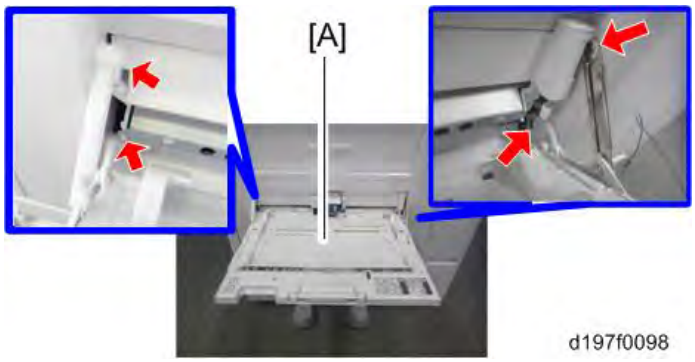
d1462411

6. Remove the harness. (×1, ×1, ×1)



d197f0097

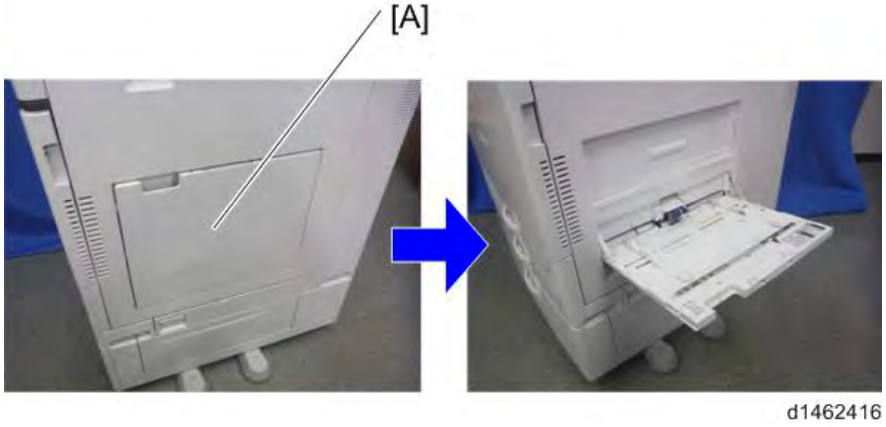
7. Remove the bypass tray [A]. (×4)



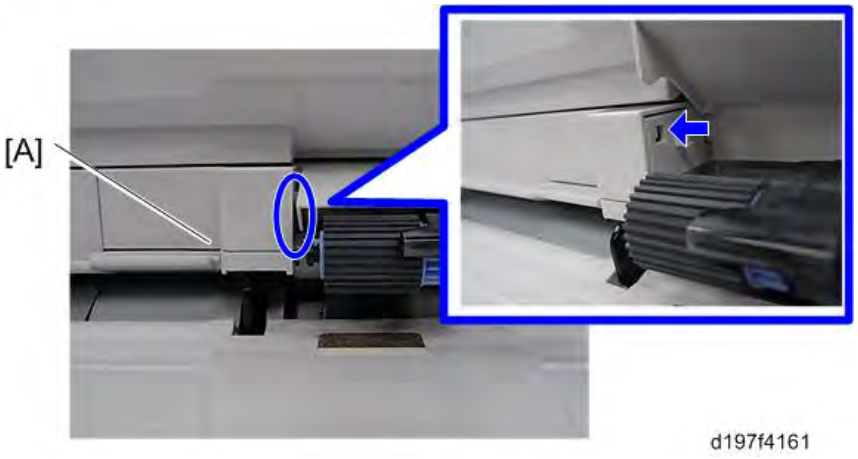
d197f0098

Bypass Paper End Sensor

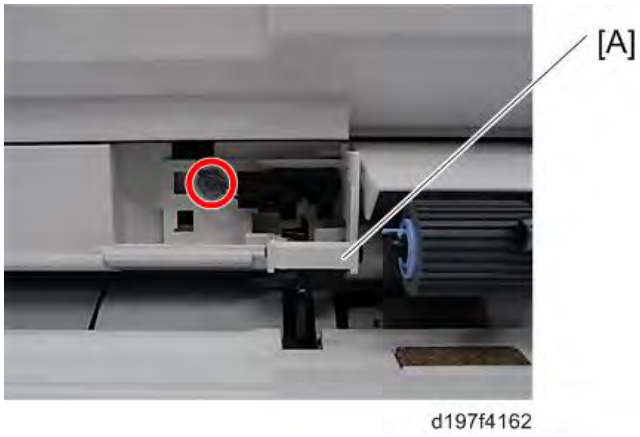
1. Open the bypass tray [A].



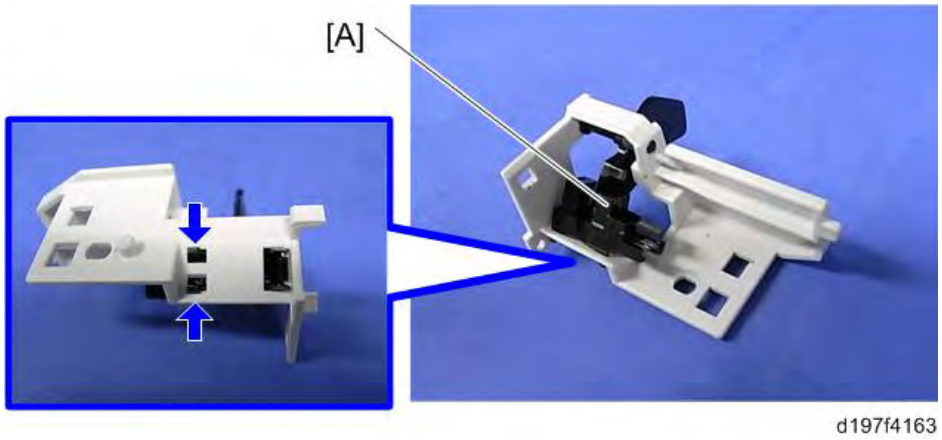
2. Remove the bypass paper end sensor cover [A].



3. Remove the bypass paper end sensor unit [A]. (×1, ×1)



4. Remove the bypass paper end sensor [A] from the bracket (hooks).



Bypass Pick-up Roller

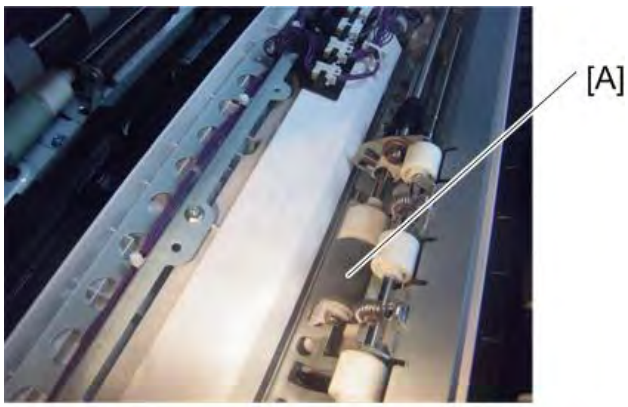
1. Open the bypass tray (Bypass Tray).
2. Remove the bypass pick-up roller [A]. (×1)

Bypass Paper Feed Roller

1. Remove the bypass paper end sensor unit. (Bypass Paper End Sensor)
2. Remove the bypass paper feed roller [A]. (×1)

Bypass Separation Roller

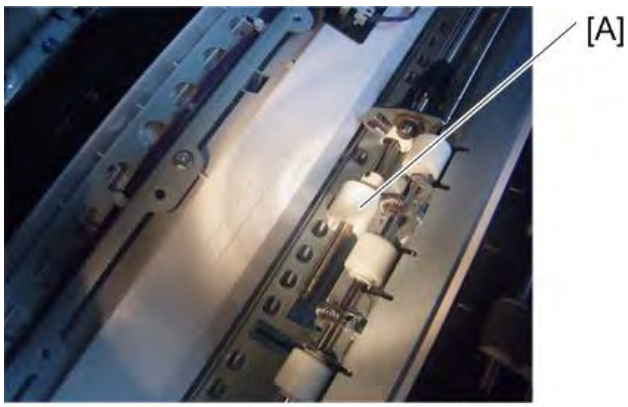
1. Remove the paper transport guide. (Bypass Tray)
2. Remove the bypass separation roller [A]. (×1)



d1462419

Torque Limiter

1. Remove the bypass separation roller. (Bypass Separation Roller)
2. Remove the torque limiter [A].

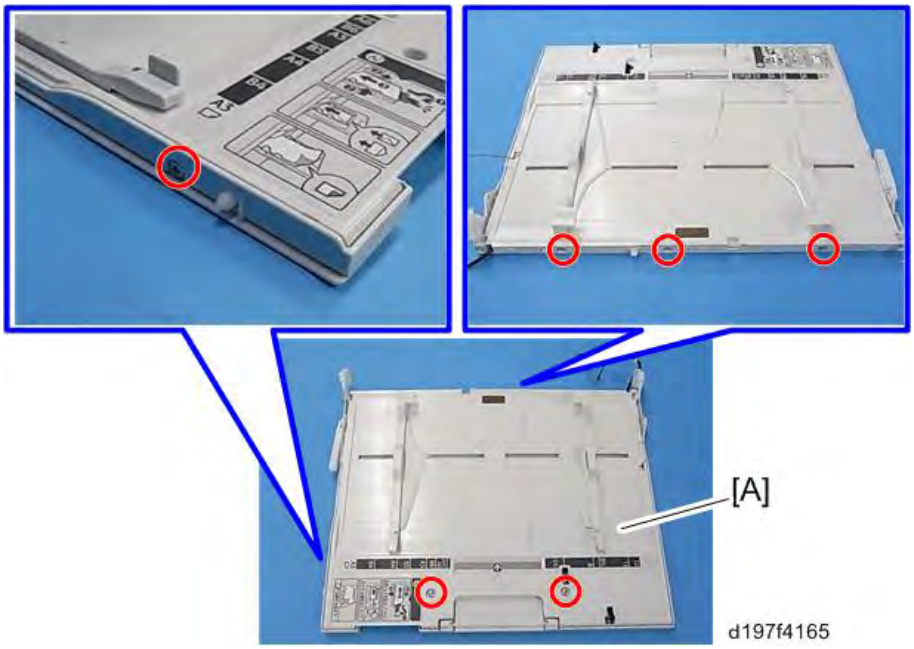


d1462420

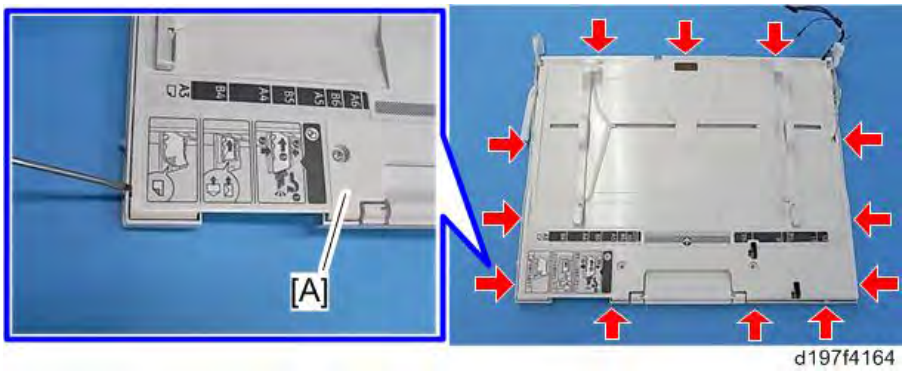
Bypass Width Sensor

1. Remove the bypass tray. (Bypass Tray)

2. Remove the six screws on the bypass tray [A]. (×6).

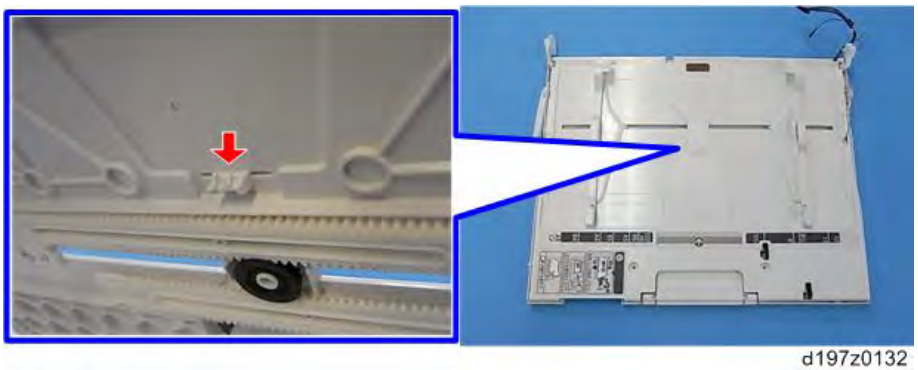


3. Release the hooks around the bypass tray [A].



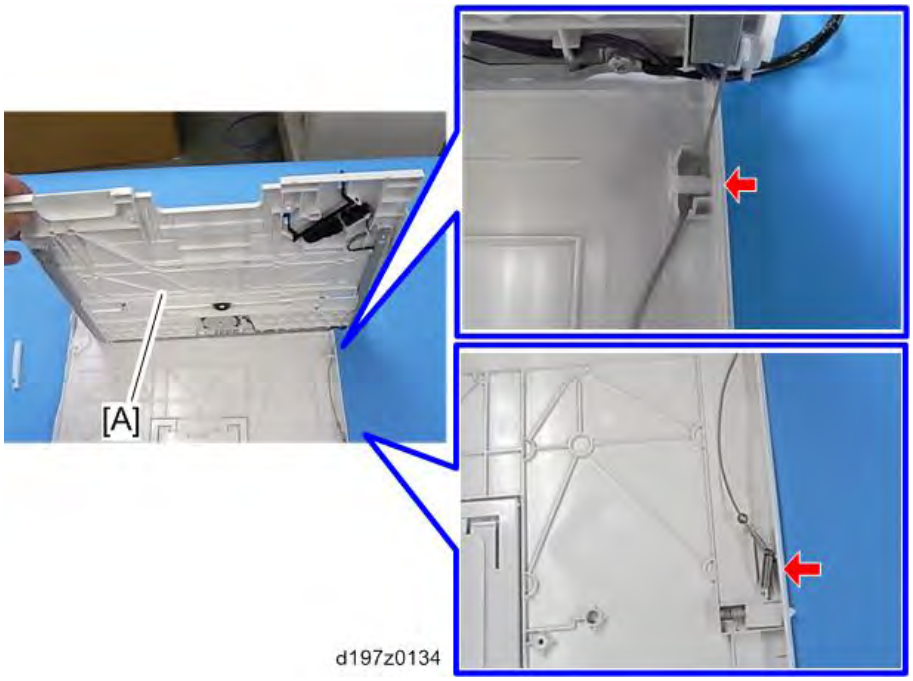
Note

- There is a hook in the tray cover. Be careful not to damage it during removal or installation.

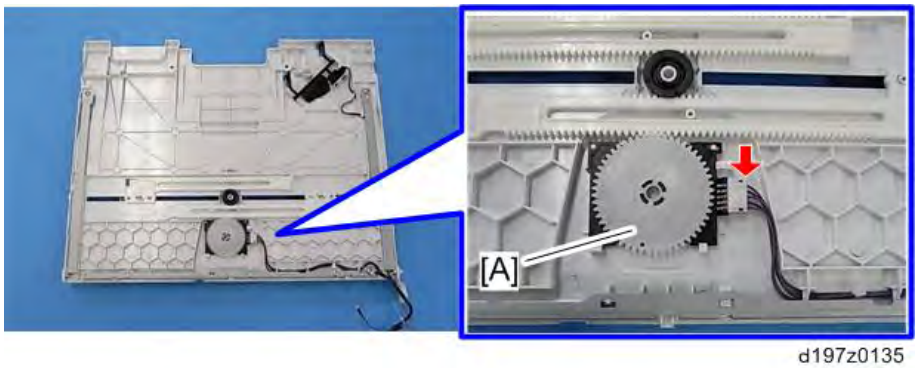


4. Release the links.

5. Remove the bypass tray upper cover [A]. (pin x 1, x1)

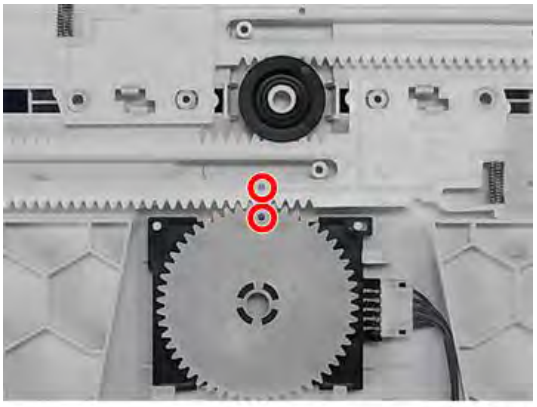


6. Remove the bypass width sensor [A]. (×1, x2)



Note

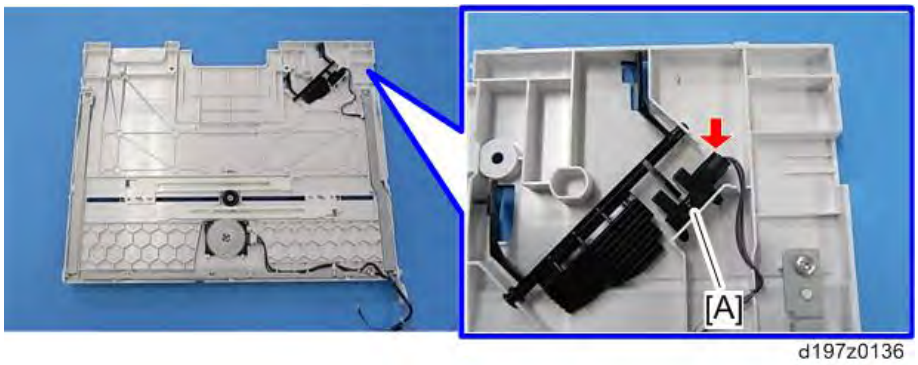
- When installing, the holes must align as shown below.



d197z0449

Bypass Length Sensor

1. Remove the bypass tray upper cover. (Bypass Width Sensor).
2. Remove the bypass length sensor [A]. (×1, hooks)

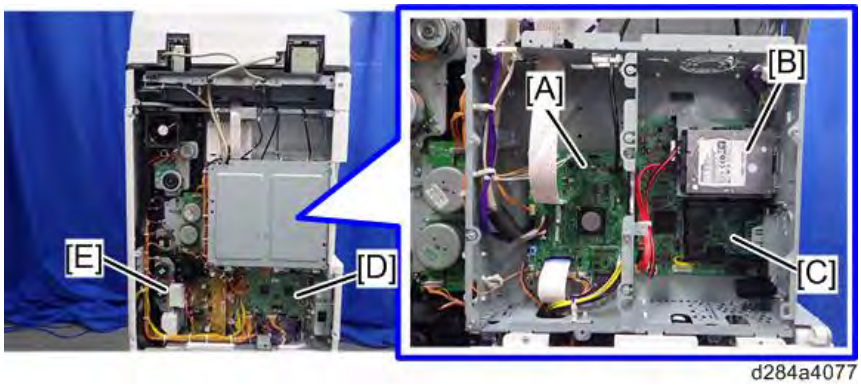


d197z0136

PCBs and Other Items

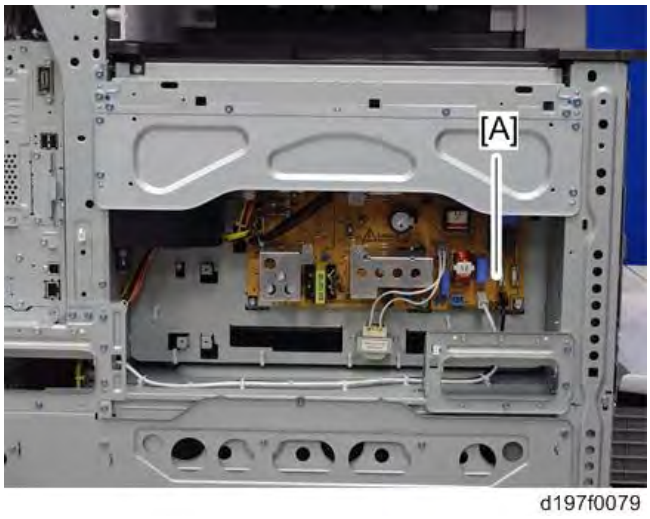
Overview

Around the Controller Box



[A]	IPU
[B]	HDD
[C]	Controller Board
[D]	BCU
[E]	HVPS

Around the Power Supply Box

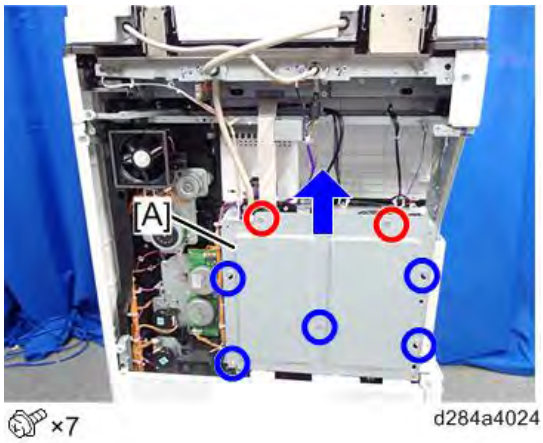


[A]	PSU

Controller Box Cover

1. Remove the rear cover. (Rear Cover)
2. Remove the controller box cover [A].

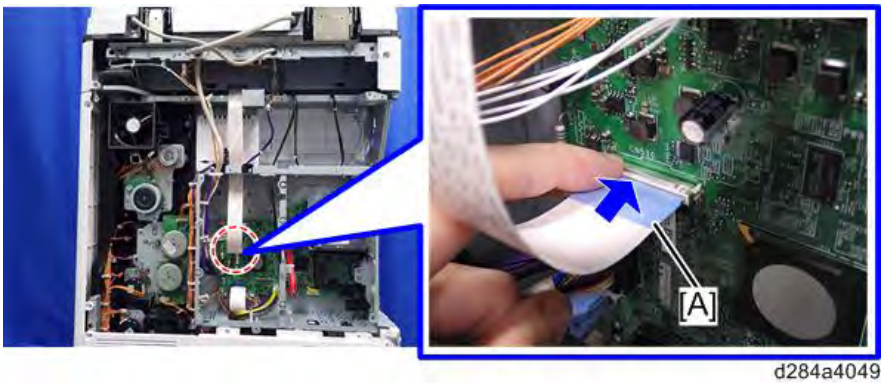
Red Circle: Remove, Blue Circle: Loosen



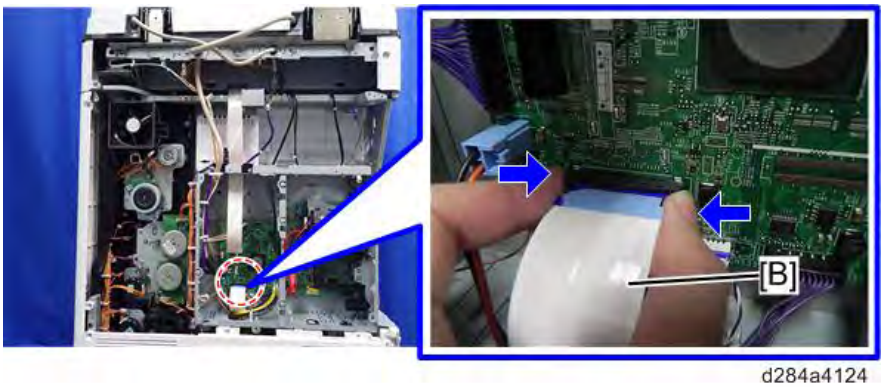
IPU

⚠CAUTION

- The FFC connector [A] has a lock mechanism. Do not use force to pull it out.

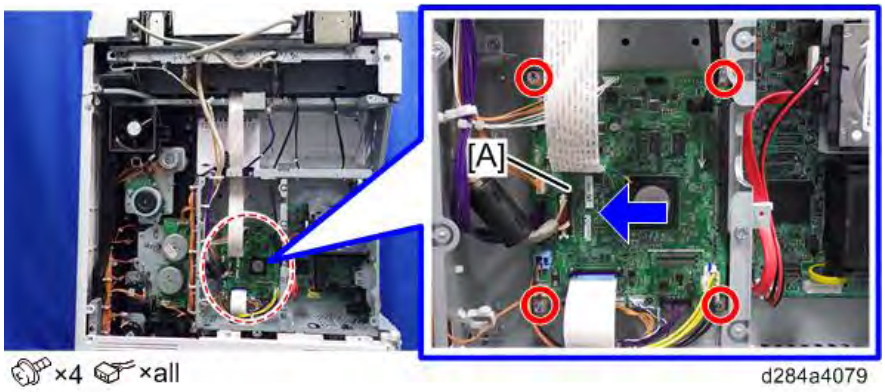


- For the FCC connector [B], pull out it by pressing the release levers on both sides.



1. Remove the controller box cover. (Controller Box Cover)
2. Remove the IPU Sub if the SPDF is installed.

3. Remove the IPU [A].



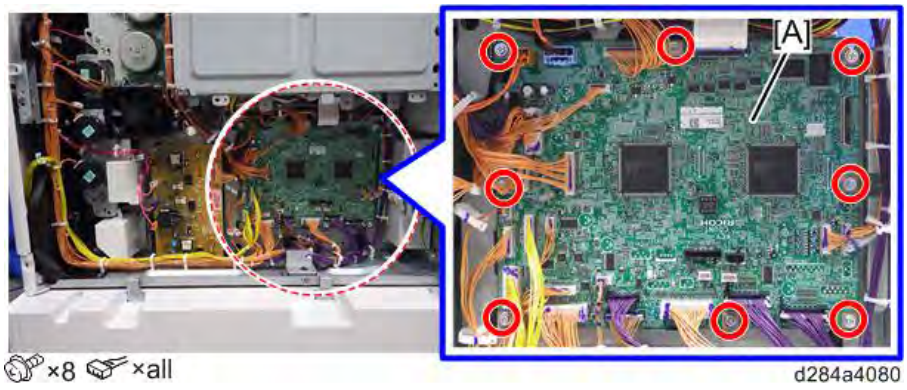
BCU

⚠CAUTION

- The FFC connector has a lock mechanism. Do not use force to pull it out.

1. Remove the rear lower cover. (Rear Lower Cover)

2. Remove the BCU [A].



When installing the new BCU

Remove the NVRAM (EEPROM) from the old BCU. Then install it on the new BCU after you replace the BCU. Replace the NVRAM (Replacing the NVRAM (EEPROM) on the BCU) if the NVRAM on the old BCU is defective.

Note

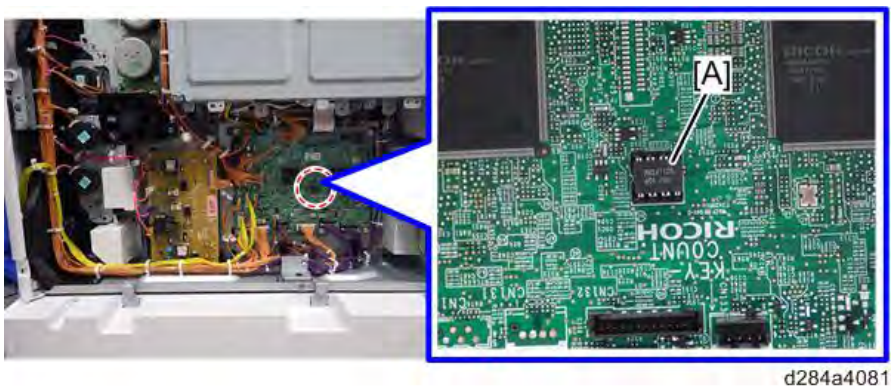
- Make sure you print out the SMC reports ("SP Mode Data" and "Logging Data") before you replace the NVRAM (EEPROM).

⚠CAUTION

- Keep NVRAMs (EEPROM) away from any objects that can cause static electricity. Static electricity can damage NVRAM data.
- Make sure the serial number is input in the machine for the NVRAM data with SP5-811-004, if not, SC995-001 occurs

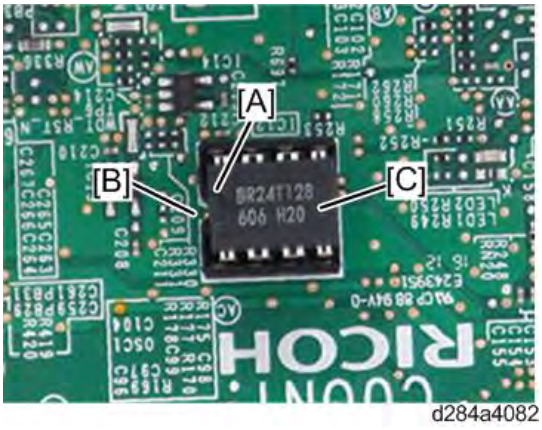
Replacing the NVRAM (EEPROM) on the BCU

1. Make sure that you have the SMC report (factory settings). This report comes with the machine.
2. Output the SMC data ("ALL") using SP5-990-001/SP5-992-001.
3. Turn off the main switch.
4. Insert a blank SD card in the SD slot #2, and then turn on the main switch.
5. Use SP5-824-001 to upload the NVRAM data from the BCU.
6. Turn off the main power switch and unplug the power cord.
7. Replace the NVRAM [A] on the BCU with a new one.



Note

- Install a new NVRAM [C] so that the indentation [A] on the NVRAM corresponds with the mark [B] on the BCU. Incorrect installation of the NVRAM will damage both the BCU and NVRAM.



8. Plug in, and then turn on the main switch.

Note

- When the power is turned ON, SC195-00 appears, but continue with the following steps.

9. Select the destination setting. (SP5-131-001) (JPN: 0, NA: 1, EU/AA/TWN/CHN: 2)
10. Check the machine serial number with SP5-811-004, and then set the machine serial number of SP5-811-001.

Note

- For information on how to configure SP5-811-001, contact the supervisor in your branch office.

11. Set the area selection with SP5-807-001.

Note

- For information on how to configure SP5-807-001, contact the supervisor in your branch office.

12. Turn off the machine, and then turn it back on.

13. Use SP5-801-002 “Memory Clear Engine”.

Important

- After changing the EEPROM, Some SPs do not have appropriate initial values. Because of this, steps 10 to 12 must be done.

14. Turn off the machine, and then turn it back on.
15. From the SD card where you saved the NV-RAM data in step 5, download the NV-RAM data with SP5-824-002.
16. Turn off the machine, and then remove the SD card from SD slot 2.
17. Turn on the main switch.
18. Check the factory setting sheet and the SMC data printout from step 2, and set the user tool and SP settings so they are the same as before.

Controller Board

Note

- Keep NVRAM away from any objects that can cause static electricity. Static electricity can damage NVRAM data.

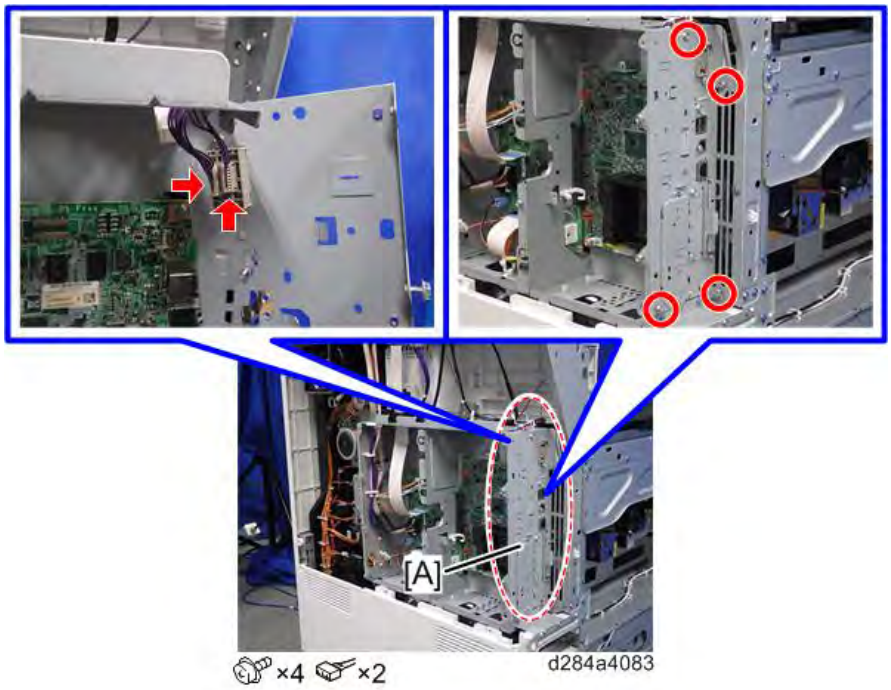
Note

Special Procedure for Machines that have a Self Encrypting Drive (SED) Installed

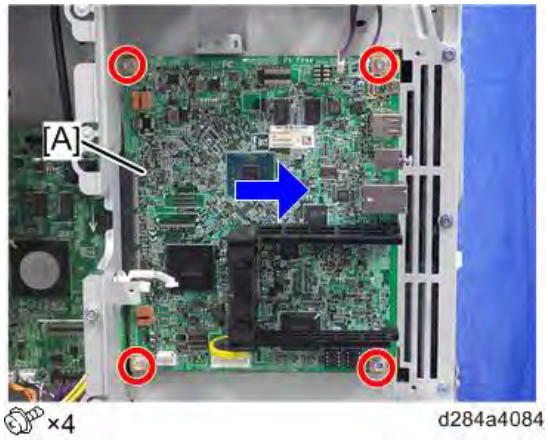
- The machine holds data, linking the controller board and SED, created automatically during SED installation. The data, however, will not be deleted automatically at controller board replacement. Therefore, before replacing a controller board, you must delete the link data manually so that the machine can create new link data.
- Do the following steps when doing the replacement.
  - Execute [Erase All Memory] on the operation panel
    [System Settings] – [Administrator Tools] – [Erase All Memory]
  - Turn OFF the main power switch
  - Replace the controller board
  - Turn ON the main power switch
  - **Do not** turn the main power ON after step 2, until after you replaced the board.

1. Remove the left rear cover. (Left Rear Cover)
2. Remove the HDD bracket. (HDD)

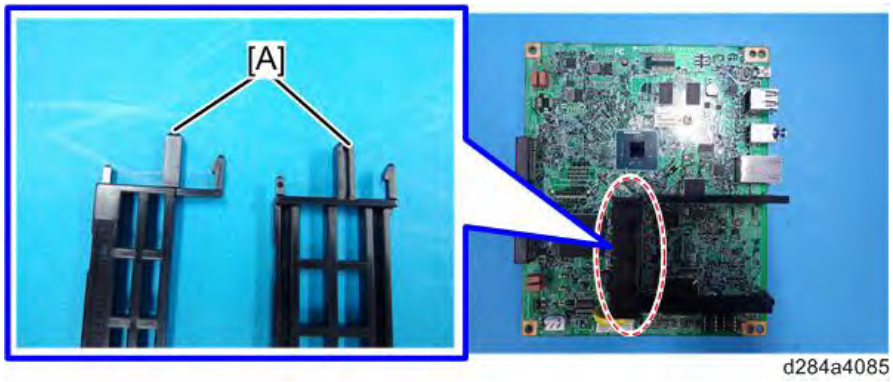
3. Remove the controller bracket [A].



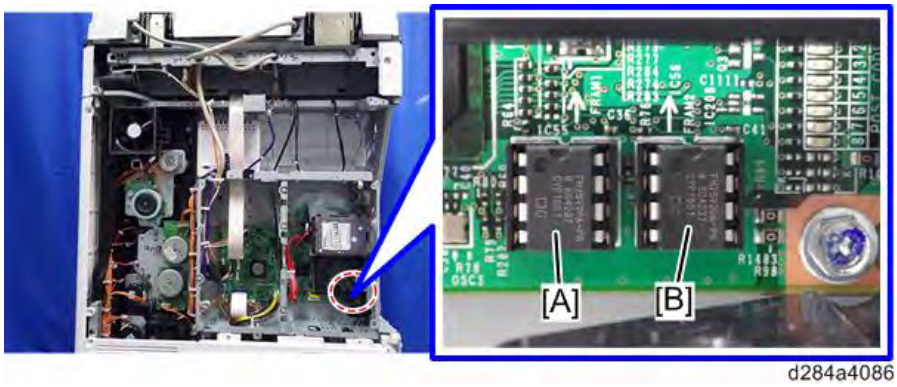
4. Slide the controller board [A] to the right side to remove it.



5. Release the guide rail [A].

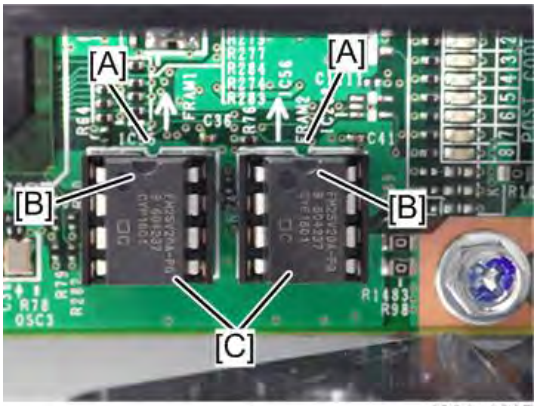


6. Remove the NVRAMs 1 [A] and 2 [B] on the controller board.



Note

- When installing a new controller board, install the NVRAM removed from the old board, or a new NVRAM if the old NVRAM is defective. Install the NVRAM [C] so that the indentation [B] on the NVRAM corresponds with the mark [A] on the controller board. Incorrect installation of the NVRAM will damage both the controller board and the NVRAM.



Replacing the NVRAM on the controller board

⚠CAUTION

- Referring to the previous procedure, be sure that there are no mistakes in the mounting position and orientation of the NVRAM.

⚠CAUTION

- SC195 (Machine serial number error) will be displayed if you forget to attach the NVRAM.
- If you mounted the NVRAM in the wrong direction, each component needs to be replaced because a short circuit was caused in the controller board and the NVRAM.

1. Make sure you have the SMC report (factory settings). This report comes with the machine.

2. Output all the SMC data using SP5-990-001 (SP Print Mode: All (Data List)).

3. Turn off the main power switch.

4. Insert a blank SD card in the SD slot 2, and then turn on the main power switch.

5. Use SP5-824-001 to upload the NVRAM data from the controller board.

6. Make sure the customer has a backup of their address book data. If not, obtain the backup by referring to the following procedure.

1. Insert an SD card into SD slot 2, and then turn the main power ON.
2. Save the address book data in the SD card using SP5-846-051.

Important

- The address data stored in the machine will be discarded later during this procedure. So be sure to obtain a backup of the customer's address book data.
- Note that the counters for the user will be reset when doing the backup/restore of the address book data.
- If they have a backup of the address book data, use their own backup data for restoring. This is because there is a risk that the data cannot be backed up properly depending on the NVRAM condition.

7. Do the following steps if the machine has the fax unit. If not, skip this step.

1. Print the Box List by with the User Tools/Counter.
   - [User Tools/Counter] - [Facsimile Features] - [General Settings] - [Box Setting: Print List]
2. Print the Special Sender List by pressing these buttons in the following order.
   - [User Tools/Counter] - [Facsimile Features] - [Reception Settings] - [Program Special Sender: Print List]
3. Write down the following fax settings.
   - [Receiver] in [User Tools/Counter] - [Facsimile Features] - [Reception Settings] - [Reception File Settings] - [Forwarding].
   - [Notify Destination] in [User Tools/Counter] - [Facsimile Features] - [Reception Settings] - [Reception File Settings] - [Store].
   - [Specify User] in [User Tools/Counter] - [Facsimile Features] - [Reception Settings] - [Stored Reception File User Setting].
   - [Notify Destination] in [User Tools/Counter] - [Facsimile Features] - [Reception Settings] - [Folder Transfer Result Report].
   - Specified folder in [User Tools/Counter] - [Facsimile Features] - [Send Settings] - [Backup File TX Setting].
   - [Receiver] in [User Tools/Counter] - [Facsimile Features] - [Reception Settings] - [Reception File Settings] - [Output Mode Switch Timer].
   - [Store: Notify Destination] in [User Tools/Counter] - [Facsimile Features] - [Reception Settings] - [Output Mode Switch Timer].
   - All the destination information shown on the display.

   Note

   - In the fax settings, address book data is stored with entry IDs, which the system internally assigns to each data. The entry IDs may be changed due to re-assigning in backup/restore operations.
4. Make sure that there is no transmission standby file. If any standby file exists, ask the customer to delete it or complete the transmission.

8. Turn the main power OFF and unplug the power supply cord.

9. Push the main power switch ON again to discharge the residual charge.

10. Replace the NV-RAM with a brand-new one.

11. Turn the power ON with the SD card to which the NV-RAM data has been uploaded in Slot 2.

Note

- SC673 appears at start-up, but this is normal behavior. This is because the controller and the smart operation panel cannot communicate with each other due to changing the SP settings for the operation panel.

12. Change the SP settings for the operation panel.

If you switch the screen to enter the SP mode, SC995-02 is displayed. However, continue the following steps.

- SP5-748-101: (OpePanel Setting: Op Type Action Setting): Change bit 0 from 0 to 1.
- SP5-748-201: (OpePanel Setting: Cheetah Panel Connect Setting): Change the value from 0 to 1.

13. Change the Flair API SP values.

- SP5-752-001 (Copy FlairAPIFunction Setting): Change bit from 0 to 1.
- SP1-041-001 (Scan:FlairAPI Setting): Change bit from 0 to 1.
- SP3-301-001 (FAX:FlairAPI Setting) Change bit from 0 to 1.

14. Cycle the power OFF/ON.

Note

- The model information is written on the NVRAM (Novita), so SC995-02 does not occur.
- Program/Change Administrator will be displayed in Japanese, but this is normal.

15. Enter the SP mode and specify the following settings manually.

- SP5-985-001 (Device Setting: On Board NIC) Change the value from 0 to 1.
- SP5-985-002 (Device Setting: On Board USB) Change the value from 0 to 1.

16. Turn OFF the main power, and then turn ON the main power with the SD card to which the NV-RAM data has been uploaded in Slot 2.

17. Download the NV-RAM data stored in the SD card to the brand-new NV-RAM using SP5-825-001 (NV-RAM Data Download).

Note

- The download will take a couple of minutes.

18. Turn the power OFF and remove the SD card from slot 2.

19. Turn the power ON.

The screen "Program/Change Administrator" will be displayed in the language that is the same language as the time when the data was uploaded to the SD card in step 5.

20. Execute SP5-755-002 (Hide Administrator Password Change Scrn).

After you execute this SP and exit SP mode, the Home screen is displayed and user functions can be used.

21. Check that the fax and scanner icons are displayed, and then change the following SP settings.

a. SP5-193-001 (External Controller Info. Settings)

b. SP5-895-001 (Application invalidation: Printer)

c. SP5-895-002 (Application invalidation: Scanner)

22. If the security functions (e.g. Stored file encryption/ Auto Erase Memory Setting) were applied, set the

functions again.

23. Ask the customer to restore their address book. Or restore the address book data using SP5-846-052 (UCS Setting: Restore All Addr Book), and ask the customer to ensure the address book data has been restored properly.

Important

- If you obtained the backup of the customer's address book data in step 3, delete the backup immediately after the NV-RAM replacement to avoid accidentally taking out the customer's data.

24. Output all the SMC data with SP5-990-001 and make sure all the SP/UP settings except for counter information are properly restored, by checking the SMC data obtained in step 2.

Note

- The counters will be reset.

25. When equipped with fax, make sure that the list printed in step 2 and 6 are the same as the sender information.

If the setting is different from the original setting after the replacement of the NVRAM, then set it again to the original setting.

26. Execute the process control (SP3-011-001).

27. Execute the ACC (Copy).

28. Execute the ACC (Printer).

29. Cycle the power OFF/ON.

Important

- If you cannot execute SP5-824-001 or SP5-825-001 for some reason, try all the following things.
  - Check the changed SP value on the SMC which was output in step 2 and set it manually. Especially, ensure that the values of the following SPs are same as the setting before the replacement.
  - a. SP5-045-001 (Accounting counter: Counter Method)
  - b. SP5-104-001 (A3/DLT Double Count)
  - c. SP5-104-002 (Bypass Paper Size Undetection)
  - d. SP5-302-002 (Set Time: Time Difference)
- Because the PM counters have been reset during NV-RAM replacement, it is necessary to replace all the PM parts for proper PM management.

Note

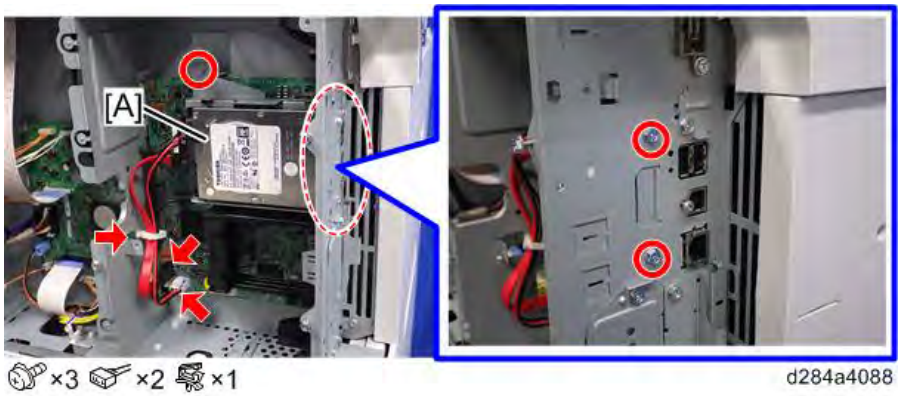
- If a message tells you need a SD card to restore displays after the NV-RAM replacement, create a "SD card for restoration" and restore with the SD card.

HDD

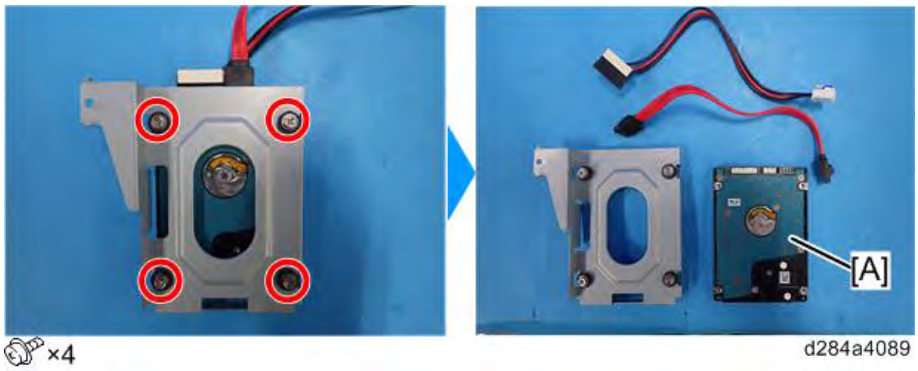
Note

- Before replacing the HDD, copy the address book data to an SD card with SP5-846-051 if possible.
- If the customer is using the Data Overwrite Security, the Data Encryption feature or OCR Scanned PDF, these applications must be installed again.

1. Remove the controller cover. (Controller Cover)
2. Remove the controller box cover. (Controller Box Cover)
3. Remove the HDD with bracket [A].



4. Remove the HDD [A] from the bracket.



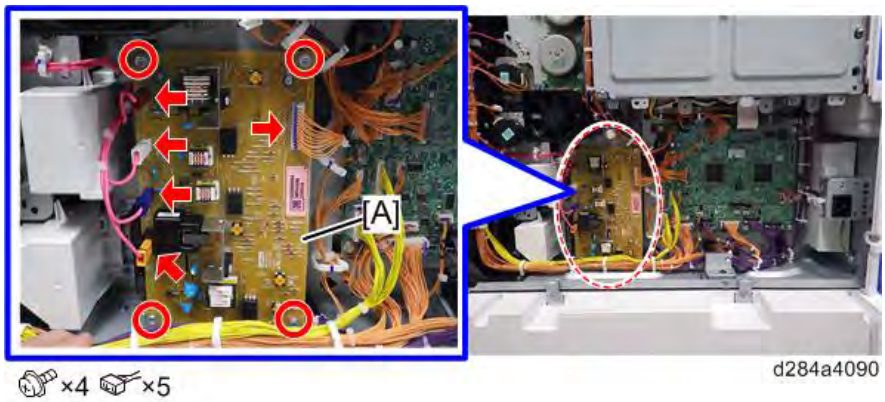
Adjustment after replacement

1. Execute SP5-832-001 to initialize the hard disk.
   Even if you use an HDD that is already formatted, it is recommended that you re-initialize.
2. Execute SP5-853-001 to install the fixed stamps.
3. Execute SP5-846-052 to copy the address book from the SD card to the HDD.
4. Turn off the machine, and then turn it back on.

HVPS

1. Remove the rear lower cover. (Rear Lower Cover)

2. Remove the HVPS [A].

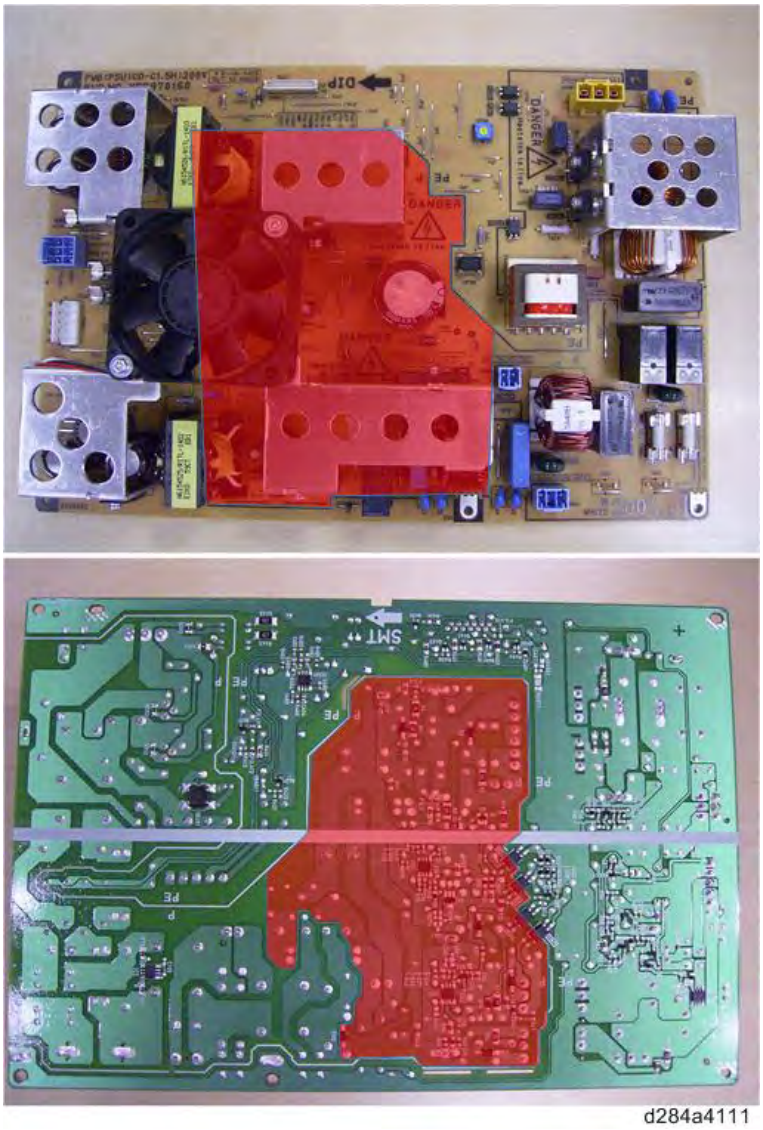


PSU

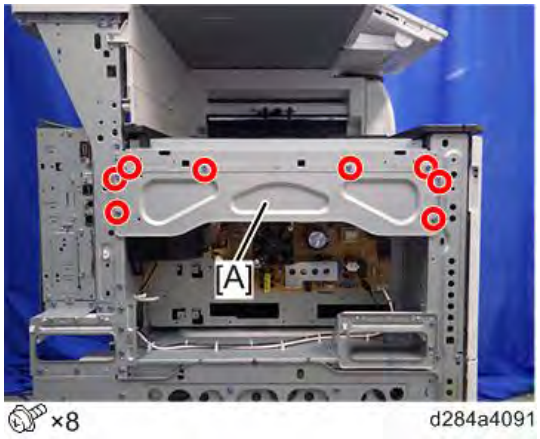
⚠CAUTION

- NEVER touch the areas outlined in red in the photos below, to prevent electric shock caused by residual charge.
- A residual charge of about 100V-400V remains in the AC circuits on the PSU board for several months even when the board has been removed from the machine after turning off the machine power and unplugging the power cord.
- The procedure to discharge residual charge from the machine by unplugging the power cord from the AC wall outlet and pressing the main power switch works only for the DC circuits on this board.

Residual charge remains in the AC circuits.

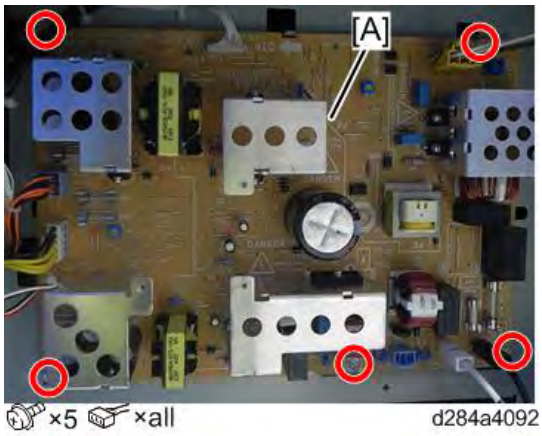


1. Remove the left cover. (Left Cover)
2. Remove the bracket [A].



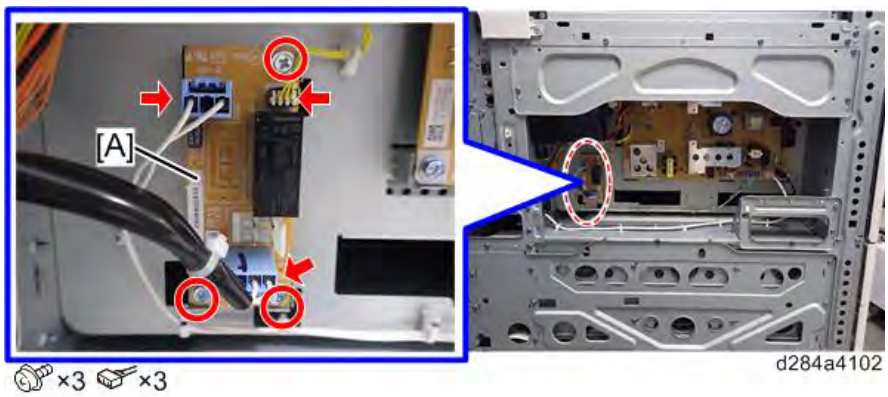
3. Remove the PSU cooling fan (for MP 4055 SP/5055 SP/6055 SP only). (PSU Cooling Fan (MP 4055 SP/5055 SP/6055 SP Only))

4. Remove the PSU [A].



Heater Board

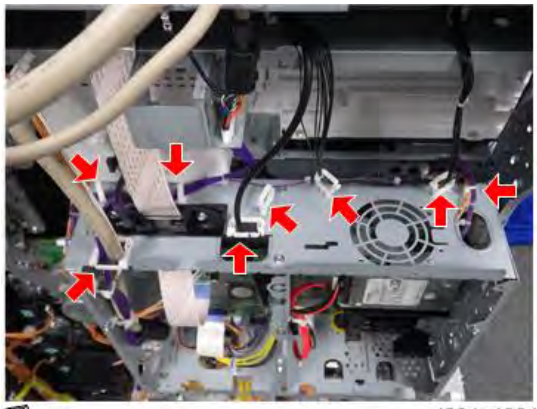
1. Remove the left cover. (Left Cover)
2. Remove the heater board [A].



Controller Box

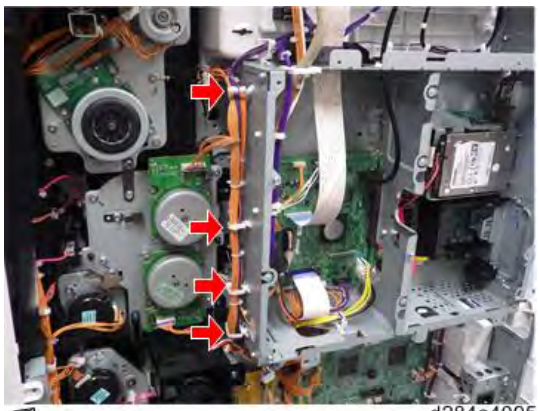
1. Remove the left rear cover. (Left Rear Cover)
2. Remove the left cover. (Left Cover)
3. Remove the rear lower cover. (Rear Lower Cover)
4. Remove the controller box cover. (Controller Box Cover)

5. Release the clamps on the upper side of the controller box.



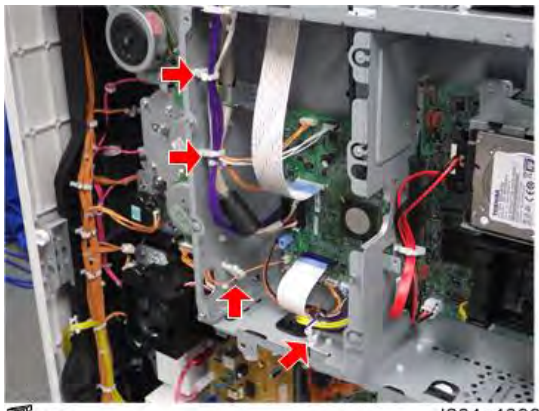
×8 d284a4094

6. Release the clamps on the side of the controller box.



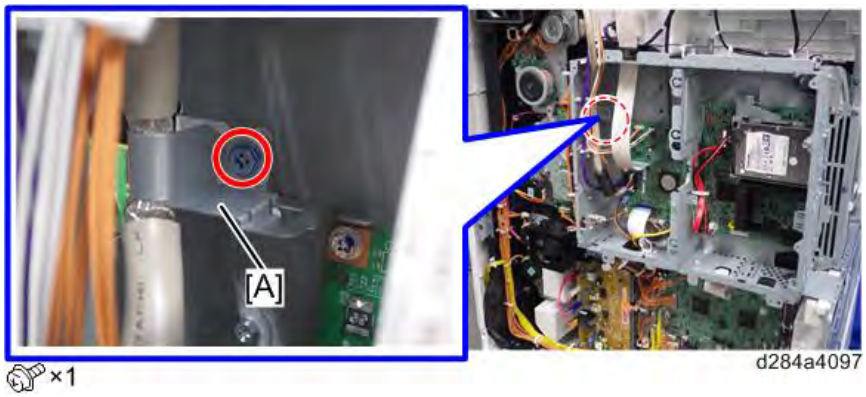
×4 d284a4095

7. Release the clamps in the controller box.

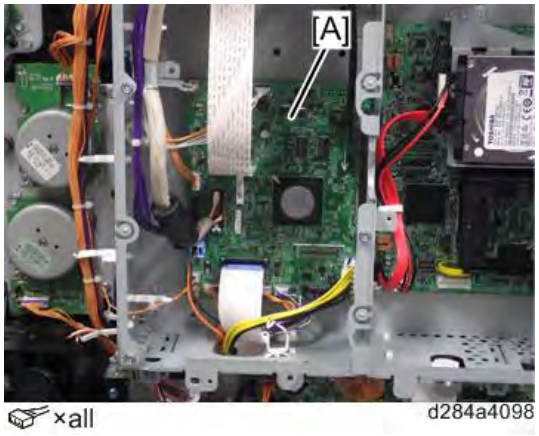


×4 d284a4096

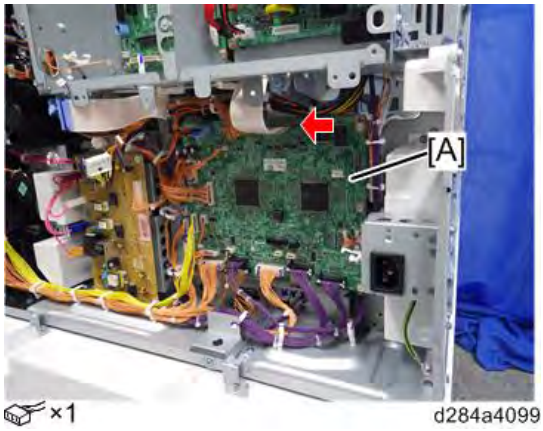
8. Release the fixing of the bracket [A].



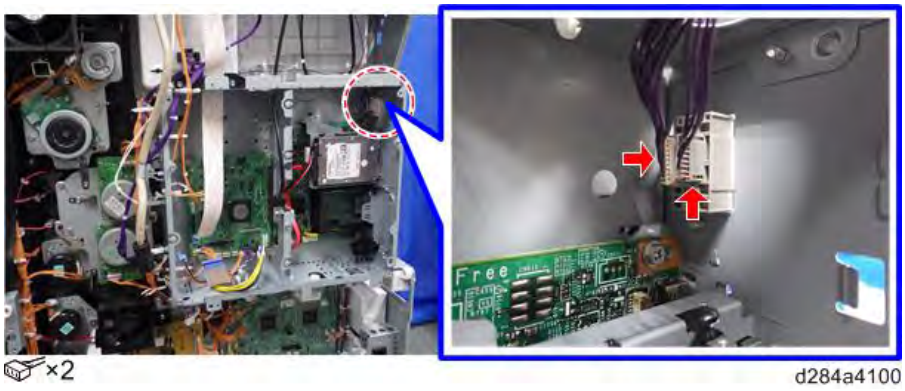
9. Remove the connectors on the IPU [A].



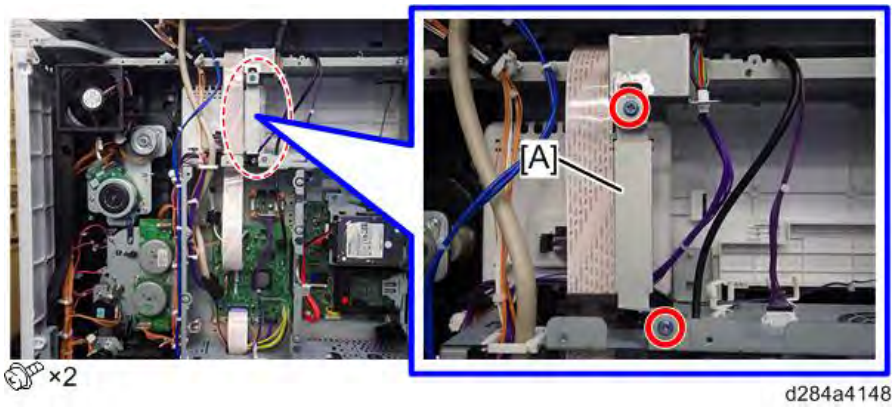
10. Remove the FFC on the BCU [A].



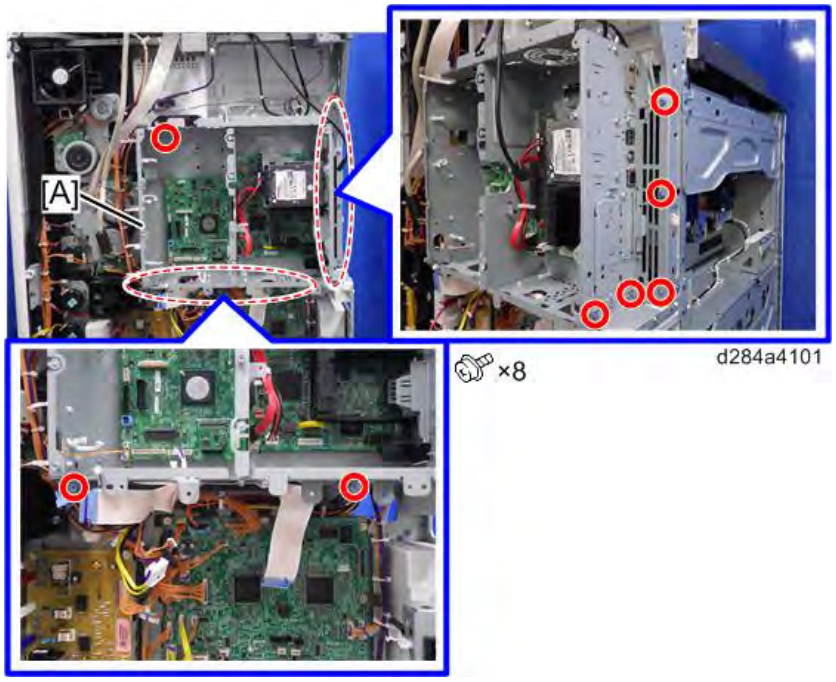
11. Remove the connector.



12. Remove the bracket [A].



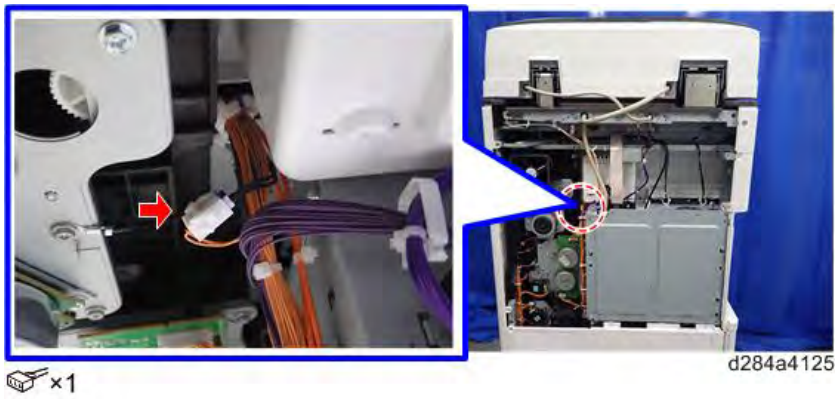
13. Remove the controller box [A].



Imaging Temperature Sensor (Thermistor)

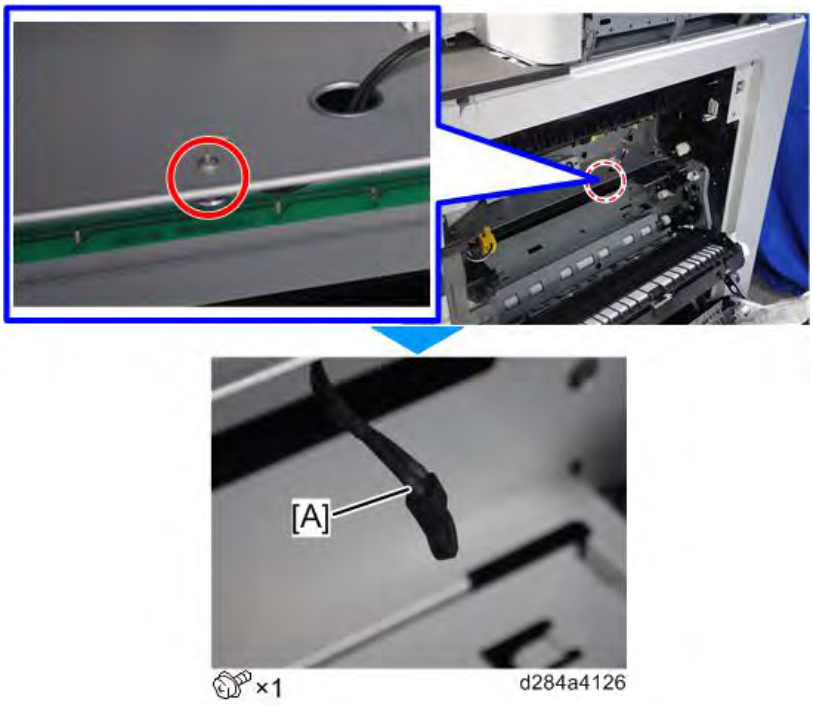
1. Remove the rear cover. (Rear Cover)

2. Remove the connector.



3. Remove the PCL. (PCL (Pre Cleaning Light))

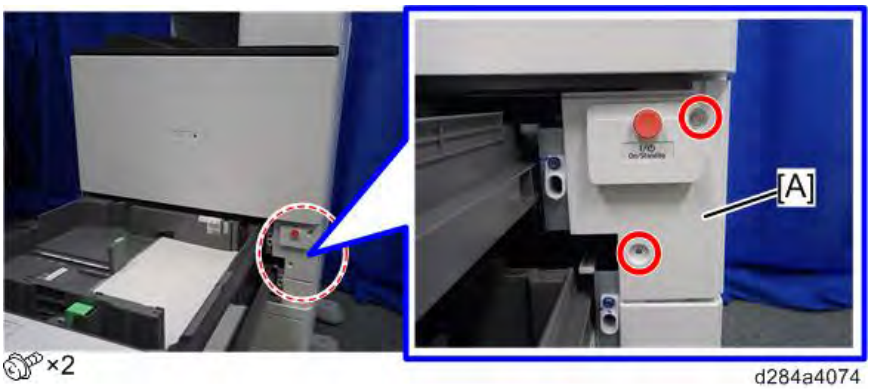
4. Remove the imaging temperature sensor (thermistor) [A].



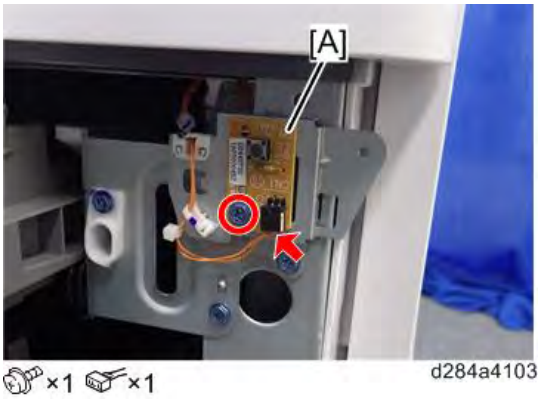
DC SW board

1. Pull out the 1st and 2nd paper feed trays.

2. Remove the right lower cover [A].



3. Remove the DC SW board [A].



Fans/Filters

Odor Filter

1. Remove the odor filter box [A].

MP 2555 SP/3055 SP/3555 SP

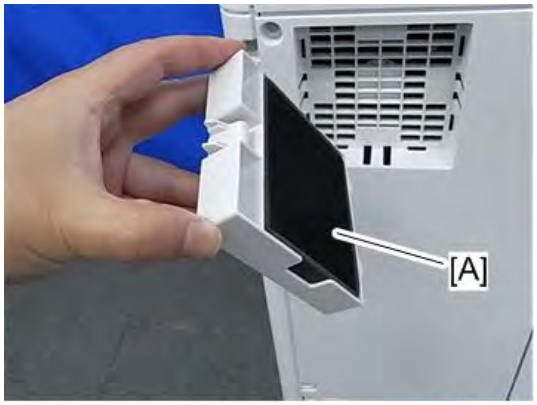
d284a4069

MP 4055 SP/5055 SP/6055 SP

d284a8011

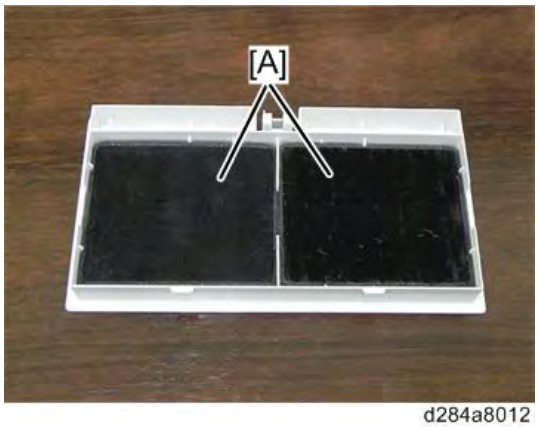
2. Remove the odor filter [A].

MP 2555 SP/3055 SP/3555 SP



d197z0016

MP 4055 SP/5055 SP/6055 SP



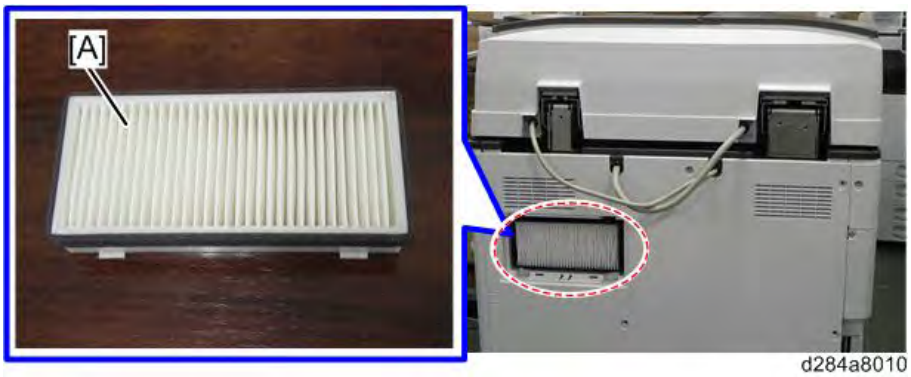
d284a8012

Particulate Filter (MP 4055 SP/5055 SP/6055 SP Only)

1. Remove the odor filter box [A].

d284a8011

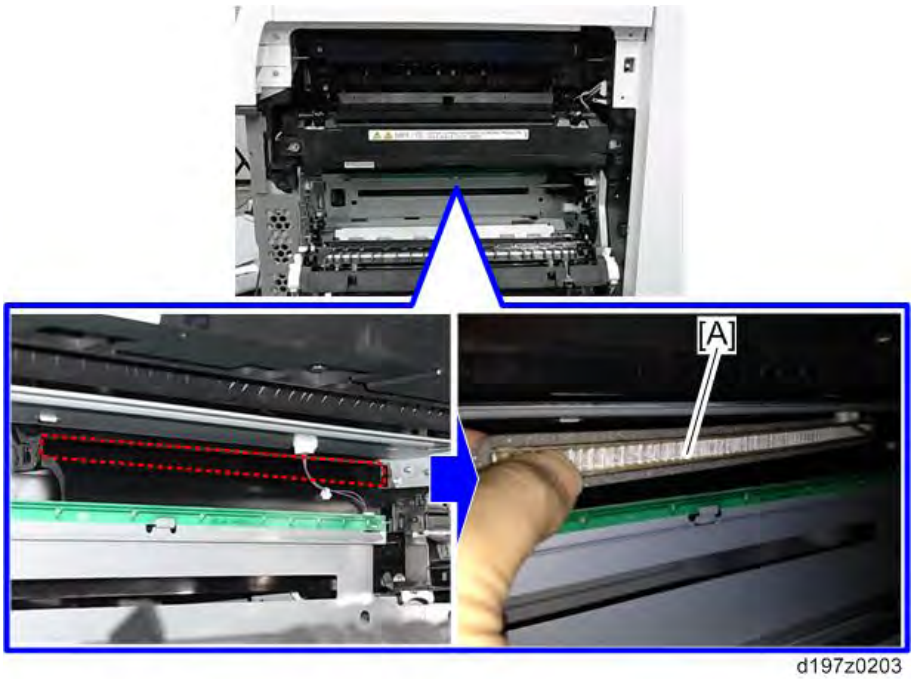
2. Remove the particulate filter [A].



Dust filter

1. Remove the PCDU. (PCDU)

2. Mount the dust filter on the duct [A].

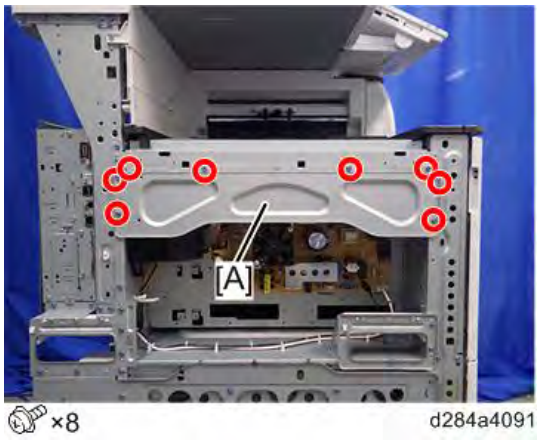


Note

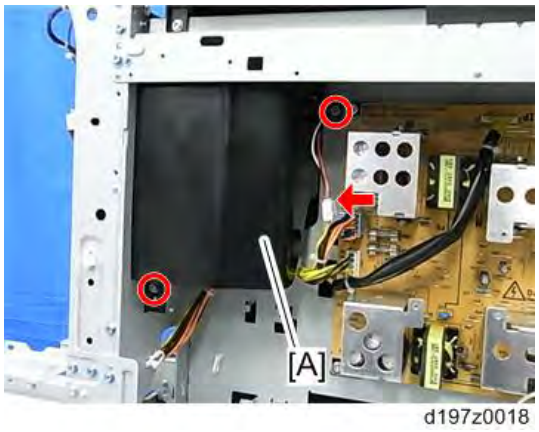
- Attach the right side of the filter first when you mount it.

Development Exhaust Fan

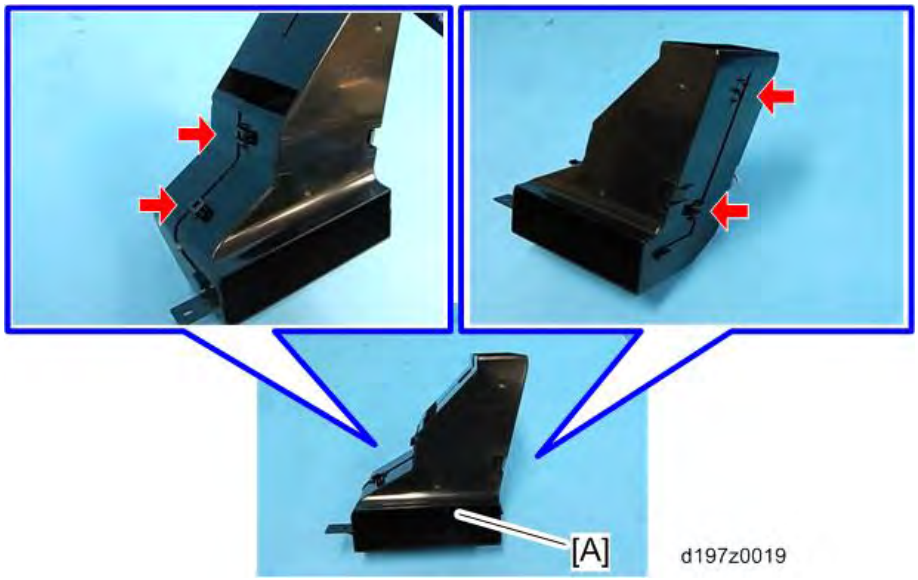
1. Remove the left cover. (Left Cover)
2. Remove the bracket [A].



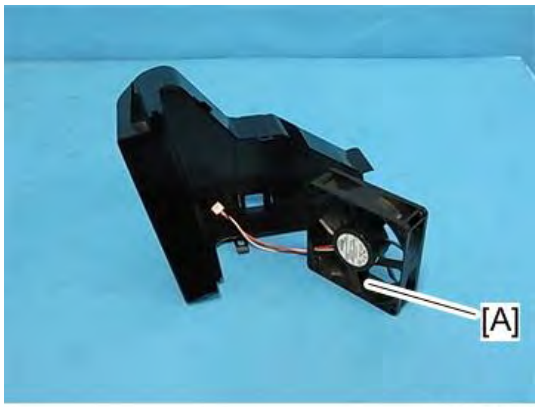
3. Remove the development exhaust fan with duct [A]. (×2, ×1)



4. Dismantle the duct [A]. (×4)



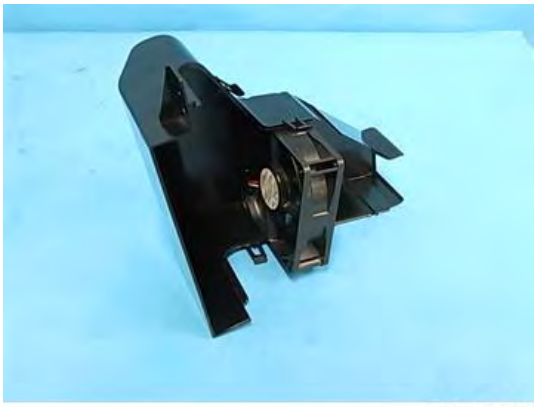
5. Remove the development exhaust fan [A].



d197z0020

Note

- Pay attention to the direction of the fan when installing. The decal pasted on the fan must face the outside.



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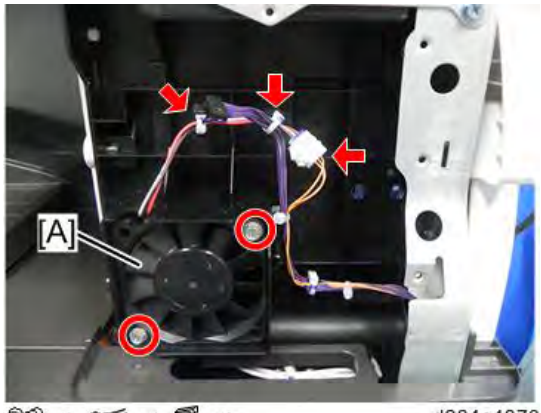
Paper Exit Cooling Fan

1. Remove the upper front cover. (Upper Front Cover)

2. Remove the paper exit cooling fan [A].



×2 ×1 ×2 d284a4070

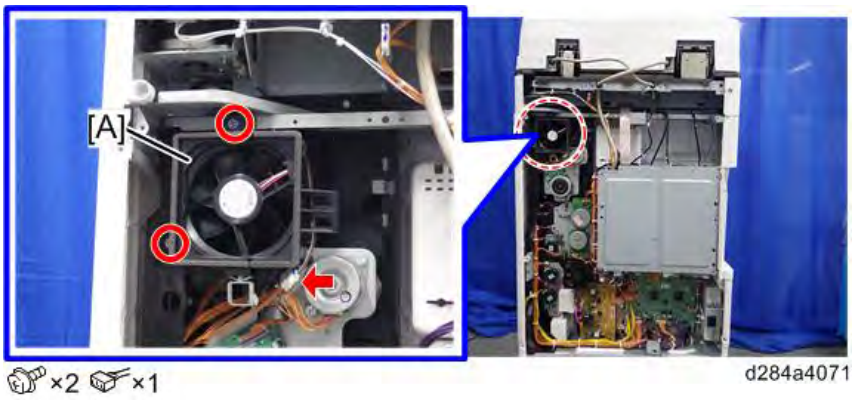
Note

- Pay attention to the direction of the fan when installing. The decal pasted on the fan must face the inside.

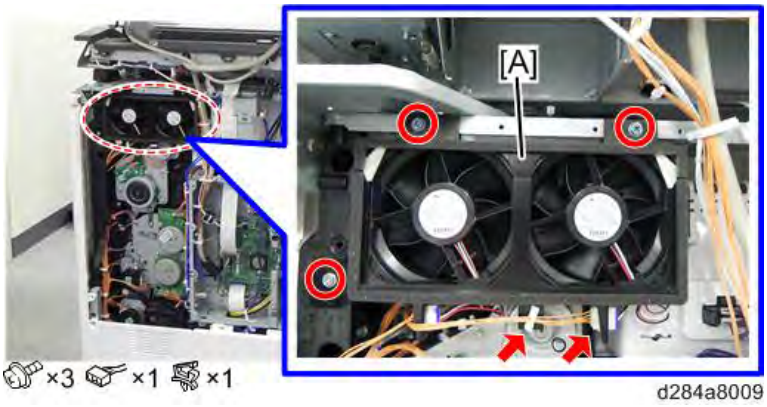
Fusing Fan

1. Remove the rear cover. (Rear Cover)
2. Remove the fusing exhaust heat fan [A] with duct.

MP 2555 SP/3055 SP/3555 SP

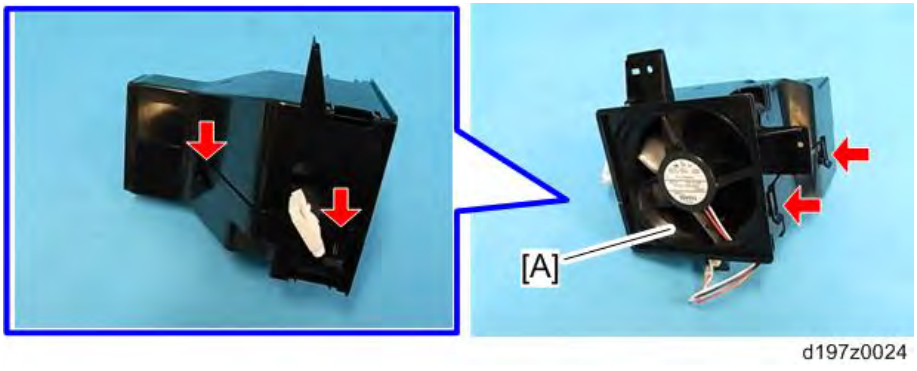


MP 4055 SP/5055 SP/6055 SP



3. Remove the fusing exhaust heat fan [A]. (×4)

MP 2555 SP/3055 SP/3555 SP



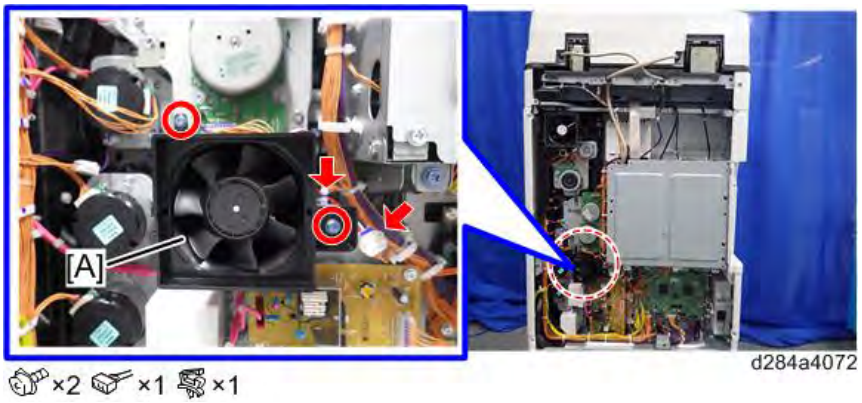
Note

- Pay attention to the direction of the fan when installing. The decal pasted on the fan must face the outside.

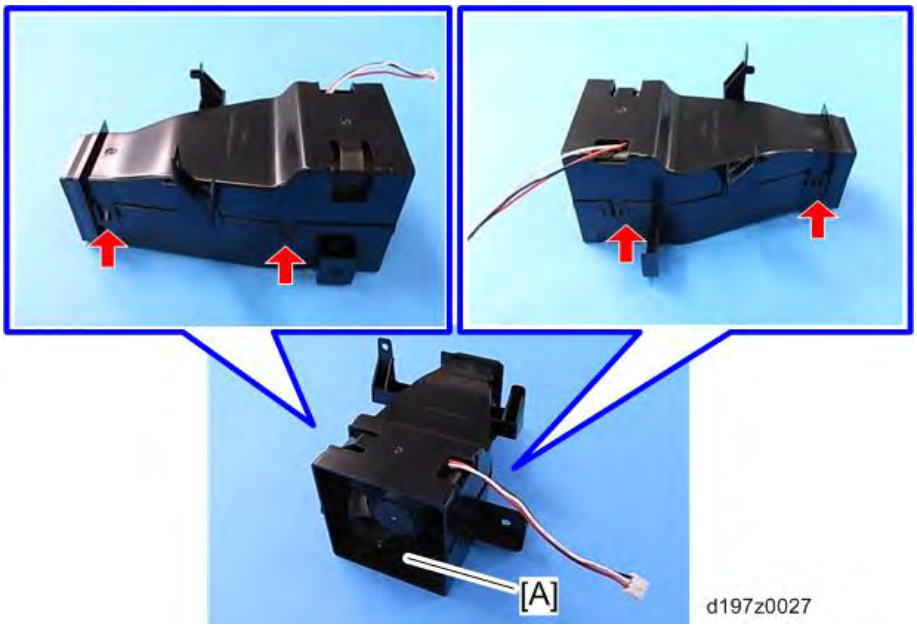
d197z0025

Development Bearing Cooling Fan (MP 4055 SP/5055 SP/6055 SP Only)

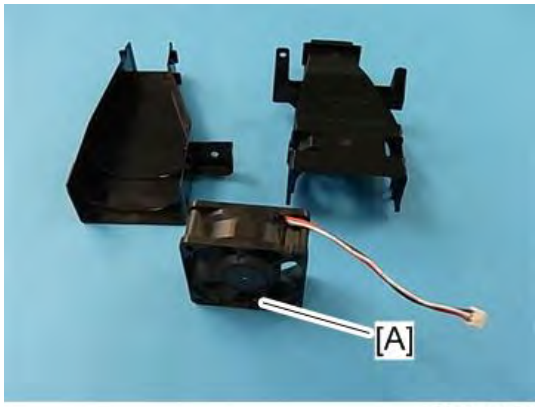
1. Remove the rear lower cover. (Rear Lower Cover)
2. Remove the development bearing cooling fan with duct [A].



3. Dismantle the duct [A]. (×4)



4. Remove the development bearing cooling fan [A].



d197z0028

Note

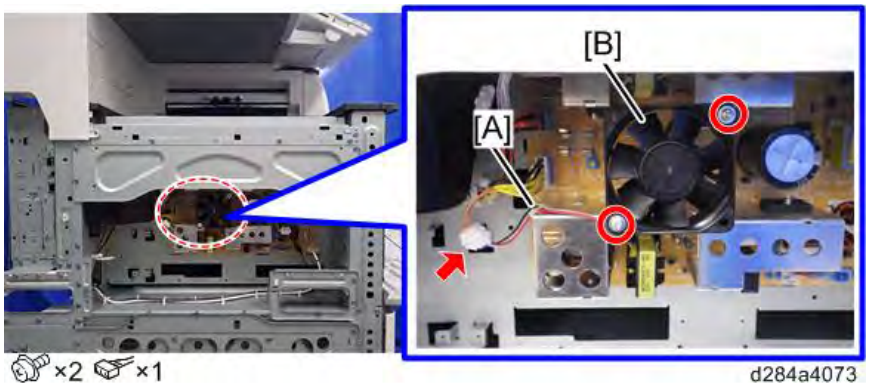
- Pay attention to the direction of the fan when installing. The decal pasted on the fan must face the outside.

d197z0029

PSU Cooling Fan (MP 4055 SP/5055 SP/6055 SP Only)

1. Remove the left cover. (Left Cover)

2. Remove the tie wrap band [A], and remove the PSU cooling fan [B].



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Note

- Pay attention to the direction of the fan when installing. The decal pasted on the fan must face the inside.

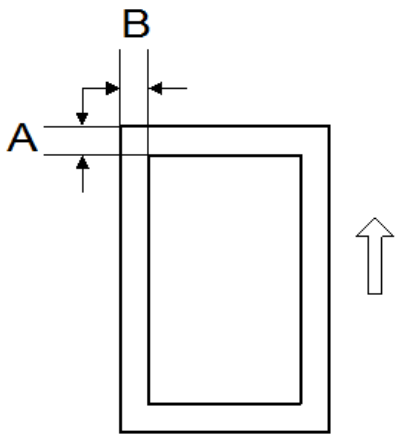
Adjustment after Replacement

Printing

Note

- Make sure the paper is installed correctly in each paper tray before you start these adjustments.
- Use the Trimming Area Pattern (SP2-109-003, No.14) to print the test pattern for the following procedures.
- Set SP 2-109-003 to “0” again after completing these printing adjustments.

Registration - Leading Edge/Side-to-Side



A: Leading Edge Registration (4.2 ± 1.5 mm)

B: Side-to-side Registration (2 ± 1.5 mm)

Make sure that the registration is adjusted within the adjustment standard range as shown above.

After doing the registration adjustment, do the Blank Margin Adjustment in the next section.

1. Check the leading edge registration [A] for each paper feed station, and adjust them using SP1-001.

Tray	SP No.	Threshold
Tray1: Thin	SP1-001-001	4.2 ± 1.5 mm
Tray1: Plain	SP1-001-002	
Tray1: MidThick	SP1-001-003	
Tray1: Thick1	SP1-001-004	
Tray1: Thick2	SP1-001-005	
Tray1: Thick3	SP1-001-006	
Tray1: Thick4	SP1-001-007	
Tray2: Thin	SP1-001-008	4.2 ± 1.5 mm
Tray2: Plain	SP1-001-009	
Tray2: MidThick	SP1-001-010	
Tray2: Thick1	SP1-001-011	
Tray2: Thick2	SP1-001-012	

Tray	SP No.	Threshold
Tray2: Thick3	SP1-001-013	
Tray2: Thick4	SP1-001-014	
Bypass: Thin	SP1-001-015	4.2 ± 1.5 mm
Bypass: Plain	SP1-001-016	
Bypass: MidThick	SP1-001-017	
Bypass: Thick1	SP1-001-018	
Bypass: Thick2	SP1-001-019	
Bypass: Thick3	SP1-001-020	
Bypass: Thick4	SP1-001-021	
Duplex: Thin	SP1-001-022	4.2 ± 1.5 mm
Duplex: Plain	SP1-001-023	
Duplex: MidThick	SP1-001-024	
Duplex: Thick1	SP1-001-025	
Duplex: Thick2	SP1-001-026	
Duplex: Thick3	SP1-001-027	
Tray1: Thin: 1200	SP1-001-028	4.2 ± 1.5 mm
Tray1: Plain: 1200	SP1-001-029	
Tray1: MidThick: 1200	SP1-001-030	
Tray1: Thick1: 1200	SP1-001-031	
Tray1: Thick2: 1200	SP1-001-032	
Tray1: Thick3: 1200	SP1-001-033	
Tray1: Thick4: 1200	SP1-001-034	
Tray2: Thin: 1200	SP1-001-035	4.2 ± 1.5 mm
Tray2: Plain: 1200	SP1-001-036	
Tray2: MidThick: 1200	SP1-001-037	
Tray2: Thick1: 1200	SP1-001-038	
Tray2: Thick2: 1200	SP1-001-039	
Tray2: Thick3: 1200	SP1-001-040	
Tray2: Thick4: 1200	SP1-001-041	
Bypass: Thin: 1200	SP1-001-042	4.2 ± 1.5 mm
Bypass: Plain: 1200	SP1-001-043	
Bypass: MidThick: 1200	SP1-001-044	
Bypass: Thick1: 1200	SP1-001-045	
Bypass: Thick2: 1200	SP1-001-046	
Bypass: Thick3: 1200	SP1-001-047	
Bypass: Thick4: 1200	SP1-001-048	
Duplex: Thin: 1200	SP1-001-049	4.2 ± 1.5 mm

Tray	SP No.	Threshold
Duplex: Plain: 1200	SP1-001-050	
Duplex: MidThick: 1200	SP1-001-051	
Duplex: Thick1: 1200	SP1-001-052	
Duplex: Thick2: 1200	SP1-001-053	
Duplex: Thick3: 1200	SP1-001-054	

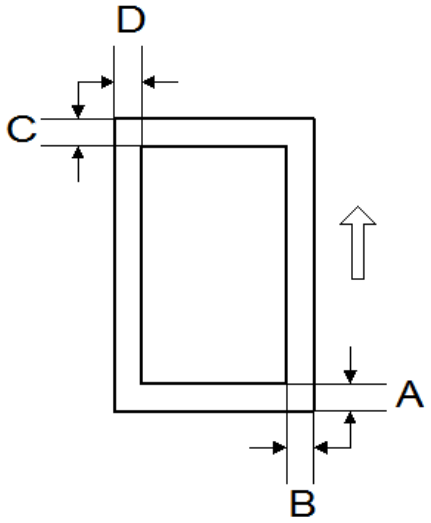
2. Check the side-to-side registration [B] for each paper feed station, and adjust them using SP1-002.

Tray	SP No.	Threshold
Tray 1	SP1-002-002	2 ±1.5 mm
Tray 2	SP1-002-003	
Tray 3 (Optional PFU tray 1 or LCT)	SP1-002-004	
Tray 4 (Optional PFU tray 2)	SP1-002-005	
Duplex (side 1)	SP1-002-006	
LCT	SP1-002-007	

Blank Margin

Note

- After adjusting the Leading Edge Registration and Side Registration settings (see the previous section), do the Blank Margin Adjustment. To do this, check the values of Margins C and D.
- If they are not within the specifications (see below), then adjust C and D with SP2-103-001 to -020 as explained below. Then check Margins A and B again.



A: Trailing Edge Blank Margin

B: Right Edge Blank Margin

C: Leading Edge Blank Margin

D: Left Edge Blank Margin

1. Check the trailing edge [A], right edge [B], leading edge [C], left edge [D] blank margins, and adjust them using the following SP modes.

Edge	SP No.	Adjustment Range
Leading Edge	SP2-103-001	4.2 ± 1.5 mm (Plain, Thin)
Trailing Edge	SP2-103-002	More than 0.5 mm
Left Edge	SP2-103-003	2.0 ±1.5 mm
Right Edge	SP2-103-004	2.0 +2.5 /-1.5 mm
Duplex: Trailing Edge: L Size: Plain	SP2-103-006	2.0 ±2.0 mm
Duplex: Trailing Edge: M Size: Plain	SP2-103-007	
Duplex: Trailing Edge: S Size: Plain	SP2-103-008	
Duplex: Left Edge Plain	SP2-103-009	-2.0 ±1.5 mm
Duplex: Right Edge: Plain	SP2-103-010	2.0 +2.5 /-1.5 mm
Duplex: Trailing Edge: L Size: Thick	SP2-103-011	2.0 ±2.0 mm
Duplex: Trailing Edge: M Size: Thick	SP2-103-012	
Duplex: Trailing Edge: S Size: Thick	SP2-103-013	
Duplex: Left Edge Thick	SP2-103-014	-2.0 ±1.5 mm
Duplex: Right Edge: Thick	SP2-103-015	2.0 +2.5 /-1.5 mm
Duplex Trail. L Size:Thin	SP2-103-016	-4.0 ± 4.0 mm
Duplex Trail. M Size:Thin	SP2-103-017	
Duplex Trail. S Size:Thin	SP2-103-018	
Lead Edge Width:Thin	SP2-103-019	0.0 ± 9.9 mm
Trail. Edge Width:Thin	SP2-103-020	

- L Size: Paper Length is 297.1 mm or more
- M Size: Paper Length is 216.1 to 297 mm
- S Size: Paper Length is 216 mm or less.

Main Scan Magnification

1. Use SP2-109-003, no.5 (Grid Pattern) to print the single-dot grid pattern.

2. Check the magnification, and adjust the magnification using SP2-102-001 (Magnification Adjustment Main Scan) if necessary. The specification is ± 1%.

Parallelogram Image Adjustment

Laser unit adjustment is to fix parallelogram images that developed as a result of the laser operation, by means of adjusting the physical angle of the laser unit itself. This adjustment must be done after the skew-correction for the paper feed unit.

If parallelogram images are caused by the scanner after doing the laser unit adjustment, scanner unit adjustment must also be performed to correct this.

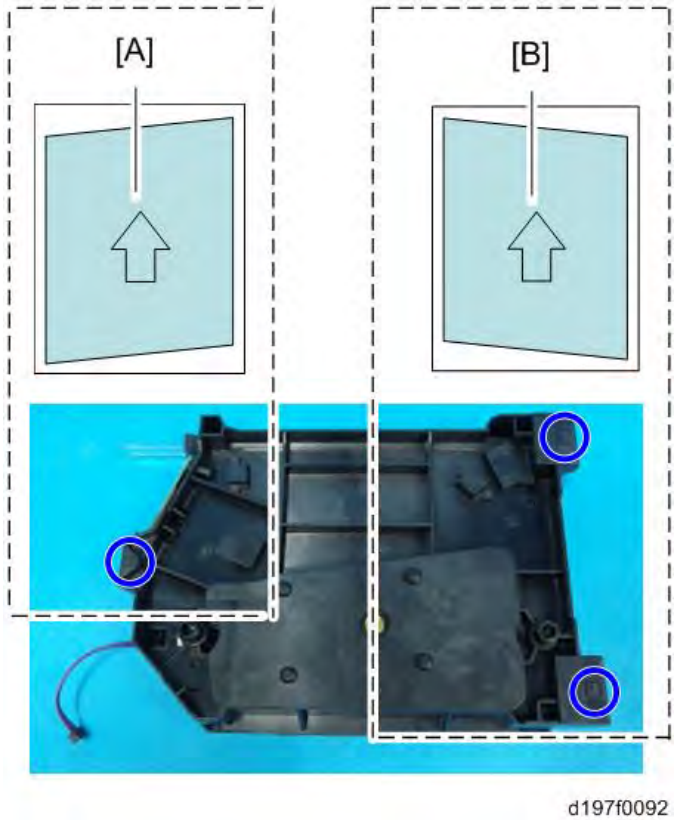
1. Enter into the SP mode.
2. Using SP2-109-003, output a trimming pattern to measure the parallelogram.
   - It is not necessary to do this step if output image is developed properly.

   Note

   - If the laser unit causes a parallelogram image, there is a slanted line in the main-scan direction, and there is a straight line in the sub-scan direction.
3. Remove the laser unit (Laser Unit).
4. Paste the adjustment sheet(s) on the reference points located on the back side of the laser unit (two points on the inside and/or one point on the front side).

   Note

   - A set of four sheets is provided as service parts. The number of sheets to be pasted depends on the condition of the image.
   - If lines slant down to the left [A], paste one or two sheets on the front side.
   - If lines slant down to the right [B], paste one or two sheets at each position on the rear side.
   - Adjustable amount: 0.5mm – 0.6mm/sheet



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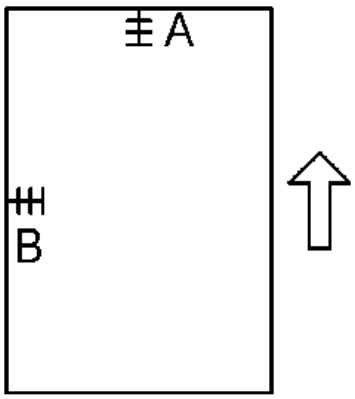
5. Do step 1 and 2 again to check that there is no parallelogram image.

Scanning

Note

- Before doing the following scanner adjustments, perform or check the printing registration /side-to-side adjustment and the blank margin adjustment.
- Use an S5S test chart to perform the following adjustments.

Registration: Platen Mode



A: Leading Edge Registration (Sub Scan Registration Adj)

B: Side-to-side Registration (Main Scan Reg)

1. Place the test chart on the exposure glass and make a copy from one of the feed stations.

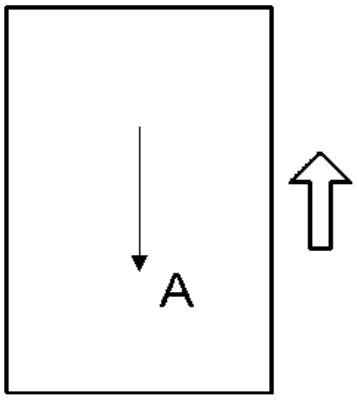
2. Check the leading edge and side-to-side registration, and adjust them using the following SP modes if necessary.

SP No.	SP Name	Adjustment Range
SP4-803-001	Home Position Adj Value	±2.0 mm
SP4-011-001	Main Scan Reg	±2.5 mm

Magnification

Note

- Use an S5S test chart to do the following adjustment.



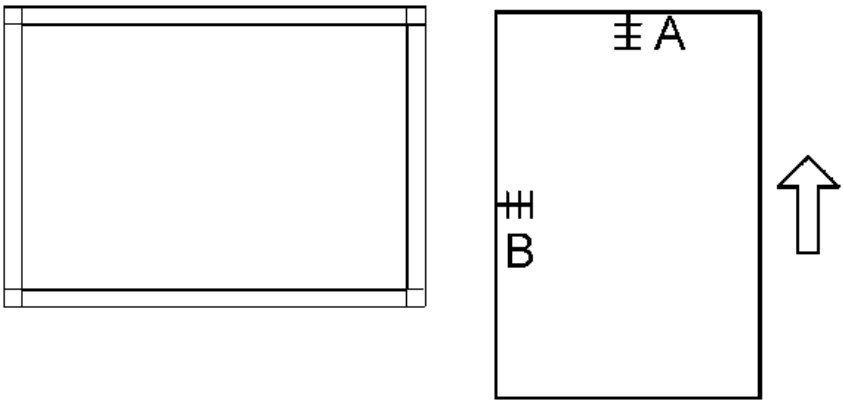
A: Sub-scan magnification

1. Place the test chart on the exposure glass and make a copy from one of the feed stations.
2. Check the magnification ratio and adjust using the following SP mode if necessary.

SP No.	SP Name	Adjustment Range
SP4-008-001	Sub Scan Magnification Adj	±1.0 %

ADF Image Adjustment

ARDF side-to-side, leading edge registration and trailing edge



A: Leading Edge Registration

B: Side-to-side Registration

Note

- Use A3/DLT paper to make a temporary test chart as shown above.

1. Put the temporary test chart on the ARDF. Then make a copy from one of the feed stations.
2. Check the registration. Check the leading edge and side-to-side registration. Adjust the following SP modes if necessary.

   Standard: 4.2 ± 2 mm for the leading edge registration, 2 ± 1 mm for the side-to-side registration. Use the following SP modes to adjust if necessary.

ARDF DF3090

SP No.	SP Name	Adjustment Range
SP6-006-001	Side-to-Side Regist: Front	±3.0 mm
SP6-006-002	Side-to-Side Regist: Rear	±3.0 mm
SP6-006-003	Leading Edge Registration: Front	±5.0 mm
SP6-006-004	Leading Edge Registration: Rear	±5.0 mm
SP6-006-005	Buckle: Duplex Front	±5.0 mm
SP6-006-006	Buckle: Duplex Rear	±5.0 mm
SP6-006-007	Rear Edge Erase Front	±10.0 mm
SP6-006-008	Rear Edge Erase Rear	±10.0 mm

SPDF DF3100

SP No.	SP Name	Adjustment Range
SP6-006-001	Side-to-Side Regist: Front	±3.0 mm
SP6-006-002	Side-to-Side Regist: Rear	±3.0 mm
SP6-006-010	L-Edge Regist (1-Pass): Front	±5.0 mm
SP6-006-011	L-Edge Regist (1-Pass): Rear	±5.0 mm
SP6-006-012	1st Buckle (1-Pass)	±3.0 mm
SP6-006-013	2nd Buckle (1-Pass)	-2 to +3 mm
SP6-006-014	T-Edge Erase (1-Pass): Front	±5.0 mm
SP6-006-015	T-Edge Erase (1-Pass): Rear	±5.0 mm

Sub Scan Magnification

Note

- Make a temporary test chart as shown above using A3/DLT paper.

1. Place the temporary test chart on the ADF and make a copy from one of the feed stations.

2. Check the magnification, and adjust using the following SP modes if necessary.

SP No.	SP Name	Adjustment Range
SP6-017-001	DF Magnification Adj.	±5.0 %

5. System Maintenance

Service Program Mode

⚠CAUTION

- Make sure that the data-in LED (⇨) is not on before you go into the SP mode. This LED indicates that some data is coming to the machine. When the LED is on, wait for the copier to process the data.

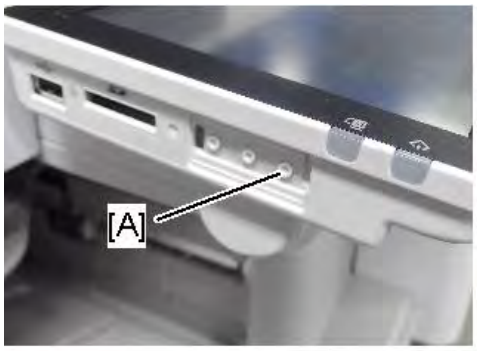
Note

- The Service Program Mode is for use by service representatives only. If this mode is used by anyone other than service representatives for any reason, data might be deleted or settings might be changed. In such case, product quality cannot be guaranteed any more.

Entering SP Mode

If there are no Classic Application (copy/printer/scanner/fax) icons on the HOME screen, follow the procedure below to display the number keyboard.

1. Press and hold the button [A] located at the left side of the operation panel and "Check Status [B]" at the same time, until the number keyboard is displayed.



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2. Enter the key code for SP mode.

For details of the key code to enter the SP mode, ask your supervisor.

Exiting SP Mode

Press "Exit" on the LCD twice to return to the copy window.

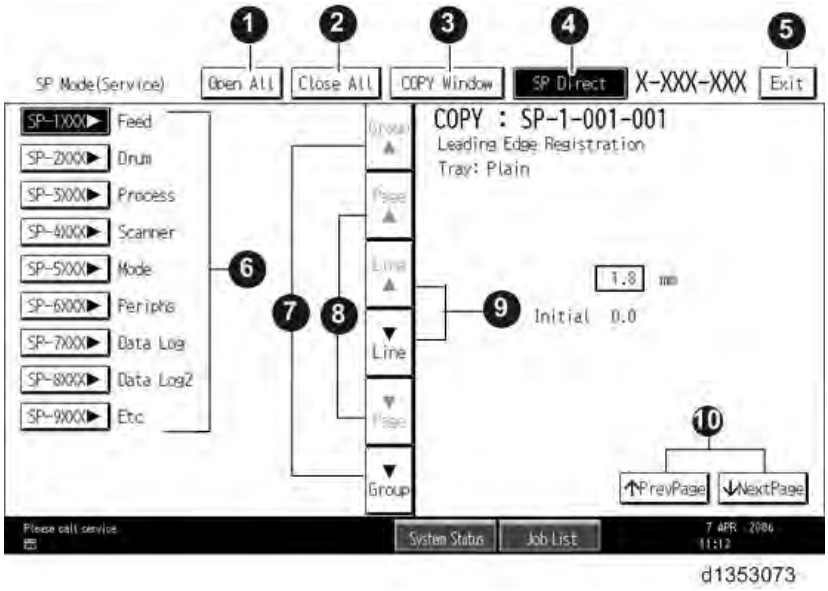
Types of SP Modes

- System SP: SP modes related to the engine functions
- Printer SP: SP modes related to the controller functions
- Scanner SP: SP modes related to the scanner functions
- Fax SP: SP modes related to the fax functions

Select one of the Service Program modes (System, Printer, Scanner, or Fax) from the touch panel as shown in the diagram below after you access the SP mode. This section explains the functions of the System/Printer/Scanner SP modes. Refer to the Fax service manual for the Fax SP modes.

SP Mode Button Summary

Here is a short summary of the touch-panel buttons.



1	Opens all SP groups and sublevels.
2	Closes all open groups and sublevels and restores the initial SP mode display.
3	Opens the copy window (copy mode) so you can make test copies. Press SP Mode (highlighted) in the copy window to return to the SP mode screen,
4	Enter the SP code directly with the number keys if you know the SP number. Then press [#]. The required SP Mode number will be highlighted when pressing [#]. If not, just press the required SP Mode number.)
5	Press two times to leave the SP mode and return to the copy window to resume normal operation.
6	Press any Class 1 number to open a list of Class 2 SP modes.
7	Press to scroll the show to the previous or next group.
8	Press to scroll to the previous or next display in segments the size of the screen display (page).
9	Press to scroll the show the previous or next line (line by line).
10	Press to move the highlight on the left to the previous or next selection in the list.

Switching Between SP Mode and Copy Mode for Test Printing

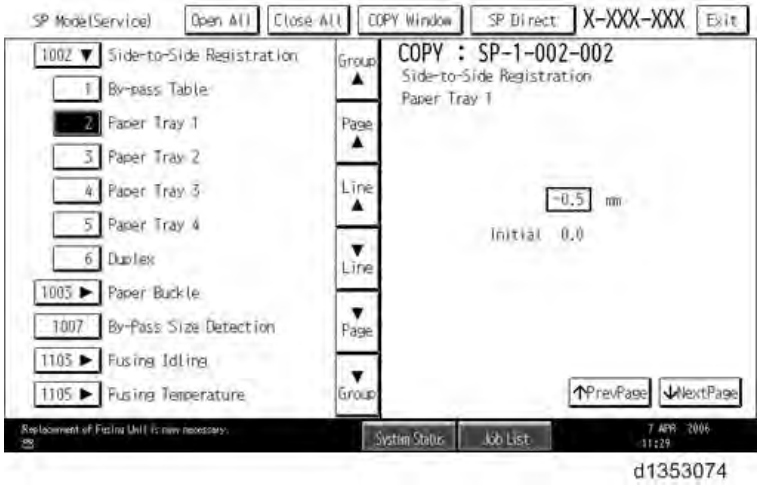
1. In the SP mode, select the test print. Then press "Copy Window".
2. Use the copy window (copier mode), to select the appropriate settings (paper size, etc.) for the test print.
3. Press [Start] key to start the test print.
4. Press SP Mode (highlighted) to return to the SP mode screen and repeat from step 1.

Selecting the Program Number

Program numbers have two or three levels.

1. Refer to the Service Tables to find the SP that you want to adjust before you begin.
2. Press the Group number on the left side SP Mode window that contains the SP that you want to adjust.
3. Use the scrolling buttons in the center of the SP mode window to show the SP number that you want to open. Then press that number to expand the list.
4. Use the center touch-panel buttons to scroll to the number and title of the item that you want to set and press

it. The small entry box on the right activates and shows the below default or the current settings.



Note

- Refer to the Service Tables for the range of allowed settings.

5. Do this procedure to enter a setting:
   - Press ⁺⁄₋ to toggle between plus and minus and use the keypad to enter the appropriate number. The number you enter writes over the previous setting.
   - Press [#] to enter the setting. (The value is not registered if you enter a number that is out of range.)
   - Press "Yes" when you are prompted to complete the selection.
6. If you need to perform a test print, press Copy Window to open the copy window and select the settings for the test print. Press [Start] key and then press SP Mode (highlighted) in the copy window to return to the SP mode display.
7. Press Exit two times to return to the copy window when you are finished.

Service Mode Lock/Unlock

At locations where the machine contains sensitive data, the customer engineer cannot operate the machine until the Administrator turns the service mode lock off. This function makes sure that work on the machine is always done with the permission of the Administrator.

1. If you cannot go into the SP mode, ask the Administrator to log in with the User Tool and then set "Service Mode Lock" to OFF after he or she logs in:
   User Tools > System Settings > Administrator Tools > Service Mode Lock > OFF
   - This unlocks the machine and lets you get access to all the SP codes.
   - The CE can service the machine and turn the machine power switch off and on. It is not necessary to ask the Administrator to log in again each time the main power switch is turned on.
2. Go into the SP mode and set SP5-169 to "1" if you must use the printer bit switches.
3. After machine servicing is completed:
   - Change SP5-169 from "1" to "0".
   - Turn the machine power switch off and on. Tell the administrator that you have completed servicing the machine.

- The Administrator will then set the "Service Mode Lock" to ON.

Remarks

The maximum number of characters which can show on the control panel screen is limited to 30 characters. For this reason, some of the SP modes shown on the screen need to be abbreviated. The following are abbreviations used for the SP modes for which the full description is over 20 characters.

Item	Description
Paper Weight	Thin paper: 52-59 g/m^2, 13.9-15.7lb. Plain Paper1: 60-74 g/m^2, 16-19.7lb. Plain Paper2: 75-81 g/m^2, 20-21.6lb. Middle Thick: 82-105 g/m^2, 21.9-28lb. Thick Paper1: 106-157 g/m^2, 28.3-41.9lb.
Paper Type	N: Normal paper MTH: Middle thick paper TH: Thick paper
Paper Feed Station	P: Paper tray B: By-pass table
Print Mode	S: Simplex D: Duplex

Others

The settings of each SP mode are explained in the right-hand column of the SP table in the following way.

[Adjustable range / **Default setting** / Step] Alphanumeric

Note

- If "Alphanumeric" is written to the right of the bracket as shown above, the setting of the SP mode shows on the screen using alphanumeric characters instead of only numbers. However, the settings in the bracket in the SP mode table are explained by using only the numbers.

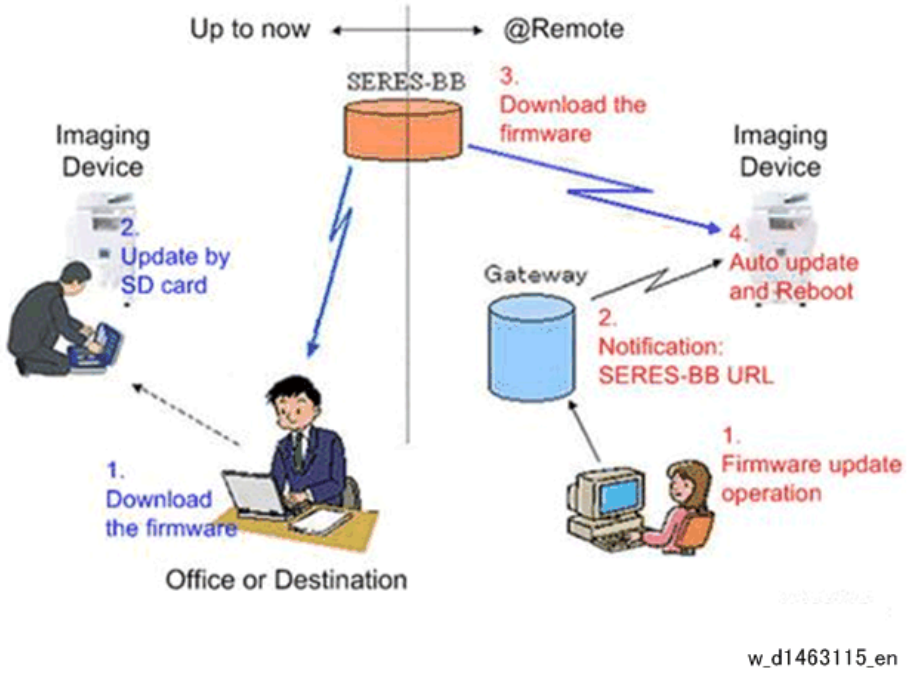
The following symbols are used in the SP mode tables.

Notation	What it means
ENG	Engine SP
CTL	Controller SP
FA	Factory setting: Data may be adjusted from the default setting at the factory. Refer to the factory setting sheets enclosed. You can find it in the front cover.
DFU	Design/Factory Use only: Do not touch these SP modes in the field.
*****	An asterisk (*) to the left side of ENG/CTL column means that this mode is stored in the NVRAM. If you do a RAM clear, this SP mode will be reset to the default value. "ENG" and "CTL" show which NVRAM contains the data. • *ENG: NVRAM on the BCU board

Notation	What it means
	• *CTL: NVRAM on the controller board
SSP	This denotes a "Special Service Program" mode setting.

Firmware Update (Remote Firmware Update)

In this machine, software can be updated by remote control using @Remote.



Types of firmware update files, supported update methods:

	SFU	SD	RFU	ARFU
Individual firmware	N/A	Available	Available	N/A
Package firmware	Available	Available	Available	Available

RFU Performable Condition

RFU is performable for a device which meets the following conditions.

1. The customer consents to the use of RFU.
2. The devise is connected to a network via TCP/IP for @Remote.

Firmware Update (SD Card)

Overview

In order to update the firmware of this machine, it is necessary to download the latest version of firmware on an SD card.

Insert the SD card into SD card slot 2 beside the rear left of the controller box.

Types of firmware update files, supported update methods:

	SFU	SD Card	RFU	ARFU
Individual firmware	N/A	Available	Available	N/A
Package firmware	Available	Available	Available	Available

Firmware Types

Firmware type	Firmware position
System/Copy	Controller Board
Network Support	Controller Board
Web Support	Controller Board
Fax	FCU
Scanner	Controller Board
Web Uapl	Controller Board
NetworkDocBox	Controller Board
Animation	Controller Board
Printer	Controller Board
RPCS	Controller Board
Font EXP	Controller Board
IRIPS Font	Controller Board
PCL	Controller Board
PDF	Controller Board
PS3	Controller Board
Java VM v12 std	Controller Board
Data Erase Onb	Controller Board
PowerSaving Sys	Controller Board
Engine	BCU
OpePanel	Smart Operation Panel
ADF	ADF
Finisher	Finisher

Note

- Even when not using a RPCS driver, the XPS driver requires RPCS firmware.

What is Included in the Firmware Package

Modules included in the firmware package are indicated by ticks (✓).

Firmware not included in the package require updating by SD cards, etc.

Included	Firmware
-	aics
✓	animation
✓	Application Site
✓	BluetoothService
✓	CheetahSystem
-	CSPF
-	Data Erase Onb
-	EcoInfoWidget
✓	Engine
-	External Auth
✓	Fax
-	FaxInfoWidget
✓	GWFCU3.8-9(WW)

Procedure

Important

- An SD card is a precision device, so when you handle an SD card, respect the following.
- When the power is switched ON, do not insert or remove a card.
- During installation, do not switch the power OFF.
- Since the card is manufactured to high precision, do not store it in a hot or humid location, or in direct sunlight.
- Do not bend the card, scratch it, or give it a strong shock.
- Before downloading firmware to an SD card, check whether write-protection of the SD card is canceled. If write-protection is enabled, an error code (error code 44, etc.) will be displayed during download, and the download will fail.
- Before updating firmware, remove the network cable from this machine.
- If SC818 is generated during software update, switch the power OFF -> ON, and complete the update which was interrupted.
- During software update, disconnect network cables and interface cables, remove wireless boards, etc., (so that they are not accessed during the update).
- During software update, network cables, remove interface cables, wireless boards, etc., (so that they are not accessed during update).

Preparation

- If the SD card is blank, copy the entire "romdata" folder onto the SD card.

If the card already contains folders up to "D284", copy the necessary firmware files (e.g. D284xxxx.fwu) into this folder.

Note

- Do not put multiple machine firmware programs on the same SD card. Copy the only model firmware you want.

Update procedure

1. First download the new firmware to the SD card.
2. Turn OFF the main power.
3. Remove the SD card slot cover [A].

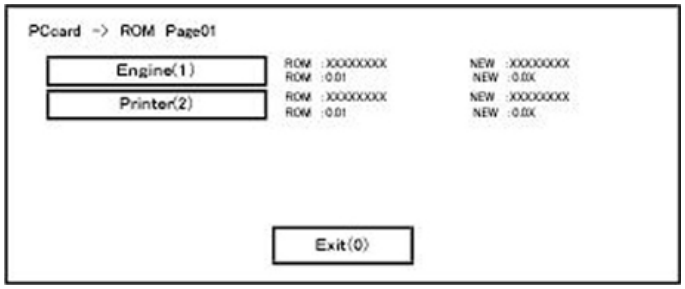
4. Insert the SD card [A] straight in slot 2.

Note

- Check whether the card is properly in the SD card slot. When a SD card is inserted, a click is heard, and it is locked.
- To remove the card, release by pressing once in the set state.

5. Turn ON the main power.
6. Wait until the update screen starts (about 45 seconds).
   When it appears, "Please Wait" is displayed.
7. Check whether a program installation screen is displayed. (English display) When the SD card contains two

or more software modules, they are displayed as follows.



When two or more software names are displayed

1. Press the module selection button or [1] - [5] on the 10-key pad.

2. Choose the appropriate module. (If already selected, cancel the selection)

Operation of keys or buttons

Keys or buttons to press	Contents
[Exit] or 10 key [0]	Returns to normal screen.
[Start] Key	Select all modules.
[Clear/Stop] key	Cancel all selections.

Display contents

On the above screen, two programs, i.e., engine firmware and printer application are displayed. (The screen may change depending on the firmware or application).

The display contents are as follows:

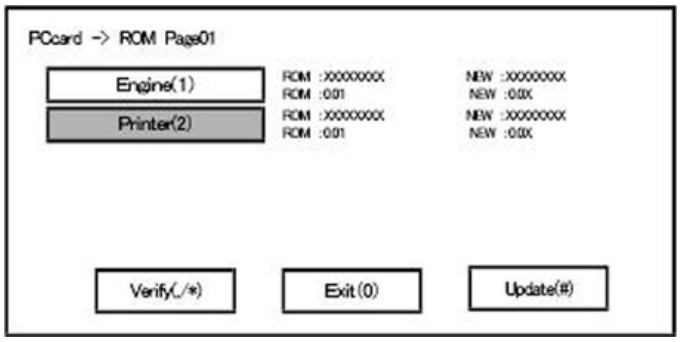
Display	Contents
ROM:	Display installed module number / version information.
NEW:	Display module number / version information in the card.

The upper row corresponds to the module number, the lower row corresponds to the version name.

8. Select the module with the module selection button or 10 key operation. The selected module is highlighted, and [Verify] and [Update] are displayed.

Note

- Depending on the combination of modules to update, it may not be possible to select all of them simultaneously.

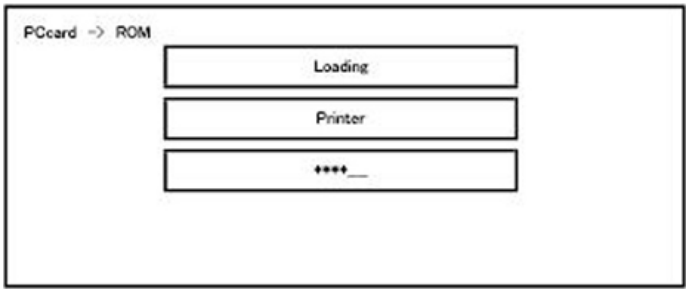


Key or button operations

Keys or buttons to press	Contents
[Update] or [#] key	Update the ROM of the selected module.
[Verify] button or [./*] key	Perform verification of the selected module.

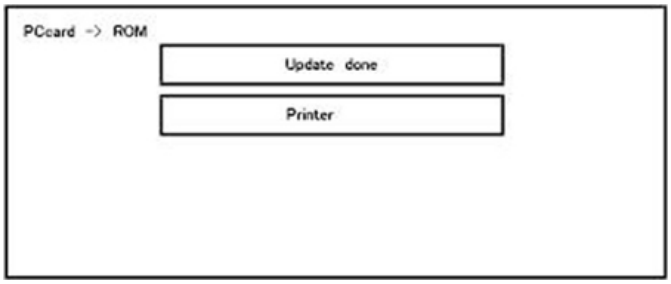
9. Press the [Update] or [#] key, and perform software update.

10. During firmware update, a “firmware update/ verification progress screen" is displayed. When firmware update is complete, a “firmware update end screen" is displayed.



- In the middle row, the name of the module currently being updated is displayed. (in this case, the printer module is being updated)
- In the lower row, a progress bar is displayed in ten steps. (The more *, the more the progress.)

Firmware update end screen



- This screen is displayed when all selected firmware modules are to be updated. "printer" in the second row shows that the module updated last is the printer. (When more than one are updated simultaneously, only what was updated last is displayed.)
- When Verify has completed normally, the Update done display of the above screen is "Verify done." If "Verify Error" is displayed, reinstall the software of the application displayed in the lower row.

11. After switching power OFF, remove the SD card.

12. Turn the main power ON again, and check whether the machine is operating normally.

13. Return the SD card slot cover to the original position.

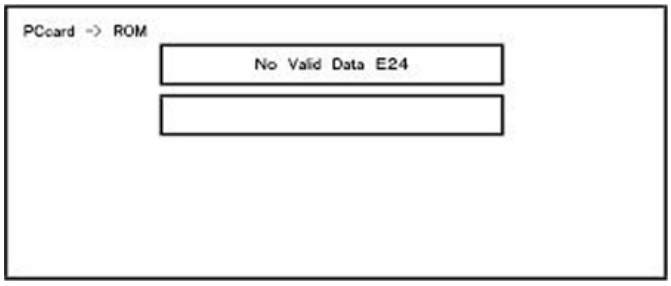
Note

- When the power supply is switched OFF during firmware update, update is interrupted, and the power is switched ON again, normal operation cannot be guaranteed.
- To guarantee operation, an update error continues to be displayed until update is successful.
- In this case, insert the SD card again, switch the power ON, and continue download of firmware from the SD card automatically.
- The PS3 firmware program is included in the preinstalled PDF firmware. In the default state, although

the PS3 firmware program is hidden in the disabled state, the function is enabled by installing the PS3 card. (The program installed in the PS3 card is a dongle (key) for enabling the PS3 function).

- Due to the above specification, the self-diagnosis result report shows the ROM module number / software version of the PDF firmware at the PS location.

Error Screens During Updating



EXX shows an error code.

For error codes, refer to the following table:

Error Code List

Code	Contents	Solutions
20	Physical address mapping cannot be performed.	• Switch the main power supply off and on to try again. • Re-insert the SD card to reboot it. • Replace the controller board if the above solutions do not solve the problem.
21	Insufficient memory for the download	• Switch the main power supply off and on to try again. • Replace the controller board if the updating cannot be done by switching the power off and on.
22	Decompression of compressed data failed.	• Switch the main power supply off and on to try again. • Replace the SD card used for the update. • Replace the controller board if the above solutions do not solve the problem.
24	SD card access error	• Re-insert the SD card. • Switch the main power supply off and on to try again. • Replace the SD card used for the update. • Replace the controller board if the above solutions do not solve the problem.
32	The SD card used after download suspension is incorrect.	• Insert the SD card containing the same program as when the firmware update was suspended, and

Code	Contents	Solutions
	SD cards are different between the one which was inserted before power interruption and the one which was inserted after power interruption.	then switch the main power supply off and on to try again. • There is a possibility that the SD card is damaged if the update cannot be done after the correct SD card has been inserted. In this case, try again with a different SD card. • Replace the controller board if the above solutions do not solve the problem. Replace all relevant boards if the update is done for the BCU and FCU. Replace the operation panel unit if the update is done for the operation panel.
33	Card version error. The wrong card version is downloaded.	• Install the correct ROM update data for each version in the SD card.
34	Destination error. A card for the wrong destination is inserted.	• Install the correct ROM update data for each destination (JPN/ EXP/ OEM) in the SD card.
35	Model error. A card for the wrong model is inserted.	• Install the correct ROM update data for each model in the SD card.
36	Module error. The program to be downloaded does not exist on the main unit. The download destination specified by the card does not match up to the destination for the main unit's program.	• Install the program to be updated in advance. • There is a possibility that the SD card containing the program to be updated has not been mounted. Check to confirm that the SD card has been correctly mounted. • The SD card is incorrect if the program to be updated has been correctly installed. In this case, insert the correct SC card.
38	The version of the downloaded program has not been authorized for the update.	• Make sure that the program to be overwritten is the specified version.
40	Engine download fails.	• Switch the main power supply off and on to try again. • If the download fails again, replace the controller board and the BCU.
41	Fax download fails.	• Switch the main power supply off and on to try again. • If the download fails again, replace the controller board and the FCU board.
42	Control panel / language download fails.	• Switch the main power supply off and on to try again.

Code	Contents	Solutions
		• If the download fails again, replace the controller board and the operation panel unit.
43	Printing download fails.	• Switch the main power supply off and on to try again. • The SD card media is damaged if the update fails again. Replace the SD card media.
44	The data to be overwritten cannot be accessed when controller-related programs are downloaded.	• Switch the main power supply off and on to try again. • Install the correct ROM update data in the SD card. • Replace the controller board if the data to be overwritten is contained on the controller board.
49	Firmware updates are currently prohibited.	• The setting of Update Firmware in the Administrator Tools has been set to [Prohibit] by an administrator. Amend the setting to [Do not Prohibit] and try again.
50	The results of the electronic authorization check have rejected the update data.	• Install the correct ROM update data in the SD card.
57	@Remote is not connected at the date/time reserved for receiving the package firmware update from the network.	• Check the @Remote connection.
58	Update cannot be done due to a reception route problem.	• Check the @Remote connection.
59	HDD is not mounted.	• Check the HDD connection.
60	HDD could not be used during the package firmware update.	• Try again. • Replace the HDD if the download fails again.
61	The module ID for the package firmware update is incorrect.	• Prepare the correct package files.
62	The configuration of the package firmware update files is incorrect.	• Prepare the correct package files.
63	Reception fails due to the power off at the reserved date/time of the remote firmware update from the network.	• Update is to be done automatically when the next reception time has elapsed.
64	Reception fails due to the power off at the reserved date/time of the package firmware update from the network.	• Reset the reservation date/time for the remote update.
65	Reception fails due to the status error of the	• Update is to be done automatically when the next

Code	Contents	Solutions
	machine at the reserved date/time of the remote firmware update from the network.	reception time has elapsed.
66	Reception failed due to the status error of the machine at the reserved date/time of the package firmware update from the network.	• Reset the reservation date/time for the remote update.
67	Acquisition of the latest version information from the Gateway fails at the reserved date/time of the remote firmware update from the network.	• Check that the network is connected correctly.
68	Acquisition of the latest version information from the Gateway fails.	• Check that the network is connected correctly.
69	Download fails at the reserved date/time of the remote firmware update from the network.	• Check that the network is connected correctly.
70	Package firmware download from the network fails.	• Check that the network is connected correctly.
71	Network communication error occurs at the reserved date/time of the package firmware update from the network.	• Check that the network is connected correctly.
72	The setting of @Remote is invalid at the reserved date/time of the package firmware update from the network.	• Set the setting of @Remote Service in the Administrator Tools to [Do not Prohibit].

Note

- The PDF firmware installed as standard contains the program required to print PS3 data by default. However, this PS3 program is normally disabled.
- The PS3 firmware is a dongle (key) which enables PS3 data printing functions. When the PS3 firmware is installed, the PS3 program in the PDF firmware is enabled. Due to this specification, the self-diagnosis result report shows the ROM part number/software version of the PDF firmware contained in the PS3 program.

Firmware Update (Smart Firmware Update)

⚠CAUTION

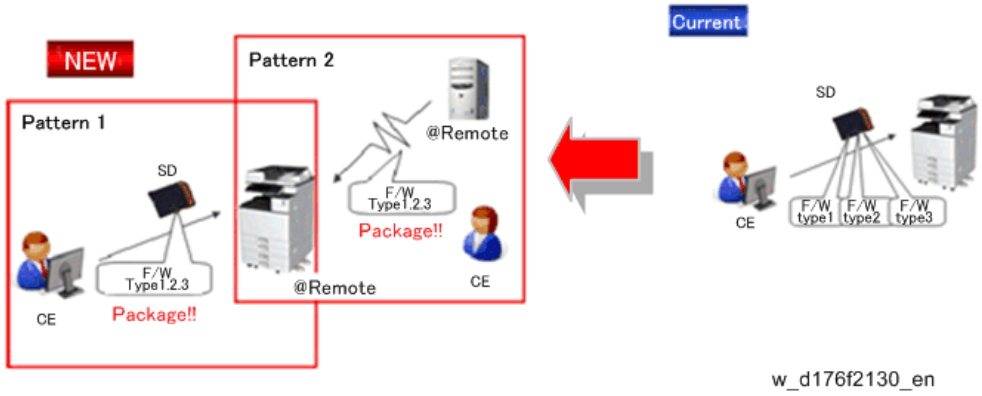
- An HDD unit must be installed on the machine to enable the SFU or the package firmware update via SD card.

Overview

Each firmware module (such as System/Copy, Engine, etc) used to be updated individually. However, an all-inclusive firmware package (package_ALL) is now available.

There are two ways to update using the firmware package.

- Package Firmware Update via a network: SFU (Smart Firmware Update)
- Package Firmware Update with an SD card



Package Firmware Update via a network: SFU (Smart Firmware Update)

- There are two methods for SFU.
  - Immediate Update: To update the firmware when visiting
  - Update at the next visit: To set the date and time for downloading. The firmware will be automatically downloaded beforehand and updated at the following visit.
- “Update at the next visit” is recommended since firmware download may take some minutes due to the network condition.

Note

- SFU requires the connection to @Remote via a device which has the embedded @Remote communicating function. When a machine is connected to @Remote via an intermediate device (RC Gate), the SFU function is disabled.

Package Firmware Update via an SD Card

Package firmware update can also be performed using the conventional SD card method by writing the package firmware directly to the SD card.

Types of firmware update files, supported update methods:

	SFU	SD Card	RFU	ARFU
Individual firmware	N/A	Available	Available	N/A
Package firmware	Available	Available	Available	Available

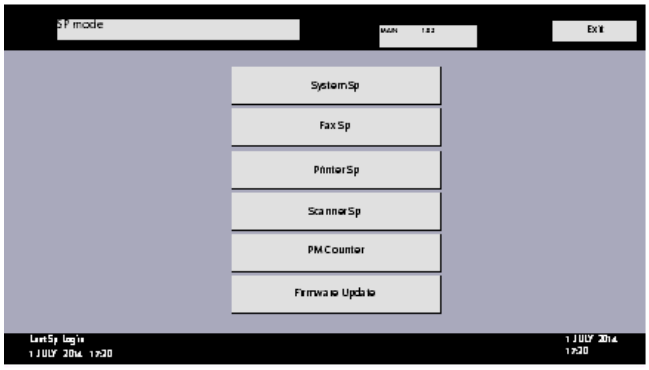
Immediate Update

Enter the [Firmware Update] menu in the SP mode and update the package firmware.

Note

- The [Firmware Update] button will appear even when a machine is connected to @Remote with a device which does not have an embedded @Remote communicating function.
- If an error code is displayed, refer to Error screens during updating (Error Screens During Updating).

1. Enter the SP mode.
2. Touch [Firmware Update].



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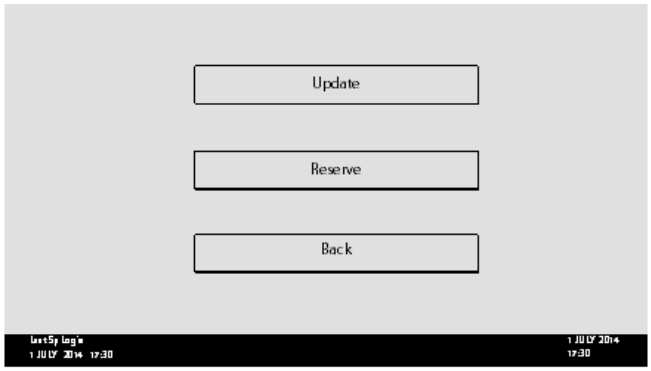
3. Touch [Update].



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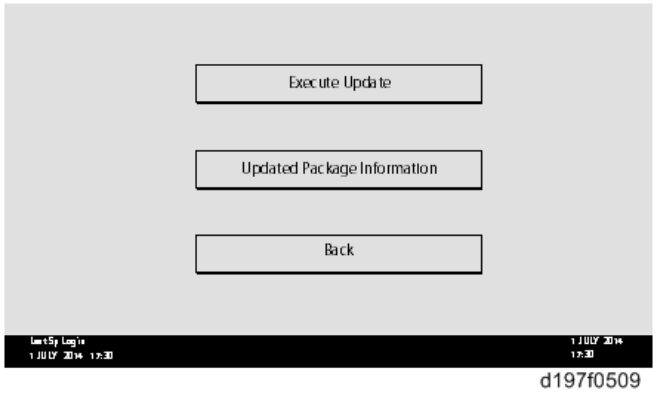
4. Touch [Execute Update].



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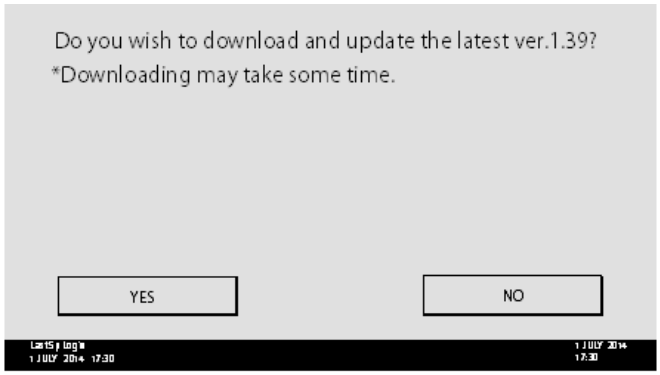
5. Touch [YES].



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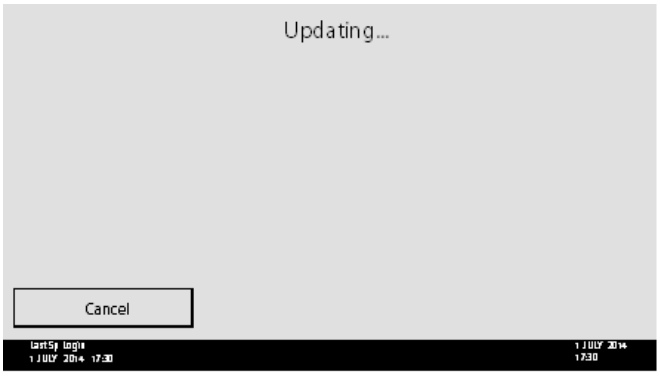
6. The following display will be displayed.



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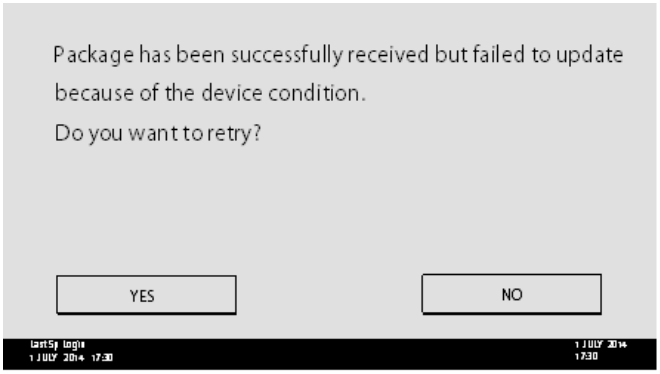
Note

- If the error code E66, which indicates that the download of the firmware has failed, is displayed, go back to step 1.
- Update will be started automatically after the download is finished.
- When the machine is in the update mode, the automatic update is suspended if a print job is started.

After the print job is finished, touch [YES] on the display shown below to restart updating.



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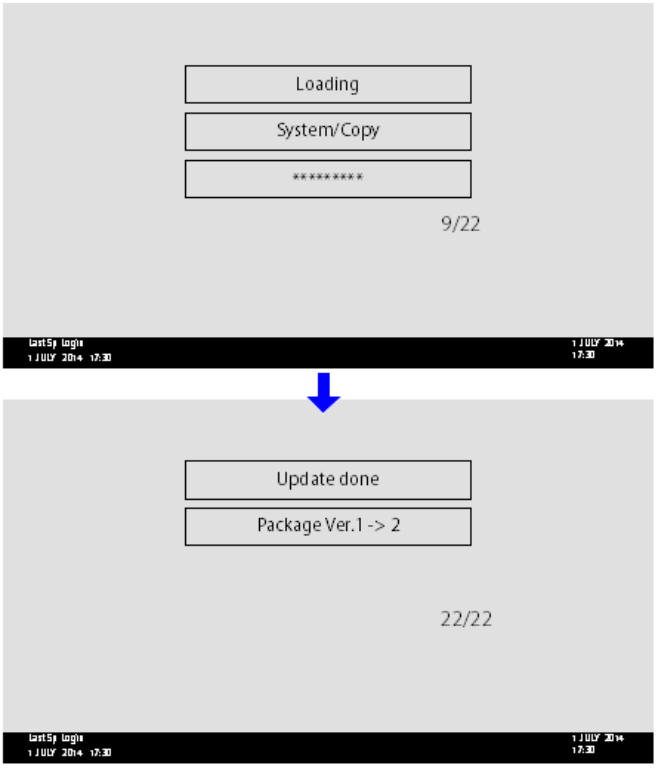
7. [Update done] is displayed.

- The machine will automatically reboot itself.



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Note

- The figures at the lower right of the display indicate “Number of updated items/ All items to be updated”.

Update at the Next Visit (Reserve)

It is possible to set the machine to download the package firmware which is necessary for SFU in advance, and then perform the actual installation at the next service visit. This saves waiting time for the firmware to download at the service visit.

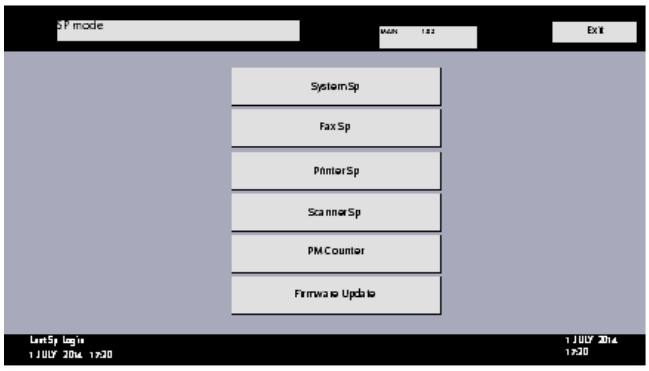
How to Set the Machine to Download Firmware Later (RESERVE)

Enter the [Firmware Update] menu in the SP mode and update the package firmware.

Note

- The [Firmware Update] button will appear even when a machine is connected to @Remote with a device which does not have an embedded @Remote communicating function. If an error code is displayed, refer to Error Screens During Updating.

1. Enter the SP mode.
2. Touch [Firmware Update].



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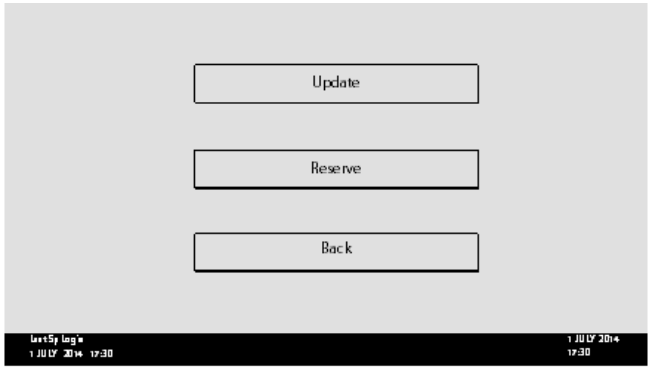
3. Touch [Reserve].



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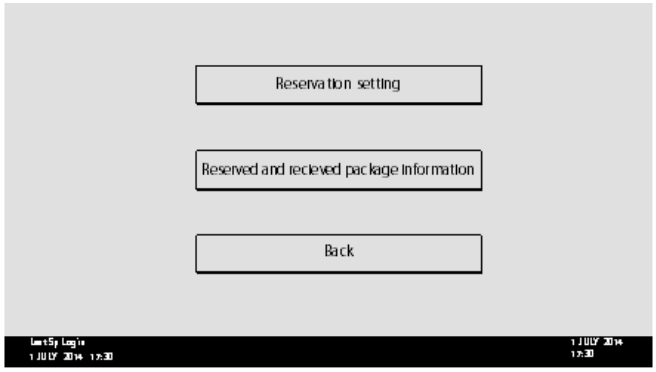
4. Touch [Reservation setting].



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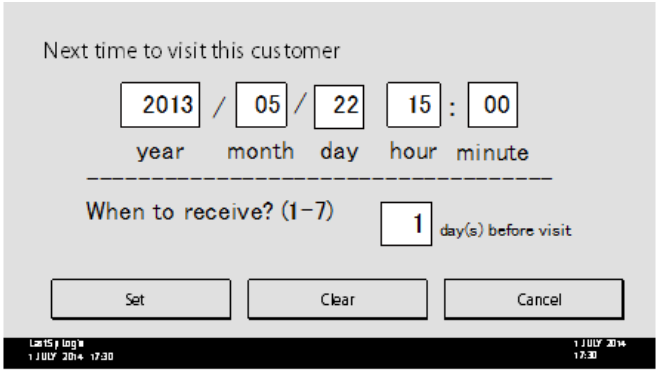
5. Enter the dates and times of the next visit and the start of receiving data.
   - ”Next time to visit this customer”: The package firmware will be automatically downloaded by this

time/date.

- ”When to receive? (1-7)”: The download of the package firmware will begin this number of days before the next visit.



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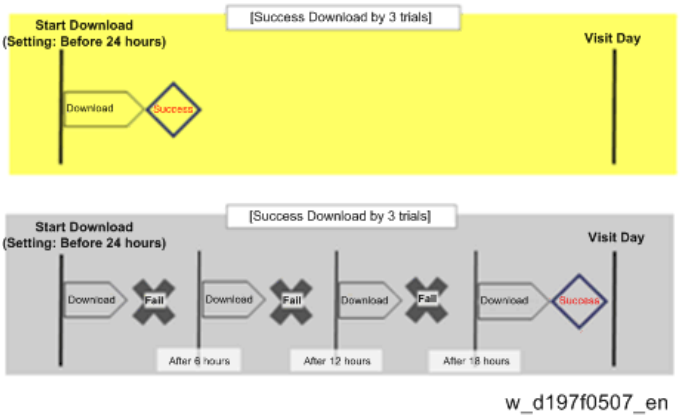
Successful Download

In the two diagrams below, the firmware is set to be downloaded by the day before the next scheduled visit. In the first diagram, the download is successful on the first try. In the second diagram, the download fails three times and is successful on the fourth try.



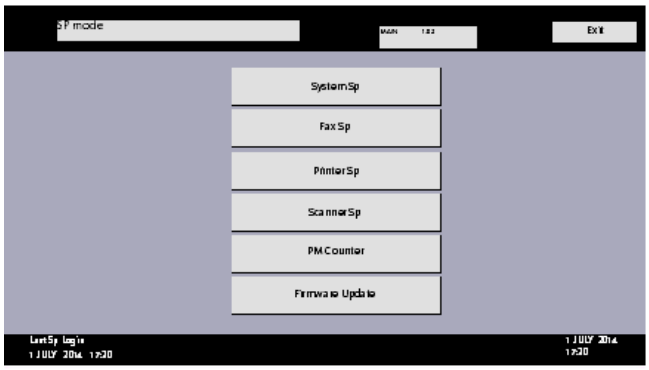
w_d197f0507_en

- If the firmware download fails or cannot be completed due to the network settings/condition, no power to the machine, or other reason, the machine will continue retrying every six hours until the scheduled deadline (up to a maximum of four tries). For example, if the download is set for the day before the next visit, the machine will attempt the download at 24 hours before the visit, and then continue trying every six hours (max. four tries total).
- The retry is only performed in cases when the firmware download has failed.
- If the machine is in Energy Saver mode when the download is scheduled to begin, the download will be performed in the background and the machine/panel will stay in Energy Saver mode.
- The download will continue uninterrupted even if the customer initiates a print job, copy job, fax receiving or other operation while the download is in progress.
- The download will be terminated if the customer turns the power off while the download is in progress.
- If the download cannot be completed successfully by the time of the next scheduled visit, the machine will

stop trying to download the firmware.

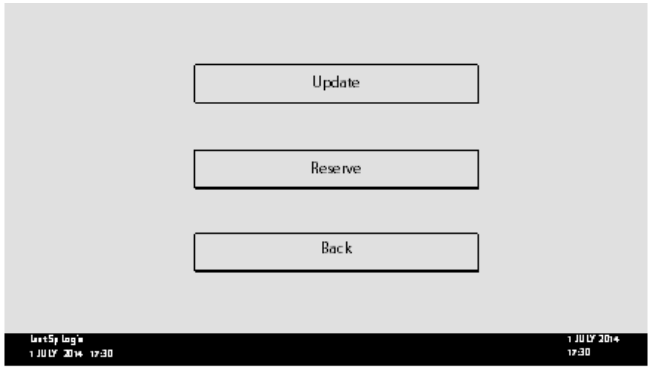
How to Check if the Firmware Downloaded with Reserve

1. Enter the SP mode.
2. Touch [Firmware Update].



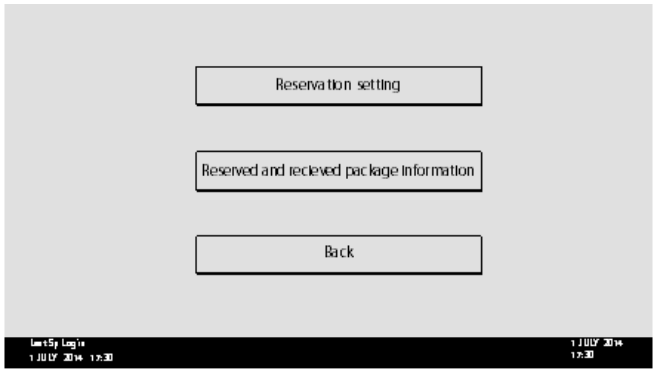
d197f0507

3. Touch [Reserve].



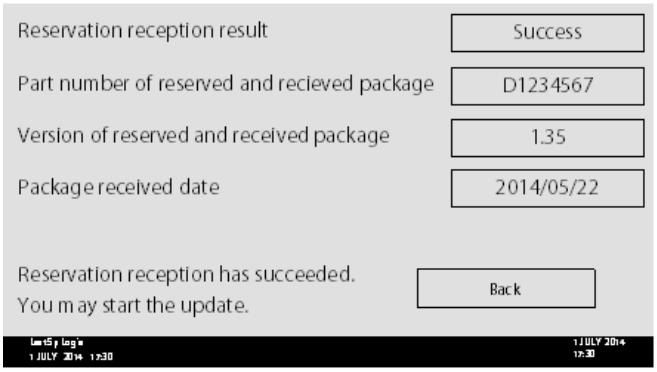
d197f0508

4. Touch [Reserve and received package information].



d197f0510

5. Check the information displayed.
   When the package firmware was downloaded successfully, the details of the download result are displayed as the following picture shows.



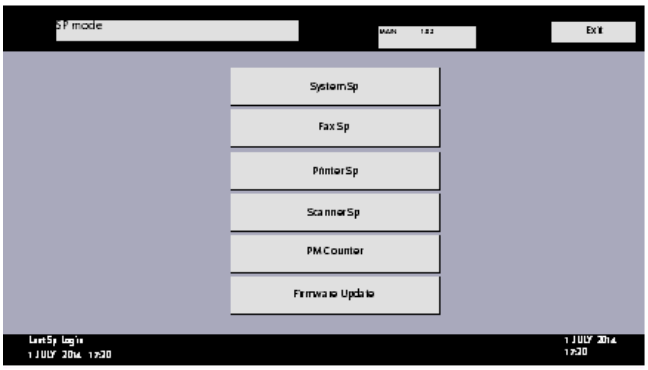
d197f0511

Note

- This information will only be displayed if the reserved firmware has already been downloaded. If not, all the data items are indicated with "-".

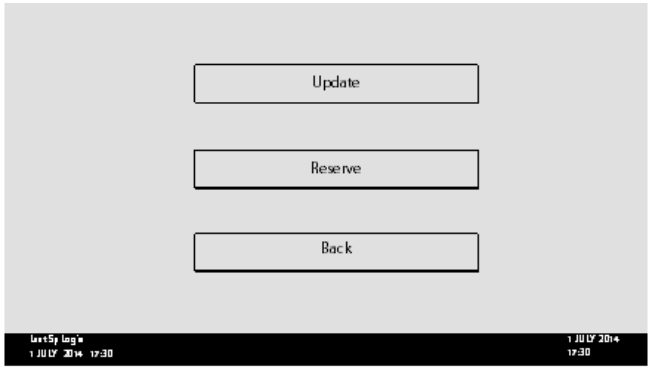
How to Install Firmware Downloaded with Reserve

1. Enter the SP mode.
2. Touch [Firmware Update].



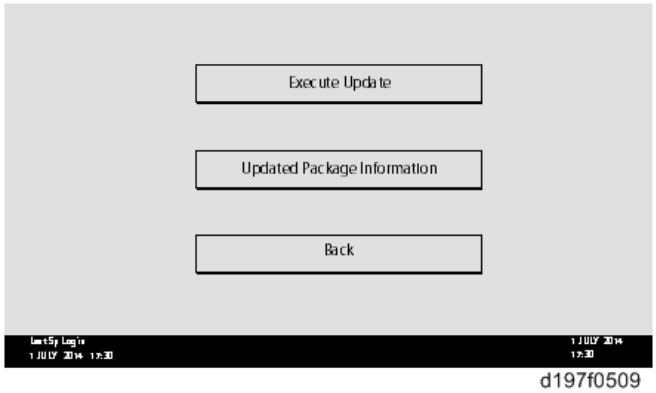
d197f0507

3. Touch [Update].



d197f0508

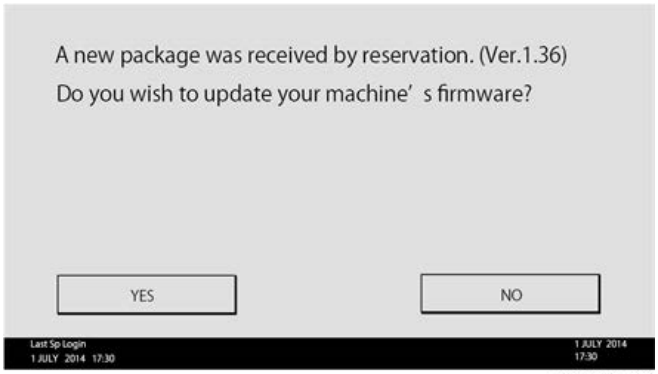
4. Touch [Execute Update].



d197f0509

5. Check the version of the received package firmware, and then touch [YES].

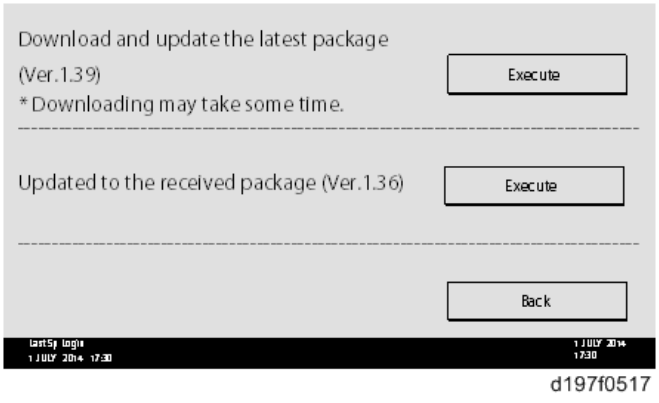
- Update is started.



d197f0516

Note

- If the version of the reserved package in the HDD is older than the latest version, the messages shown in the following picture are displayed.

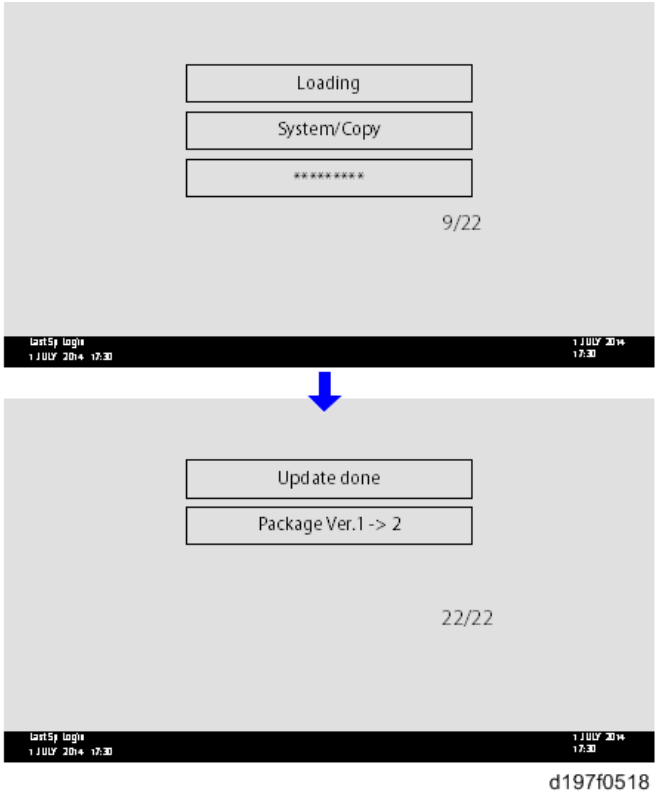


d197f0517

- If you wish to download the latest version, touch [Execute] beside the message “Download and update the latest package.” Then update of the package firmware will be started.
- If you wish to update using the firmware in the HDD (old version), touch [Execute] beside the message “Update to the received package.”

6. [Update done] is displayed.

- The machine will automatically reboot itself.



d197f0518

Note

- The figures at the lower right of the display indicate “Number of updated items/ All items to be updated”.

Update via SD card

Update with an SD card, which is the conventional method, is available if you write the package firmware to the SD card.

Note

- If an error code is displayed, refer to Error Screens During Updating.

1. Create a new folder in the SD card, and then name it “package”.
2. Copy the package firmware (xxxxxxxx.pkg) to this folder.

d197f0504

Important

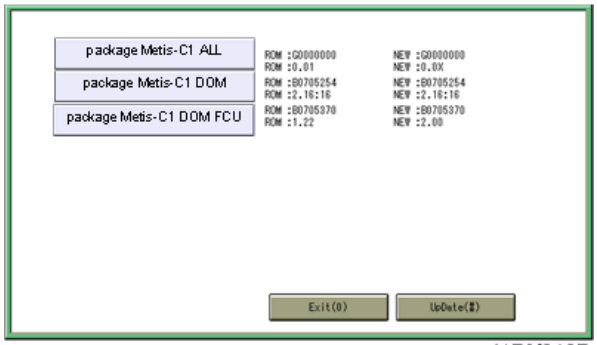
- If you copy the package firmware into the conventional “romdata” folder, the update will not work.

- Only one version of the package firmware should be copied into the folder. If you copy multiple versions of package firmware to the SD card, the machine will select only one version of the firmware randomly.

3. Turn the power OFF.

4. Insert the SD card which contains the package into SD card slot 2 (for service).

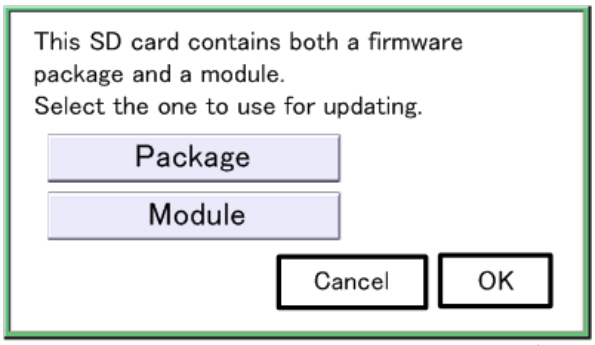
5. Turn the power ON and touch [Update].



d176f2127

Note

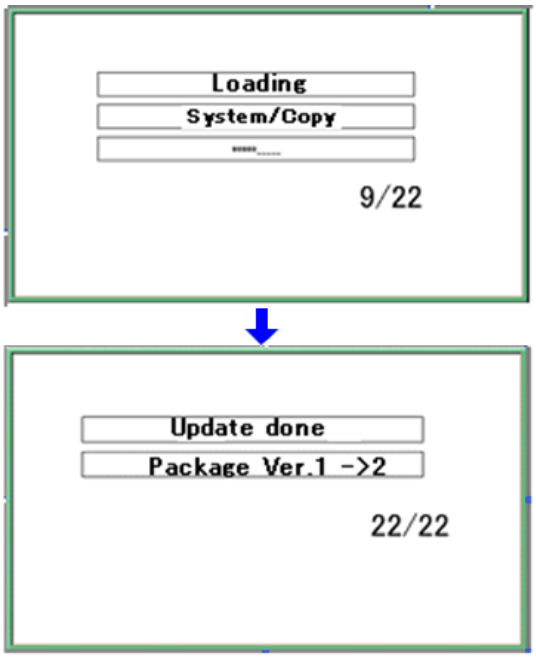
- When the SD card contains both a firmware package and one or more modules, the following display may show up. Select [Package] and touch [OK] to move to step 5 above.



d176f2128

6. Update is started automatically after the package firmware download to the HDD has been completed.

7. When update is completed, “Update done” is displayed.



d177z0021a

Note

- The figures at the lower right of the display indicate “Number of updated items/ All items to be updated”.

8. Turn the main power switch OFF, and then pull out the SD card from SD card slot 2.

9. Turn the power ON.

Firmware Update (Auto Remote Firmware Update)

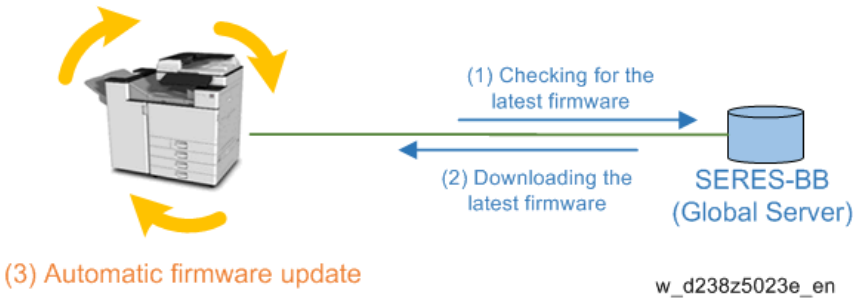
Note

- Auto remote firmware update (ARFU) requires connection to an external network. Be sure to get permission from the customer before setting.
- Internet connection is needed.

Overview

By Auto Remote Firmware Update (ARFU), the firmware is updated by checking the global server every 76 hours and downloading the latest package if it is newer than the one installed on the machine.

Function Overview



Types of firmware update files, supported update methods:

	SFU	SD Card	RFU	ARFU
Individual firmware	N/A	Available	Available	N/A
Package firmware	Available	Available	Available	Available

What is Included in the Firmware Package

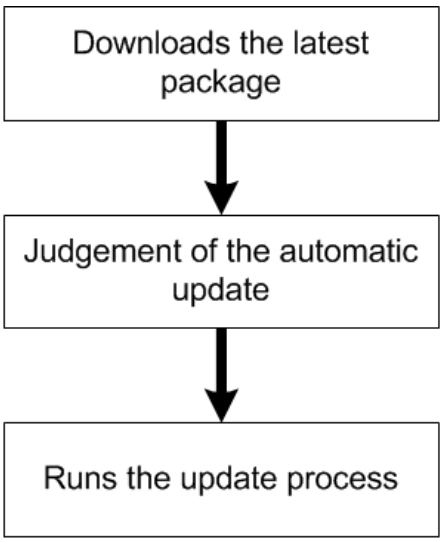
Modules included in the firmware package are indicated by ticks (✓).

Firmware not included in the package requires updating by SD cards, etc.

Included	Firmware
-	aics
✓	animation
✓	Application Site
✓	BluetoothService
✓	CheetahSystem
-	CSPF
-	Data Erase Onb
-	EcoInfoWidget
✓	Engine

Included	Firmware
-	External Auth
✓	Fax
-	FaxInfoWidget
✓	GWFCU3.8-9(WW)

Downloading and Updating Process



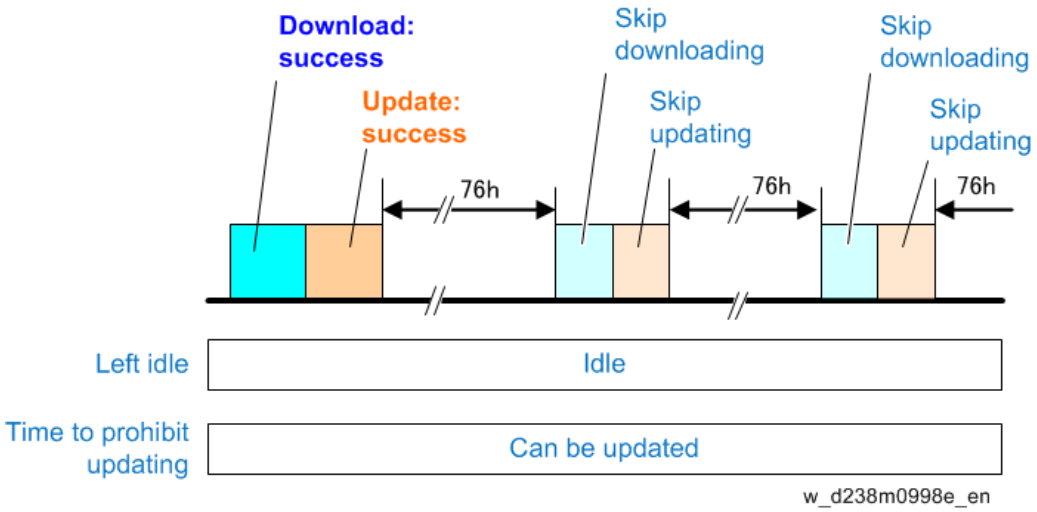
w_d238z5024e_en

Downloads the latest package

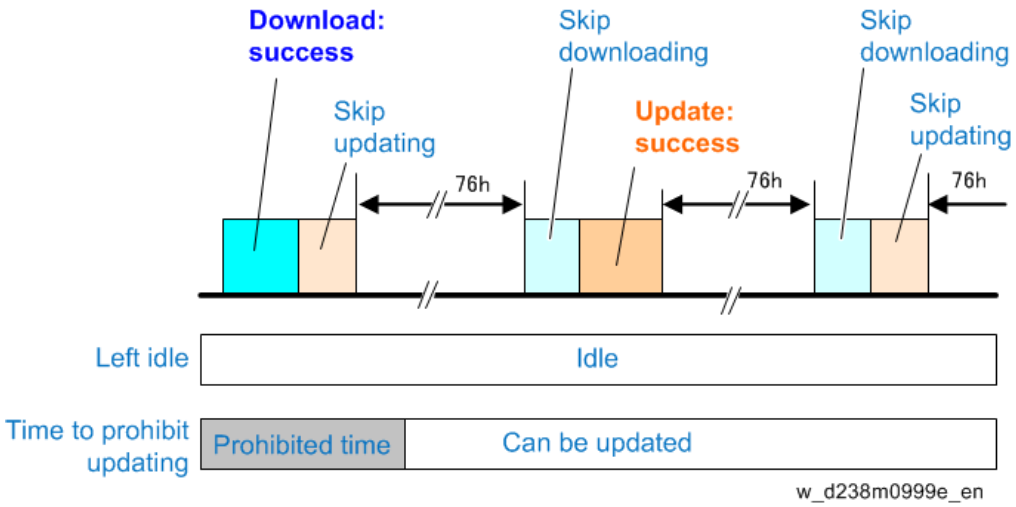
The machine checks the server for the latest package version.
If the version of the package on the global server is later than that of the package installed on the machine, or if the machine has not downloaded the firmware package, the machine downloads the latest package in the background even when the customer is using the machine.
If download fails, the machine will retry downloading 76 hours later.
The downloaded package can also be used with SFU (Smart Firmware Update). A package downloaded with SFU (Smart Firmware Update) can be used with ARFU (Auto Remote Firmware Update) and vice versa.
When replacing the hard disk, information concerning the current firmware package becomes lost from the hard disk. So, even if the latest firmware is on the new hard disk, be sure to download the latest package data.
When the machine connects to the server where the package files are stored, the DNS settings and the name solution by DNS are needed. The machine will still try to download the package even if the name cannot be resolved, but will fail as the name is not resolved.
The time and date to send the next inquiry to the global server can be checked with SP5-886-116 (Farm Update Setting: Auto Update Next Date).
The auto remote firmware update is executed every 76 hours.

Judgement of ARFU

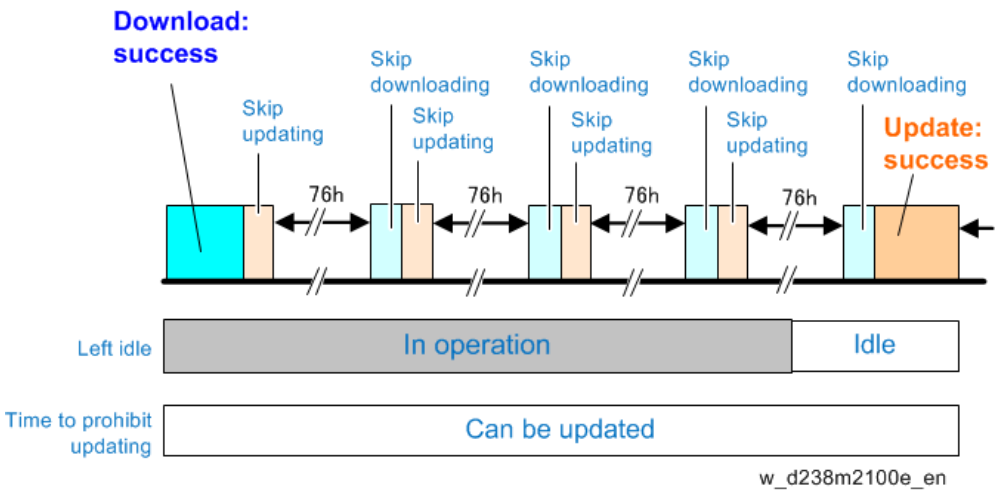
Update judgement is done when the latest update package is successfully downloaded, or the package has already been downloaded.



If the judgement timing is in the range of the update prohibited time or day set with SP or WIM, the machine will retry the update after 76 hours.



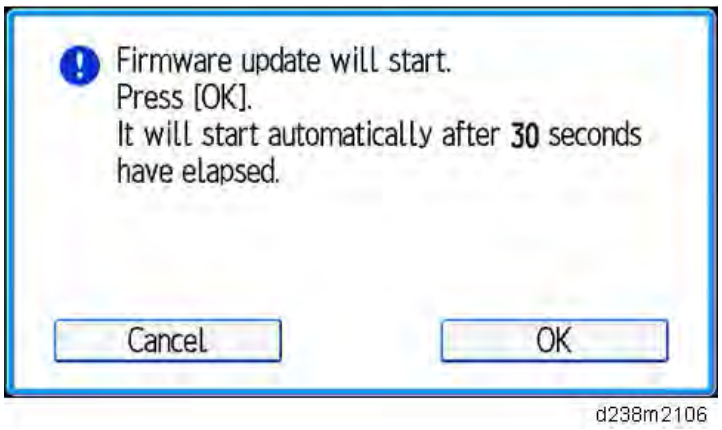
If the machine is in use when the judgement process runs, the process is retried. Retry is done up to three times every hour (can be changed with SP) and if the machine is in use for all three retries, the machine will retry the update after 76 hours



Situations judged as machine in use

No.	Situations judged as machine in use
1	When the control panel is used within 30 seconds
2	During firmware update
3	While firmware update is disabled
4	While printing (copy, printer, fax, re-printing via network)
5	While scanning (copy, scanner, fax)
6	Retrieving image data via network
7	While initial setting (User Tools settings) or SP is being set
8	While fax is transferring data
9	During on hook / on handset
10	During the PC-FAX process (from PC to machine data transfer to the end of the job)
11	While shifting to/from the energy server mode
12	When not being able to run firmware update due to the modules that are running e.g.) Waiting for DCS transfer (refer to appendix), accessing devices such as HDD/SD card, etc.
13	While displaying a preview
14	While the document server function is in use
15	Connecting to TWAIN
16	During the interrupt copy process
17	While displaying the printer menu
18	While updating the display for the document server function via WIM or for stored fax documents
19	While writing log information
20	While accessing the address book
21	During SC

When the machine has decided to run the auto firmware update, the following message is displayed.



The popup will have "Cancel" and "OK" buttons and the update process will start either when the "OK" button is selected or 30 seconds has passed.

When the "Cancel" button is selected, the machine will run the "Retry update" process.

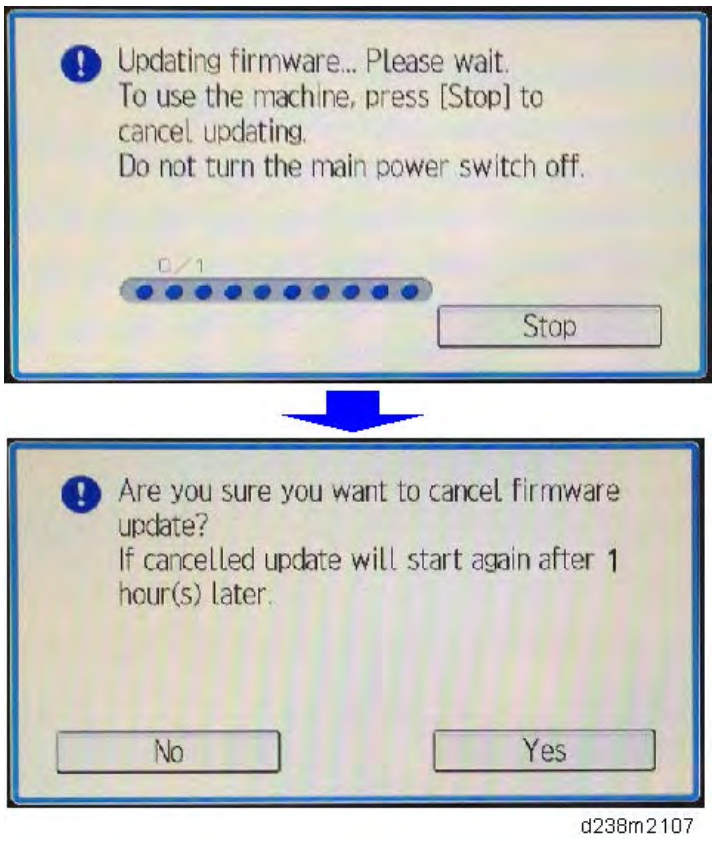
When the device update and three retries in recovery mode both fail, it is determined as a device defect and will display an SC for the defective device. If such an SC appears, replace the indicated board. In the case of SC845, the SC cannot be reported to the call center.

Device and corresponding SC number.

Device name	SC number
Engine board	SC845-01
Controller board	SC845-02
Operation panel (normal panel)	SC845-03
Operation panel (smart panel)	SC845-04
FCU	SC845-05

Canceling the update

It is possible to cancel the Auto Remote Firmware Update (ARFU) or update in recovery mode from the operation panel.



But this is not possible while updating the operation panel itself. On the other hand, the update for the operation panel will run at the final stage of the update. Thus canceling the update at that stage has no real effect.

When the update is cancelled, the machine will reboot when updates for all modules of one of the following devices is done.

1. Engine Board
2. FCU
3. Controller Board
4. Operation Panel

For example, when the update process is cancelled while updating the first module of the operation panel, the machine will reboot when all modules in the operation panel have been updated.

The firmware contents included in the package can be referred to in the release note in SERES release of the package.

The next update will run 76 hours after the cancellation. The old (cancelled) package will be discarded if the package downloaded 76 hours later is the latest.

Related SP

SP Number	Selection **Def.**	Overview
SP5-886-111	0: OFF **1: ON**	Sets auto update ON/OFF by ARFU.

SP Number	Selection **Def.**	Overview
SP5-886-112	**0: OFF** 1: ON	Will not run the update when update prohibited time setting is ON and the current time is in the range of the time set. • Start time < End time: Prohibited time is from the start time to the end time on the same day. • Start time > End time: Prohibited time is from the start time to the end time on the next day. • Start time == End time: Prohibited time setting is disabled. (Update will not be prohibited.)
SP5-886-113	0 to 23 **9**	
SP5-886-114	0 to 23 **17**	
SP5-886-115	**0: OFF** 1: ON	Even when the update function is disabled, downloading the package is allowed. The downloaded package can be used with SFU.
SP5-886-116	Display only	Displays when the latest package check will run.
SP5-886-117	1 to 24 **1**	Set time for the next version check after retry.
SP5-886-120	**0x00**	Update will not run if the corresponding bit for each day below is set to 1. • prohibited:bit7 • Monday: bit 6 • Tuesday: bit 5 • Wednesday: bit 4 • Thursday: bit 3 • Friday: bit 2 • Saturday: bit 1 • Sunday: bit 0 This setting is not affected by the prohibited time setting. e.g.) Prohibited on Mon., Fri., Sat., and Sun. : 0x47 (01000111)
SP7-520-011 to 015	Display only	History of date and time when update has started. The five most recent are recorded, the lowest number being most recent. If the last update failed, this is not recorded.
SP7-520-021 to 025	Display only	History of date and time when update has finished. The five most recent are recorded, the lowest number being most recent. The record is created when the update has successfully finished. When the update is cancelled, no record is created.
SP7-520-031 to 035	Display only	History of the package number (including suffix) for which update has completed. The five most recent are recorded, the lowest number being most recent. The record is created when the update has successfully finished.

SP Number	Selection **Def.**	Overview
		When the update is cancelled, no record is created.
SP7-520-041 to 045	Display only	History of the package version for which update has completed. The five most recent are recorded, the lowest number being most recent. The record is created when the update has successfully finished. When the update is cancelled, no record is created.
SP7-520-051 to 060	Display only	History of the result of the download and the update. Refer below for the numbers set.

Numbers set for the result history for SP7-520-051 to 060

No.	Result	Description
1	Downloading with SFU	Cannot download or update as the machine is now downloading the package for SFU.
2	HDD uninstalled	Cannot download or update as the machine has no HDD.
3	Updating with SFU	Cannot download or update as the machine is being updated with SFU.
4	HDD error	Cannot download or update as the HDD cannot be used.
5	Version information obtain error	Cannot download or update as the version information cannot be obtained.
6	Update download error	Cannot download or update as the update download failed. In non @Remote method, this shows that the download failed because there was no proxy set.
7	Name resolution error	Cannot download or update as the name cannot be resolved upon downloading the update.
8	Auto update setting disabled	The package has been downloaded but will not run the update as SP5-886-111 (auto update setting) is disabled and SP5-886-115 (auto download setting for SFU) is enabled.
9	Update prohibited time	Cannot start to update as the auto update prohibited time setting (SP5-886-112) is enabled and the time update initiated was in the range of prohibited time (SP5-886-113 to 114). Or the day which update was initiated was a day for which update was prohibited (SP5-886-120).
10	Update postponed due to machine in use	Cannot start update due to the following conditions when update was initiated. • The machine is in use by a user (the panel was used within 30 seconds) • Machine offline for other reasons • Operation prohibited

No.	Result	Description
		• Displaying SP/UP menu • Firmware update is running with another method • Configuration change prohibited • Verifying the operation panel (smart panel)
11	Update cancelled by user	Update was cancelled because a user selected "Cancel" in the popup shown before starting the update.
12	Offline failed	Cannot start to update as the machine is offline for other reasons.
13	Update successful	Update was started and successfully completed.
14	Update failed	Update was started but failed.
15	Update cancelled by user after update initiated	Update was cancelled after the process initiated because a user selected "Cancel" during the update.
16	Update deemed completed	Update was cancelled after the process was initiated because a user selected “Cancel”. There is no need to resume the update due to one of the following reasons: • A newer update has been released and received. • When retrying ARFU, the update has already been completed by another method.
17	Version information obtain error (proxy verification failure)	Cannot download or update as the proxy verification failed with proxy settings when obtaining version information.
18	Version information obtain error (other than proxy verification failure when proxy is set)	Cannot download or update as an error other than proxy verification with proxy settings occurred when obtaining version information.
19	Update download error (proxy verification failure)	Cannot download or update as the proxy verification failed with proxy settings when downloading the package.
20	Update download error (other than proxy verification failure when proxy is set)	Cannot download or update as an error other than proxy verification with proxy settings occurred when downloading the package.
22	Update by retry successful	After power failure, unsuccessful update, or rebooting, update by retry is executed successfully. However, this does not apply to the case where the update was cancelled after the process was initiated because a user selected “Cancel”. In this case, the update is “successful” if the retry is not executed between the start and completion of the next update (76 hours after the cancellation).

Updating JavaVM

Creating an SD Card for Updating

1. Download the update modules from Firmware Download Center. As one of the model modules, "Java VM v11 UpdateTool" is available for download. (The version differs depending on the model.)
2. Unzip the downloaded file. Copy the whole "sdk" folder to the root of the SD card directly below.

Note

- When unzipping the downloaded file, two subfolders ("update" and "sdk") exist in the "sdk" folder. Rather than just copying the subfolder "sdk", copy the whole folder "sdk".

Updating Procedure

⚠CAUTION

- SD card can be inserted with the machine power off.
- During the updating process, do not turn off the power.
- If you turn off the power during the updating, the machine performance is not guaranteed. (There is a possibility that an SC and boot failure occurs.)
- If you accidentally turn off the power during the updating, retry the updating procedure from the beginning. (If the update fails again, you will need to replace the controller board.)

1. If the boot priority application is set to the ESA application, switch to the copy application. ([System Settings]-[General Features]-[Function Priority])
2. Take a note of the current Heap size. ([Extended Feature Settings] – [Administrator Tools] – [Heap/Stack Size Settings])
3. Turn OFF the main power.
4. Insert the SD card you created into the service slot, and then turn ON the main power switch.
5. After booting Java VM, update of the application is started. "Updating SDK/J" appears in the banner message of the touch panel display. (Estimated time: about 2 minutes)
6. After completing the update and starting the Java VM, "Update SDK / J done SUCCESS" will appear in the banner message of the touch panel display. After turning off the power, remove the SD card from the slot. When you fail to update, "Update SDK/J done FAIL" is displayed. You can confirm the cause of the error message below.
7. Turn ON the main power.
8. Check the Heap size is set to the value that you noted in step 2. ([Extended Feature Settings]-[Administrator Tools]-[Heap/Stack Size Settings]).
9. Return to the previous setting for the boot priority application.

List of Error Messages

Update results are output as a text file on the SD card called "sdkjversionup.log" in the "\sdk \update" folder.

Result	File contents	Description of the output
Success	script file = /mnt/sd0/sdk/update/bootscript	Boot script path

Result	File contents	Description of the output
	2012/08/22 17:57:47 start 2012/08/22 17:59:47 end SUCCESS	Boot scripts processing start time End time boot script processing, the results
Failure	script file = /mnt/sd0/sdk/update/bootscript 2012/08/22 17:57:47 start XXXX Error 2012/08/22 17:57:57 end FAIL	Boot script path Boot scripts processing start time Error message (Possibly multiple) End time boot script processing, the results

Error Message	Cause	Remedy
PIECEMARK Error,machine=XXXXX	Applied the wrong updating tool (Using the updating tool of a different model)	Use the correct updating tool for this model.
pasePut() - error : The file of the copy origin is not found Put Error!	Inadequacy with the SD card for updating (Files are missing in the updating tool)	Re-create the SD card for updating.
paseCopy() - error : The file of the copy origin is not found. Copy Error!	Inadequacy SD card for updating (Files in the updating tool are missing)	Inadequacy SD card for updating (Files in the updating tool are missing)
[file name: XX] error,No space left on device pasePut() - error : The destination directory cannot be made. pasePut() - error : fileCopy Error. Put Error!	Writing destination is full. (The NAND flash memory on the controller board is full.)	Uninstall the unnecessary SDK applications. If you can not uninstall it, implement escalation, stating the "model name, application configuration, SMC sheet (SP5-990-006/024/025), and error file."
[file name: XX] error,No space left on device paseCopy() - error : The destination directory cannot be made. paseCopy() - error : fileCopy Error. Copy Error!	Writing destination is full. (The NAND flash memory on the controller board is full.)	Uninstall the unnecessary SDK applications. If you can not uninstall it, implement escalation stating the "model name, application configuration, SMC sheet (SP5-990-006/024/025), and error file."
Put Error! *1	Error, not normally expected to occur	If you cannot uninstall it, implement escalation stating the "model name, application configuration, SMC sheet (SP5-
Copy Error! *1		
Delete Error!		

Error Message	Cause	Remedy
[XXXXX] is an unsupported command.		990-006/024/025), and error file." *1 Without the foregoing error message, only "Put Error / Copy Error" will be displayed
Version Error		

NVRAM Data Upload/Download

Uploading Content of NVRAM to an SD card

Do the following procedure to upload SP code settings from NVRAM to an SD card.

Note

- This data should always be uploaded to an SD card before the NVRAM is replaced.
- Make sure that the write protection of an SD card is unlocked

1. Do SP5-990-001 (SP Print Mode: All(Data List)) before you switch the machine off. You will need a record of the NVRAM settings if the upload fails.
   Make sure to shut down and reboot the machine once before printing the SMC. Otherwise, the latest settings may not be collected when the SMC is printed.
2. Turn OFF the main power.
3. Remove the SD card slot cover [A].

4. Insert the SD card into SD slot 2 [A].

5. Turn on the main power switch.
6. Execute SP5-824-001 (NVRAM Data Upload) and then press the “Execute” key.
7. The following files are coped to an NVRAM folder on the SD card when the upload procedure is finished.
   The file is saved to the path and the following filename:
   NVRAM\<serial number>.NV
   Here is an example with Serial Number “K5000017114”:
   NVRAM\K5000017114.NV

8. In order to prevent an error during the download, be sure to mark the SD card that holds the uploaded data with the number of the machine from which the data was uploaded.

Note

- You can upload NVRAM data from more than one machine to the same SD card.

Downloading an SD Card to NVRAM

Do the following procedure to download SP data from an SD card to the NVRAM in the machine.

- The NVRAM data down load may fail if the SD card with the NVRAM data is damaged, or if the connection between the controller and BCU is defective.
- Do the download procedure again if the download fails.
- Do the following procedure if the second attempt fails:
- Enter the NVRAM data manually using the SMC print you created before uploading the NVRAM data.

1. Turn OFF the main power.

2. Remove the controller cover (x1).

3. Insert the SD card with the NVRAM data into SD slot 2.

4. Switch the copier main power switch on.

5. Do SP5-825-001 (NVRAM Data Download) and press the “Execute” key.

Note

- The serial number of the file on the SD card must match the serial number of the machine for the NVRAM data to download successfully. The download fails if the serial numbers do not match.

This procedure does not download the following data to the NVRAM:

- Total Count
- C/O, P/O Count

UP/SP Data Import/Export

Overview

Import/export conditions

Import/export is possible between devices only if their model type, region of use, and the following device configurations match.

- Input Tray
- Output Tray
- ARDF
- Whether or not equipped with a hard disk
- Whether or not equipped with a finisher and the type of finisher

UP Data Import/Export

Data that can be imported and exported

- Copier / Document Server Features
- Printer Features
- Scanner Features
- Facsimile Features
- Browser Features
- Extended Feature Settings
- Program (Document Server)
- Program (Copier)
- Program (Scanner)
- Web Image Monitor Setting
- Web Service Settings
- System Settings

Data that cannot be imported or exported

- Some System Settings *1 *2

  *1 The setting for the date, settings that require the device certificate, and settings that need to be adjusted for each machine (for example, image adjustment settings) cannot be imported or exported.

  *2 Settings only for executing functions and settings only for viewing cannot be imported or exported.
- Extended Feature Settings
- Address book
- Programs (fax function)
- Programs (printer function)
- User stamp in Copier / Document Server Features
- Settings that can be specified via telnet

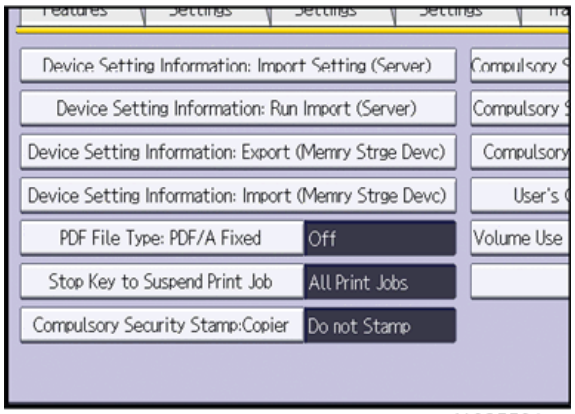
- @Remote-related data
- Counters
- EFI printer unit settings
- Settings that can only be specified via Web Image Monitor or Web Service (for example, Bonjour, SSDP setting)

Exporting Device Information

This can be exported / imported by an administrator with all privileges.

When exporting SP device information from the control panel, the data is saved on an SD card.

1. Insert an SD card into the media slot on the side of the control panel.
2. Log in from the control panel as an administrator with all privileges.
3. Press [User Tools] icon > [Machine Features] > [System Settings].
4. Press [Administrator Tools].
5. Press [Device Setting Information: Export (Memry Strge Devc)].



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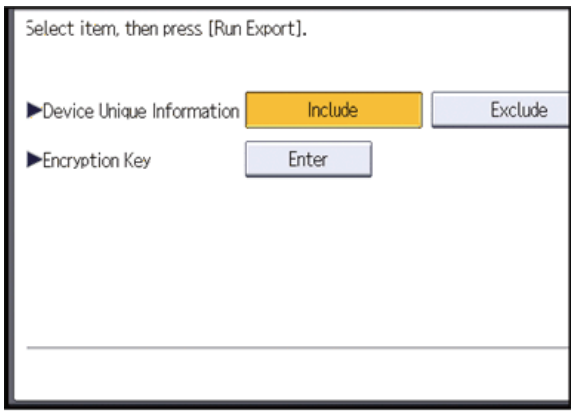
6. Set the export conditions.



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   - Specify whether to [Include] or [Exclude] the "Device Unique Information". "Device Unique Information" includes the IP address, host name, fax number, etc.
   - Specify an encryption key.
7. Press [Run Export].
8. Press [OK].

9. Press [Exit].

10. Log out.

Note

- If data export fails, the details of the error can be viewed in the log.
- When device Information is periodically imported, it is necessary to create the device setting information file with special software and store it on the web server.

Importing Device Information

This can be exported / imported by an administrator with all privileges.

Import device information saved on an SD card.

1. Insert an SD card into the media slot on the side of the control panel.

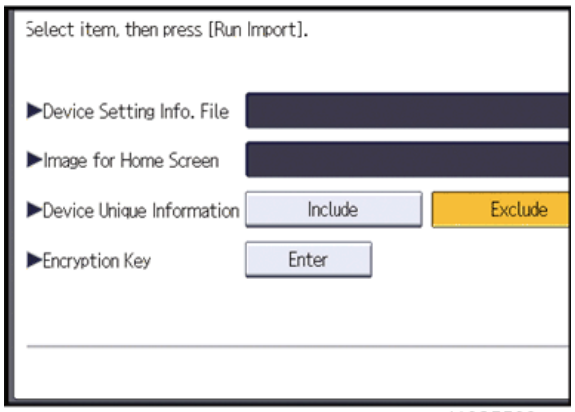
2. Log in from the control panel as an administrator with all privileges.

3. Press [User Tools] icon > [Machine Features] > [System Settings].

4. Press [Administrator Tools].

5. Press [Device Setting Information: Import (Memry Strge Devc)].

6. Configure the import conditions.



d1825503

- Press [Select] of the "Device Setting Info. File" to select the file(s) to import.
- When inserting a file into a home screen, press [Select] for the Image for Home screen and select the file. You cannot use this setting when using the Smart Operation Panel.
- Specify whether to [Include] or [Exclude] the "Device Unique Information". "Device Unique Information" includes the IP address, host name, fax number, etc.
- Enter the encryption key that was specified when the file was exported.

7. Press [Run Import].

8. Press [OK].

9. Press [Exit].

The machine restarts.

Note

- If data export fails, the details of the error can be viewed in the log.

SP Data Import/Export

Data that can be imported and exported

- System SP
- Printer SP
- Fax SP
- Scanner SP

Exporting Device Information

When exporting SP device information from the control panel, the data is saved on an SD card.

1. Insert an SD card into the media slot on the side of the control panel.
2. Enter SP mode.
3. Press SP5-749-001 (Import/Export: Export)
4. Select “Target” SP settings (System/Printer/Fax/Scanner/Smart Operation Panel) to be exported.
5. Select “Option” settings (Unique/Secret).

Item	Specification	Note
Unique	Unique information of the machine is included in the exported file if you select "Unique" setting.	**Unique information that can be updated** #1. Items that are to be used to identify the machine. Example: Network Information/ Host name / Information related to fax number /Mail address assigned to the machine #2. Items for specifying the options equipped on the machine. Example: Lot number for developer **Unique information that cannot be updated** #1. Items that may cause a problem if imported Example: Serial number / Information related to @Remote #2. Items for managing the history of the machine Example: Time and date / Counter information / Installation date #3. Setting values for the Engine
Secret	Secret information is exported if you select "Secret" setting.	**Secret information** #1. Data that cannot be exported without being encrypted. (Exported data is encrypted.) Example: Password / Encryption key / PIN code #2. Confidential information for the customer

Item	Specification	Note
		Example: User name / User ID / Department code / Mail address / **Phone number** #3. Personal information Example: Document name / Image data #4. Sensitive information for the customer Example: MAC address / Network parameters

* The IP address is exported when both 'Unique' and 'Secret' are selected.

6. Select “Crpt config” setting (Encryption).

Encryption	Select whether to encrypt or not when exporting. If you push the "Encryption" key, you can export secret information.	If the encryption function is used, setting of an encryption key is required by direct input. • Type the arbitrary password using the soft keyboard • Can enter up to 32 characters

7. Press [Execute].

8. Press [OK].

Note

- If data export fails, the details of the error can be viewed in the log.

Importing Device Information

Import device information saved on an SD card.

1. Insert an SD card into the media slot on the side of the control panel.

2. Enter SP mode.

3. Press SP5-749-101(Import/Export: Import)

4. Select a unique setting.

5. Press [Encryption Key], if the encryption key was created when the file was exported.

6. Select an encryption setting.

Unique	If you want to apply the unique information to the target machine, select the "Unique" key.	Refer to the above information.
Encryption	If an encrypted file is selected as the import file, this setting is required.	

7. Press [Execute].

8. Press [OK].

Note

- If data export fails, the details of the error can be viewed in the log.

Possible solutions for import/export problems

The access log file is created when export/import is executed. The file is stored in the same location as the exported device setting information file.

If an error occurs, check the log's result code in the access log file first. Values other than 0 indicate that an error occurred.

The result code will appear in the circled area illustrated below.

- Example of a log file

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If you cannot solve the problem or do not know how to solve it after checking the code, note down the error log entry, then contact your supervisor.

Result Code	Cause	Solutions
2 (INVALID REQUEST)	A file import was attempted between different models or machines with different device configurations.	Import files exported from the same model with the same device configurations.
4 (INVALID OUTPUT DIR)	Failed to write the device information to the destination device.	Check whether the destination device is operating normally.
7(MODULE ERROR)	An unexpected error occurred during import or export.	Switch the power off and then back on, and then try the operation again. If the error persists, contact your supervisor.
8 (DISK FULL)	The available storage space on the external medium is insufficient.	Execute the operation again after making sure there is enough storage space.
9 (DEVICE ERROR)	Failed to write or read the log file.	Check whether the path to the folder for storing the file or the folder in which the file is stored is missing.
10 (LOG ERROR)	The hard disk is faulty.	Contact your supervisor.
20 (PART FAILED)	Failed to import some settings.	The reason for the failure is logged in "NgCode". Check the code. **Reason for the Error (Ng-Name)** 2. INVALID VALUE The specified value exceeds the allowable

Result Code	Cause	Solutions
		range. 3. PERMISSION ERROR The permission to edit the setting is missing. 4. NOT EXIST The setting does not exist in the system. 5. INTERLOCK ERROR The setting cannot be changed because of the system status or interlocking with other specified settings. 6. OTHER ERROR The setting cannot be changed for some other reason.
21 (INVALID FILE)	Failed to import the file because it is in the wrong format in the external medium.	Check whether the file format is correct. The import file should be a CSV file.
22 (INVALID KEY)	The encryption key is not valid.	Use the correct encryption key.

Note

- When exporting device information from the control panel, the data can be saved only on an SD card.
- The file format for exports is CSV.

Address Book Upload/Download

Information List

The following information is possible to be uploaded and downloaded.

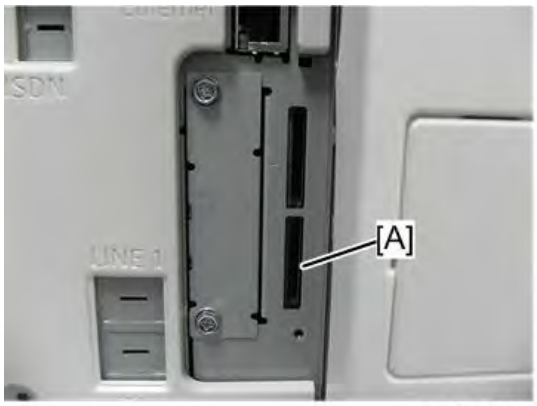
Information	
• Registration No. • User Code • E-mail • Protection Code • Fax Destination • Fax Option • Group Name • Key Display	• Select Title • Folder • Local Authentication • Folder Authentication • Account ACL • New Document Initial ACL • LDAP Authentication

Download

Backup address book information on SD card formatted with the specified software.

1. Prepare a formatted SD card.
2. Make sure that the write-protection on the SD card is off.
3. Turn OFF the main power.
4. Remove the SD slot cover [A].

5. Insert the SD card in the service slot [A].



6. Enter the SP mode.
7. Do SP5-846-051 (Backup All Addr Book).
8. Exit the SP mode, and then turn OFF the main power switch.
9. Remove the SD card.
10. Attach the SD slot cover to the original position (x1).

Note

- If the capacity of SD card is not enough to store the local user information, an error message is displayed.
- Carefully handle the SD card, which contains user information. Do not take it back to your location.

Upload

1. Turn OFF the main power.
2. After removing the SD slot cover of the controller unit, set the SD card in the service slot.
3. Turn ON the main power.
4. Enter the SP mode.
5. Do SP5-846-052 (Restore All Addr Book).
6. Exit the SP mode, and then turn OFF the main power switch.
7. Remove the SD card.
8. Attach the SD slot cover to the original position (x1).
9. Turn ON the main power, and check that the address book has been restored.

Note

- The counter in the user code information is initialized after uploading.
- The information of an administrator and supervisor cannot be downloaded nor uploaded.
- If there is no data of address book information in the SD card, an error message is displayed.
- If a download file does not exist, or if erasure is complete, execution malfunction is displayed.

Specification

The information which can be exported /imported is the following items.

- Entry information
- User code information
- E-mail information
- Protection code information
- Fax information
- Fax additional information
- Group information
- Title information
- Title position information
- Folder information
- SMTP attestation
- Local authorization
- Folder authorization information
- Account ACL information
- New document initial ACL information
- LDAP authorization information

Capturing the Device Logs

Overview

With this feature, you can save device logs that are stored in the machine (HDD or operation panel) on an SD card. It allows the Customer Engineer to save and retrieve error information for analysis.

The Capturing Log feature saves device logs for the following four.

- Controller device log
- Engine device log
- FCU device log
- Operation panel log

Important

- In older models, a technician enabled the logging tool after a problem occurred. After that, when the problem had been reproduced, the technician was able to retrieve the device log.
- However, this new feature saves the device logs at the time that problems occur. Then you can copy the logs to an SD card.
- You can retrieve the device logs using a SD card without a network.
- Analysis of the device log is effective for problems caused by the software. Analysis of the device log is not valid for the selection of defective parts or problems caused by hardware.
- Make sure to shut down and reboot the machine once before retrieving the Device Logs. Otherwise, the latest settings may not be collected when the device logs are retrieved.

Types of device logs that can be saved

Type	Storage Timing	Destination (maximum storage capacity)
Controller device log including operation log	• Saved at all times	HDD (4 GB) or SD card connected to the service slot. When the data gets over 4.0 GB, the older data is deleted.
Engine device log	• When an engine SC occurs • When paper feeding/output stop because of a jam • When the machine doors are opened during normal operation	HDD or SD card connected to the service slot (Up to 300 times)
FCU device log	• When a specified amount of FCU device log is stored in the FCU. If fax application is unavailable (e.g. not installed), the machine does not transfer the log.	HDD or SD card connected to the service slot
Operation panel log	• When an error related to the operation panel occurs.	Memory in the operation panel.

Note

- **Device logs are not saved in the following conditions:**
- While erasing all memory
- While data encryption equipment is installed
- While changing the firmware configuration
- Forced power OFF (accidentally disconnecting the outlet)
- Engine device log while the machine is shutting down
- When the power supply to the HDD is off because of energy saving (engine OFF mode/STR mode)
- When one of the following SCs occurs: SC672, SC816, SC819, SC878, SC899, SC859, SC860, SC861, SC863, or SC864

Note

- **The following logs are not saved:**
- Logs related to the energy saver mode (Engine-off, suspend-mode, or other cases)
  Network communication log
  Logs related to NRS
  IP-FAX log
  Access log for unauthorized users (guests)
- HTTP session timeout log
- Auto log-out log
- IC card related log
- Authorization for Fax

Security of the Operation Log

The following operation logs related to security are not saved.

- User ID
- Password
- IP address
- Telephone number
- Encryption key
- Transition to SP mode

Also the following operation logs are not saved.

- Number keys (0 to 9) on the operation panel
- Soft keyboard on the touch panel display
- External keyboard

Retrieving the Device Logs via Operation Panel

Important

- Retrieve device logs to identify the date of occurrence of the problems and to find details of the problems

- e.g.: At around 8:00 am on March 10, an engine stall occurred. The operation panel does not respond. Turn the main power supply off / on.
- Analysis of the device log is effective for problems caused by the software. Analysis of the device log is not valid for the selection of defective parts or problems caused by hardware.

Procedure for Retrieving the Device Log with SD Card

1. Insert the SD card into the slot on the side of the operation panel or the service slot.

Important

- It is recommended to use the SD card (2 GBs* or 8 GBs**) provided as a service part. This is because the log data can be acquired much faster than when using commercially available SD cards.
- Format the SD card by using SD Formatter from Panasonic before copying the logs: https://www.sdcard.org/downloads/formatter_3/ (free software)
- Insert the SD card into the machine's service slot instead of the SD slot on the side of the operation panel.

* The part number of the SD card with 2 GBs that is registered as a service part is "B6455030".

** The part number of the SD card with 8 GBs that is registered as a service part is "B6455040".

2. Turn ON the main power.

3. Enter SP mode.

4. Specify the date that the problem occurred in SP5-858-101 (Start Date) by setting it to the year-month-day calendar format.

- For example, if a problem occurred on February 1, 2015, the date should be set to "20150201", as shown above.
- Be sure to confirm the date when the problem occurred before obtaining the logs.

5. Specify the number of days to collect the logs in SP5-858-102 (Days of Tracing).

- "**2**" is set by default, which is the minimum needed for investigating the problem.
- A value of "1" to "180" can be set.

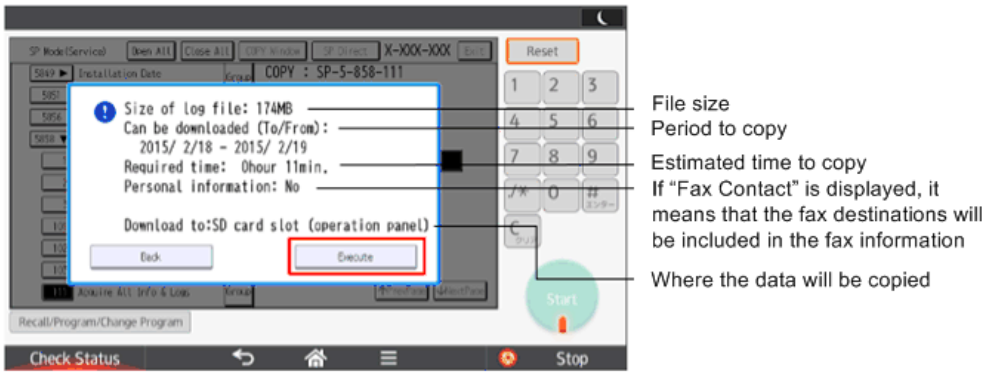
6. Execute SP5-858-111 (Acquire All Info & Logs) to copy all of the log types to an SD card.

It is possible to obtain the logs separately by the following SPs.

SP	Collectable Information and/or Logs
SP5-858-111	All of the information and logs that are collected by executing the SPs from SP5-858-121 to SP5-858-145, and SMC.
SP5-858-121	Configuration page
SP5-858-122	Font page
SP5-858-123	Print settings list
SP5-858-	Error log

SP	Collectable Information and/or Logs
124	
SP5-858-131	Fax information (whether the fax destinations are included or not depends on the setting of SP5-858-103.)
SP5-858-141	Controller log, engine log, operation panel log, FCU, and SMC.
SP5-858-142	Controller log
SP5-858-143	Engine log
SP5-858-144	Operation panel log
SP5-858-145	FCU log
SP5-992-001	SMC

7. After executing the SP for copying the information and/or logs, a confirmation screen will appear. To proceed with obtaining the information and/or logs, tap "Execute"



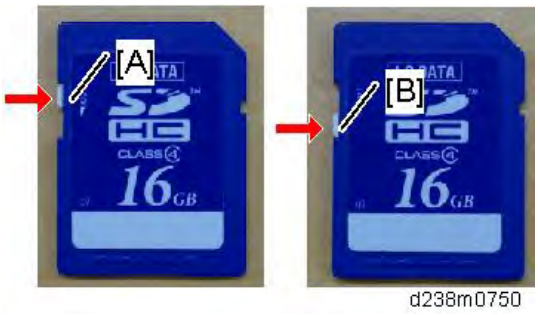
w_d238m0749_en

Note

- The approximate time it takes to transfer the debug log is as follows. Transfer time may be affected by the type or format of the SD card.
  Controller device log (GW device log): 2 - 20 minutes
  Engine device log: 2 minutes
  Operation panel device log: 2 - 20 minutes

If the estimated time is not calculated due to an error, an error code will be displayed.

Error Code	Description
-1	Other.
-2	No SD card is inserted in the service slot or in the SD slot on the side of the operation panel. In this case, insert an SD card into either of the SD slots.

Error Code	Description
-3	The SD card is locked. In this case, unlock the SD card, as shown below.  d238m0750 [A]: Unlocked, [B]: Locked

8. Wait for the information and/or logs to be copied to the SD card.

d238m0751

9. After a message stating that the process has completed appears on the operation panel, confirm that the LED light next to the SD card slot is not flashing and then remove the SD card.

10. Make sure that the SD card access LED is off, then remove the SD card.

Note

- The process of obtaining logs fails in the following cases:
  - When the size of the logs to obtain exceeds the amount of space available on the SD card.
  - When the SD card is removed while the logs are being copied to it.
  - When the SD card is not formatted.
- If 'failed' appears on the touch panel display, turn the power off, and then recover from step 1 again.

Retrieving the Device Logs via Web Image Monitor

The device logs can be retrieved via the Web Image Monitor.

1. Access the following URL and logon as an administrator:
http://[IP address or host name]/web/entry/df/websys/direct/getSysInfo.cgi

2. Specify the date that the problem occurred and the number of days to download the logs. If the fax destinations need to be included in the fax information, set "On" as "Obtain Fax Destination(s) Information". Then click "Download".

Note

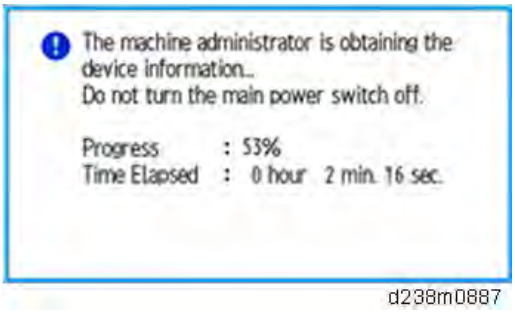
- "3" is set by default for "Number of days, including date fault occurred, to obtain". However "2", which is the minimum needed for investigating the problems, is recommended for reducing the downloading time.
- "Obtain Fax Destination(s) Information" is set to "Off" by default.

3. The confirmation screen will appear and the information and/or logs will start downloading. To proceed to download the information and/or logs, wait for the open-or-save dialog to appear.

Note

- To cancel downloading, click "Cancel".
- To reconfigure some settings, click "Download again".

- Operation panel when downloading the logs:



4. After a while, the open-or-save dialog will appear. Specify where to download and save the file.

Note

- The debug logs are saved with the following file names. These names are the same as the files downloaded with SD card.

The device logs are saved with the following file names.

Controller log (mmesg)	/LogTrace/[the model number]/watching/[yyyymmdd_hhmmss]_[a unique value].gz
Engine device log	/LogTrace/[Machine Serial]/engine/[yyyymmdd_hhmmss].gz
Operation panel log	/LogTrace/[the model number]/opepanel/[yyyymmdd_hhmmss].tar.gz
SMC	/LogTrace/[the model number]/smc/[the model number]_[5992XXX]_[yyyymmdd]_[hhmmss].csv
Configuration page	/LogTrace/[the model number]/gps/ConfigrationPage/ConfigrationPage_ [yyyymmdd_hhmmss].csv
Font page	• /LogTrace/[the model number]/gps/FontPage/FontPage_PCL_[the page number]_[yyyymmdd_hhmmss].jpg • /LogTrace/[the model number]/gps/FontPage/FontPage_PDF_[the page number]_[yyyymmdd_hhmmss].jpg • /LogTrace/[the model number]/gps/FontPage/FontPage_PS_[the page number]_[yyyymmdd_hhmmss].jpg
Print settings list	• /LogTrace/[the model number]/gps/PrintSettingList/PrintSettingList_RPGL_[yyyymmdd_hhmmss].txt • /LogTrace/[the model number]/gps/PrintSettingList/PrintSettingList_RTIFF_[yyyymmdd_hhmmss].csv
Error log	/LogTrace/[the model number]/gps/ErrorLog/[yyyymmdd_hhmmss].csv

Fax information	/LogTrace/[the model number]/faxreport/[yyyymmdd_hhmmss].csv
FCU debug log	/LogTrace/[Machine Serial]/fculog/[yyyymmdd_hhmmss].gz

SMC List Card Save Function

Overview

SMC List Card Save

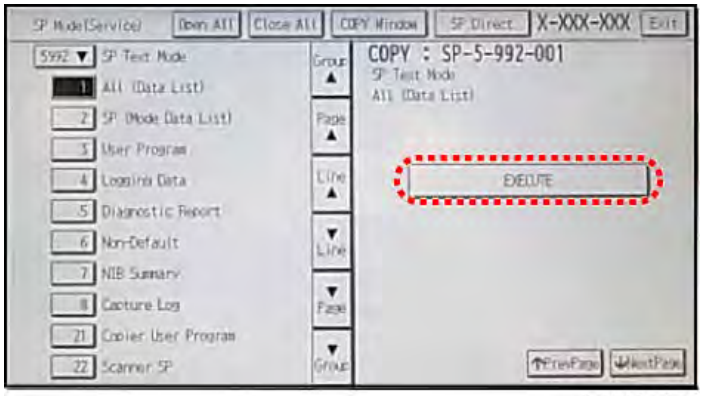
The SMC List Card Save (SP Text Mode) function is used to save the SMC list as CSV files to the SD-card inserted into the operation panel SD-card slot.

Important

- Make sure to shut down and reboot the machine once before exporting the SMC sheet data. Otherwise, the latest settings may not be collected when the SMC is exported.

Procedure

1. Turn OFF the main power.
2. Insert the SD card into the operation panel SD-card slot, and then turn OFF the main power.
3. Enter SP mode.
4. Select "System SP".



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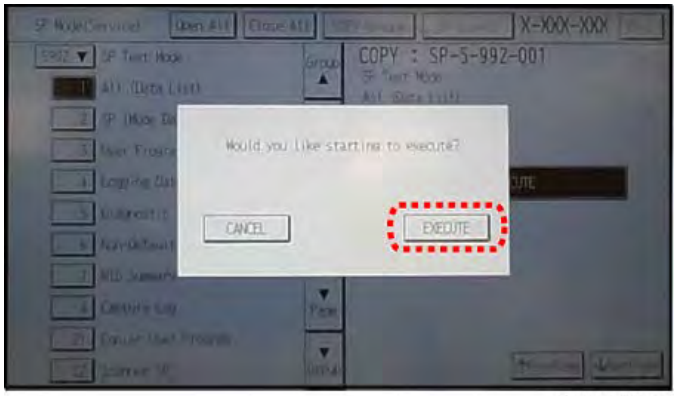
5. Select SP5-992-001 (SP Text Mode).
6. Select a detail SP number shown below to save data on the SD card.

SP5-992-xxx (SP Text Mode)

Detail No.	SMC Categories to Save
001	All (Data List)
002	SP (Mode Data List)
003	User Program
004	Logging Data
005	Diagnostic Report
006	Non-Default
007	NIB Summary
008	Capture Log
021	Copier User Program

Detail No.	SMC Categories to Save
022	Scanner SP
023	Scanner User Program
024	SDK/J Summary
025	SDK/J Application Info
026	Printer SP
027	Smart Operation Panel SP
028	Smart Operation Panel UP

7. Press [EXECUTE].

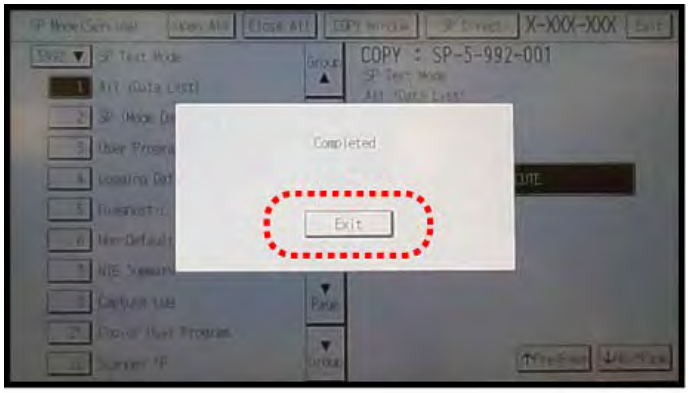


d1440128

8. Press [EXECUTE] again to start. Press [CANCEL] to cancel the saving.

d1440130

9. "It is executing it" is shown on the screen while executing.



d1440129

10. Wait for 2 to 3 minutes until "Completed" is shown.

Note

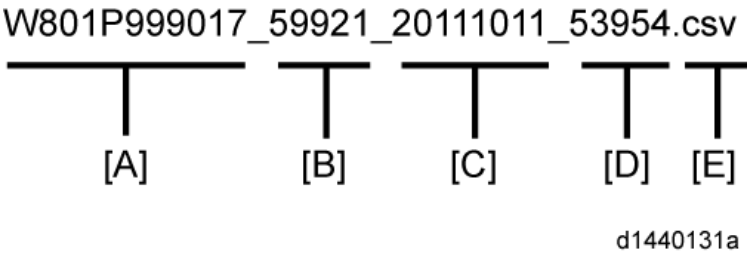
- The SMC list saving may take from 2 to 3 minutes to complete.
- Press [CANCEL] to abort executing.

11. Press [Exit] to exit from SP mode.

File Names of the Saved SMC Lists

The SMC list data saved on the SD-card will be named automatically. The file naming rules are as follows.

Example:



A:

Machine serial number (fixed for each machine)

B:

SP number saved in this file.

First four digits (5992) in this part are fixed. The other one or two digits are the detail SP number(s). In this case, it is one digit. Therefore, this file is of SP5-992-001 (All data list). See the upper SP table for the correspondence between SP detail numbers and the contents.

C:

File creation date

Year/Month/Day ("Zero" will be omitted if each is one digit.)

D:

File creation time

Hour/Minute/Second ("Zero" will be omitted if each is one digit.)

E:

File Extension CSV (Comma Separated Value)

This part is fixed.

Note

- A folder named by the machine serial number will be created on the SD card when this function is executed.
- This function can save the SMC list data only to an SD card inserted into the operation panel SD card slot.

Error Messages

SMC List Card Save error message:

- **Failed:**

  FACTOR: Read-only file system, No space left on device.

If an error occurs, pressing "Exit" will cause the device to discard the job and return to the ready state.

Card Save Function

Overview

Card Save:

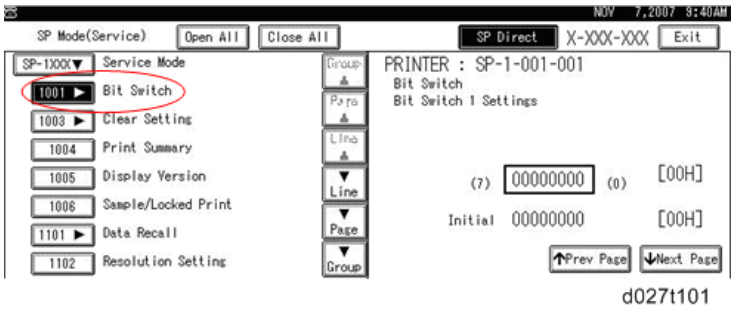
- The Card Save function is used to save print jobs received by the printer on an SD card with no print output. Card Save mode is toggled using printer Bit Switch #1 bit number 4. Card Save will remain enabled until the SD card becomes full, or until all file names have been used.
- Captures are stored on the SD card in the folder /prt/cardsave. File names are assigned sequentially from PRT00000.prn to PRT99999.prn. An additional file PRT.CTL will be created. This file contains a list of all files created on the card by the card save function.
- Previously stored files on the SD card can be overwritten or left intact. Card Save SD has "Add" and "New" menu items.
  - **Card Save (Add):** Appends files to the SD Card. Does not overwrite existing files. If the card becomes full or if all file names are used, an error will be displayed on the operation panel. Subsequent jobs will not be stored.
  - **Card Save (New):** Overwrites files in the card's /prt/cardsave directory.

Limitation:

- Card Save cannot be used with PJL Status Readback commands. PJL Status Readbacks will not work. In addition they will cause the Card Save to fail.

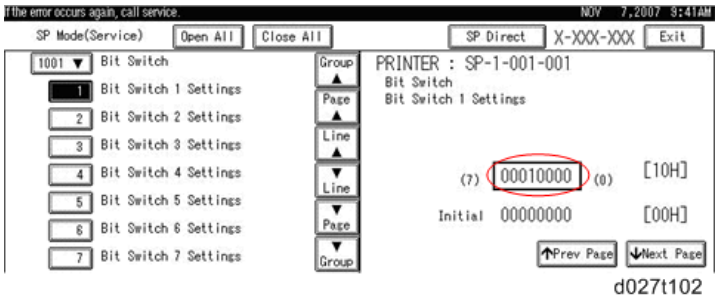
Procedure

1. Turn OFF the main power.
2. Insert the SD card into slot 2 (lower), then turn ON the main power.
3. Enter SP mode.
4. Select the "Printer SP".
5. Select SP-1001 "Bit Switch".



6. Select "Bit Switch 1 Settings" and use the numeric keypad to turn bit 4 ON and then press the "#" to register the change. The result should look like: 00010000. By doing this, Card Save option will appear in the

"List/Test Print" menu.

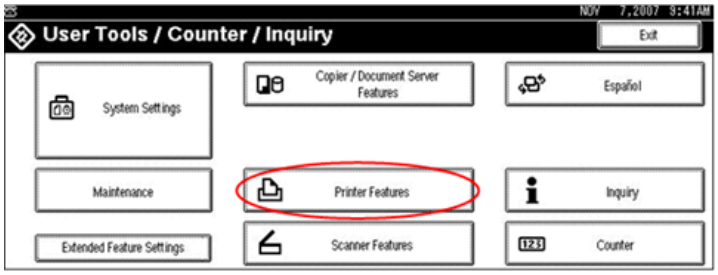


d027t102

7. Press "Exit" to exit SP Mode.

8. Press the "User Tools" icon > "Machine Features".

9. Select "Printer Features".



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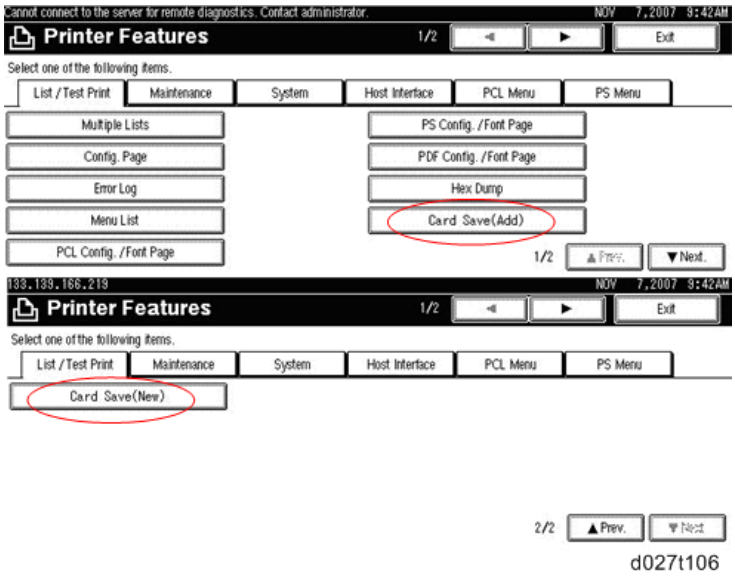
10. Card Save (Add) and Card Save (New) should be displayed on the screen. Select Card Save (Add) or Card Save (New).



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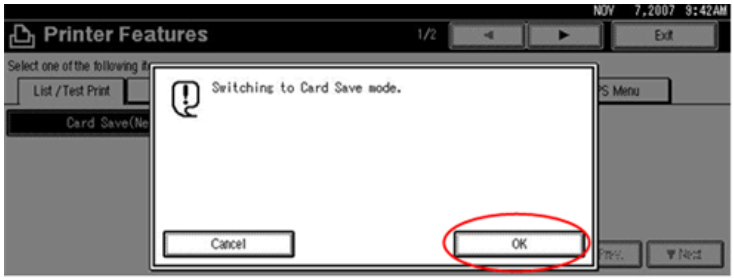
11. Press "OK" and then return to Home screen.



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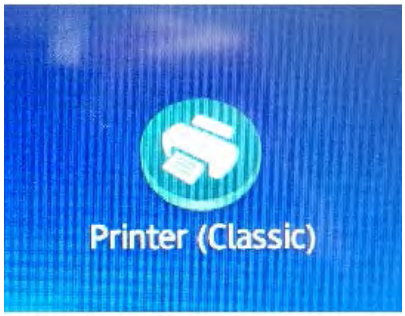
12. Press the "Printer (Classic)" icon.



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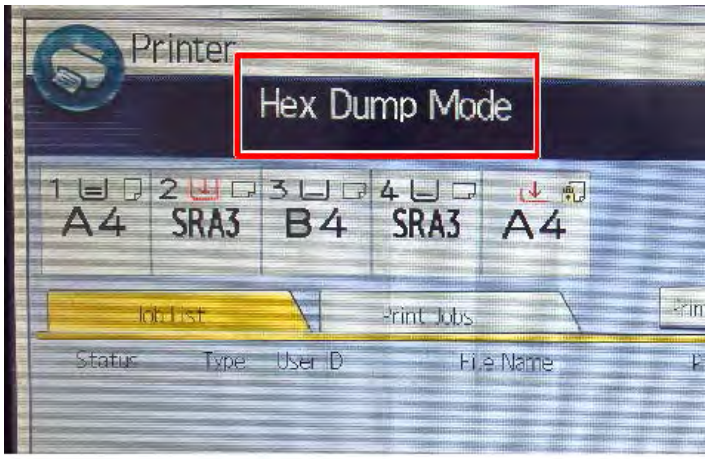
13. "Hex Dump Mode" is be displayed in the top left of the display panel.

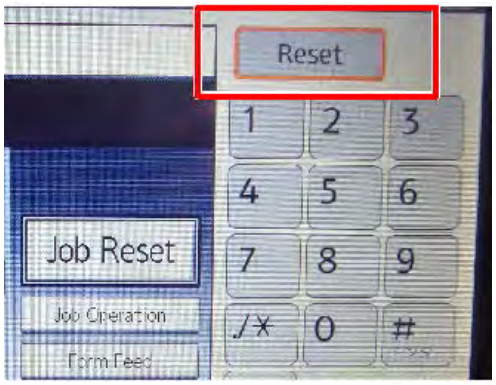


d238m0936

14. Send a job to the printer. The Communicating light should start blinking.

15. As soon as the printer receives the data, it will be stored on the SD card automatically with no print output. Nothing is displayed on the screen, indicating that a Card Save operation was successful.

16. Press "Reset" to exit Card Save mode.



17. Change the Bit Switch Settings back to the default 00000000, then press the "#" in the numeric keypad to register the changes.

18. Remove the SD card after the main power switch is turned OFF.

Error Messages

Card Save error messages:

- **Init error:** A card save process (e.g. card detection, change to kernel mode) failed to initialize.
- **Card not found:** Card cannot be detected in the slot.
- **No memory:** Insufficient working memory to process the job.
- **Write error:** Failed to write to the card.
- **Other error:** An unknown error occurred.

If an error occurs, pressing "OK" will cause the device to discard the job and return to the ready state.

6. Troubleshooting

Self-Diagnostic Mode

Service Call Conditions

The ‘SC Table’ section shows the SC codes for controller errors and other errors. The latter are put into four types. The type is determined by their reset procedures. The table shows the classification of the SC codes.

Type	Display	How to reset	SC call or SC alarm in customer support system
A	The SC is immediately displayed on the operation panel when SC occurs. The error involves the fusing unit. The machine operation is disabled. The user cannot reset the error.	Reset the SC (set SP5-810-1) and then cycle the main power off and on.	Occurrence & alarm count ↓ Immediate alarm
B	When a function is selected, the SC is displayed on the operation panel. The machine cannot be used (down-time mitigation).	Turn the operation switch off and on.	Occurrence & alarm count ↓ Power OFF and ON ↓ Alarm count and alarm only if recurrence
C	No display on the operation panel. The machine operates as usual.	Only the SC history is updated.	Occurrence ↓ Logging count & alarm count
D	The SC is displayed on the operation panel. The machine cannot be used (machine-error SC).	Turn the main power switch off and on.	Occurrence & alarm count ↓ Power OFF and ON ↓ Alarm count and alarm only if recurrence

Note

- When an ordinary SC (type D) is generated, an automatic reboot is performed. When an event is reported by the customer support system, even in the event of an ordinary SC, reboot is not performed. During automatic reboot, a confirmation screen is displayed after the reboot.

- When automatic reboot occurs twice continuously, an SC is displayed without rebooting, and logging count is performed. Also, when an SMC print is output, an * mark is added alongside the SC number for clarity.
- Automatic reboot can be enabled or disabled with SP5-875-001 (SC automatic reboot setting) (default value: OFF).

SP descriptions

- **SP5-875-001 (SC automatic reboot: Reboot Setting)**
  Enables or disables the automatic reboot function when an SC error occurs.
  0: The machine reboots automatically when the machine issues an SC error and logs the SC error code. If the same SC occurs again, the machine does not reboot.
  1: The machine does not reboot when an SC error occurs.
  The reboot is not executed for the pattern A or C.

SC Logging

When an SC is generated, the "total count value when the SC is generated" and the "SC code" are logged. However, if the total count value during the SC is the same as last time, logging is not performed.
Logged data can be checked by outputting an administrative report (SMC print). The SC history is logged up to the last 10 entries, and if there are more than 10 entries, data are progressively deleted starting from the oldest.

SC Automatic Reboot

When an ordinary SC (pattern D) is generated, automatically reboot is performed. Automatic reboot or reboot by user operation can be set by SP5-875-001 (SC automatic reboot setting out) (default value: 1 "OFF").
When a type D occurs, automatic reboot is done or the machine display asks the customer if it can reboot.
However, when the SC occurs twice in a short time, the machine sends a report to the @Remote server without rebooting. This is because just rebooting may not be a good solution if an SC occurs twice.
When an automatic reboot is performed, a confirmation screen is displayed after reboot. The confirmation screen can be cancelled by pressing the [OK] key (display is not cancelled only when the main power switch is switched OFF to ON).

Screen display during reboot

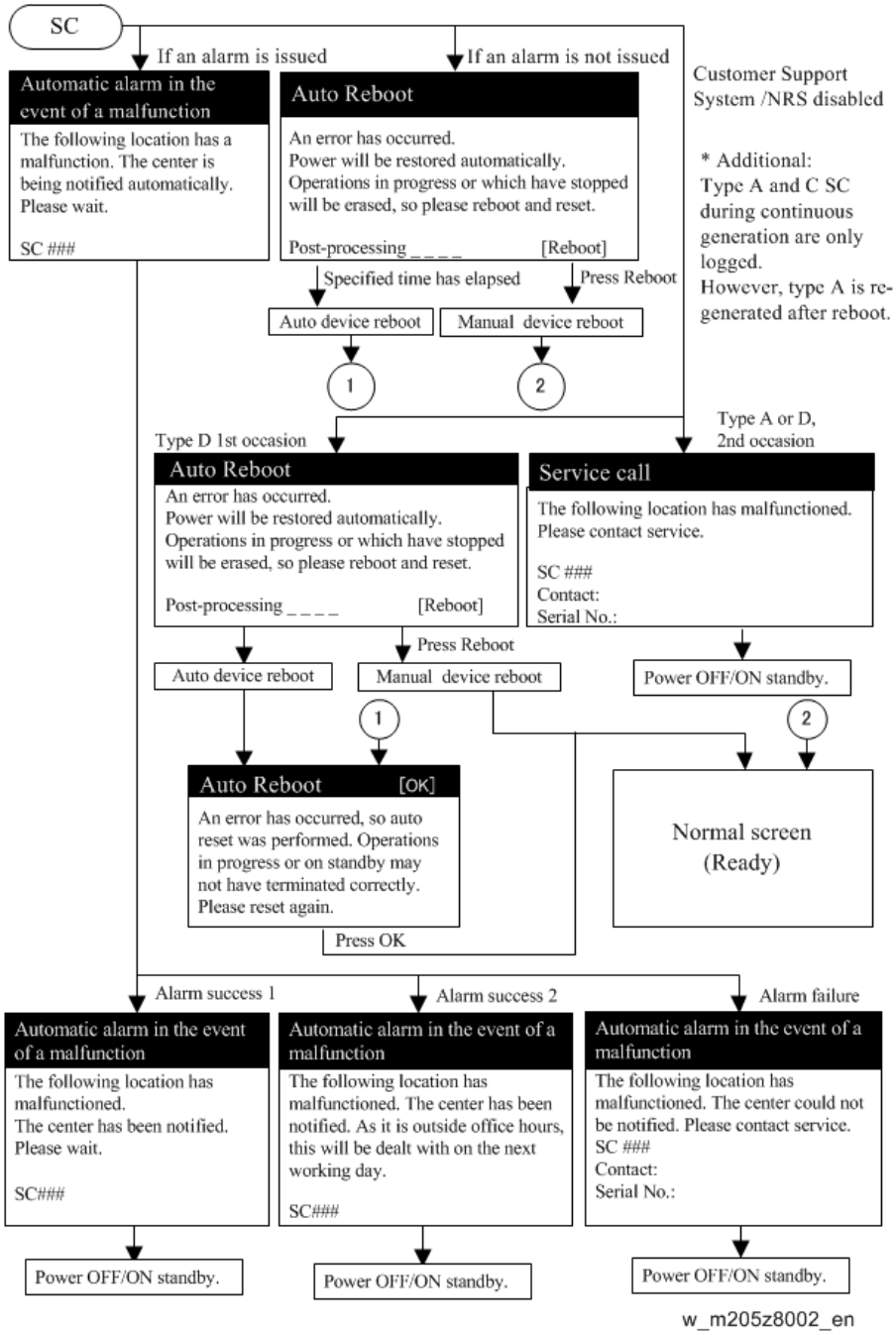
- Status display on the current screen
  - Post-processing ..... Post-processing during printing, etc.
  - Automatic reboot .... After operation end
    Post-processing
    ■■□□□□□□□□
    Until automatic reboot
    □□□□□□□□□□
- Reset key (Reboot key)
  Key to perform reboot

Cancel key is not displayed.

- Turn ON spanner LED (same as when an SC is generated).

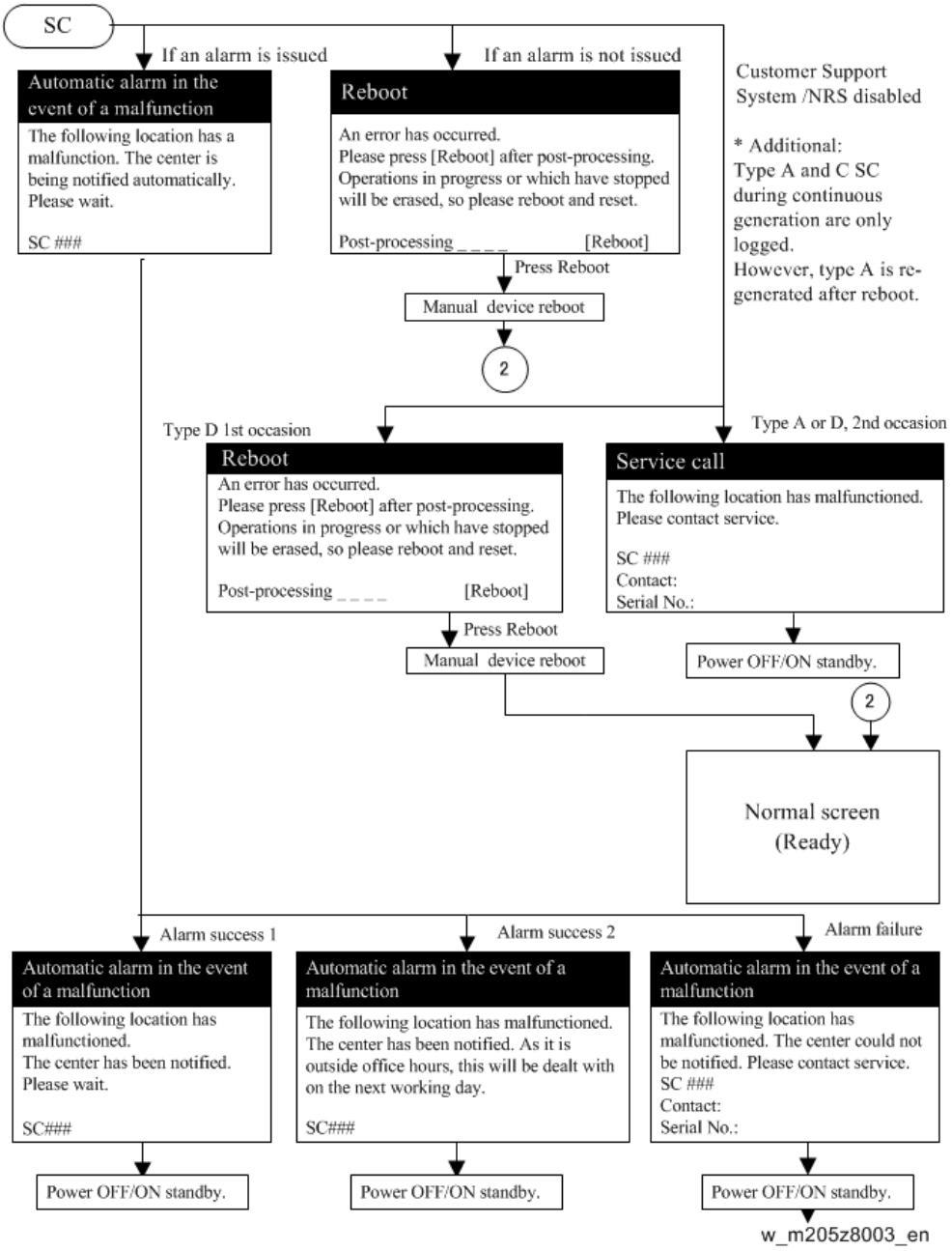
Operation during SC reboot

- Timing of SC reboot
  When @Remote is enabled, and when a NRS alarm*1 is not generated, the corresponding SC is the object of an automatic reboot.
  *1 NRS alarm: Issued when an ordinary SC (type D) is generated twice while the total counter counts 10 times.
- Time to automatic reboot
  Reboot is performed 30 seconds after an engine reboot is possible, after the end of post-processing during printing, etc.
  At that time, a reboot is performed even if the MFP is operating. The engine does not start process control when a reboot is possible.
- Automatic reboot
  See the flowchart below.



SC Manual Reboot

When the automatic reboot is disabled in SP5-875-001 (SC automatic reboot setting), user reboot the machine manually. See the flowchart below.


SC
If an alarm is issued
If an alarm is not issued
Customer Support System /NRS disabled
* Additional:
Type A and C SC during continuous generation are only logged.
However, type A is re-generated after reboot.
Automatic alarm in the event of a malfunction
The following location has a malfunction. The center is being notified automatically. Please wait.
SC ###
Reboot
An error has occurred.
Please press [Reboot] after post-processing.
Operations in progress or which have stopped will be erased, so please reboot and reset.
Post-processing _ _ _ _ [Reboot]
Press Reboot
Manual device reboot
2
Type D 1st occasion
Type A or D, 2nd occasion
Reboot
An error has occurred.
Please press [Reboot] after post-processing.
Operations in progress or which have stopped will be erased, so please reboot and reset.
Post-processing _ _ _ _ [Reboot]
Service call
The following location has malfunctioned.
Please contact service.
SC ###
Contact:
Serial No.:
Press Reboot
Manual device reboot
Power OFF/ON standby.
2
Normal screen
(Ready)
Alarm success 1
Alarm success 2
Alarm failure
Automatic alarm in the event of a malfunction
The following location has malfunctioned.
The center has been notified.
Please wait.
SC###
Automatic alarm in the event of a malfunction
The following location has malfunctioned.
The center has been notified. As it is outside office hours, this will be dealt with on the next working day.
SC###
Automatic alarm in the event of a malfunction
The following location has malfunctioned. The center could not be notified. Please contact service.
SC ###
Contact:
Serial No.:
Power OFF/ON standby.
Power OFF/ON standby.
Power OFF/ON standby.
w_m205z8003_en

SC Tables: SC1xx (Scanning)

SC101-01 to SC195-00

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC101-01	D	Lamp Error (Scanning)
		The white level peak did not reach the prescribed threshold when the white guide plate was scanned.
		• Condensation in scanner unit • Connector defective (disconnected, loose) • Scanner Carriage defective • IPU defective • Harness defective • White Reference Seal dirty or installed incorrectly (sheet-through exposure glass) • White Guide Plate, or White Roller dirty or installed incorrectly (SPDF/ARDF) • BCU defective
		1. Perform a system reboot. 2. Turn the power off/on. 3. Reconnect the connectors. 4. Replace the following parts: • Replace the scanner carriage • Replace the IPU board • Replace the harness • Clean and replace the white reference seal (sheet-through exposure glass) • Clean and replace the white guide plate, or white roller (SPDF/ARDF) • Replace the BCU board

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC101-02	D	LED Error (LED illumination adjustment)
		LED error was detected.
		• Condensation in scanner unit • Connector defective (disconnected, loose) • Scanner Carriage defective • IPU defective • Harness defective • White Reference Seal dirty or installed incorrectly (sheet-through exposure glass) • BCU defective
		1. Perform a system reboot. 2. Turn the power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		3. Reconnect the connectors. 4. Replace the following parts: • Replace the scanner carriage • Replace the IPU board • Replace the harness • Clean and replace the white reference seal (sheet-through exposure glass) • Replace the BCU board

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC102-00	D	LED Illumination Adjustment Error
		The white level peak reached the prescribed threshold (ex. 571/10 bit) when the white plate was scanned after a specified number of adjustments (ex. 10 times).
		• Connector defective (disconnected, loose) • Scanner Carriage defective • IPU defective • Harness defective • BCU defective
		1. Perform a system reboot. 2. Turn the power off/on. 3. Reconnect the connectors. 4. Replace the following parts: • Replace the scanner carriage • Replace the IPU board • Replace the harness • Clean and replace the white reference seal (sheet-through exposure glass) • Replace the BCU board

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC120-00	D	Scanner Home Position Error 1
		The scanner HP sensor does not go OFF. Details: Error detection timing • During homing (when the machine is turned ON or when it returns from energy save mode) • During an automatic adjustment (when the machine is turned ON or when it returns from energy save mode) • During a scan from the ADF/ARDF or exposure glass.
		• Scanner motor driver defective

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Scanner motor defective • Scanner HP sensor defective • Harness defective • Timing belt, pulley, wire, or carriage not installed correctly
		Check if the SC occurs by turning the power OFF then ON. If the SC occurs again, do the following steps. 1. Replace the following parts: • Replace the HP sensor • Replace the scanner motor • Replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC121-00	D	Scanner Home Position Error 2
		The scanner HP sensor does not go ON. Details: Error detection timing • During homing • During an automatic adjustment • During a scan from the ADF/ARDF or exposure glass.
		• Scanner motor driver defective • Scanner motor defective • Scanner HP sensor defective • Harness defective • Timing belt, pulley, wire, or carriage not installed correctly
		Check if the SC occurs by turning the power OFF then ON. If the SC occurs again, do the following steps. 1. Replace the following parts: • Replace the scanner HP sensor • Replace the scanner motor • Replace the harness. • Reattach or replace the timing belt, pulleys, wires, or carriage unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC141-00	D	Black Level Detection Error
		The black level cannot be adjusted within the target during auto gain control.
		• Scanner Carriage defective • IPU defective

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Harness defective • BCU defective
		Check if the SC occurs by turning the power OFF then ON. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. 1. Reconnect the following connectors: • Scanner Carriage - IPU harness (FFC) • IPU- BCU harness 2. Replace the Scanner Carriage. 3. Replace the IPU. 4. Replace the following harnesses: • Scanner Carriage - IPU harness (FFC) • IPU - BCU harness 5. Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC142-00	D	White Level Detection Error
		The white level cannot be adjusted to the second target level within the target during auto gain control.
		• Scanner Carriage defective • IPU defective • Harness defective • Connector defective (disconnected, loose) • Condensation in scanner unit • White plate dirty or installed incorrectly
		Check if the SC occurs by turning the power OFF then ON. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. 1. Reconnect the following connectors: • Scanner Carriage - IPU harness (FFC) • SBU - LEDB (scanner lamp unit) harness (FFC) • IPU- BCU harness 2. Check the white reference seal that attached back of sheet-through exposure glass. Replace the sheet-through exposure glass, if dirty or damaged. 3. Replace the scanner carriage. 4. Replace the IPU. 5. Replace the following harnesses: • Scanner Carriage - IPU harness (FFC) • IPU - BCU harness 6. Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC144-00	D	SBU Communication Error
		• The machine cannot detect that the Scanner Carriage is connected. • The machine cannot communicate with the Scanner Carriage. • The communication data is incorrect.
		• Scanner Carriage defective • IPU defective • BCU defective • Harness defective
		Check if the SC occurs by turning the power OFF then ON. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. 1. Reconnect the following connectors: • Scanner Carriage - IPU harness (FFC) • IPU- BCU harness 2. Replace the Scanner Carriage. 3. Replace the IPU. 4. Replace the BCU. 5. Replace the following harnesses: • Scanner Carriage - IPU harness (FFC) • IPU - BCU harness

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC151-00	D	Black Level Error: Side 2
		The black level scanned is not specified range.
		• CIS for SPDF defective • SPDF main board defective • Harness defective
		Check if the SC occurs by turning the power OFF then ON. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. 1. Reconnect the SPDF main board - CIS connectors if they are disconnected, or loose. 2. Replace the CIS for SPDF 3. Replace the following harnesses: • SPDF main board - CIS • IPU -SPDF main board 4. Replace the SPDF main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC152-00	D	White Level Error: Side 2
		The shading data peak value read out from the CIS is not specified range from the target value.
		• CIS defective • White roller defective • SPDF main board defective • Harness defective
		Check if the SC occurs by turning the power OFF then ON. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. 1. Reconnect the SPDF main board - CIS connectors if they are disconnected, or loose. 2. Replace the CIS for SPDF 3. Replace the following harnesses: • SPDF main board - CIS • IPU -SPDF main board 4. Replace the SPDF main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC154-00	D	Scanner Communication Error: Side 2
		The value read out from the ASIC and FROM area inside the CIS is different from the expected value.
		• CIS defective • "FROM" area error • SPDF main board defective • Connector defective (loose, broken)
		Check if the SC occurs by turning the power OFF then ON. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. 1. Reconnect the SPDF main board - CIS connectors if they are disconnected, or loose. 2. Replace the CIS for SPDF 3. Replace the following harnesses: • SPDF main board - CIS • IPU -SPDF main board 4. Replace the SPDF main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC161-02	D	IPU error (Lsync Error: Side 2)
		The machine detects the error from the results of self-diagnostic test before scanning the side 2.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Harness defective between CIS and IPU (disconnected, loose) • CIS defective • IPU defective (ASIC: Macaron error)
		1. Perform an automatic reboot. 2. Turn the power off/on. 3. Replace the following parts: • Replace the harness. • Replace the CIS. • Replace the IPU (BCU) board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC161-20	D	IPU error (DRAM initialization failure)
		An error occurred during performed every time the machine is turned on, or returns to full operation from energy save mode.
		• IPU defective (Macaron/ DRAM device connection error) • DRAM device defective
		1. Perform an automatic reboot. 2. Turn the power off/on. 3. Replace the following parts: • Reconnect the connector. • Replace the harness. • Replace the CIS. • Replace the IPU (BCU) board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC195-00	D	Machine Serial Number Error
		Comparison of the product identification code in the machine serial number (11 digits).
		The product identification code in the machine serial number (11 digits) does not match.
		Re-enter the machine serial number.

SC Tables: SC2xx (Exposure)

SC202-00 to SC272-10

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC202-00	D	Polygon Motor: ON Timeout Error
		After the polygon motor turned on, or within 10 sec. after the rpm's changed, the motor did not enter READY status.
		• The interface harness to the polygon motor driver damaged or not connected correctly. • Polygon motor or polygon motor driver defective • Polygon motor drive pulse cannot be output correctly. (Polygon controller) • XSCRDY signal observation failing (Polygon controller)
		• Turn the power off/on. • Replace the laser unit. • Replace the harness. • Replace the IPU board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC203-00	D	Polygon Motor: OFF Timeout Error
		The XSCRDY signal (polygon ready) never becomes inactive (H) within 3 sec. after the polygon motor went OFF.
		• The interface harness to the polygon motor driver damaged or not connected correctly. • Polygon motor or polygon motor driver defective • Polygon motor drive pulse cannot be output correctly. (Polygon controller) • XSCRDY signal observation failing (Polygon controller)
		• Turn the power off/on. • Replace the laser unit. • Replace the harness. • Replace the IPU board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC204-00	D	Polygon Motor: XSCRDY Signal Error
		During polygon motor rotation, the XSCRDY signal was inactive (H) for longer than one rotation of the polygon.
		• The interface harness to the polygon motor driver damaged or not connected correctly. • Polygon motor or polygon motor driver defective
		• Turn the power off/on. • Replace the laser unit. • Replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Replace the IPU board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC220-00	D	Laser Synchronization Detection Error: Leading Edge
		The laser synchronizing detection signal for the start position of the LD was not output for 200msec. after LDB unit turned on with the polygon motor rotating normally.
		• The interface harness to the synchronization detection unit damaged or not connected correctly. • Synchronization detection board defective • Beam does not enter photo detector. • Abnormality around GAVD • IDB (LED driver) defective • LDB defective • IPU defective
		• Turn the power off/on. • Replace the laser unit. • Replace the harness. • Replace the IPU board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC230-00	D	FGATE ON Error
		The FGATE signal did not turn ON within the given time period after the writing process started.
		• GAVD defective • Image processing ASIC defective • BCU, controller board not connected correctly or defective • Harness between BCU and LDB defective
		• Turn the power off/on. • Replace the harness between IPU and laser unit. • Replace the IPU board. • Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC231-00	D	FGATE OFF Error
		The FGATE signal did not turn OFF within the given time period after the writing process ended.
		• GAVD defective

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Image processing ASIC defective • IPU, controller board not connected correctly or defective • Harness between IPU and LDB defective
		• Turn the power off/on. • Replace the harness between IPU and laser unit. • Replace the IPU board. • Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC240-00	D	LD Error
		• The LD error status of LD driver is asserted after the LD is initialized. • The LD driver's error signal is detected during LD initialization.
		• LD degradation (LD broken, shift of output characteristics etc.) • The interface harness damaged or not connected correctly. • LD driver defective
		• Cycle the main power off/on. • Replace the laser unit. • Replace the harness. • Replace the IPU board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC272-01	D	LD Driver Communication Error
		If the value is not same when the machine reads and writes the same registration at the machine start-up. If the communication parity retries three consecutive times, the SC is generated.
		• CPU defective • IPU defective • BCU defective • Harness defective
		• Cycle the main power off/on. • Replace the laser unit. • Replace the harness. • Replace the IPU board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC272-10	D	LD Driver Communication Error: Others
		If the “Door Open” status does not change to “Door Close” after closing the door.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• CPU defective • IPU defective • BCU defective • Harness defective
		• Cycle the main power off/on. • Replace the laser unit. • Replace the harness. • Replace the IPU board.

SC Tables: SC3xx (Image Processing 1: Charge, Development)

SC302-00 to SC396-01

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC302-00	D	High Voltage Power Source: Charge: Output Error
		The machine detects the error detection signal “L (unexpected)” 10 times for 200 msec consecutively when monitoring the error signal every 20 msec during outputting the PWM signal.
		Hardware error • Input / Output connector is disconnected. • Input / Output harness is short-circuited. • Surface/air clearance insufficient (arc discharge) • BCU error (signal error) • HVPS defective **Load error** • Grounding fault of charging output, short-circuit with other outputs • Surface/air clearance insufficient in charging output path (including distance from other outputs) • Unexpected deterioration of drum and over current due to pinholes gap error between the drum and charge roller (PCU error). • Over current due to drum surface condensation • PCU is disconnected.
		• Cycle the main power off/on. • Replace the HVPS. • Replace the harness of the HVPS. • Replace the harness of the PCU. • Replace the PCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC324-01	D	Development Motor: Bk: Lock
		Lock signals are observed at 2 sec intervals during motor ON, and a High level is detected at least 20 times.
		• Motor defective • Connector disconnected • Harness broken • BCU defective • Unit torque increased
		• Replace the development motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Reconnect the connector. • Replace the harness. • Replace the BCU. • Replace the development unit. • Replace the driven unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC360-01	D	TD Sensor Adjustment Error

		• When Mu count exceeds the judgment threshold of no developer status.
		• When Mu count does not satisfy the following target ranges for 3 times in a row.
		  • Upper threshold
		  • Lower threshold

		• TD sensor defective • Loose connection • Harness broken • Developer toner density differs from initial developer
		• Replace the TD sensor harness. • Reconnect the TD sensor connector. • Replace the TD sensor. • Replace the development unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC361-01	D	TD Sensor Output Error: Upper Limit (K)
		The following condition continuously exceeds the upper limit threshold value (SP3-211-003). • TD sensor output: Vt (SP3-210-001) > output upper limit error threshold (SP3-211-002)
		• TD sensor connector dropout (connection fault)
		• Check if the TD sensor connector is connected. • Check the harness of the TD sensor (disconnection, etc.). • Replace the TD sensor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC362-01	D	TD Sensor Output Error: Lower limit (K)
		TD sensor output: Vt (SP3-210-001) < output lower limit error threshold (SP3-211-004) is continuously below the lower limit occurrence threshold value (SP3-211-005)
		TD sensor connector missing/dropout

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Check if the TD sensor connector is connected. • Check the harness of the TD sensor (disconnection, etc.). • Replace the TD sensor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC370-00	C	ID Sensor Calibration Error
		Regular reflection optical output voltage of the ID sensor: Vsg_reg cannot be adjusted to within target range. Upper limit (SP3-320-013: initial value 4.5V) Lower limit (SP3-320-014: initial value 3.5V)
		• ID sensor connector missing/connection fault • ID sensor detection window dirt • ID sensor malfunction
		• Check the ID sensor connector. If it is not connected, reconnect it. • Check for dirt on the ID sensor detection window. If the detection window is dirty, clean by the predetermined method (do not wipe it dry). • If neither of the above have occurred, replace the ID sensor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC391-00	D	High Voltage Power Source: Development : Output Error
		When the machine detects the error detection signal “L (abnormal)” 10 times for 200 ms consecutively by monitoring the error detection signal every 20ms during output of the PWM signal used as an error detection target.
		Hardware error • Input / Output connector is disconnected. • Surface/air clearance insufficient (arc discharge) • Input / Output harness is short-circuited. • BCU error (signal error) • HVPS defective **Load error** • Grounding fault of charging output, short-circuit with other outputs • Surface/air clearance insufficient in charging output path (including distance from other outputs) • Unexpected deterioration of drum, and over current due to pinholes • Over current due to drum surface condensation • PCDU is not set properly.
		• Cycle the main power off/on

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Replace the harness between the BCU and HVPS. • Reconnect or replace the harness between the BCU and HVPS. • Reinstall or replace the development unit. • Check if the contact and separation movement of the transfer unit works correctly. • Replace the HVPS. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC396-01	D	Drum Motor Lock
		Lock signals are observed at 2 sec intervals during motor ON, and a High level is detected at least 20 times.
		• Motor defective • Connector disconnected • Harness broken • BCU defective • PCU torque increased
		• Reconnect the connector. • Replace the harness of the drum/waste toner motor. • Replace the drum/waste toner motor. • Replace the PCDU. • Replace the BCU.

SC Tables: SC4xx (Image Processing 2: Around the Drum)

SC440-00 to SC498-00

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC440-00	D	High Voltage Power Source: Paper Transfer : Output Error
		The machine detects the error detection signal “L (unexpected)” 10 times for 200 msec consecutively when monitoring the error signal every 20 msec during outputting the PWM signal.
		Hardware error • Input / Output connector is disconnected. • Input / Output harness is short-circuited. • BCU error (signal error) • HVPS defective **Load error** • Transfer roller's impedance increases. • Transfer unit is not set properly.
		• Cycle the main power off/on. • Reconnect or replace the harness of the HVPS (power pack). • Reconnect or replace the harness between the BCU and the HVPS. • Reset or replace the transfer unit. • Check if the contact and separation movement of the transfer unit works correctly. • Replace the HVPS. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC452-00	D	Transfer Roller Contact Motor Error
		When the machine does not detect the high/low signal for a specified time after the transfer roller contact motor has been turned on.
		• Motor overload, Motor defective • Connector disconnected • Harness broken • Interlock mechanism is defective.
		• Cycle the main power off/on • Check if the contact and separation movement of the transfer unit works correctly. • Replace the transfer roller contact motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC460-	D	High Voltage Power Source: Separation : Output Error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
00		The machine detects the error detection signal “L (unexpected)” 10 times for 200 msec consecutively when monitoring the error signal every 20 msec during outputting the PWM signal.
		Hardware error • Input / Output connector is disconnected. • Input / Output harness is short-circuited. • Transfer unit is not set properly. • BCU error (signal error) • HVPS defective **Load error** • Grounding fault of separation power output, short-circuit with other outputs • Surface/air clearance insufficient in separation power output path (including distance from other outputs)
		• Cycle the main power off/on • Reconnect or replacethe harness of the HVPS (power pack). • Reconnect or replace the harness between the BCU to the HVPS. • Reset or replace the transfer unit. • Check if the contact and separation movement of the transfer unit works correctly. • Replace the HVPS. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC497-00	C	Machine Temperature Detection Thermistor Error
		The output of the temperature sensor is out of the following range. • 0.56 V or less (90°C or more) • 3.0 V or more (-18°C or less)
		• Imaging temperature sensor is not set (connector disconnected or broken) • Imaging temperature sensor defective
		• Reconnect the connector. • Replace the connector. • Replace the imaging temperature sensor (thermistor).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC498-00	C	Temperature and Humidity Sensor Error (Main machine)
		The output of the temperature/humidity sensor is out of the following range. • 0.76 V or less/ 2.90 V or more (temperature sensor) • 2.4 V or more (humidity sensor)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Temperature/Humidity sensor is not set (connector disconnected or broken) • Temperature/Humidity sensor defective
		• Reconnect the connector. • Replace the connector. • Replace the temperature/humidity sensor.

SC Tables: SC5xx (Paper Feed and Fusing)

SC501-01 to SC589-02

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC501-01	B	1st Tray Lift Error
		The machine detects the error of the 1st paper feed tray lift motor 3 times consecutively when the 1st paper feed tray is lifted. (The message of resetting the tray is displayed when the machine detects the error consecutively 2 times or less.)
		• 1st paper feed tray limit sensor connector disconnection, malfunction or sensor's dirt. • 1st paper feed tray lift motor connector disconnection, malfunction • Foreign matter, such as paper scrap, is caught between the paper feed tray and the paper feed tray lift motor. • Paper set fault
		• Reset the paper. • Remove the foreign matter (1st paper feed tray limit sensor, 1st paper feed tray lift motor). • Check the harness. • Reset or replace the connector. • Replace the 1st paper feed unit and 1st paper feed tray. • Replace the BCU.
SC501-02	B	1st Tray Lowering Error
		The machine detects the error of the 1st paper feed tray lift motor 5 times consecutively when the 1st paper feed tray is lowered. (The message of resetting the tray is displayed when the machine detects the error consecutively 4 times or less.)
		• 1st paper feed tray limit sensor connector disconnection, malfunction or sensor's dirt. • 1st paper feed tray lift motor connector disconnection, malfunction • Foreign matter, such as paper scrap, is caught between the paper feed tray and the paper feed tray lift motor. • Paper set fault • Paper overload
		• Reset the paper. • Remove the foreign matter (1st paper feed tray limit sensor, 1st paper feed tray lift motor). • Check the harness. • Reset or replace the connector. • Replace the 1st paper feed unit, 1st paper feed tray.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC502-01	B	2nd Tray Lift Error
		The machine detects the error of the 2nd paper feed tray lift motor 3 times consecutively when the 2nd paper feed tray is lifted. (The message of resetting the tray is displayed when the machine detects the error consecutively 2 times or less.)
		• 2nd paper feed tray limit sensor connector disconnection, malfunction, dirt • 2nd paper feed tray lift motor connector disconnection, malfunction • Foreign matter, such as paper scrap, is caught between the paper feed tray and the paper feed tray lift motor • Paper set fault
		• Reset the paper. • Remove the foreign matter (2nd paper feed tray limit sensor, 2nd paper feed tray lift motor). • Check the harness. • Reset or replace the connector. • Replace the 2nd paper feed unit, 2nd paper feed tray. • Replace the BCU.
SC502-02	B	2nd Tray Lowering Error
		The machine detects the error of the 2nd paper feed tray lift motor 5 times consecutively when the 2nd paper feed tray is lowered. (The message of resetting the tray is displayed when the machine detects the error consecutively 4 times or less.)
		• The 2nd paper feed tray limit sensor connector disconnection, malfunction, and dirt • 2nd paper feed tray lift motor connector disconnection, malfunction • Foreign matter, such as paper scrap, is caught between the paper feed tray and the paper feed tray lift motor • Paper set fault • Paper overload
		• Reset the paper. • Remove the foreign matter (2nd paper feed tray limit sensor, 2nd paper feed tray lift motor). • Check the harness. • Reset or replace the connector. • Replace the 2nd paper feed unit, 2nd paper feed tray. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC503-01	B	3rd Tray Lift Error (D694)
		The machine detects the lift error of the tray lift motor for the PFU (D694) 3 times consecutively when the 3rd paper feed tray is lifted at the machine's initialization. (The message of resetting the tray is displayed when the machine detects the error consecutively 2 times or less.)
		• Tray lift motor connector disconnected • Limit sensor harness disconnected or broken • Control board defective • Foreign matter, such as paper scrap, is caught between the paper feed tray and the tray lift motor • Paper set fault
		• Reset the paper. • Remove the foreign matter. • Replace the tray lift motor. • Reset the connector. • Replace the harness. • Replace the limit sensor. • Replace the control board for the optional PFU (D694). • Replace the tray. • Replace the paper feed roller. • Replace the pick-up arm.
SC503-02	B	3rd Tray Lowering Error (D694)
		The machine detects the lowering error of the tray lift motor for the PFU (D694) 5 times consecutively when the 3rd tray is lowered at the machine's initialization. (The message of resetting the tray is displayed when the machine detects the error consecutively 4 times or less.)
		• Tray lift motor connector disconnected • Limit sensor harness disconnected or broken • Controller board defective • Paper overload • Foreign matter, such as paper scrap, is caught between the paper feed tray and the tray lift motor • Paper set fault
		• Reset the paper. • Remove the foreign matter. • Replace the tray lift motor. • Reset the connector.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Replace the harness. • Replace the limit sensor. • Replace the controller board for the optional PFU (D694). • Replace the tray. • Replace the paper feed roller. • Replace the pick-up arm.
SC503-11	B	3rd Tray Lift Error (D787)
		The machine detects the lift error of the tray lift motor for the PFU (D787) 3 times consecutively when the 3rd tray is lifted at the machine's initialization. (The message of resetting the tray is displayed when the machine detects the error consecutively 2 times or less.)
		• Tray lift motor connector disconnected • Upper limit sensor harness disconnected or broken • Controller board defective • Foreign matter, such as paper scrap, is caught between the paper feed tray and the tray lift motor • Paper set fault
		• Reset the paper. • Remove the foreign matter. • Replace the tray lift motor. • Reset the connector. • Replace the harness. • Replace the upper limit sensor. • Replace the controller board for the optional PFU (D787). • Replace the tray. • Replace the paper feed roller. • Replace the pick-up arm.
SC503-12	B	3rd Tray Lowering Error (D787)
		The machine detects the lowering error of the tray lift motor for the PFU (D787) 3 times consecutively when the 3rd tray is lowered at the machine's initialization. (The message of resetting the tray is displayed when the machine detects the error 2 times consecutively.)
		• Tray lift motor connector disconnected • Upper limit sensor harness disconnected or broken • Controller board defective • Paper overload • Foreign matter, such as paper scrap, is caught between the paper feed tray and the tray lift motor

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Paper set fault
		• Reset the paper. • Remove the foreign matter. • Replace the tray lift motor. • Reset the connector. • Replace the harness. • Replace the upper limit sensor. • Replace the controller board for the optional PFU (D787). • Replace the tray. • Replace the paper feed roller. • Replace the pick-up arm.
SC503-31	B	3rd Tray Lift Error (LCIT: D695)
		• The machine detects the lift error of the tray lift motor for the LCIT (D695) 3 times consecutively when the 3rd tray is lowered at the machine's initialization. • The machine detects the lift error of the tray lift motor for the LCIT (D695) 3 times consecutively when the 3rd tray is lifted at the machine's initialization. (The message of resetting the tray is displayed when the machine detects the error consecutively 2 times or less.)
		• Tray lift motor connector disconnected • Limit sensor harness disconnected or broken • Controller board defective • Foreign matter, such as paper scrap, is caught between the right tray and the tray lift motor. • Paper set fault • Timing belt damage or dropout • Timing pulley damage or dropout • Base plate damaged or plate horizontality fault • Paper feed roller missing • Pickup arm damage • Foreign matter, such as paper scrap, is caught inside the right tray.
		• Reset the paper. • Remove the foreign matter. • Replace the tray lift motor. • Reset the connector. • Replace the harness. • Replace the limit sensor. • Replace the controller board for the optional LCIT (D695). • Replace the tray.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Replace the paper feed roller. • Replace the pick-up arm. • Replace the timing belt. • Replace the timing pulley. • Replace the base plate.
SC503-32	B	3rd Tray Lowering Error (LCIT: D695)
		• The machine detects the lift error of the tray lift motor for the LCIT (D695) 3 times consecutively when the 3rd tray is lowered at the machine's initialization. • The machine detects the lift error of the tray lift motor for the LCIT (D695) 3 times consecutively when the 3rd tray is lifted at the machine's initialization. (The message of resetting the tray is displayed when the machine detects the error consecutively 2 times or less.)
		• Tray lift motor connector disconnected • Lower limit sensor harness disconnected or broken • Controller board defective • Foreign matter, such as paper scrap, is caught between the right tray and the tray lift motor. • Paper set fault • Timing belt damage or dropout • Timing pulley damage or dropout • Base plate damaged or plate horizontality fault • Foreign matter, such as paper scrap, is caught inside the right tray.
		• Reset the paper. • Remove the foreign matter. • Replace the tray lift motor. • Reset the connector. • Replace the harness. • Replace the lower limit sensor. • Replace the controller board for the LCIT (D695). • Replace the tray. • Replace the timing belt. • Replace the timing pulley. • Replace the base plate.
SC503-33	B	3rd Tray Paper Overload Error (LCIT: D695)
		Both of the upper limit sensor and lower limit sensor detects the base plate 3 times consecutively at the machine's initialization. (The message of resetting the tray is displayed when the both sensors detect the error consecutively 2 times or less.)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Paper overload • Paper set fault • Upper limit sensor harness disconnected or broken • Lower limit sensor harness disconnected or broken • Control board defective • Foreign matter, such as paper scrap, is caught inside the right tray.
		• Reset the paper. • Remove the foreign matter. • Reset the connector. • Replace the harness. • Replace the upper limit sensor. • Replace the lower limit sensor. • Replace the controller board for the LCIT (D695).
SC503-34	B	3rd Tray Paper Position Error (LCIT: D695)
		During left/right tray set, or when power is switched ON, or when transfer is complete, "open" is detected 5 times consecutively by end fence open/close detection. (The message of resetting the tray is displayed when the both sensors detect the error consecutively 4 times or less.)
		• Paper set fault (paper is offset from position for pushing end fence) • Foreign matter entry (foreign matter is caught in the position for pushing end fence) • Paper transport cover open/close switch error, connector missing • Harness broken • Bank controller board defective
		• Reset the paper. • Remove the foreign matter. • Reset the connector. • Replace the harness. • Replace the sensor. • Replace the controller board for the optional paper feed tray.
SC503-35	B	3rd Tray Transfer Error (LCIT: D695)
		• Transfer end detection error At right tray paper end (right tray lower limit detection, left tray paper detection), left tray paper is transferred to the right tray, but the left tray paper sensor is detected although a predetermined time elapsed (transfer paper missing is not detected), for 3 times consecutively. (The message of resetting the tray is displayed when the both sensors detect the error consecutively 2 times or less.)
		• Paper transfer motor error/connector missing

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Left tray paper sensor error/connector missing • Harness broken • Bank control board defective • Paper overload • Foreign matter, such as paper scrap, is caught between the left tray and the paper tray transfer motor • Paper set fault • Timing belt damage/dropout • Timing pulley damage/dropout • Transfer fence defective • Foreign matter, such as paper scrap, is caught inside the left tray
		• Replace the motor. • Reset the connector. • Replace the harness. • Replace the sensor. • Replace the controller board for the optional paper feed tray. • Reset the paper. • Remove the foreign matter. • Replace the tray. • Replace the timing belt. • Replace the timing pulley. • Replace the end fence of the left tray.
SC503-36	B	3rd Tray Transfer HP Error (LCIT: D695)
		• HP detection error (during transfer start) At right tray paper end (right tray lower limit detection, left tray paper detection), left tray paper is transferred to the right tray, but the transfer fence home position sensor is detected although a predetermined time elapsed (home position sensor missing cannot be detected). • HP detection error (during transfer fence HP return) During transfer fence HP not detected (stop after paper transfer, during power supply ON, during left tray set), the transfer fence is moved to HP, but the transfer fence home position sensor is not detected although a predetermined time elapsed. *If an error occurs 3 times consecutively: LCIT transmits "3rd paper feed tray transfer HP error" to the main machine. (The message of resetting the tray is displayed when the both sensors detect the error consecutively 2 times or less.)
		• Paper transfer motor error/connector missing • Transfer fence home position sensor error/connector missing

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Harness broken • Bank controller board defective • Paper overload • Foreign matter, such as paper scrap, is caught between the left tray and the paper transport motor • Paper set fault • Timing belt damage/dropout • Timing pulley damage/dropout • Transfer fence defective • Foreign matter, such as paper scrap, is caught inside the left tray
		• Replace the motor. • Reset the connector. • Replace the harness. • Replace the sensor. • Replace the controller board for the optional paper feed tray. • Reset the paper. • Remove the foreign matter. • Replace the tray. • Replace the timing belt. • Replace the timing pulley. • Replace the end fence of the left tray.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC504-21	B	4th Tray Lift Error (D787)
		• Lift motor ascent error detection During tray initialization (upper limit not detected/lower limit detection), the tray base plate is raised to check the tray base plate position, but the upper limit sensor is not detected although a predetermined time elapsed, for 3 times consecutively. (The message of resetting the tray is displayed when the both sensors detect the error consecutively 2 times or less.)
		• Tray lift motor error/connector missing • Upper limit sensor error/connector missing • Harness broken • Bank controller board defective • Foreign matter, such as paper scrap, is caught between the paper feed tray and the tray lift motor • Paper set fault
		• Reset the paper.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Remove the foreign matter. • Replace the motor. • Reset the connector. • Replace the harness. • Replace the sensor. • Replace the controller board for the optional paper feed tray. • Replace the tray. • Replace the paper feed roller. • Replace the pick-up arm.
SC504-22	B	4th Tray Lowering Error (D787)
		• Lift motor descent error detection During tray initialization, the tray base plate is lowered to check the tray base plate position, but the upper limit sensor is detected although a predetermined time elapsed, for 3 times consecutively. (The message of resetting the tray is displayed when the both sensors detect the error consecutively 2 times or less.)
		• Tray lift motor error/connector missing • Upper limit sensor error/connector missing • Harness broken • Bank controller board defective • Paper overload • Foreign matter, such as paper scrap, is caught between the paper feed tray and the tray lift motor • Paper set fault
		• Reset the paper. • Remove the foreign matter. • Replace the motor. • Reset the connector. • Replace the harness. • Replace the sensor. • Replace the controller board for the optional paper feed tray. • Replace the tray. • Replace the paper feed roller. • Replace the pick-up arm.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC505-41	B	Side LCIT Limit Detection Error (D696)
		• Upper limit detection error (during descent)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		During tray initialization (upper limit detection/lower limit not detected), the tray base plate is lowered to check the tray base plate position, but the upper limit sensor is detected although a predetermined time elapsed. • Upper limit detection error (during ascent) During tray initialization (upper limit not detected /lower limit detection), the tray base plate is raised to check the tray base plate position, but the upper limit sensor is not detected although a predetermined time elapsed. *If an error occurs for 3 times consecutively: the side LCIT transmits a "5th paper feed tray upper limit detection error" to the main machine. (The message of resetting the tray is displayed when the both sensors detect the error consecutively 2 times or less.)
		• Tray lift motor error/connector missing • Upper limit sensor error/connector missing • Harness broken • Bank controller board defective • Paper set fault • Timing belt damage/dropout • Timing pulley damage/dropout • Base plate damage/horizontality fault • Paper feed roller missing item • Pickup arm defective • Foreign matter, such as paper scrap, is caught inside the tray
		• Reset the paper. • Remove the foreign matter. • Replace the motor. • Reset the connector. • Replace the harness. • Replace the sensor. • Replace the controller board for the optional side LCT. • Replace the tray. • Replace the paper feed roller. • Replace the pick-up arm. • Replace the timing belt. • Replace the timing pulley. • Replace the base plate.
SC505-42	B	Side LCIT Lower Limit Detection Error (D696)
		• Lower limit detection error (during descent) During tray initialization (upper limit not detected /lower limit eject detection), the tray

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		base plate is lowered to check the tray base plate position, but the lower limit sensor is not detected although a predetermined time elapsed. Alternatively, at paper end, the tray base plate is lowered, but the lower limit sensor is not detected although a predetermined time elapsed. • Lower limit detection error (during ascent) During tray initialization (upper limit not detected/lower limit detection), the tray base plate is raised to check the tray base plate position, but the lower limit sensor is detected although a predetermined time elapsed. *If an error occurs for 3 times consecutively: the side LCIT transmits a "5th paper feed tray upper limit detection error" to the main machine. (The message of resetting the tray is displayed when the both sensors detect the error consecutively 2 times or less.)
		• Tray lift motor error/connector missing • Lower limit sensor error/connector missing • Harness broken • Bank control board defective • Paper set fault • Timing belt damage/dropout • Timing pulley damage/dropout • Base plate damage/horizontality fault • Foreign matter, such as paper scrap, is caught inside the tray
		• Reset the paper. • Remove the foreign matter. • Replace the motor. • Reset the connector. • Replace the harness. • Replace the sensor. • Replace the controller board for the optional side LCT. • Replace the tray. • Replace the timing belt. • Replace the timing pulley. • Replace the base plate.
SC505-43	B	Side LCIT Paper Overload Error (D696)
		During tray initialization, both the upper limit and lower limit are detected for 3 times consecutively. (The message of resetting the tray is displayed when the both sensors detect the error consecutively 2 times or less.)
		• Paper overload

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Paper set fault • Upper Limit sensor error/connector missing • Lower limit sensor error/connector missing • Harness broken • Bank control board defective • Foreign matter, such as paper scrap, is caught inside the tray
		• Reset the paper. • Remove the foreign matter. • Reset the connector. • Replace the harness. • Replace the sensor. • Replace the controller board for the optional side LCT.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC508-00	B	Bypass Tray Size Detection Error
		The paper size detected on the bypass tray is different from any of the pattern of automatic size detection.
		• Bypass Length Sensor or Bypass Width Sensor malfunction • Bypass Length Sensor or Bypass Width Sensor harness disconnected
		• Replace the Bypass Length Sensor, or Bypass Width Sensor. • Replace the harness for Bypass Length Sensor, or Bypass Width Sensor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC520-01	C	Registration Motor: Lock
SC520-02	C	Paper feed Motor: Lock
SC520-03	C	Vertical Transport Motor: Lock
		During motor ON, after checking the motor error notification registers (err_velo and err_posi) for 500msec, the error state of either register was detected at least 5 times.
		• Motor defective • Connector disconnected • Harness broken • BCU defective • Encoder defective
		• Replace the motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Reset the connector. • Replace the harness. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC521-01	C	Duplex Entrance Motor: Lock
SC521-02	C	Duplex By-pass Motor: Lock
		During motor ON, after checking the motor error notification registers (err_velo and err_posi) for 500msec, the error state of either register was detected at least 5 times.
		• Motor defective • Connector disconnected • Harness broken • BCU defective • Encoder defective
		• Replace the motor. • Reset the connector. • Replace the harness. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC522-00	C	Paper Exit Motor: Lock
		During motor ON, after checking the motor error notification registers (err_velo and err_posi) for 500msec, the error state of either register was detected at least 5 times.
		• Motor defective • Connector disconnected • Harness broken • BCU defective • Encoder defective
		• Replace the motor. • Reset the connector. • Replace the harness. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC530-00	D	Fusing Fan Lock

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		In the motor ON state, the value of the lock sensor is checked every 100msec. If a lock signal is not obtained for 50 times consecutively.
		• Motor defective • Connector disconnected • Harness broken • BCU defective
		• Replace the fusing fan. • Reset the connector. • Replace the harness. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC531-00	D	Development Bearing Cooling Fan Lock
		In the motor ON state, the value of the lock sensor is checked every 100msec. If a lock signal is not obtained for 50 times consecutively.
		• Motor defective • Connector disconnected • Harness broken • BCU defective
		• Replace the development bearing cooling fan • Reset the connector. • Replace the harness. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC533-00	D	PSU Cooling Fan Lock
SC533-01	D	Development Bearing Cooling Fan
		In the motor ON state, the value of the lock sensor is checked every 100msec. If a lock signal is not obtained for 50 times consecutively.
		• Motor defective • Connector disconnected • Harness broken • BCU defective
		• Replace the development bearing cooling fan. • Reset the connector. • Replace the harness. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC534-00	D	Development Exhaust Fan
		In the motor ON state, the value of the lock sensor is checked every 100msec. If a lock signal is not obtained for 50 times consecutively.
		• Motor defective • Connector disconnected • Harness broken • BCU defective
		• Replace the development exhaust fan. • Reset the connector. • Replace the harness. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC535-00	D	Paper Exit Cooling Fan Lock
		In the motor ON state, the value of the lock sensor is checked every 100msec. If a lock signal is not obtained for 50 times consecutively.
		• Motor defective • Connector disconnected • Harness broken • BCU defective
		• Replace the paper exit cooling fan. • Reset the connector. • Replace the harness. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC540-00	D	Fusing/paper Exit Motor: Lock
		During motor ON, after checking lock signals for 2sec, a High level was detected at least 20 times.
		• Motor defective • Connector disconnected • Harness broken • BCU defective • Unit torque increased
		• Replace the fusing/paper exit motor. • Reset the connector. • Replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC541-01	A	Fusing Thermopile (Center) Disconnection
		Below a predetermined temperature (or below CB) is detected for specified seconds continuously. Detection frequency: 10 times or more.
		• Harness broken • Connector disconnected
		• Reconnect the connectors between the fusing unit and the BCU. • Replace the thermopile (center). • Replace the harness between the fusing unit and the BCU. • Replace the BCU.
SC541-02	A	NC Sensor (Center) Disconnection
		3ED - 3FF (FB voltage: 3.243V-3.300V) is detected for specified seconds continuously (NC sensor (center): detection & compensation, NC sensor (end): detection & compensation). Detection period: 100 ms, detection frequency: 10 times or more.
		• Harness broken • Connector disconnected
		• Reconnect the connectors between the fusing unit and the BCU. • Replace the NC sensor (center). • Replace the harness between the fusing unit and the BCU. • Replace the BCU.
SC541-03	A	NC Sensor (Center) Short-circuit
		AD value: 0-13 (FB voltage: 0.000V-0.041V) is detected for specified seconds continuously. Detection period: 100 ms, detection frequency: 10 times or more.
		• Harness broken • Connector disconnected
		• Reconnect the connectors between the fusing unit and the BCU. • Replace the NC sensor (center). • Replace the harness between the fusing unit and the BCU. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC542-02	A	Fusing Thermopile (Center) Thermopile Does Not Reload
		When the thermopile (center) does not reach a predetermined temperature for 7 seconds

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		consecutively.
SC542-03	A	Fusing Thermopile (Center) Does Not Reload
		When the thermopile (center) does not reach the permission temperature of heat central reloading for specified seconds continuously.
SC542-05	C	Fusing Thermopile (Center) Does Not Reload (Low Voltage)
		When the thermopile (center) does not reach a predetermined temperature for 7 seconds consecutively.
SC542-06	C	Fusing Thermopile (Center) Does Not Reload (Low Voltage)
		When the thermopile (center) does not reach the permission temperature of heat central reloading for specified seconds continuously.
		• Thermopile (center) lens dirt • Thermopile (center) installed incorrectly • Thermopile (center) deformed or not installed (or mounted) properly • Outside input voltage guarantee • After excessive temperature rise prevention unit operation
		• Remove the jammed paper in the fusing unit. • Check and replace the thermopile (center). • Check the power supply voltage and reconnect the cable to the outlet. • Replace the thermostat. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC543-00	A	Fusing Thermopile (Center) High Temperature Detection (Software)
		When the thermopile (center) detects a predetermined temperature or above for specified seconds consecutively. Detection period 100ms, detection count: 10 times or more.
		• Triac short-circuit • Engine controller defective • Fusing roller temperature sensor (center) defective • Fusing control software defective
		• Check the fusing unit. • Check that the triac of the AC controller on the PSU does not short-circuit. • Reconnect the following connectors: CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit • Replace the the following harness: CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit • Replace the BCU board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Replace the fusing unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC544-01	A	Fusing High Temperature Detection (hardware) (Fusing Thermopile (Center) High Temperature Error)
		In the event of an error
		• Triac defective (short-circuit) • Engine controller defective • Fusing roller temperature sensor (center) defective • Fusing control software: out of control

		• Check the sensor temperature with the following SPs. If the temperature is lower than 250°C, replace the thermopile or thermistor.
		  • SP1-141-101 (Thermopile (center))
		  • SP1-141-102 (Thermopile (edge))
		  • SP1-141-103 (Thermistor (center))
		  • SP1-141-104 (Thermistor (edge))
		  • SP1-141-151 (Thermopile (center): 200 msec before the SC is generated)
		  • SP1-141-152 (Thermopile (edge): 200 msec before the SC is generated)
		  • SP1-141-153 (Thermistor (center): 200 msec before the SC is generated)
		  • SP1-141-154 (Thermistor (edge): 200 msec before the SC is generated)
		  Note: The high temperature state of the fusing unit is detected when the temperature detected by the sensor is 250°C or more. Therefore, if the temperature of the above SPs is lower than 250°C, the thermopile or thermistor may be defective or out of position.
		• Check the fusing unit.
		• Check the triac of the AC controller on the PSU and replace the PSU.
		• Reconnect the following connectors: CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit
		• Replace the following harness: CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit
		• Replace the BCU board.
		• Turn the power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC544-02	A	Fusing High Temperature Detection (hardware) (Non-Contact thermistor High Temperature Error)
		In the event of an error
		• Triac defective (short-circuit) • Engine controller defective

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Fusing roller temperature sensor (center) defective • Fusing control software: out of control

		• Check the sensor temperature with the following SPs. If the temperature is lower than 250°C, replace the thermopile or thermistor.
		  • SP1-141-101 (Thermopile (center))
		  • SP1-141-102 (Thermopile (edge))
		  • SP1-141-103 (Thermistor (center))
		  • SP1-141-104 (Thermistor (edge))
		  • SP1-141-151 (Thermopile (center): 200 msec before the SC is generated)
		  • SP1-141-152 (Thermopile (edge): 200 msec before the SC is generated)
		  • SP1-141-153 (Thermistor (center): 200 msec before the SC is generated)
		  • SP1-141-154 (Thermistor (edge): 200 msec before the SC is generated)
		  Note: The high temperature state of the fusing unit is detected when the temperature detected by the sensor is 250°C or more. Therefore, if the temperature of the above SPs is lower than 250°C, the thermopile or thermistor may be defective or out of position.
		• Check the fusing unit.
		• Check the triac of the AC controller on the PSU and replace the PSU.
		• Reconnect the following connectors: CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit
		• Replace the following harness: CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit
		• Replace the BCU board.
		• Turn the power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC545-01	A	Fusing Central Heater Continuously Heat

		After waiting for full power for more than specified seconds continuously, not detected for specified seconds.
		• Definition of heater full power
		  Continuously heating rate set point (maximum heating rate)
		• Measurement start point
		  After reload (after heater extinguished, after rotation complete) below the standby temperature (target temperature), measurement starts after a heater heat-up request is issued.
		• Measurement stop condition
		  Rotation started due to a print signal during measurement or other.
		• Maximum heat-up Duty (SP interlinked value) 0% is excluded.

		• Thermopile (center) lens dirt

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Thermopile (center) installed incorrectly • Thermopile bracket deformation • Heater disconnection • After excessive temperature rise prevention unit operates • Outside input voltage guarantee
		• Remove the jammed paper in the fusing unit • Check and replace the thermopile (center). • Check the power supply voltage and reconnect the cable to the outlet. • Replace the thermostat. • Replace the BCU board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC545-05	C	Fusing Central Heater Continuously Heat (Low Voltage)
		After waiting for full power for more than specified seconds continuously, not detected for specified seconds. • Definition of heater full power Continuously heating rate set point (maximum heating rate) • Measurement start point After reload (after heater extinguished, after rotation complete) below the standby temperature (target temperature), measurement starts after a heater heat-up request is issued. • Measurement stop condition Rotation started due to a print signal during measurement or other. • Maximum heat-up Duty (SP interlinked value) 0% is excluded.
		• Thermopile (center) lens dirt • Thermopile (center) installed incorrectly • Thermopile bracket deformation • Heater disconnection • After excessive temperature rise prevention unit operates • Outside input voltage guarantee
		• Remove the jammed paper in the fusing unit • Check and replace the thermopile (center). • Check the power supply voltage and reconnect the cable to the outlet. • Replace the thermostat. • Replace the BCU board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC547-	D	Zero cross Error (relay-contact soldering)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
01		In the event of an error
		• Fusing relay defective (contact soldering) • Fusing relay drive circuit fault
		• Turn the main power supply switch OFF/ON • If the fusing relay is damaged, replace the PSU. • Check the connection between PSU and controller board, and replace harness and board if necessary.
SC547-02	D	Zero cross Error (relay contact fault)
		In the event of an error
		• Fusing relay damage (contact open) • Fusing relay drive circuit fault • PSU fuse (24VS) blowout
		• Turn the main power supply switch OFF/ON. • If the fusing relay is damaged, replace the PSU. • Check the connection between PSU and controller board, and replace harness and board if necessary. • If the PSU fuse (24VS) blows out, replace the fuse.
SC547-03	D	Zero cross Error (low-frequency error)
		In the event of an error
		Frequency instability of commercial power line
		• Turn the main power supply switch OFF/ON. • Check the power source. • Check the connection between PSU and controller board, and replace harness and board if necessary.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC551-01	A	Fusing Thermopile (Edge) Disconnection
		When the thermopile (edge) detects a predetermined temperature or less for specified seconds consecutively.
		• Harness broken • Connector disconnected
		• Reconnect the connectors between the fusing unit and the BCU. • Replace the thermopile (edge). • Replace the harness between the fusing unit and the BCU. • Replace the BCU.
SC551-02	A	NC Sensor (End) Disconnection
		3ED - 3FF (FB voltage: 3.243V-3.300V) is detected for specified seconds continuously (NC

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		sensor (center): detection & compensation, NC sensor (end): detection & compensation). Detection period: 100 ms, detection frequency: 10 times or more.
		• Harness broken • Connector disconnected
		• Reconnect the connectors between the fusing unit and the BCU. • Reset the NC sensor. • Replace the harness between the fusing unit and the BCU. • Replace the BCU.
SC551-03	A	NC Sensor (End) Short-circuit
		AD value: 0-13 (FB voltage: 0.000V-0.041V) is detected for specified seconds continuously. Detection period: 100 ms, detection frequency: 10 times or more.
		• Harness broken • Connector disconnected
		• Reconnect the connectors between the fusing unit and the BCU. • Reset the NC sensor. • Replace the harness between the fusing unit and the BCU. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC552-02	A	Fusing Thermopile (Edge) Does Not Reload
		When the thermopile (edge) does not reach a predetermined temperature for specified seconds consecutively.
SC552-03	A	Fusing Thermopile (Edge) Does Not Reload
		Heating edge reload permission temperature not reached after heater 1 ON for specified seconds.
SC552-05	C	Fusing Thermopile (Edge) Does Not Reload (Low Voltage)
		When the thermopile (edge) does not reach a predetermined temperature for specified seconds consecutively.
SC552-06	C	Fusing Thermopile (Edge) Does Not Reload (Low Voltage)
		When the thermopile (edge) does not reach the permission temperature of heat edge reloading for specified seconds continuously.
		• Thermopile (edge) lens dirt • Thermopile (edge) installed incorrectly • Thermopile modification • Outside input voltage guarantee • After excessive temperature rise prevention unit operation

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Remove the jammed paper in the fusing unit. • Check and replace the thermopile (edge). • Check the power supply voltage and reconnect the cable to the outlet. • Replace the thermostat. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC553-00	A	Fusing Thermopile (Edge) High Temperature Detection (software)
		Above a predetermined temperature detected for specified seconds continuously. Detection period: 100ms, detection count: 10 times or more.
		• Triac short-circuit • Engine controller defective • Fusing roller temperature sensor (center) defective • Fusing control software defective
		• Check the fusing unit. • Check that the triac of the AC controller on the PSU does not short-circuit. • Reconnect the following connectors CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit • Replace the following harness CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit • Replace the BCU board. • Replace the fusing unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC554-01	A	Fusing Thermopile (Edge) High Temperature Detection (hardware)
		In the event of an error
		• Triac defective (short-circuit) • Engine controller defective • Fusing roller temperature sensor (center) defective • Fusing control software: out of control

		• Check the sensor temperature with the following SPs. If the temperature is lower than 250°C, replace the thermopile or thermistor.
		  • SP1-141-101 (Thermopile (center))
		  • SP1-141-102 (Thermopile (edge))
		  • SP1-141-103 (Thermistor (center))
		  • SP1-141-104 (Thermistor (edge))
		  • SP1-141-151 (Thermopile (center): 200 msec before the SC is generated)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• SP1-141-152 (Thermopile (edge): 200 msec before the SC is generated) • SP1-141-153 (Thermistor (center): 200 msec before the SC is generated) • SP1-141-154 (Thermistor (edge): 200 msec before the SC is generated) Note: The high temperature state of the fusing unit is detected when the temperature detected by the sensor is 250°C or more. Therefore, if the temperature of the above SPs is lower than 250°C, the thermopile or thermistor may be defective or out of position. • Check the fusing unit. • Check that the triac of the AC controller on the PSU does not short-circuit. • Replace the PSU. • Reconnect the following connectors: CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit • Replace the following harness CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit • Replace the BCU board. • Turn the power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC554-02	A	NC Sensor (End) High Temperature Detection (hardware)
		In the event of an error
		• Triac defective (short-circuit) • Engine controller defective • Fusing roller temperature sensor defective (rear) • Fusing control software: out of control
		• Check the sensor temperature with the following SPs. If the temperature is lower than 250°C, replace the thermopile or thermistor. • SP1-141-101 (Thermopile (center)) • SP1-141-102 (Thermopile (edge)) • SP1-141-103 (Thermistor (center)) • SP1-141-104 (Thermistor (edge)) • SP1-141-151 (Thermopile (center): 200 msec before the SC is generated) • SP1-141-152 (Thermopile (edge): 200 msec before the SC is generated) • SP1-141-153 (Thermistor (center): 200 msec before the SC is generated) • SP1-141-154 (Thermistor (edge): 200 msec before the SC is generated) Note: The high temperature state of the fusing unit is detected when the temperature detected by the sensor is 250°C or more. Therefore, if the temperature of the above SPs is lower than 250°C, the thermopile or thermistor may be defective or out of position. • Check the fusing unit. • Check that the triac of the AC controller on the PSU does not short-circuit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Replace the PSU. • Reconnect the following connectors: CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit • Replace the following harness: CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit • Replace the BCU board. • Turn the power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC555-01	A	Fusing Edge Heater Continuously Heat
SC555-05	C	Fusing Edge Heater Continuously Heat (Low Voltage)
		After waiting for full power for more than specified seconds continuously, not detected for specified seconds. • Definition of heater full power Continuously heating rate set point (maximum heating rate) • Measurement start point After reload (after heater extinguished, after rotation complete) below the standby temperature (target temperature), measurement starts after a heater heat-up request is issued. • Measurement stop condition Rotation started due to a print signal during measurement or other • Maximum heat-up Duty (SP interlinked value) 0% is excluded
		• Thermopile (edge) lens dirt • Thermopile (edge) installed incorrectly • Thermistor deformation • Heater disconnection • After excess temperature rise prevention unit operation • Outside input voltage guarantee
		• Remove the jammed paper in the fusing unit. • Check and replace the thermopile (edge). • Check the power supply voltage and reconnect the cable to the outlet. • Replace the thermostat. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC557-00	C	Zero Cross Frequency Exceeded

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		In the event of an error
		Frequency instability of commercial power line/Noise
		-

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC558-00	C	Low Input Voltage
		On the mains power supply, detected the input voltage that is less than the specification and is more than 50V.
		Low input of mains power supply
		-

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC559-00	A	Fusing Jam Detected for 3 Times Consecutively
		Fusing jam (does not reach fusing exit sensor) is detected for 3 times consecutively. • Detection conditions Displays the SC559-00 at the time of integrating the counter each time fusing jam occurs, became fusing jam counter value = 3. The counter value is retained without fusing jam also reset by OFF/ON the power supply. • Control ON/OFF And enables ON / OFF is this SC, the default is set to OFF, then ON at the time of customer requirements. SP1-142-001 0: OFF (default), 1: ON (Set at the time of customer requirements) • Counter reset condition occurs fusing jam 1. Normal paper exit has been done during this continuous fusing jam, fusing jam counter is reset. 2. When "1" is changed to "0" SP1-142-001, to reset the (SP9-912-001) fusing jam counter. 3. When after displaying SC559, SC release is made, reset the (SP9912-001) fusing jam counter.
		Fusing unit paper jam
		Remove the jam.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC561-00	A	Pressure Roller Thermistor (Center) Disconnection
		When the pressure roller thermistor (center) detects a predetermined temperature or less for specified seconds consecutively.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		Detection period 100ms, detection count: 10 times or more.
		• Harness broken • Connector disconnected
		• Reconnect the connectors between the fusing unit and the BCU. • Replace the pressure roller thermistor (center). • Replace the harness between the fusing unit and the BCU. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC562-02	A	Pressure Roller Thermistor (Center) Does Not Reload
		When the pressure roller thermistor (center) does not reach a predetermined temperature for specified seconds consecutively.
		• Thermistor dirt • Thermopile deformed or not installed (or mounted) properly • Outside input voltage guarantee • After excess temperature rise prevention unit operation
		• Remove the jammed paper in the fusing unit. • Check and replace the pressure roller thermistor (center). • Check the power supply voltage and reconnect the cable to the outlet. • Replace the thermostat. • Replace the thermopile. • Replace the BCU.
SC562-05	C	Pressure Roller Thermistor (Center) Does Not Reload (Low Voltage)
		When the pressure roller thermistor (center) does not reach a predetermined temperature for specified seconds consecutively.
		• Thermistor dirt • Thermopile deformed or not installed (or mounted) properly • Outside input voltage guarantee • After excess temperature rise prevention unit operation
		• Remove the jammed paper in the fusing unit. • Check and replace the pressure roller thermistor (center). • Check the power supply voltage and reconnect the cable to the outlet. • Replace the thermostat. • Replace the thermopile. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC563-00	A	Pressure Roller Thermistor (Center) High Temperature Detection (software)
		Above a predetermined temperature detected for specified seconds continuously. Detection period: 100ms, detection count: 10 times or more.
		• Triac short-circuit • Engine controller defective • Pressure roller thermistor (end) defective • Fusing control software defective
		• Check the fusing unit. • Check that the triac of the AC controller on the PSU does not short-circuit. • Reconnect the following connectors: CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit • Replace the following harness: CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit • Replace the BCU. • Replace the fusing unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC564-00	A	Fusing High Temperature Detection (hardware) (Pressure Roller Thermistor Error)
		In the event of an error
		• Triac short-circuit • Engine controller defective • Pressure roller thermistor (end) defective • Fusing controller software defective

		• Check the sensor temperature with the following SPs. If the temperature is lower than 250°C, replace the thermopile or thermistor.
		  • SP1-141-101 (Thermopile (center))
		  • SP1-141-102 (Thermopile (edge))
		  • SP1-141-103 (Thermistor (center))
		  • SP1-141-104 (Thermistor (edge))
		  • SP1-141-151 (Thermopile (center): 200 msec before the SC is generated)
		  • SP1-141-152 (Thermopile (edge): 200 msec before the SC is generated)
		  • SP1-141-153 (Thermistor (center): 200 msec before the SC is generated)
		  • SP1-141-154 (Thermistor (edge): 200 msec before the SC is generated)
		  Note: The high temperature state of the fusing unit is detected when the temperature detected by the sensor is 250°C or more. Therefore, if the temperature of the above SPs is lower than 250°C, the thermopile or thermistor may be defective or out of position.
		• Check the fusing unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Check that the triac of the AC controller on the PSU does not short-circuit. • Replace the PSU. • Reconnect the following connectors: CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit • Replace the following harness: CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit. • Replace the BCU. • Turn the power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC571-00	A	Pressure Roller Thermistor (End) Disconnection
		When the pressure roller thermistor (end) detects a predetermined temperature or less for specified seconds consecutively. Detection period: 100 ms, detection counts: 10 times or more.
		• Harness broken • Connector disconnected
		• Reconnect the connectors between the fusing unit and the BCU. • Replace the pressure roller thermistor (end). • Replace the harness between the fusing unit and the BCU. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC572-02	A	Pressure Roller Thermistor (End) Does Not Reload
		When the temperature does not reach 40 degrees Centigrade for 100 seconds consecutively.
		• Thermistor dirt • Thermopile deformed or not installed (or mounted) properly • Outside input voltage guarantee • After excess temperature rise prevention unit operation
		• Remove the jammed paper in the fusing unit. • Check and replace the pressure roller thermistor (end). • Check the power supply voltage and reconnect the cable to the outlet. • Replace the thermostat. • Replace the thermopile. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC573-00	A	Pressure Roller Thermistor (End) High Temperature Detection (software)
		When the pressure roller thermistor (end) detects a predetermined temperature or above for specified second consecutively.
		• Triac short-circuit • Engine controller defective • Pressure roller thermistor (end) defective • Fusing controller software defective
		• Check the fusing unit. • Check that the triac of the AC controller on the PSU does not short-circuit. • Reconnect the following connectors: CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit • Replace the following harness: CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit • Replace the BCU. • Replace the fusing unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC574-00	A	Pressure Roller Thermistor (End) High Temperature Detection (hardware)
		In the event of an error
		• Triac short-circuit • Engine controller defective • Pressure roller thermistor (end) defective • Fusing control: out of control

		• Check the sensor temperature with the following SPs. If the temperature is lower than 250°C, replace the thermopile or thermistor.
		  • SP1-141-101 (Thermopile (center))
		  • SP1-141-102 (Thermopile (edge))
		  • SP1-141-103 (Thermistor (center))
		  • SP1-141-104 (Thermistor (edge))
		  • SP1-141-151 (Thermopile (center): 200 msec before the SC is generated)
		  • SP1-141-152 (Thermopile (edge): 200 msec before the SC is generated)
		  • SP1-141-153 (Thermistor (center): 200 msec before the SC is generated)
		  • SP1-141-154 (Thermistor (edge): 200 msec before the SC is generated)
		Note: The high temperature state of the fusing unit is detected when the temperature detected by the sensor is 250°C or more. Therefore, if the temperature of the above SPs is lower than 250°C, the thermopile or thermistor may be defective or out of position.
		• Check the fusing unit.
		• Check that the triac of the AC controller on the PSU does not short-circuit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Replace the PSU. • Reconnect the following connectors: CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit • Replace the following harness: CN115 of BCU, connectors between the fusing unit and the BCU, connectors connected to the fusing unit • Replace the BCU. • Turn the power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC589-01	D	Fusing center: Low Temperature Detection
		When the thermopile (center) detects the temperature which is 180 degrees Centigrade lower than target Temperature for 12 seconds consecutively.
		• Central heater harness disconnected • Connector defective • After excess temperature rise prevention unit (thermostat) operation
		• Replace the jammed paper in the fusing unit. • Check and replace the thermopile (center). • Check the power supply voltage and reconnect the cable to the outlet. • Replace the thermostat. • Replace the BCU.
SC589-02	D	Fusing edge: Low Temperature Detection
		When the thermopile (edge) detects the temperature which is 180 degrees Centigrade lower than target Temperature for 12 seconds consecutively.
		• Edge heater harness disconnected • Connector defective • After excess temperature rise prevention unit (thermostat) operation
		• Replace the jammed paper in the fusing unit. • Check and replace the thermopile (edge). • Check the power supply voltage and reconnect the cable to the outlet. • Replace the thermostat. • Replace the BCU.

SC Tables: SC6xx (Communication and Others)

SC620-01 to SC687-00

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC620-01	D	ADF Communication Error 1
SC620-02	D	ADF Communication Error 2
SC620-03	D	ADF Communication Error 3
		SC620-01: After ADF connection was recognized on startup, an error is detected. (disconnection detection) **SC620-02:** After ADF connection was recognized on startup, an error is detected. (Retry out due to communication error) **SC620-03:** SC is displayed when CIS initialization complete command is not received for certain time.
		• ADF connection fault • ADF defection • IPU board defection • Noise contamination • ADF machine code unmatched
		• Check the ADF cable connection • Replace the ADF • Replace the IPU board • Replace the ADF which matches the machine code

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC621-00	D	Finisher/Mail Box Communication Error
		• Detected an error when connecting the communication line. • Received a communication error notification from the UART.
		• Finisher control board defective. • BCU defective • Connection fault between finisher and main machine.
		• Turn the power off/on. • Reconnect the finisher/mail box interface cable • Replace the BCU

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Replace the finisher/mail box.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC622	D	Paper Bank Communication Error
SC622-01	D	Paper Bank 1 Communication Error (D694)
SC622-11	D	Paper Bank 1 Communication Error (D787)
SC622-12	D	Paper Bank 1 Communication Error (D787)
SC622-31	D	Paper Bank 1 Communication Error (D695)
		Detected an error when connecting the communication line.
		• Paper bank control board defective • BCU defective • Paper bank-main machine connection fault
		Check if the SC occurs by turning the main power OFF then ON. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. 1. Check if all connectors in tray 1, 2, and optional paper tray are connected securely. Reconnect the connectors if they are disconnected, or loose. 2. Check the harness in tray 1, 2, and optional paper tray. Replace the harness if it is disconnected, or damaged. 3. Check if there are any signs of a short circuit on the Bank Main Board. If there are any defects, replace the board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC623-00	D	Paper Bank Communication Error (D696)
		When two trays PFU (D787) and side LICT (D696) or LCIT (D695) and side LCIT (D696) are installed, 1. When the upper stream unit (D787 or D695) recognizes the lower stream unit (D696), the break of the lower stream unit is not canceled within predetermined milliseconds. 2. After the upper stream unit (D787 or D695) recognizes the lower stream unit (D696), there is no ACK within predetermined milliseconds after transmission of a data frame to the lower stream unit, and a timeout error occurs for 3 times consecutively even if retransmission is performed.
		• Bank control board fault • Connector disconnected

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Turn the power off/on. • Reset the optional paper tray connecting cable. • Replace the BCU. • Replace the optional paper tray.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC664-01	D	Access Permission Error to VODKA SRAM
SC664-02	D	Write Error to VODKA SRAM
SC664-03	D	VODKA Program Startup Error
		The machine detects the communication error between VODKA and SRAM when starting up, or recovery from energy saver mode.
		• BCU defective (Parts implementation defect, solder scrap, implemented parts defect, etc.)
		• Turn the power off/on. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC665-01	D	BCU-IPU Connection Error
		The machine detects the communication error between BCU and IPU (No FFC connection) when starting up, or recovery from energy saver mode.
		• BCU defective, IPU defective (Parts implementation defect, solder scrap, implemented parts defect, etc.)
		• Reconnect the FFC. • Replace the FFC. • Replace the BCU. • Replace the IPU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC665-04	D	BCU (IOB Module) Does Not Start
		The IOB does not start up when starting up, or recovery from energy saver mode.
		• No power supply to the BCU (IOB module) (power supply connector installed incorrectly, harness broken) • Board defective (Parts implementation defect, solder scrap, implemented parts defect, etc.)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Turn the power off/on. • Reconnect the BCU power supply harness. • Replace the BCU power supply harness. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC665-05	D	Master Device Communication Error
		The machine detects the communication error between CPU and Slave1 when starting up, or recovery from energy saver mode.
		• BCU defective (Parts implementation defect, solder scrap, implemented parts defect, etc.)
		• Turn the power off/on. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC665-07	D	IPU signal Communication Error
		The machine detects the communication error between CPU and Slave1 when starting up, or recovery from energy saver mode.
		• BCU defective, IPU defective (Parts implementation defect, solder scrap, implemented parts defect, etc.)
		• Reconnect the FCC. • Replace the FCC. • Replace the BCU. • Replace the IPU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC665-08	D	IOB signal Communication Error
		The machine detects the communication error between CPU and Slave1 when starting up, or recovery from energy saver mode.
		• BCU defective (Parts implementation defect, solder scrap, implemented parts defect, etc.)
		• Turn the power off/on. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC667-01	D	Master Device Mode Setting Error
		The machine detects the CPU mode error when starting up, or recovery from energy saver

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		mode.
		• BCU defective (Parts implementation defect, solder scrap, implemented parts defect, etc.)
		• Turn the power off/on. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC667-10	D	Slave1 Device Mode Setting Error
		The machine detects the Slave1 mode error when starting up, or recovery from energy saver mode.
		• BCU defective (Parts implementation defect, solder scrap, implemented parts defect, etc.)
		• Turn the power off/on. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC667-40	D	Macaron1 Mode Setting Error
		The machine detects the Macaron1 mode error when starting up, or recovery from energy saver mode.
		• BCU defective (Parts implementation defect, solder scrap, implemented parts defect, etc.)
		• Turn the power off/on. • Replace the BCU. • Replace the IPU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC669		EEPROM Communication Error
SC669-01	D	EEPROM OPEN: ID error
SC669-02	D	EEPROM OPEN: Channel error
SC669-03	D	EEPROM OPEN: Device error
SC669-04	D	EEPROM OPEN: Communication abort error
SC669-05	D	EEPROM OPEN: Communication timeout error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC669-06	D	EEPROM OPEN: Operation stopped error
SC669-07	D	EEPROM OPEN: Buffer full
SC669-08	D	EEPROM OPEN: No error code
SC669-09	D	EEPROM CLOSE: ID error
SC669-10	D	EEPROM CLOSE: No error code
SC669-11	D	EEPROM Data write: ID error
SC669-12	D	EEPROM Data write: Channel error
SC669-13	D	EEPROM Data write: Device error
SC669-14	D	EEPROM Data write: Communication abort error
SC669-15	D	EEPROM Data write: Communication timeout error
SC669-16	D	EEPROM Data write: Operation stopped error
SC669-17	D	EEPROM Data write: Buffer full
SC669-18	D	EEPROM Data write: No error code
SC669-19	D	EEPROM Data read: ID error
SC669-20	D	EEPROM Data read: Channel error
SC669-21	D	EEPROM Data read: Device error
SC669-22	D	EEPROM Data read: Communication abort error
SC669-23	D	EEPROM Data read: Communication timeout error
SC669-	D	EEPROM Data read: Operation stopped error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
24		
SC669-25	D	EEPROM Data read: Buffer full
SC669-26	D	EEPROM Data read: No error code
		Received an error notification during EEPROM communication and does not resume after 3 retries.
		• Electrical noise • EEPROM not connected fully • EEPROM damaged • BCU damaged
		• Turn the power off/on. • Check the EEPROM. • Replace the EEPROM. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC669-36	D	EEPROM: Verify Error
		The machine receives an error notification during EEPROM (BCU) communication and does not resume after 2 retries. The machine detects an abnormal value in the EEPROM data when starting up, or recovery from energy saver mode.
		• Electrical noise • EEPROM not connected fully • EEPROM damaged • BCU damaged
		• Turn the power off/on. • Check the EEPROM. • Replace the EEPROM. • Replace the BCU.
SC669-37	D	EEPROM: Failure Detection Error
		The machine receives an error notification during EEPROM (BCU) communication and does not resume after 1 retries. The machine determined EEPROM failure in the EEPROM detection operation when starting up, or recovery from energy saver mode.
		• Electrical noise • EEPROM not connected fully

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• EEPROM damaged • BCU damaged
		• Turn the power off/on. • Check the EEPROM. • Replace the EEPROM. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC682		PCU: ID Chip Communication Error
SC682-01	D	Invalid Device ID
SC682-06	D	Channel Error
SC682-11	D	Device Error
SC682-16	D	Communication Aborted (error during communication)
SC682-21	D	Communication Timeout
SC682-26	D	Device Stopped (logically stopped)
SC682-31	D	Requested Buffer Full
		Received an error notification during EEPROM communication and does not resume after 3 retries.
		• Device ID date error • Mu sesnsor / EEPROM defective • Electrical noise • PCU is not set properly.
		• Turn the power off/on. • Replace the PCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC682-36	D	PCU: Verify Error
		Received a error notification during EEPROM communication and does not resume after 2 retries.
		• Device ID date error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Mu sensor / EEPROM defective • Electrical noise • PCU is not set properly.
		• Turn the power off/on. • Replace the PCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC687-00	D	PER Not Received Error
		Unable to receive the PER command from the controller.
		• Communication error
		• Replace the BCU.

SC Tables: SC7xx (Peripherals)

SC700-01 to SC792-00

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC700		**SPDF error**
SC700-01	D	ADF Bottom Plate Lift Motor (SPDF)
SC700-02	D	ADF Pick-Up Roller Lift Motor Error (SPDF)
SC700-04	D	ADF Feed Motor Error (SPDF)
SC700-05	D	ADF Entrance Motor Error (SPDF)
SC700-06	D	ADF Transport Motor Error (SPDF)
SC700-07	D	ADF Scanning Motor Error (SPDF)
SC700-09	D	ADF Exit Motor Error (SPDF)
		SC700-01 Even if the ADF bottom plate lift motor is rotated in the base plate ascent direction, the bottom plate position sensor does not detect. Even if the ADF bottom plate lift motor is rotated in the base plate descent direction, the bottom plate HP sensor does not detect. SC700-02 Even if the ADF pick-up roller lift motor is rotated, the pick-up roller HP sensor does not detect. SC700-04, 05, 06, 07, 09 When an error notification signal is detected during the motor drive period.
		SC700-01 • Bottom plate position sensor error (output error) • Bottom plate HP sensor • ADF bottom plate lift motor error (does not rotate) • ADF controller board error SC700-02 • Pick-up roller HP sensor error (output error) • ADF pick-up roller lift motor error (does not rotate) • ADF controller board error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		SC700-04, 05, 06, 07, 09 • Motor defective • Connector disconnected • Harness broken • Overload
		SC700-01, 02 • Check the sensor harness and motor harness connection • Replace the sensor harness and motor harness • Replace the sensor • Replace the motor • Replace the ADF controller board SC700-04, 05, 06, 07, 09 • Check the harness connection • Replace the harness • Replace the motor

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC701-03	D	Paper Feed Motor Driver Error (ARDF)
		Detection of error signal from motor driver
		• Encoder disconnection • Encoder connector dropout • Encoder defective • Overload • Motor deterioration
		• Replace the encoder harness • Check the harness connection • Replace the motor
SC701-08	D	Paper Exit Motor Driver Error (ARDF)
		Detection of error signal from motor driver.
		• Encoder disconnection • Encoder connector dropout • Encoder defective • Overload • Motor deterioration
		• Replace the encoder harness • Check the harness connection • Replace the motor

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC702-01	D	Protection Device Intercept Error 1 (ARDF)
		When original source 5V power supply is ON, protection device intercept of 24V power supply system is detected.
		Any of feed motor, transport motor, inverter solenoid, pick-up solenoid, feed clutch and cooling fan motor defective, a harness short-circuit occurs, and the protection device of the 24V power supply system intercepts.
		• Replace the blown fuse or circuit board • Replace the short-circuited parts
SC702-02	D	Protection Device Intercept Error 2 (ARDF)
		When original source 5V power supply is ON, protection device intercept of 24V OUT power supply system is detected.
		Stamp solenoid defective or harness short-circuit occurs in 24VOUT power supply system.
		• Replace the blown fuse or circuit board • Replace the short-circuited parts
SC702-03	D	Protection Device Intercept Error 3 (ARDF)
		When original source 5V power supply is ON, protection device intercept of 5VE power supply system is detected.
		Original set sensor defective or a harness short-circuit occur in 5VE power supply system.
		• Replace the blown fuse or circuit board • Replace the short-circuited parts
SC702-04	D	Protection Device Intercept Error 4 (SPDF)
		Motor defective in any of the ADF pick-up roller lift motor, stamp solenoid, ADF bottom plate lift motor or FAN motor, or a harness short-circuit occurs, and the protection device of the non-interlocking power supply system intercepts.
		Motor defective or a harness short-circuit occurs in the non-interlocking power supply system.
		• Replace the blown fuse or circuit board • Replace the short-circuited parts
SC702-05	D	Protection Device Intercept Error 5 (SPDF)
		Motor defective in the paper feed motor, entrance motor, transport motor, ADF scanning motor or ADF exit motor, or a harness short-circuit occurs, and the protection device of the interlocking power supply system intercepts.
		Motor defective or a harness short-circuit occurs in the interlocking power supply system.
		• Replace the blown fuse or circuit board • Replace the short-circuited parts

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720		**Booklet Finisher SR3240/Finisher SR3230 Error**
SC720-03	B	Protection Device Intercept Error 1
		Protection device intercept error state (fuse break) is detected.
		• Short-circuit defective • Overload defective • Motor defective • Solenoid defective
		Check if the SC occurs by turning the main power OFF then ON. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. • The target parts are all the motors and the sensors. 1. Check if the connector of the target part is connected securely. Reconnect the connector if it is disconnected, or loose. 2. Check the harness for the target part. Replace the harness if it is disconnected, or damaged. 3. Check if the motor runs, sensors turn OFF/ON, has no overloads, and is properly driven. Replace the parts if there are any defects. 4. Check if there are any signs of a short circuit. Replace the parts if there are any defects.
SC720-06	C	Access error to NVRAM
		Error occurs when accessing NVRAM.
		Connection failure or malfunction of NVRAM
		Check if the SC occurs by turning the main power OFF then ON. If the SC occurs again, do the following steps. 1. Pull out and reinsert the NVRAM to check if the NVRAM is correctly inserted into the IC socket. If the SC cannot be recovered, replace the main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720		**Booklet Finisher SR3240/Finisher SR3230 Error**
SC720-10	B	Entrance Transport Motor Error
SC720-11	B	Horizontal Transport Motor Error
SC720-13	B	Transport Motor Error
SC720-15	B	Pre-stack Transport Motor Error
SC720-	B	Exit Motor Error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
17		
		Error Condition of -06, -10, -11, -13, -15, -17 • Motor driver detects an error (DC motor control error) (1st time is jam notification, 2nd time is SC notification)
SC720-20	B	Lower Junction Gate Motor Error
SC720-24	B	Paper Exit Guide Plate Motor Error
SC720-25	B	Punch Motor Error
SC720-27	B	Punch Unit Movement Motor Error
SC720-28	B	Punch Registration Motor Error
SC720-30	B	Jogger Motor Error
SC720-33	B	Positioning Roller Shift Motor Error
		Error Condition of -20, -24, -25, -27, -28, -30, -33 • During movement to home, the home position could not be detected within a predetermined pulse (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (1st time is jam notification, 2nd time is SC notification).
SC720-34	B	Positioning Roller Motor Error
		• Motor driver detects an error (DC motor control error) (1st time is jam notification, 2nd time is SC notification)
SC720-35	B	Paper Stacking Holder Motor Error
		• Motor driver detects an error (DC motor control error) (1st time is jam notification, 2nd time is SC notification) • During movement to home, the home position could not be detected within a predetermined time (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined time (1st time is jam notification, 2nd time is SC notification).
SC720-41	B	Stack Feed-out Motor Error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Motor driver detects an error (DC motor control error) (1st time is jam notification, 2nd time is SC notification) • During movement to home, the home position could not be detected within a predetermined pulse (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (1st time is jam notification, 2nd time is SC notification).
SC720-42	B	Corner Stapler Movement Motor Error
		• During movement to home, the home position could not be detected within a predetermined pulse (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (1st time is jam notification, 2nd time is SC notification).
SC720-44	B	Corner Stapler Motor Error
		• During movement to home, the home position could not be detected within a predetermined time (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined time (1st time is jam notification, 2nd time is SC notification).
SC720-50	B	Booklet Jogger Motor Error
SC720-51	B	Booklet Jogging Pawl Movement Motor Error
SC720-52	B	Press Folding Motor Error
SC720-53	B	Bottom Fence Motor Error
		Error Condition of -50, -51, -52, -53 • During movement to home, the home position could not be detected within a predetermined pulse (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (1st time is jam notification, 2nd time is SC notification).
SC720-54	B	Fold Roller Motor Error
		Motor driver detects an error (short-circuit and overheating) (1st time is jam notification, 2nd time is SC notification).
SC720-60	B	Booklet Stapler Motor Error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• During movement to home, the home position could not be detected within a predetermined time (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined time (1st time is jam notification, 2nd time is SC notification).
SC720-70	B	Tray Lift Motor Error
		• Motor controller detects an error (overload) (1st time is jam notification, 2nd time is SC notification). • During descent, the paper surface sensor still detects paper even after a predetermined time (t0sec) elapses (1st time is jam notification, 2nd time is SC notification). • During ascent, the paper surface sensor could not detect the paper surface even after a predetermined time (t1sec) elapses (1st time is jam notification, 2nd time is SC notification).
SC720-71	B	Shift Motor Error
SC720-72	B	Shift Jogger Front Motor Error
SC720-73	B	Shift Jogger Rear Motor Error
SC720-74	B	Shift Jogger Retreat Motor Error
		Error Condition of -71, -72, -73, -74 • During movement to home, the home position could not be detected within a predetermined pulse (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (1st time is jam notification, 2nd time is SC notification).
SC720-75	B	Return Roller Motor Error
		• Motor driver detects an error (DC motor control error) (1st time is jam notification, 2nd time is SC notification) • During movement to home, the home position could not be detected within a predetermined time (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined time (1st time is jam notification, 2nd time is SC notification).
SC720-80	B	Protection Device Intercept Error 3
		Fuse blowout is detected

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-81	B	Shift Roller Drive Motor Error
		Motor driver detects an error (DC motor control error) (1st time is jam notification, 2nd time is SC notification)
SC720-82	B	Edge Guide Motor Error
SC720-83	B	Paper Guide Motor Error
		Error Condition of -82, -83 • During movement to home, the home position could not be detected within a predetermined pulse (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (1st time is jam notification, 2nd time is SC notification).
		• Harness short-circuit -80 only • Overload • Motor defective • Solenoid defective -03, -80 only • Connector disconnected • Encoder defective -10, -25, -34 -81 only • Home position sensor defective
		Check if the SC occurs by turning the main power OFF then ON. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. • The target parts are the motor and related HP sensor that SC occurred. 1. Check if the connector of the target part is connected securely. Reconnect the connector if it is disconnected, or loose. 2. Check the harness for the target part. Replace the harness if it is disconnected, or damaged. 3. Check if the motor runs, sensors turn OFF/ON, has no overloads, and is properly driven. Replace the parts if there are any defects. 4. Check if there are any signs of a short circuit. Replace the parts if there are any defects.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC721		**Booklet Finisher SR3220 (D3B9) Error**
SC721-03	B	Protection Device Intercept Error 1
		Fuse blowout is detected
SC721-	C	See the descriptions next table below.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
06		
SC721-10	B	Entrance Transport Motor Error (1K sheet finisher)
		Motor driver detects an error state (DC motor control error). 1st error detection is determined as a jam and 2nd error detection is determined as an SC.
SC721-11	B	Proof Transport Motor Error (1K sheet finisher)
		Motor driver detects an error state (DC motor control error). 1st error detection is determined as a jam and 2nd error detection is determined as an SC.
SC721-17	B	Paper Eject Transport Motor Error (1K sheet finisher)
		Motor driver detects an error state (DC motor control error). 1st error detection is determined as a jam and 2nd error detection is determined as an SC.
SC721-24	B	Paper Exit Guide Plate Open/Close Motor (1K sheet finisher)
		• During movement to home, the home position could not be detected within a predetermined pulse (p0 pulse) (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (p1 pulse) (1st time is jam notification, 2nd time is SC notification). The return pulse to home and pulse coming from home during normal operation are calculated and measured. The pulses which are 1.5-2 times the normal operation pulse are taken as p0 and p1.
SC721-25	B	Punch Unit Drive Motor Error (1K sheet finisher)
		• During movement to home, the home position could not be detected within a predetermined time (t0 sec) (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected even after a predetermined time (t1 sec) elapsed (1st time is jam notification, 2nd time is SC notification). • Output from the encoder could not be counted for a predetermined number of times within a predetermined time (t0 sec) (1st time is jam notification, 2nd time is SC notification). The time to return to home without fail, the time coming from home, and the time for which the encoder output can be counted during normal operation, are taken as t0, t1 and t2.
SC721-27	B	Punch Movement Motor Error (1K sheet finisher)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC721-28	B	Horizontal Registration Correction Motor Error (1K sheet finisher)
SC721-30	B	Jogger Motor Error (1K sheet finisher)
SC721-33	B	Positioning Roller Motor Error (1K sheet finisher)
SC721-41	B	Feedout Pawl Motor Error (1K sheet finisher)
		• During movement to home, the home position could not be detected within a predetermined pulse (p0 pulse) (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected even after a predetermined pulse (p1 pulse) elapsed (1st time is jam notification, 2nd time is SC notification). The return pulse to home and pulse coming from home during normal operation are calculated and measured. The pulses which are 1.5-2 times the normal operation pulse are taken as p0 and p1.
SC721-42	B	Stapler Unit Displacement Motor Error (1K sheet finisher)
		• During movement to home, the home position could not be detected within a predetermined pulse (p0 pulse) (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected even after a predetermined pulse (p1 pulse) elapsed (1st time is jam notification, 2nd time is SC notification). • During movement from home, retreat sensor ON could not be detected even after a predetermined pulse (p2 pulse) elapsed (1st time is jam notification, 2nd time is SC notification). • During initialization, retreat sensor ON was detected simultaneously when the home position is detected (1st time is jam notification, 2nd time is SC notification). The return pulse to home and pulse coming from home during normal operation are calculated and measured. The pulses which are 1.5-2 times the normal operation pulse are taken as p0, p1 and p2.
SC721-44	B	Stapler Error (1K sheet finisher)
		• Motor driver detects an error (short-circuit and overheating) (1st time is SC). • During movement to home, the home position could not be detected even after a predetermined time (t0 sec) elapsed (1st time is jam notification, 2nd time is SC

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		notification). • During movement from home, the home position was detected even after a predetermined time (t1 sec) elapsed (1st time is jam notification, 2nd time is SC notification). • During motor drive, the output from the encoder could not be counted for a predetermined number of times within a predetermined time (t0 sec) (1st time is jam notification, 2nd time is SC notification). The time to return to home without fail, the time coming from home, and the time for which the encoder output can be counted during normal operation, are taken as t0, t1 and t2.
SC721-52	B	Folding Blade Motor Error (1K sheet finisher)
		• Motor driver detects an error (short-circuit and overheating) (1st time is SC). • During movement to home, the home position could not be detected within a predetermined pulse (p0 pulse) (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (p1 pulse) (1st time is jam notification, 2nd time is SC notification). The return pulse to home and pulse coming from home during normal operation are calculated and measured. The pulses which are 1.5-2 times the normal operation pulse are taken as p0 and p1.
SC721-53	B	Rear End Fence Displacement Motor Error (1K sheet finisher)
		• During movement to home, the home position could not be detected within a predetermined pulse (p0 pulse) (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (p1 pulse) (1st time is jam notification, 2nd time is SC notification). The return pulse to home and pulse coming from home during normal operation are calculated and measured. The pulses which are 1.5-2 times the normal operation pulse are taken as p0 and p1.
SC721-58	B	Booklet Transport (Upper) Pressure Release Motor Error (1K sheet finisher)
SC721-59	B	Booklet Transport (Lower) Pressure Release Motor Error (1K sheet finisher)
		• During movement to home, the home position could not be detected within a predetermined pulse (p0 pulse) (1st time is jam notification, 2nd time is SC

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		notification). • During movement from home, the home position was detected for longer than a predetermined pulse (p1 pulse) (1st time is jam notification, 2nd time is SC notification). The return pulse to home and pulse coming from home during normal operation are calculated and measured. The pulses which are 1.5-2 times the normal operation pulse are taken as p0 and p1.
SC721-70	B	Tray Lift Motor Error (1K sheet finisher)
		• Motor driver detects an error (short-circuit or overheating) (1st time is SC). • During descent, the paper surface sensor still detects paper even after a predetermined time (t0sec) elapses (1st time is jam notification, 2nd time is SC notification). • During ascent, the paper surface sensor could not detect the paper surface even after a predetermined time (t0sec) elapses (1st time is jam notification, 2nd time is SC notification). The return pulse to home and pulse coming from home during normal operation are calculated and measured. The pulses which are 1.5-2 times the normal operation pulse are taken as p0 and p1.
SC721-71	B	Shift Motor Error (1K sheet finisher)
		• During movement to home, the home position could not be detected within a predetermined pulse (p0 pulse) (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (p1 pulse) (1st time is jam notification, 2nd time is SC notification). The return pulse to home and pulse coming from home during normal operation are calculated and measured. The pulses which are 1.5-2 times the normal operation pulse are taken as p0 and p1.
SC721-80	B	Folding Transport Motor Error (1K sheet finisher)
		• Motor driver detects an error (short-circuit or overheating) (1st time is SC)
SC721-81	B	Paper Guide Drive Motor Error
		• During movement to home, the home position could not be detected within a predetermined pulse (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (1st time is jam notification, 2nd time is SC notification).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Overcurrent (-03 only) • Staple jam (-44 only) • Encoder error (-11, -11, -25, -44) • Motor defective • Connecter disconnected, or loose • Motor overload • HP sensor defective • Paper surface sensor defective (-70 only)
		Check if the SC occurs by opening/closing covers, and input/output check. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. • The target parts are the motor and related HP sensor that SC occurred. 1. Check if the connector of the target part is connected securely. Reconnect the connector if it is disconnected, or loose. 2. Check the harness for the target part. Replace the harness if it is disconnected, or damaged. 3. Check if the motor runs, sensors turn OFF/ON, has no overloads, and is properly driven. Replace the parts if there are any defects. 4. Check if there are any signs of a short circuit. Replace the parts if there are any defects.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC721		**Booklet Finisher SR3220 (D3B9) Error**
SC721-06	C	Access error to NVRAM
		Error occurs when accessing NVRAM.
		Connection failure or malfunction of NVRAM
		Check if the SC occurs by turning the main power OFF then ON. If the SC occurs again, do the following steps. 1. Pull out and reinsert the NVRAM to check if the NVRAM is correctly inserted into the IC socket. If the SC cannot be recovered, replace the main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722		**Finisher SR3210 (D3B8) Error**
SC722-03	B	Protection Device Intercept Error 1
		Fuse blowout is detected
SC722-06	C	See the descriptions next table below.
SC722-	B	Entrance Transport Motor Error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
10		
		Motor driver detects an error state (DC motor control error) (1st time is jam notification, 2nd time is SC notification).
SC722-11	B	Proof Transport Motor Error
		Motor driver detects an error state (DC motor control error) (1st time is jam notification, 2nd time is SC notification).
SC722-17	B	Paper Exit Transport Motor 2 Error
		Motor driver detects an error state (DC motor control error) (1st time is jam notification, 2nd time is SC notification).
SC722-24	B	Paper Exit Guide Plate Open/Close Motor Error
		• During movement to home, the home position could not be detected within a predetermined pulse (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (1st time is jam notification, 2nd time is SC notification).
SC722-25	B	Punch Unit Drive Motor Error
		• During movement to home, the home position could not be detected within a predetermined time (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected even after a predetermined time elapsed (1st time is jam notification, 2nd time is SC notification). • Output from the encoder could not be counted for a predetermined number of times within a predetermined time (1st time is jam notification, 2nd time is SC notification).
SC722-27	B	Horizontal Registration Unit Transfer Motor Error
SC722-28	B	Horizontal Registration Correction Motor Error
SC722-30	B	Jogger Motor Error
SC722-33	B	Positioning Roller Motor Error
SC722-41	B	Feedout Pawl Motor Error
		• During movement to home, the home position could not be detected within a predetermined pulse (1st time is jam notification, 2nd time is SC notification).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• During movement from home, the home position was detected even after a predetermined pulse elapsed (1st time is jam notification, 2nd time is SC notification).
SC722-42	B	Stapler Transfer Motor Error
		• During movement to home, the home position could not be detected within a predetermined pulse (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected even after a predetermined pulse elapsed (1st time is jam notification, 2nd time is SC notification). • During movement from home, retreat sensor ON could not bebdetected even after a predetermined pulse elapsed (1st time is jambnotification, 2nd time is SC notification). • During initialization, retreat sensor ON was detected simultaneouslybwhen the home position is detected (1st time is jam notification, 2ndbtime is SC notification).
SC722-44	B	Stapler Motor Error
		• Motor driver detects an error (short-circuit or overheating) (1st time is SC). • During movement to home, the home position could not be detected even after a predetermined time elapsed (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected even after a predetermined time elapsed (1st time is jam notification, 2nd time is SC notification). • During motor drive, the output from the encoder could not be counted for a predetermined number of times within a predetermined time (1st time is jam notification, 2nd time is SC notification).
SC722-45	B	Stapleless Stapler Transfer Motor Error
		• Motor driver detects an error (short-circuit or overheating) (1st time is SC). • During movement to home, the home position could not be detected within a predetermined pulse (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected even after a predetermined pulse elapsed (1st time is jam notification, 2nd time is SC notification).
SC722-46	B	Stapleless Stapler Motor Error
		• Motor driver detects an error (short-circuit or overheating) (1st time is SC). • During movement to home, the home position could not be detected even after a predetermined time elapsed (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected even after a predetermined time elapsed (1st time is jam notification, 2nd time is SC notification).
SC722-47	B	Paper Guide Drive Motor Error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• During movement to home, the home position could not be detected within a predetermined pulse (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (1st time is jam notification, 2nd time is SC notification).
SC722-70	B	Tray Lift Motor Error
		• Motor driver detects an error (short-circuit or overheating) (1st time is SC). • During descent, the paper surface sensor still detects paper even after a predetermined time (t0sec) elapses (1st time is jam notification, 2nd time is SC notification). • During ascent, the paper surface sensor could not detect the paper surface even after a predetermined time (t0sec) elapses (1st time is jam notification, 2nd time is SC notification).
SC722-71	B	Shift Motor Error
SC722-81	B	Paper Guide Drive Motor
		• During movement to home, the home position could not be detected within a predetermined pulse (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (1st time is jam notification, 2nd time is SC notification).
		• Overcurrent (-03 only) • Staple jam (-44 only) • Encoder error (-11, -11, -25, -44) • Motor defective • Connecter disconnected, or loose • Motor overload • HP sensor defective • Paper surface sensor defective (-70 only)
		Check if the SC occurs by opening/closing covers, and input/output check. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. • The target parts are the motor and related HP sensor that SC occurred. 1. Check if the connector of the target part is connected securely. Reconnect the connector if it is disconnected, or loose. 2. Check the harness for the target part. Replace the harness if it is disconnected, or damaged. 3. Check if the motor runs, sensors turn OFF/ON, has no overloads, and is properly driven. Replace the parts if there are any defects. 4. Check if there are any signs of a short circuit. Replace the parts if there are any defects.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722		**Finisher SR3210 (D3B8) Error**
SC722-06	C	Access error to NVRAM
		Error occurs when accessing NVRAM.
		Connection failure or malfunction of NVRAM
		Check if the SC occurs by turning the main power OFF then ON. If the SC occurs again, do the following steps. 1. Pull out and reinsert the NVRAM to check if the NVRAM is correctly inserted into the IC socket. If the SC cannot be recovered, replace the main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC723-03	B	Power Supply Error (Internal Finisher: Non-Staple Bind)
		When original source 24V power supply is ON, protection device intercept of non-interlock power supply system is detected.
		A motor failure or harness short-circuit occur in the non-interlock power supply system.
		• Replace the short-circuited harnesses • Replace the protection devices
SC723-10	B	Transport Motor Error (Internal Finisher: Non-Staple Bind)
		The DCM driver error detection is started after reset, and predetermined milliseconds error signal is detected. This SC will be issued when the above phenomenon repeated 2 times.
		• Transport Motor failure • Harness short-circuit • Circuit board failure • Over current • Abnormal temperature
		• Replace the motor • Replace the harness • Replace the circuit board.
SC723-20	B	Junction Gate Motor Error (Internal Finisher: Non-Staple Bind)
		When the junction gate motor HP sensor was not turned off while predetermined seconds applied to the junction gate motor with the HP sensor turned on. When the junction gate motor HP sensor was not turned on while predetermined seconds applied to the junction gate motor with the HP sensor turned off. This SC will be issued when the above phenomenon repeated 2 times.
		• Junction Gate Motor failure

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Connector disconnected • Over load • Junction gate motor HP sensor error
		• Check the connection • Replace the motor/sensor • Replace the harness
SC723-24	B	Paper Exit Pressure Motor Error (Internal Finisher: Non-Staple Bind)
		When the exit paper pressure HP sensor was not turned off while predetermined seconds applied to the exit pressure release motor with the HP sensor turned on. When paper output pressure HP sensor was not turned on while predetermined seconds applied to the exit pressure release motor with the HP sensor turned off. This SC will be issued when the above phenomenon repeated 2 times.
		• Exit Pressure Release Motor failure • Connector disconnected • Over load • Exit pressure release HP sensor error
		• Check the connection • Replace the motor/sensor • Replace the harness
SC723-44	B	Stapler Drive Motor Error (Internal Finisher: Non-Staple Bind)
		When the stapler drive HP sensor was not turned off while predetermined seconds applied to the stapler motor with the HP sensor turned on. When stapler drive HP sensor was not turned on while predetermined seconds applied to the stapler motor with the HP sensor turned off. The STM driver error detection is started after reset, and predetermined seconds error signal is detected. This SC will be issued when the above phenomenon repeated 2 times.
		• Stapler Motor failure • Connector disconnected • Stapler Motor overload • Stapler HP sensor error • Harness short-circuit • Circuit board failure • Excess current • Abnormal temperature
		• Check the connection • Replace the motor/sensor • Replace the harness

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Replace the circuit board
SC723-71	B	Shift Motor Error (Internal Finisher: Non-Staple Bind)
		When the shift HP sensor was not turned off while predetermined seconds applied to the shift motor with the HP sensor turned on. When shift HP sensor was not turned on while predetermined seconds applied to the shift motor with the HP sensor turned off. The STM driver error detection is started after reset, and predetermined seconds error signal is detected. This SC will be issued when the above phenomenon repeated 2 times.
		• Shift Motor failure • Connector disconnected • Shift Motor overload • Shift HP sensor error • Harness short-circuit • Circuit board failure • Excess current • Abnormal temperature
		• Check the connection • Replace the motor/sensor • Replace the harness • Replace the circuit board

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC724		**Internal Finisher Error**
SC724-24	B	Paper Exit Guide Plate Motor Error (Internal finisher)
		• When Paper Output Open/Close Guide Plate Motor is driven for predetermined seconds after paper exit guide plate HP sensor ON, the HP sensor does not switch OFF (1st time is jam notification, 2nd time is SC notification). • When Paper Output Open/Close Guide Plate Motor is driven for predetermined seconds after paper exit guide plate HP sensor OFF, the HP sensor does not switch ON (1st time is jam notification, 2nd time is SC notification).
SC724-25	B	Punch Unit Motor Error (Internal finisher)
		• When punch motor is driven for predetermined seconds after punch HP sensor ON, the HP sensor does not switch OFF (1st time is jam notification, 2nd time is SC notification). • When punch motor is driven for predetermined seconds after punch HP sensor OFF, the HP sensor does not switch ON (1st time is jam notification, 2nd time is SC notification).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC724-27	B	Horizontal Registration Movement Unit Motor Error (Internal finisher)
		• When Horizontal Registration Movement Unit Motor is driven for predetermined seconds when horizontal registration movement HP sensor is ON, the HP sensor does not switch OFF (1st time is jam notification, 2nd time is SC notification). • When Horizontal Registration Movement Unit Motor is driven for predetermined seconds when horizontal registration movement HP sensor is OFF, the HP sensor does not switch ON (1st time is jam notification, 2nd time is SC notification).
SC724-28	B	Horizontal Registration Transport Unit Motor Error (Internal finisher)
		• When Punch Horizontal Registration Detection Unit Motor is driven for predetermined seconds when horizontal registration detection HP sensor is ON, the HP sensor does not switch OFF (1st time is jam notification, 2nd time is SC notification). • When Punch Horizontal Registration Detection Unit Motor is driven for predetermined seconds when horizontal registration detection HP sensor is OFF, the HP sensor does not switch ON (1st time is jam notification, 2nd time is SC notification).
SC724-31	B	Jogger Fence Motor (Front) Error (Internal finisher)
		• When Jogger Fence Motor (Front) is driven for predetermined seconds when front jogger HP sensor is ON, the HP sensor does not switch OFF (1st time is jam notification, 2nd time is SC notification). • When Jogger Fence Motor (Front) is driven for predetermined seconds when front jogger HP sensor is OFF, the HP sensor does not switch ON (1st time is jam notification, 2nd time is SC notification).
SC724-32	B	Jogger Fence Motor (Rear) Error (Internal finisher)
		• When Jogger Fence Motor (Rear) is driven for predetermined seconds when rear jogger HP sensor is ON, the HP sensor does not switch OFF (1st time is jam notification, 2nd time is SC notification). • When Jogger Fence Motor (Rear) is driven for predetermined seconds when rear jogger HP sensor is OFF, the HP sensor does not switch ON (1st time is jam notification, 2nd time is SC notification).
SC724-33	B	Positioning Roller Motor Error (Internal finisher)
		• During initialization/strike descent, even when the strike roller motor is driven for predetermined seconds when the strike roller HP sensor is ON, the HP sensor does not switch OFF (1st time is jam notification, 2nd time is SC notification). • During initialization, even when the strike roller motor is driven for predetermined seconds when the strike roller HP sensor is OFF, the HP sensor does not switch ON (1st time is jam notification, 2nd time is SC notification). • When the strike roller is lifted from the press position, even when driven for predetermined seconds the HP sensor does not switch ON (1st time is jam notification, 2nd time is SC notification).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC724-38	B	Stack Height Lever Motor Error (Internal finisher)
		• When the paper press HP sensor is ON and the paper press motor is driven for predetermined seconds, the HP sensor does not switch OFF (1st time is jam notification, 2nd time is SC notification). • When the paper press HP sensor is OFF and the paper press motor is driven for predetermined seconds, the HP sensor does not switch ON (1st time is jam notification, 2nd time is SC notification).
SC724-42	B	Stapler Retreat Motor Error (Internal finisher)
		• Sifter stapler displacement HP sensor ON, even when the stapler displacement motor is driven for predetermined seconds, the HP sensor does not switch OFF (1st time is jam notification, 2nd time is SC notification). • After stapler displacement HP sensor OFF, even when the stapler displacement motor is driven for predetermined seconds, the HP sensor does not switch ON (1st time is jam notification, 2nd time is SC notification).
SC724-70	B	Tray Lift Motor Error (Internal finisher)
		• During ascent from paper surface sensor ON, even after predetermined seconds elapses, the paper surface sensor does not switch OFF (1st time is jam notification, 2nd time is SC notification). • During descent from paper surface sensor OFF, the paper surface sensor does not switch ON even after predetermined seconds elapses (1st time is jam notification, 2nd time is SC notification). • During descent to the packing position, the full sensor does not switch ON even if predetermined seconds elapses.
SC724-71	B	Shift Motor Error
		If the shift sensor has no response after the shift motor starts moving 1.86 sec.
SC724-80	B	Shift Motor Error (Internal finisher)
		• When the shift roller HP sensor is ON, the HP sensor does not switch OFF even when the shift roller motor is driven for predetermined seconds (1st time is jam notification, 2nd time is SC notification) • When the shift roller HP sensor is OFF, the HP sensor does not switch ON even when the shift roller motor is driven for predetermined seconds (1st time is jam notification, 2nd time is SC notification).
SC724-86	B	Stapler Motor Error (Internal finisher)
		• HP sensor does not switch OFF even when the stapler motor is driven for predetermined seconds after the stapler HP sensor switches ON (1st time is jam notification, 2nd time is SC notification). • HP sensor does not switch ON even when the stapler motor is driven for predetermined seconds after the stapler HP sensor switches OFF (1st time is jam notification, 2nd time

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		is SC notification).
		• Motor defective • Connector disconnected • Motor overload • Home position sensor error • Paper surface sensor error (*SC724-38, 70 only) • Staple jam (*SC724-86 only)
		• Reset the connector • Replace the motor • Replace the sensor • Replace the harness • Remove the staple jam (*SC724-86 only)

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC727		**Internal Multi-fold Unit FD3000 Error**
SC727-01	B	Connection Error to Downstream Unit
		Communication error has occurred with the serial interface of the downstream unit. This is displayed as an SC code from its initial detection.
		• Harness defective • Downstream unit defective • Controller board defective • I/F connector defective
		Remove the jammed paper or slip of paper from the tray, and check if the SC occurs by turning the main power OFF then ON. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. 1. Turn the power off, disconnect the interface connector connected to the machine, connect the interface connector of the downstream unit to the machine, and then turn the power on. 2. If the downstream unit does not operate, resulting in connection error, there is a problem with the downstream unit, so repair the downstream unit. 3. Check the harness connections between the controller board and each connector. Replace the harness if it is damaged, or connect it if it is disconnected. 4. Check if there are any signs of a short circuit. Replace the parts if there are any defects.
SC727-03	B	Protection Device Intercept Error 1
		• Fuse (FU3) break is detected

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		• 24-V power supply line error This is displayed as an SC code from its initial detection.
		• Fuse (FU3) is blowout • Controller board defective • 24-V harness entrapment (short circuit)
		Remove the jammed paper or slip of paper from the tray, and check if the SC occurs by turning the main power OFF then ON. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. • The target parts are all the motors and the sensors. 1. Check that the harness between the PCB and motor/solenoid is not stripped or entrapped. Replace the harness if there are any defects. 2. Rotate each motor shaft by hand to check for any overload. Replace the motor if there are any defects. 3. Check if there is any unusual odor from the solenoid or any problem with its appearance. Replace the solenoid if there are any defects. 4. Check if there are any signs of a short circuit on PCB. Replace the PCB if there are any defects.
SC727-04	B	Protection Device Intercept Error 2
		• Poly-switch (FU4) break is detected • Limit line disturbances from inrush currents has occurred to the interlock system. • This is displayed as an SC code from its initial detection.
		• Poly-switch (FU4) trip (Trip refers to the phenomenon whereby an overcurrent flows into the poly-switch, resulting in high resistance.) • Controller board defective • 24-V harness entrapment (short circuit)
		Remove the jammed paper or slip of paper from the tray, and check if the SC occurs by turning the main power OFF then ON, submitting a job, feeding paper, opening/closing covers, and input/output check. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. • The target parts are all the motors and the sensors. 1. Check that the harness between the PCB and the motor/solenoid is not stripped or entrapped. Replace the harness if there are any defects. 2. Rotate each motor shaft by hand to check for any overload. Replace the motor if there are any defects. 3. Check if there is any unusual odor from the solenoid or any problem with its appearance. Replace the solenoid if there are any defects. 4. Check if there are any signs of a short circuit on PCB. Replace the PCB if there are any

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		defects.
SC727-06	C	NVRAM Error 1
		An error has occurred during an access to the NVRAM. This is displayed as an SC code from its initial detection.
		NVRAM is disconnected, or defective
		Turn the main power OFF then ON after checking whether there are no foreign objects (such as remaining paper) in the tray. If the SC occurs again, replace the controller board.
SC727-10	B	Transport Motor Error
		Motor error (Encoder error) This is reported as a jam error when detected for the first time. If it occurs again in a row, its SC code appears.
		• Motor defective • Motor harness entrapped (short circuit or breaking of wire) • Connector disconnected • Controller board defective
		Remove the jammed paper or slip of paper from the tray, and check if the SC occurs by turning the main power OFF then ON, submitting a job, feeding paper, opening/closing covers, and input/output check. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step 1. Check if all connectors between the controller board and the motors are connected securely. Reconnect the connectors if they are disconnected, or loose. 2. Replace the harness if it is disconnected, or damaged. 3. Check if the motor runs, has no overloads, and is properly driven. Replace the parts if there are any defects. 4. Check if there are any signs of a short circuit. Replace the parts if there are any defects.
SC727-12	B	Registration Motor Error
		Motor error (Encoder error) This is reported as a jam error when detected for the first time. If it occurs again in a row, its SC code appears.
		• Motor defective • Motor harness entrapped (short circuit or breaking of wire) • Connector disconnected • Controller board defective
		Remove the jammed paper or slip of paper from the tray, and check if the SC occurs by

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		turning the main power OFF then ON, submitting a job, feeding paper, opening/closing covers, and input/output check. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. 1. Check if all connectors between the controller board and the motors are connected securely. Reconnect the connectors if they are disconnected, or loose. 2. Replace the harness if it is disconnected, or damaged. 3. Check if the motor runs, has no overloads, and is properly driven. Replace the parts if there are any defects. 4. Check if there are any signs of a short circuit. Replace the parts if there are any defects.
SC727-20	B	JG Crease Motor Error 1
		• Motor error (Encoder error) • The junction gate is not at the HP position. This is reported as a jam error when detected for the first time. If it occurs again in a row, its SC code appears.
		• Motor defective • Motor/sensor harness entrapped (short circuit or breaking of wire) • Connector disconnected • Junction Solenoid HP Sensor defective • Controller board defective
		Remove the jammed paper or slip of paper from the tray, and check if the SC occurs by turning the main power OFF then ON, submitting a job, feeding paper, opening/closing covers, and input/output check. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. 1. Check if all connectors between the controller board and the motors/sensors are connected securely. Reconnect the connectors if they are disconnected, or loose. 2. Replace the harness if it is disconnected, or damaged. 3. Check if the motor runs, has no overloads, and is properly driven. Replace the parts if there are any defects. 4. Check if the sensor turns OFF/ON. Replace the parts if there are any defects. 5. Check if there are any signs of a short circuit. Replace the parts if there are any defects.
SC727-39	B	1st Fold Motor Error
		Motor error (Encoder error) This is reported as a jam error when detected for the first time. If it occurs again in a row, its SC code appears.
		• Motor defective • Motor harness entrapped (short circuit or breaking of wire)

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		• Connector disconnected • Controller board defective
		Remove the jammed paper or slip of paper from the tray, and check if the SC occurs by turning the main power OFF then ON, submitting a job, feeding paper, opening/closing covers, and input/output check. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. 1. Check if all connectors between the controller board and the motors are connected securely. Reconnect the connectors if they are disconnected, or loose. 2. Replace the harness if it is disconnected, or damaged. 3. Check if the motor runs, has no overloads, and is properly driven. Replace the parts if there are any defects. 4. Check if there are any signs of a short circuit. Replace the parts if there are any defects.
SC727-41	B	JG Crease Motor Error 2
		• Motor error (Encoder error) • Crease Roller is not at the HP position. This is reported as a jam error when detected for the first time. If it occurs again in a row, its SC code appears.
		• Motor defective • Motor/sensor harness entrapped (short circuit or breaking of wire) Connector disconnected • Crease HP Sensor defective • Controller board defective
		Remove the jammed paper or slip of paper from the tray, and check if the SC occurs by turning the main power OFF then ON, submitting a job, feeding paper, opening/closing covers, and input/output check. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. 1. Check if all connectors between the controller board and the motors/sensors are connected securely. Reconnect the connectors if they are disconnected, or loose. 2. Replace the harness if it is disconnected, or damaged. 3. Check if the motor runs, has no overloads, and is properly driven. Replace the parts if there are any defects. 4. Check if the sensor turns OFF/ON. Replace the parts if there are any defects. 5. Check if there are any signs of a short circuit. Replace the parts if there are any defects.
SC727-71	B	2nd Fold Motor Error
		Encoder error This is reported as a jam error when detected for the first time. If it occurs again in a row, its

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		SC code appears.
		• Motor defective • Motor harness entrapped (short circuit or breaking of wire) • Connector disconnected • Controller board defective
		Remove the jammed paper or slip of paper from the tray, and check if the SC occurs by turning the main power OFF then ON, submitting a job, feeding paper, opening/closing covers, and input/output check. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. 1. Check if all connectors between the controller board and the motors are connected securely. Reconnect the connectors if they are disconnected, or loose. 2. Replace the harness if it is disconnected, or damaged. 3. Check if the motor runs, has no overloads, and is properly driven. Replace the parts if there are any defects. 4. Check if there are any signs of a short circuit. Replace the parts if there are any defects.
SC727-72	B	The power supply for the sensor is defective.
		The power supply for the sensor (5V_SN) is defective. This is displayed as an SC code from its initial detection.
		• Sensor harness entrapped (short circuit or breaking of wire) • Sensor defective • Controller board defective
		Turn the main power OFF then ON after checking whether there are no foreign objects (such as remaining paper) in the tray. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. 1. Check if the harness is connected to the wrong sensor. Reconnect the connector if there are any defects. 2. Replace the harness if it is disconnected, or damaged. 3. Check if the sensor turns OFF/ON. Replace the parts if there are any defects. 4. Check if the motor runs, has no overloads, and is properly driven. Replace the parts if there are any defects. 5. Check if there are any signs of a short circuit. Replace the parts if there are any defects.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC761		**Bridge Unit BU3070 (D685) or Side Tray Type M3 (D725) Error**
SC761-03	B	Protection Device Intercept Error 5V
SC761-	B	Protection Device Intercept Error 24V

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
04		
		Fuse blowout occurs due to over current during power injection (output detected for longer than 2 seconds).
		• Over current of bridge unit motor • Over current due to short-circuit in PCB
		• Replace the bridge unit or side tray. • Replace the PCB of bridge unit or side tray.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC780-01	D	Bank 1 (Upper optional paper tray) Protection Device Intercept Error
		When original source of 5V power supply is ON, protection device intercept of 24V power system is detected.
		In 24V power supply system: • Motor defective • Solenoid defective • Harness short- circuit
		Remove the jammed paper or slip of paper from the tray, and check if the SC occurs by turning the main power OFF then ON. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. 1. Check if all connectors in tray 1, 2, and optional upper tray are connected securely. Reconnect the connectors if they are disconnected, or loose. 2. Check the harness in tray 1, 2, and optional upper tray. Replace the harness if it is disconnected, or damaged. 3. Check if the motor runs, has no overloads, and is properly driven. Replace the parts if there are any defects. 4. Check if there are any signs of a short circuit. Replace the parts if there are any defects.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC781-01	D	Bank 2 (Lower optional paper tray) Protection Device Intercept Error
		When original source of 5V power supply is ON, protection device intercept of 24V power system is detected.
		In 24V power supply system: • Motor defective • Solenoid defective • Harness short- circuit

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		Remove the jammed paper or slip of paper from the tray, and check if the SC occurs by turning the main power OFF then ON. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step. 1. Check if all connectors in tray 1, 2, and optional upper/lower trays are connected securely. Reconnect the connectors if they are disconnected, or loose. 2. Check the harness in tray 1, 2, and optional upper/lower trays. Replace the harness if it is disconnected, or damaged. 3. Check if the motor runs, has no overloads, and is properly driven. Replace the parts if there are any defects. 4. Check if there are any signs of a short circuit. Replace the parts if there are any defects.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC791-00	D	No Bridge Unit when Finisher is Present
		When power supply is switched on or paper is transported, finisher set is detected but bridge unit set is not detected. (during internal finisher connection, not detected)
		• Bridge unit not attached • Bridge unit defective
		• Reset the bridge unit. • Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC792-00	B	No Finisher, Bridge Unit Provided
		When power supply is switched on, it is recognized there is no finisher, and a bridge unit is fitted.
		• Finisher connector set incorrectly • In a machine which has a bridge unit connected, a finisher is not fitted • Finisher defective
		Connect finisher or disconnect bridge unit, and turn the main power off/on.

SC Tables: SC8xx

SC816 to SC899

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC816	[0x0000]	Energy save I/O subsystem error
SC816-01	D	Subsystem error
SC816-02	D	Sysarch (LPUX_GET_PORT_INFO) error
SC816-03	D	Transition to STR was denied.
SC816-04	D	Interrupt in kernel communication driver
SC816-05	D	Preparation for transition to STR failed.
SC816-07	D	Sysarch (LPUX_GET_PORT_INFO) error
SC816-08	D	Sysarch (LPUX_ENGINE_TIMERCTRL) error
SC816-09	D	Sysarch (LPUX_RETURN_FACTOR_STR) error
SC816-10 to 12	D	Sysarch (LPUX_GET_PORT_INFO) error
SC816-13	D	open() error
SC816-14	D	Memory address error
SC816-15 to 18	D	open() error
SC816-19	D	Double open() error
SC816-20	D	open() error
SC816-22	D	Parameter error
SC816-23, 24	D	read() error
SC816-25	D	write () error
SC816-26 to 28	D	write() communication retry error
SC816-29, 30	D	read() communication retry error
SC816-35	D	read() error
SC816-36 to 94	D	Subsystem error
		Energy save I/O subsystem detected some abnormality. • Energy save I/O subsystem defective • Energy save I/O subsystem detected a controller board error (non-response). • Error was detected during preparation for transition to STR. • Turn the main power off/on. • Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC818-00	D	Watchdog timer error The system program fell into a bus-hold state or an endless loop of the program interruption occurred, causing other process to stop. • System program defective

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Controller board defective • Optional board defective
		• Turn the main power off/on. • Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC819-00	D	Kernel halt error [xxxx]: Detailed error code
		Due to a control error, a RAM overflow occurred during system processing. One of the following messages was displayed on the operation panel.
	[0x5032]	HAIC-P2 error
		HAIC-P2 decompression error (An error occurred in the ASIC compression/decompression module.)
		• Turn the main power off/on. • Replace the HDD. • Repace the memory • Replace the controller board. • Fix the software
	[0x6261]	HDD defective
		6261 6420 6469 7200 00 -> "bad dir"
		Replace the HDD.
	[0x696e]	gwinit processing end
		If the SCS process is ended for some reason
		If an unexpected error occurs at SCS processing end, gwint processing also halts (this result is judged a kernel stop error, by gwinit specification) “0x69742064” -> “init died”
		Turn the main power off/on.
	[0x766d]	VM full error
		Occurs when too much RAM is used during system processing
		"vm_pageout: VM is full"
		Turn the main power off/on.
	Console string	Other error (characters on operation panel)
		System detected internal mismatch error
		• Software defective • Insufficient memory • Hardware driver defective (RAM, Flash memory)
		• Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC840-00	D	EEPROM access error
		• During the I/O processing, a reading error occurred. The 3rd reading failure causes this SC code. • During the I/O processing, a writing error occurred.
		• Defective EEPROM
		-

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC841-00	D	EEPROM read data error
		Mirrored data of the EEPROM is different from the original data in EEPROM.
		Data in the EEPROM is overwritten for some reason.
		-

No.	Type	Error Name/Error Condition/Major Cause/Solution
SC842-00	C	Nand-Flash updating verification error
		SCS write error (verify error) occurred at the Nand-Flash module when remote ROM or main ROM was updated.
		Nand-Flash defective
		Turn the main power OFF/ON.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC842-01	B	Insufficient Nand-Flash blocks (threshold exceeded)
		At startup, or when machine returned from low power mode, the Nand-Flash status was read and judged that the number of unusable blocks had exceeded threshold, and then SCS generated the SC code.
		Number of unusable blocks exceeded threshold for Nand-Flash
		Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC842-02	B	Number of Nand-Flash block deletions exceeded
		At startup, or when the machined returned from low power mode, the Nand-Flash was read and judged that the number of deleted blocks had exceeded threshold, and then SCS generated this SC code.
		Number of blocks deleted exceeded threshold for Nand-Flash

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		Replace the controller board.

No.	Type	Error Name/Error Condition/Major Cause/Solution
SC845		Hardware Error Detected when the automatic firmware update
SC845-01	D	Engine Board
SC845-02	D	Controller Board
SC845-03	D	Operation Panel (Normal)
SC845-04	D	Operation Panel (Smart Panel)
SC845-05	D	FCU
		When updating the firmware automatically (ARFU), the firmware cannot be read or written normally, and the firmware update cannot be completed even by 3 retries.
		Hardware abnormality of the target board
		Replace the target board. For SC845-02, HDD and memory may cause the problem. Replace the HDD or memory if the SC cannot be recovered by replacing the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC855-01	B	Wireless LAN board error (driver attachment failure)
		Wireless LAN board error (wireless LAN card: 802.11 is covered)
		• Defective wireless LAN board • Loose connection
		• Turn the main power off/on. • Replace the wireless LAN board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC855-02	B	Wireless LAN board error (driver initialization failure)
		Wireless LAN board error (wireless LAN card: 802.11 is covered)
		• Defective wireless LAN board • Loose connection
		• Turn the main power off/on. • Replace the wireless LAN board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC858-00	A	Data encryption conversion error (Key Setting Error)
		A serious error occurred during an attempt to update the encryption key.
		• USB Flash, other data, corrupted • Communication error caused by electrostatic noise • Controller board defective
		Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC858-01	A	Data encryption conversion error (HDD Key Setting Error)
		A serious error occurred during an attempt to update the encryption key.
		• USB Flash, other data, corrupted • Communication error caused by electrostatic noise • Controller board defective
		Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC858-02	A	Data encryption conversion error (NVRAM Read/Write Error)
		A serious error occurred after data conversion during an attempt to update the encryption key.
		NVRAM defective
		Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC858-30	A	Data encryption conversion error (NVRAM Before Replace Error)
		A serious error occurred after data conversion during an attempt to update the encryption key.
		Software error such as conversion parameters being invalid.
		Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC858-31	A	Data encryption conversion error (Other Error)
		A serious error occurred after data conversion during an attempt to update the encryption key.
		Controller board defective
		Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC859-00	B	Data encryption conversion HDD conversion error
		When the data encryption key was updated, HDD data was converted, but not correctly. Image displayed at conversion only (this SC is not displayed), but SC is displayed after machine is cycled off/on.
		• HDD conversion was set with the data encryption key update function, but the HDD was removed. • Machine lost power during data encryption key update • Electrostatic noise, or an HDD error occurred, during data encryption key update, and data was not encrypted.
		• Check the HDD connection. • Format the HDD. • If there is a problem with the HDD, it has to be replaced.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC859-01	B	Data encryption conversion HDD conversion error (HDD check error)
		When the data encryption key was updated, HDD data was converted, but not correctly. Image displayed at conversion only (this SC is not displayed), but SC is displayed after machine is cycled off/on.
		• HDD conversion was set with the data encryption key update function, but the HDD was removed. • Machine lost power during data encryption key update • Electrostatic noise, or an HDD error occurred, during data encryption key update, and data was not encrypted.
		• Check the HDD connection. • Format the HDD. • If there is a problem with the HDD, it has to be replaced.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC859-02	B	Data encryption conversion HDD conversion error (Power failure during conversion)
		When the data encryption key was updated, HDD data was converted, but not correctly. Image displayed at conversion only (this SC is not displayed), but SC is displayed after machine is cycled off/on. Details: NVRAM/HDD conversion is incomplete.
		Power failure occurred during encryption key update.
		None The display after restart instructs the user to format the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC859-10	B	Data encryption conversion HDD conversion error (Data read/write command error)
		When the data encryption key was updated, HDD data was converted, but not correctly. Image displayed at conversion only (this SC is not displayed), but SC is displayed after machine is cycled off/on. Details: Abnormal DMAC return value has been received two or more times (DMAC timeout, serial communication error etc.)
		HDD was not successfully converted during encryption key update due to HDD errors or cable noises.
		• Check the HDD connection. • Format the HDD. • If there is a problem with the HDD, it has to be replaced.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC860-00	B	HDD startup error at main power on (HDD error)

		• The HDD is connected but the driver detected the following errors.
		  • SS_NOT_READY:/* (-2)HDD does not become READY*/
		  • SS_BAD_LABEL:/* (-4)Wrong partition type*/
		  • SS_READ_ERROR:/* (-5)Error occurred while reading or checking the label*/
		  • SS_WRITE_ERROR:/* (-6)Error occurred while writing or checking the label*/
		  • SS_FS_ERROR:/* (-7)Failed to repair the filesystem*/
		  • SS_MOUNT_ERROR:/* (-8)Failed to mount the filesystem*/
		  • SS_COMMAND_ERROR:/* (-9)Drive not responding to command*/
		  • SS_KERNEL_ERROR:/* (-10)Internal kernel error*/
		  • SS_SIZE_ERROR:/* (-11)Drive size too small*/
		  • SS_NO_PARTITION:/* (-12)The specified partition does not exist*/
		  • SS_NO_FILE:/* (-13)Device file does not exist*/
		• Attempted to acquire HDD status through the driver but there has been no response for 30 seconds or more.

		• Unformatted HDD • Label data corrupted • HDD defective
		Format the HDD through SP mode.

No.	Type	Error Name/Error Condition/Major Cause/Solution
SC862-00	D	Number of the defective sector reaches the maximum count

No.	Type	Error Name/Error Condition/Major Cause/Solution
		101 defective sectors are generated at the image storage area in the HDD.
		SC863 occurs during the HDD reading and defective sectors are registered up to 101.
		• Format the HDD with SPSP5-832. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-01	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in an area that does not belong to a partition, such as the disk label area.)
		Guide for when to replace the HDD 1. When SC863 has occurred ten times or more • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-02 to 23	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "a" (SC863-02) to partition “v” (SC863-23)).
		Guide for when to replace the HDD 1. When SC863 has occurred ten times or more • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-01	D	HDD data CRC error
		During HDD operation, the HDD cannot respond to a CRC error query. Data transfer did not execute normally while data was being written to the HDD.
		Bad sectors were generated during operation. (An error occurred in an area that does not belong to a partition, such as the disk label area.)
		• Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-02 to 23	D	HDD data CRC error
		During HDD operation, the HDD cannot respond to a CRC error query. Data transfer did not execute normally while data was being written to the HDD.
		Bad sectors were generated during operation. (An error occurred in partition "a" (SC864-02) to partition “v” (SC864-23)).
		• Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-00	D	HD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error).
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-01	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in an area that does not belong to a partition, such as the disk label area.)
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865 -02 to 23	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "a" (SC865-02) to partition “v” (SC865-23)).
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-50	D	HDD time-out error
		The machine does not detect a reply from the HDD during the HDD operation.
		The HDD does not respond to the read/ write command from the machine.
		• Check the harness connections between the controller board and HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-51	D	HDD time-out error
		The machine does not detect a reply from the HDD during the HDD operation. (An error occurred in an area that does not belong to a partition.)
		The HDD does not respond to the read/ write command from the machine.
		• Check the harness connections between the controller board and HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865 -52 to 73	D	HDD time-out error
		The machine does not detect a reply from the HDD during the HDD operation. (An error occurred in partition "a" (SC865-52) to partition "v" (SC865-73)).
		The HDD does not respond to the read/ write command from the machine.
		• Check the harness connections between the controller board and HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC866-00	B	SD card authentication error
		A license error of an application that is started from the SD card was detected.
		Invalid program data is stored on the SD card.
		Store a valid program data on the SD card.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC867-00	C	SD card removed
		The SD card was removed while the machine is on.
		An application SD card has been removed from the slot (mount point of /mnt/sd0).
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC867-01	C	SD card removed
		The SD card was removed while the machine is on.
		An application SD card has been removed from the slot (mount point of /mnt/sd1).
		Turn the main power off/on.

No.	Type	Error Name/Error Condition/Major Cause/Solution
SC867-02	C	SD card removed
		The SD card was removed while the machine is on.
		An application SD card has been removed from the slot (mount point of /mnt/sd2).
		Turn the main power OFF/ON.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC868-00	D	SD card access error
		The SD controller returned an error during operation. (An error occurred at the mount point of /mnt/sd0)
		• SD card defective • SD controller defective
		• Reformat the SD card (using the "SD Formatter" made by Panasonic).* • Check the SD card insertion status. • Replace the SD card. • Replace the controller board.

* Do not format an SD card supplied with the main machine or sold as an option. You may only format SD cards used for Firmware Update by a Customer Engineer.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC868-01	D	SD card access error
		The SD controller returned an error during operation. (An error occurred at the mount point of /mnt/sd1)
		• SD card defective • SD controller defective
		SD card that starts an application • Turn the main power off and check the SD card insertion status.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• If no problem is found, insert the SD card and turn the main power on. • If an error occurs, replace the SD card. • SD card for users • In case of a file system error, reformat the SD card (using the "SD Formatter" made by Panasonic).* • In case of a device access error, turn the main power off and check the SD card insertion status. • If no problem is found, insert the SD card and turn the main power on. • If an error occurs, use another SD card. • If the error persists even after replacing the SD card, replace the controller board.

* Do not format an SD card supplied with the main machine or sold as an option. You may only format SD cards used for Firmware Update by a Customer Engineer.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC868-02	D	SD card access error
		The SD controller returned an error during operation. (An error occurred at the mount point of /mnt/sd1)
		• SD card defective • SD controller defective
		SD card that starts an application • Turn the main power off and check the SD card insertion status. • If no problem is found, insert the SD card and turn the main power on. • If an error occurs, replace the SD card. • SD card for users • In case of a file system error, reformat the SD card (using the "SD Formatter" made by Panasonic).* • In case of a device access error, turn the main power off and check the SD card insertion status. • If no problem is found, insert the SD card and turn the main power on. • If an error occurs, use another SD card. • If the error persists even after replacing the SD card, replace the controller board.

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No.	Type	Error Name/Error Condition/Major Cause/Solution
SC869-**		Malfunction of the proximity sensor is detected
SC869-01	C	Continuously detecting malfunction
		The proximity sensor keeps in a detection state and accumulated time exceeds 24 hours.

No.	Type	Error Name/Error Condition/Major Cause/Solution
		The proximity sensor is disabled and is in the detection state at all times.
SC869-02	C	Continuously non-detecting malfunction
		In the non-detection state, the following operations are detected 20 times continuously. • Pressing "energy saver" key or touching the operation panel • Opening/closing the plate cover or ADF • Setting the original • Opening the front cover • Opening the paper feed tray
		The proximity sensor is disabled and is in the non-detection state at all times.
		1. Go to the SP5-102-203 (input check SP for the proximity sensor). 2. Cover the sensor with 10 sheets of plain paper, and then execute SP to confirm if it becomes “0”. (Do not place your hand near the sensor even over the papers when covering the sensor) 3. Remove the papers from the sensor and confirm if it becomes “1”. 4. If there is no issue after the confirmation in step 2 and 3, confirm that there are no possible factors around the machine that may cause the temperature change such as heater or fan. (Deal with the issue as necessary) 5. Replace the proximity sensors and proximity sensor board if the abnormal value is detected after the confirmation in step 2 and 3. 6. Turn on the main power on and perform step 1, 2, and 3 again. 7. If SC is not solved, turn the main power off and replace the harness which connects proximity sensors and proximity sensor board. 8. If SC is still not solved, there is a possibility that the other parts of the machine such as the connector at the controller side or the harness between proximity sensor board and IPU are broken.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC870-00	B	Address Book data error (Anytime: Address Book Error.)
SC870-01	B	Address Book data error (On startup: Media required for storing the Address Book is missing.)
SC870-02	B	Address Book data error (On startup: encryption is configured but the module required for encryption (DESS) is missing.)
SC870-03	B	Address Book data error (Initialization: Failed to generate a file to store internal Address Book.)
SC870-04	B	Address Book data error (Initialization: Failed to generate a file to store delivery sender.)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC870-05	B	Address Book data error (Initialization: Failed to generate a file to store delivery destination.)
SC870-06	B	Address Book data error (Initialization: Failed to generate a file to store information required for LDAP search.)
SC870-07	B	Address Book data error (Initialization: Failed to initialize entries required for machine operation.)
SC870-08	B	Address Book data error (Machine configuration: HDD is present but the space for storing the Address Book is unusable.)
SC870-09	B	Address Book data error (Machine configuration: Inconsistency in the NVRAM area used for storing settings required for Address Book configuration.)
SC870-10	B	Address Book data error (Machine configuration: Cannot make a directory for storing the Address Book in the SD/USB FlashROM.)
SC870-11	B	Address Book data error(On startup: Inconsistency in Address Book entry number.)
SC870-20	B	Address Book data error (File I/O: Failed to initialize file.)
SC870-21	B	Address Book data error (File I/O: Failed to generate file.)
SC870-22	B	Address Book data error (File I/O: Failed to open file.)
SC870-23	B	Address Book data error (File I/O: Failed to write to file.)
SC870-24	B	Address Book data error (File I/O: Failed to read file.)
SC870-25	B	Address Book data error (File I/O: Failed to check file size.)
SC870-26	B	Address Book data error (File I/O: Failed to delete data.)
SC870-27	B	Address Book data error (File I/O: Failed to add data.)
SC870-30	B	Address Book data error (Search: Failed to obtain data from cache when searching in the machine Address Book. delivery destination/sender.)
SC870-31	B	Address Book data error (Search:Failed to obtain data from cache during LDAP search.)
SC870-32	B	Address Book data error (Search:Failed to obtain data from cache while searching the WS-Scanner Address Book.)
SC870-	B	Address Book data error (Cache: failed to obtain data from cache.)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
41		
SC870-50	B	Address Book data error (On startup: Detected abnormality of the Address Book encryption status.)
SC870-51	B	Address Book data error (Encryption settings: Failed to create directory required for conversion between plaintext and encrypted text.)
SC870-52	B	Address Book data error (Encryption settings: Failed to convert from plaintext to encrypted text.)
SC870-53	B	Address Book data error (Encryption settings: Failed to convert from encrypted text to plaintext.)
SC870-54	B	Address Book data error (Encryption settings: Detected data inconsistency when reading the encrypted Address Book.)
SC870-55	B	Address Book data error (Encryption settings: Failed to delete file when changing encryption setting.)
SC870-56	B	Address Book data error (Encryption settings: Failed to erase the file that records the encryption key during an attempt to change the encryption setting.)
SC870-57	B	Address Book data error (Encryption settings: Failed to move a file during an attempt to change the encryption setting.)
SC870-58	B	Address Book data error (Encryption settings: Failed to delete a directory during an attempt to change the encryption setting.)
SC870-59	B	Address Book data error (Encryption settings: Detected a resource shortage during an attempt to change the encryption setting.)
SC870-60	B	Address Book data error (Unable to obtain the on/off setting for administrator authentication (06A and later).)
		When an error related to the Address Book is detected during startup or operation.
		• Software bug • Inconsistency of Address Book source location (machine/delivery server/LDAP server) • Inconsistency of Address Book encryption setting or encryption key (NVRAM or HDD was replaced individually without formatting the Address Book) • Address Book storage device (SD/HDD) was temporarily removed or hardware configuration does not match the application configuration. • Address Book data corruption was detected.
		• Check the HDD connection. • Initialize all UCS settings and address/authentication information (SP5-846-046). • Initialize the Address Book partition (SP5-832-006).

No.	Type	Error Name/Error Condition/Major Cause/Solution
SC871-01	D	FCU error

No.	Type	Error Name/Error Condition/Major Cause/Solution
		An error occurred when FCS detects FCU defective.
		• Time-out error • Abnormal Parameter
		• Turn the main power OFF/ON. • Update the firmware if more recent firmware was released.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC872-00	B	HDD mail reception error
		An error was detected on the HDD immediately after the machine was turned on.
		• HDD defective • Power was turned off while the machine used the HDD.
		• Format the HDD (SP5-832-007). • Replace the HDD. When you do the above, the following information will be initialized. • Partly received partial mail messages. • Already-read statuses of POP3-received messages (All messages on the mail server are handled as new messages).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC873-00	B	HDD mail reception error
		An error was detected on the HDD immediately after the machine was turned on.
		• HDD defective • Power was turned of while the machine used the HDD.
		• Format the HDD (SP5-832-007). • Replace the HDD. When you do the above, the following information will be initialized. • Sender’s mail text • Default sender name/password (SMB/FTP/NCP) • Administrator mail address • Scanner delivery history

No.	Type	Error Name/Error Condition/Major Cause/Solution
SC874-05	D	Delete all error (Delete data area) : Read error
SC874-06	D	Delete all error (Delete data area) : Write error
SC874-09	D	Delete all error (Delete data area) : No response from HDD
SC874-10	D	Delete all error (Delete data area) : Error in Kernel
SC874-12	D	Delete all error (Delete data area) : No designated partition

No.	Type	Error Name/Error Condition/Major Cause/Solution
SC874-13	D	Delete all error (Delete data area) : No device file
SC874-14	D	Delete all error (Delete data area) : Start option error
SC874-15	D	Delete all error (Delete data area) : No designated sector number
SC874-16	D	Delete all error (Delete data area) : failure in performing hdderase
SC874-41	D	Delete all error (Delete data area) : Other fatal errors
SC874-42	D	Delete all error (Delete data area) : End by cancellation
SC874-61 to -65	D	Delete all error (Delete data area) : library error
SC874-66	D	Delete all error (Delete data area) : Unavailable
SC874-67	D	Delete all error (Delete data area) : Erasing not finished
SC874-68	D	Delete all error (Delete data area) : HDD format failure (Normal)
SC874-69	D	Delete all error (Delete data area) : HDD format failure (Abnormal)
SC874-70	D	Delete all error (Delete data area) : Unauthorized library
SC874-99	D	Delete all error (Delete data area) : other errors
		An error occurred while data was being erased on HDD or NVRAM.
		• Error detected in HDD data delete program • Error detected in NVRAM data delete program • The “Delete All” option was not set
		• Turn the main power switch off and back on, and then execute "Erase All Memory" under UP mode again. (However, if there is a defective sector or other problem with the hard disk, the error will persist even after trying the above.) • If the "Delete All" option is not installed when this error occurs, install the option.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC875-01	D	Delete all error (HDD erasure) (hddchack –i error)
SC875-02	D	Delete all error (HDD erasure) (Data deletion failure)
		An error was detected before HDD/data erasure starts. (Failed to erase data/failed to logically format HDD)
		• HDD logical formatting failed. • The modules failed to erase data.
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC876-01	D	Log Data Error 1
		An error was detected in the handling of the log data at power on or during machine

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		operation.
		Damaged log data file
		Initialize the HDD (SP5-832-004).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC876-02	D	Log Data Error 2
		An error was detected in the handling of the log data at power on or during machine operation.
		Log encryption is enabled but encryption module is not installed.
		• Replace or set again the encryption module. • Disable the log encryption setting.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC876-03	D	Log Data Error 3
		An error was detected in the handling of the log data at power on or during machine operation.
		Inconsistency of encryption key between NV-RAM and HDD.
		• Disable the log encryption setting. • Initialize LCS memory (SP5801-019). • Initialize the HDD (SP5-832-004).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC876-04	D	Log Data Error 4
		An error was detected in the handling of the log data at power on or during machine operation.
		• Log encryption key is disabled but the log data file is encrypted. (NVRAM data corruption) • Log encryption key is enabled but the log data file is not encrypted. (NVRAM data corruption)
		Initialize the HDD (SP5-832-004).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC876-05	D	Log Data Error 5
		An error was detected in the handling of the log data at power on or during machine operation.
		• Only the NV-RAM has been replaced with one previously used in another machine. • Only the HDD has been replaced with one previously used in another machine.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• Attach the original NV-RAM. • Attach the original HDD. • With the configuration that caused the SC, initialize the HDD (SP5-832-004).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC876-99	D	Log Data Error 99
		An error was detected in the handling of the log data at power on or during machine operation.
		Other causes
		-

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC878-00	D	TPM authentication error
		TPM electronic recognition failure
		• Update of system module attempted without correct update path • USB flash memory not operating correctly
		Replace the controller board.

Trusted Platform Module

- In computing, Trusted Platform Module (TPM) is both the name of a published specification detailing a secure crypto processor that can store cryptographic keys that protect information, as well as the general name of implementations of that specification, often called the "TPM chip" or "TPM Security Device" (as designated in certain Dell BIOS settings).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC878-01	D	USB flash error
		There is a problem in the file system of the USB flash memory.
		USB Flash system files corrupted
		Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC878-02	D	TPM error
		An error occurred in either TPM or the TPM driver
		TPM not operating correctly
		Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC878-03	D	TCSD dffof
		An error occurred in the TPM software stack.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• TPM, TPM software cannot start • A file required by TPM is missing
		Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC880-00	D	MLB error
		Reply to MLB access was not returned within a specified time.
		MLB defective
		• Replace the MLB. • Remove the MLB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC881-01	D	Management area error
		• A problem was detected in the software • This error may occur even when an IC card option is not installed.
		• This is caused by accumulation of abnormal authentication information in the software. (User operation will not directly cause it.) • At login Example: When a job is sent to the printer/when logged on from the operation panel/when logged on from a Web browser
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC899-00	D	Software performance error (signal reception end)
		Unknown software error occurred.
		Occurs when an internal program behaves abnormally.
		In case of a hardware defect • Replace the hardware. In case of a software error • Turn the main power off/on. • Try updating the firmware.

SC Tables: SC9xx (Others)

SC900-00 to SC995-04

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC940-01	C	1st Paper Feed Tray Pickup Solenoid Non-Drive Error
SC940-02	C	2nd Paper Feed Tray Pickup Solenoid Non-Drive Error
SC940-03	C	Bypass Pickup Solenoid Non-Drive Error
SC940-04	C	Paper Exit Switching Solenoid Non-Drive Error
		When the solenoid is not moving, the registration value of the failure detection is "0" three times consecutively.
		• Connector disconnected • Harness broken • Solenoid defective SC940-01: 1st Paper Feed Tray Pickup Solenoid SC940-02: 2nd Paper Feed Tray Pickup Solenoid SC940-03: Bypass Pickup Solenoid SC940-04: Paper Exit Switching Solenoid • Driver defective (which drive the solenoid)
		• Turn the main power off/on. • Reconnect the connector on the BCU. • Reconnect the relay connector and electronic connector. • Replace the solenoid. • Replace the BCU. • Replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC940-50	C	Key Counter Error
		When the key counter is ON, the registration value of the key counter detection signal 2 is "1" three times consecutively.
		• Driver defective (which drive the key counter) (open)
		• Turn the main power off/on. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC940-51	C	1st Paper Feed Tray Pickup Solenoid Drive Error
SC940-52	C	2nd Paper Feed Tray Pickup Solenoid Drive Error
SC940-53	C	Bypass Pickup Solenoid Drive Error
SC940-54	C	Paper Exit Switching Solenoid Drive Error
		When the solenoid is moving, the registration value of the failure detection is "1" three times consecutively.
		• Driver defective (which drive the solenoid)
		• Turn the main power off/on. • Replace the BCU. • Replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC990-00	D	Software operation error
		Software attempted an unexpected operation.
		• Parameter error • Internal parameter error • Insufficient work memory • Operation error caused by abnormalities that are normally undetectable.
		• Turn the main power off/on. • Reinstall the software of the controller and BCU board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC991-00	C	Recoverable software operation error
		Software attempted an unexpected operation. SC991 covers recoverable errors as opposed to SC990.
		• Parameter error • Internal parameter error • Insufficient work memory • Operation error caused by abnormalities that are normally undetectable.
		Logging only

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC995-	D	CPM setting error 1

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
01		Comparison of machine serial number (11 digits) and machine identification code. Details: • Machine serial number cannot be identified because of BICU replacement or malfunctioning. • Machine serial number cannot be identified because of NV-RAM replacement
		Machine serial number (11 digits) or machine identification code does not match.
		• Enter the machine serial number using SP5-811, and then turn the power on/off. • Attach the NV-RAM that was installed previously.

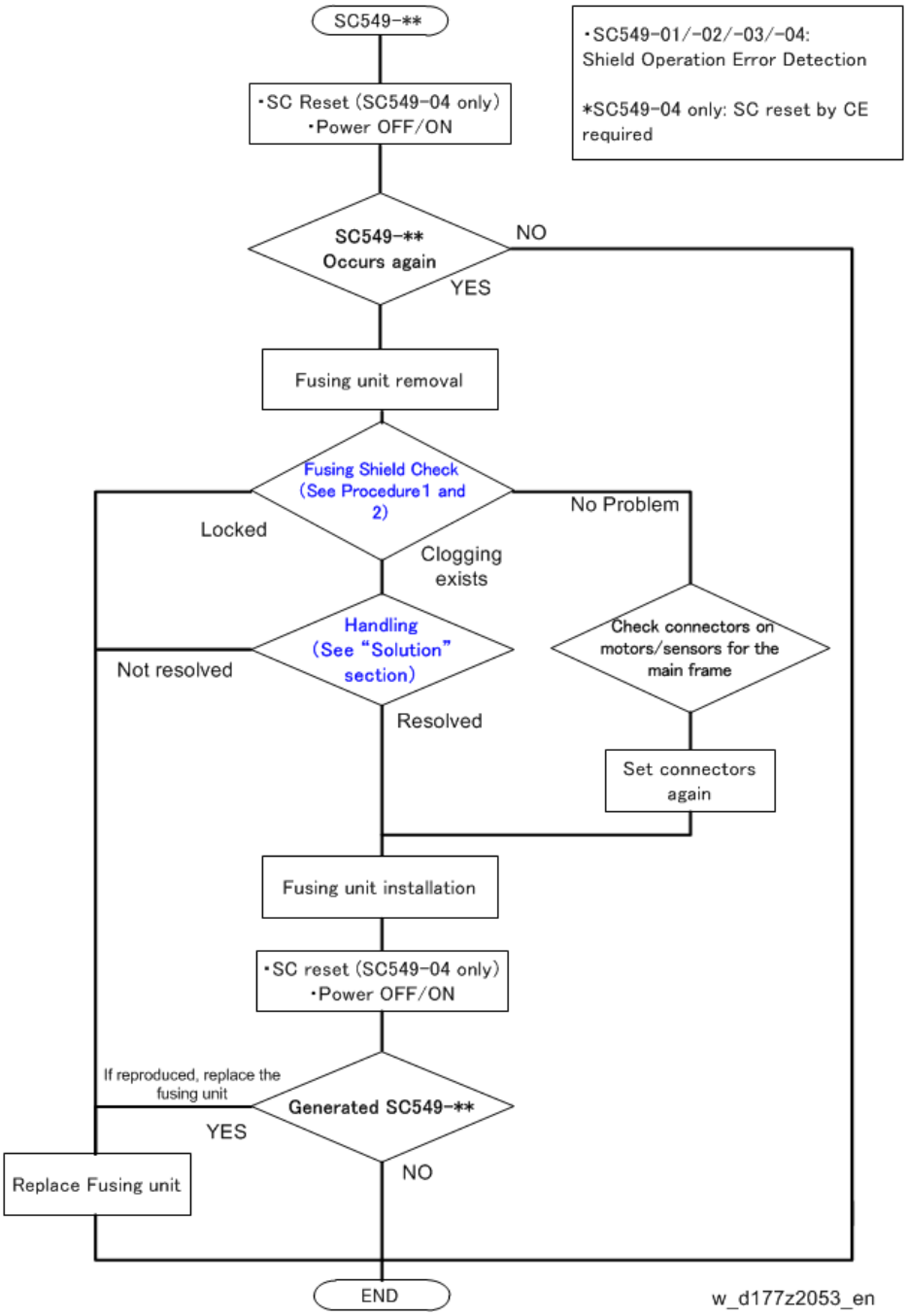
SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC995-02	D	CPM setting error 2
		Comparison of machine serial number (11 digits) and machine identification code. Details: Machine serial number cannot be identified because of NV-RAM replacement or malfunctioning.
		Machine serial number (11 digits) or machine identification code does not match.
		• Attach the NV-RAM that was installed previously. • Download data on the NV-RAM using SP5-825.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC995-03	D	CPM setting error 3
		Comparison of machine serial number (11 digits) and machine identification code. Details: Unable to recognize machine identification code because the controller was replaced incorrectly or is malfunctioning.
		Machine serial number (11 digits) or machine identification code does not match.
		Replace it with a compatible controller.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC995-04	D	CPM setting error 4
		Comparison of machine serial number (11 digits) and machine identification code.
		Machine serial number (11 digits) or machine identification code does not match.
		Return the parts to the original configuration, and then replace them according to the manual.

When SC549 Is Displayed

Troubleshooting Flowchart



Fusing Shield Check

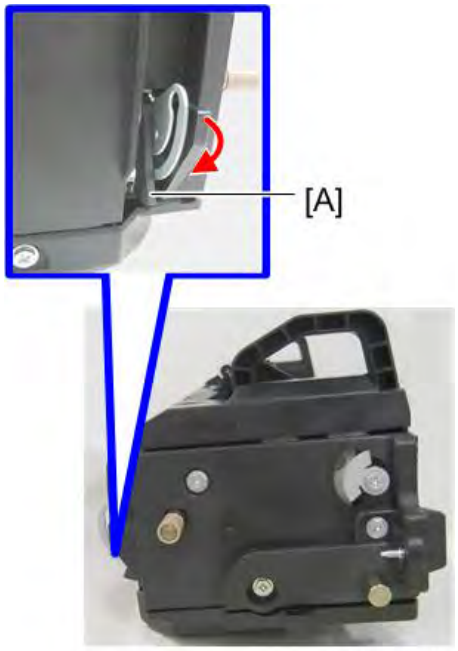
Procedure 1: Operation check for the lower side of the shield detection feeler

1. Place the fusing unit on a flat place and tilt it towards the drawer connector [A].

2. Move the shield drive gear with your hands to put the upper surface of the feeler [A] in a horizontal position.

3. Keep your fingers off the shield drive gear.

4. Make sure that the shield detection feeler [A] moves down to the lowest point by its own weight.



d146z0057

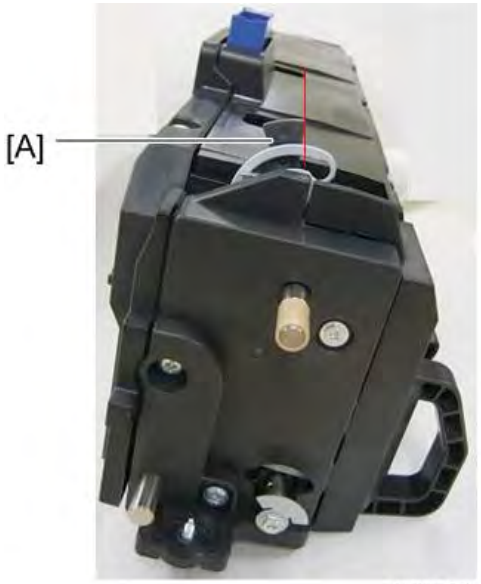
- The feeler moves smoothly: OK
- The feeler does not move / stops during moving / moves but slowly: NG

Procedure 2: Operation check for the upper side of the shield detection feeler

1. Place the fusing unit on a flat place with the drawer connector [A] turned up and the handle [B] touching a flat surface.

d146z0058

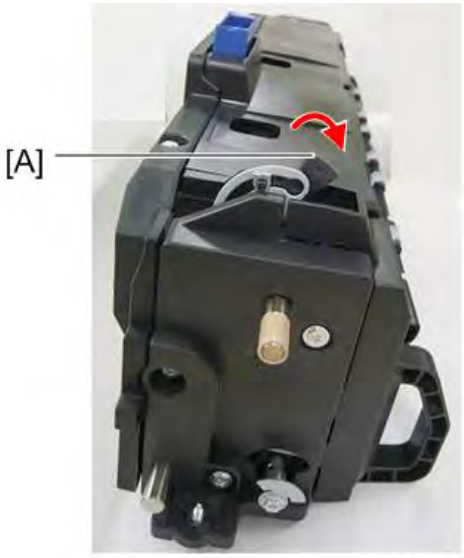
2. Move the shield drive gear with your hands to put the upper surface of the feeler [A] in a vertical position.



d146z0059

3. Keep your fingers off of the shield drive gear.

4. Make sure that the shield detection feeler [A] moves up to the highest point by its own weight.



d146z0060

- The feeler moves smoothly: OK
- The feeler does not move / stops during moving / moves but slowly: NG

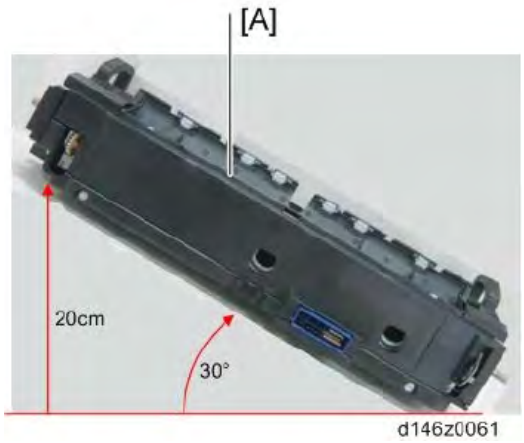
Results

- Both Procedure 1 and 2 are OK: No problem.
- Either Procedure 1 or 2 is NG: The mechanism is blocked.
- The shield detection feeler never moves while moving the shield drive gear by hands or fingers: Locked.

Solution

By tilting the fusing unit, you can check whether the feeler does not move smoothly due to burrs on a part in the unit, and remove the burrs.

1. Tilt the fusing unit [A] approx. 30°.



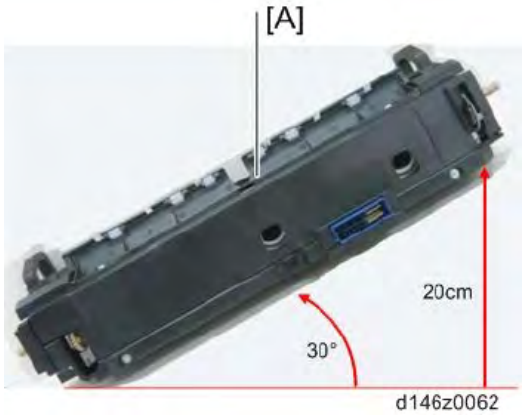
2. Put the fusing unit back to the horizontal position.

3. Perform the checking procedures (Fusing Shield Check).

There is no blockage: Resolved

There is some blockage: Not resolved

4. Tilt the fusing unit [A] approx. 30° in the opposite direction from step 1.



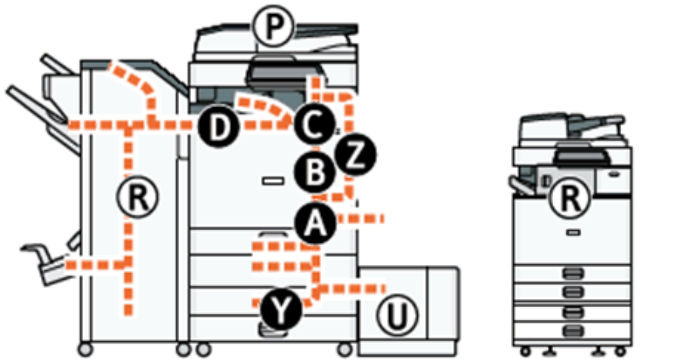
There is no blockage: Resolved

There is some blockage: Not resolved

Jam Detection

Paper Jam Display

When a jam occurs, the location is displayed on the operation panel.



d284a6002

SP7-507 shows the paper jam history.

```
CODE :011
SIZE  :05h
TOTAL:000034
DATE  :Fri Feb 15 11:44:50 2006
```

- **CODE**: Indicates the jam code.
- **SIZE**: Indicates the paper size code.
- **TOTAL**: Indicates the total counter (SP7-502-001).
- **DATE**: indicates the date when the jam occurred.

Note

- The 10 latest printer jams are displayed.
- Initial jams are not recorded.

Jam Codes and Display Codes

Note

- Jam code: Shows the cause of a jam. Appears in the log data.
- Position code: Shows the location of a jam. Appears on the operation panel.

These are lists of jam codes for the main machine and peripheral devices. Please note:

- **Late jam.** The paper has failed to arrive within the prescribed time due to a jam that has occurred upstream of the referenced sensor.
- **Lag jam.** The paper has failed to leave the location of the referenced sensor within the prescribed time due to a jam downstream of the referenced sensor.

Main Machine

Cause Code	Cause of Jam	Late Jam	Lag Jam	Stay Jam	Display Code
001	Transport Sensor 1			✓	A
001	Transport Sensor 2			✓	A
001	Registration Sensor			✓	B
001	Fusing Entrance Sensor			✓	C
001	Fusing Exit Sensor			✓	C
001	Paper Exit Sensor			✓	C
001	Reverse Sensor			✓	C
001	Duplex Exit Sensor			✓	Z
001	Duplex Entrance Sensor			✓	Z
003	Paper not fed from tray 1	✓			A1
004	Paper not fed from tray 2	✓			A2
008	Paper not fed from bypass tray	✓			A
009	Paper not transported to duplex unit	✓			Z
010	Disappearance of the detection Timing Only remaining paper position information displayed				
011	Transport Sensor 1	✓			A
012	Transport Sensor 2	✓			A
017	Registration Sensor	✓			A
018	Fusing Entrance Sensor	✓			B
019	Fusing Exit Sensor	✓			C
020	Paper Exit Sensor	✓			C
051	Transport Sensor 1 (when paper not fed from Tray 1)		✓		A
052	Transport Sensor 2 (when paper not fed from Tray 2)		✓		A
057	Registration Sensor		✓		B
060	Paper Exit Sensor		✓		C
024	Reverse Sensor	✓			C
064	Reverse Sensor		✓		C
025	Duplex Exit Sensor	✓			Z
025	Duplex Exit Sensor & No Paper at Duplex Entrance Sensor	✓			Z
065	Duplex Exit Sensor		✓		Z
027	Duplex Entrance Sensor	✓			C
027	Duplex Entrance Sensor & No Paper at Reverse	✓			Z

Cause Code	Cause of Jam	Late Jam	Lag Jam	Stay Jam	Display Code
	Sensor				
067	Duplex Entrance Sensor		✓		Z
021	Relay Exit Sensor	✓			D
022	Relay Transport Sensor	✓			D
061	Relay Exit Sensor		✓		D
062	Relay Transport Sensor		✓		D

Paper Feed Unit PB3210/PB3220

Cause Code	Cause of Jam	Late Jam	Lag Jam	Stay Jam	Display Code
005	Paper not fed from tray 3	✓			Y1
013	Transport Sensor 3	✓			Y
053	Transport Sensor 3 (when paper not fed from Tray 3)		✓		Y
001	Transport Sensor 3			✓	Y
006	Paper not fed from tray 4	✓			Y2
014	Transport Sensor 4	✓			Y
054	Transport Sensor 4 (when paper not fed from Tray 4)		✓		Y
001	Transport Sensor 4			✓	Y

Paper Feed Unit PB3150

Cause Code	Cause of Jam	Late Jam	Lag Jam	Stay Jam	Display Code
005	Paper not fed from tray 3	✓			Y1
013	Transport Sensor 3	✓			Y
053	Transport Sensor 3 (when paper not fed from Tray 3)		✓		Y
001	Transport Sensor 3			✓	Y

LCIT RT3030

Cause Code	Cause of Jam	Late Jam	Lag Jam	Stay Jam	Display Code
007	Paper not fed from LCT	✓			U1
015	LCT Transport Sensor	✓			U
055	LCT Transport Sensor (when paper not fed from LCT)		✓		U

Cause Code	Cause of Jam	Late Jam	Lag Jam	Stay Jam	Display Code
001	LCT Transport Sensor			✓	U

ARDF DF3090

Cause Code	Cause of Jam	Late Jam	Lag Jam	Stay Jam	Display Code
014	Skew Correction Sensor	✓			P
064	Skew Correction Sensor		✓		P
016	Registration Sensor	✓			P
066	Registration Sensor		✓		P
017	Exit Sensor	✓			P
067	Exit Sensor		✓		P
239	Misfeed: Original Removed			✓	P

SPDF DF3100

Cause Code	Cause of Jam	Late Jam	Lag Jam	Stay Jam	Display Code
013	Separation Sensor	✓			P
063	Separation Sensor		✓		P
014	Skew Correction Sensor	✓			P
064	Skew Correction Sensor		✓		P
015	Interval Sensor	✓			P
065	Interval Sensor		✓		P
016	Registration Sensor	✓			P
066	Registration Sensor		✓		P
017	Original Exit Sensor	✓			P
067	Original Exit Sensor		✓		P
239	Misfeed: Original Removed			✓	P
001	Initial jam	✓			P
001	Overload jam	✓			P

Booklet Finisher SR3240

Cause Code	Cause of Jam	Late Jam	Lag Jam	Stay Jam	Display Code
001	Entrance Sensor			✓	R1-R5
001	Horizontal Transport Sensor			✓	R1-R5
001	Switchback Transport Sensor			✓	R1-R5
001	Proof Exit Sensor			✓	R1-R5
001	Shift Tray Exit Sensor			✓	R1-R5
001	Booklet Exit Sensor 1			✓	R6-R11

Cause Code	Cause of Jam	Late Jam	Lag Jam	Stay Jam	Display Code
001	Transport Path Paper Sensor			✓	R1-R5
001	Booklet Upper Transport Path Stack Sensor			✓	R6-R11
001	Booklet Lower Transport Path Stack Sensor			✓	R6-R11
150	Entrance Sensor	✓			R1-R5
151	Entrance Sensor		✓		R1-R5
152	Horizontal Transport Sensor	✓			R1-R5
153	Horizontal Transport Sensor		✓		R1-R5
154	Switchback Transport Sensor	✓			R1-R5
155	Switchback Transport Sensor		✓		R1-R5
156	Jam in proof exit unit	✓			R1-R5
157	Jam in proof exit unit		✓		R1-R5
158	Jam in shift exit unit	✓			R1-R5
159	Jam in shift exit unit		✓		R1-R5
160	Jam in Booklet exit	✓			R6-R11
161	Jam in Booklet exit		✓		R6-R11
162	Jam in Entrance Transport Motor	✓	✓		R1-R5
163	Jam in Horizontal Transport Motor	✓	✓		R1-R5
164	Jam in Pre-stack Transport Motor	✓	✓		R1-R5
165	Jam in Relay Transport Motor	✓	✓		R1-R5
166	Jam in Upper Tray Exit Motor	✓	✓		R1-R5
167	Jam in Trailing Edge Pressure Plate Motor	✓	✓		R1-R5
168	Jam in Paper Exit Gate Motor	✓	✓		R1-R5
169	Jam in Punch Drive Motor	✓	✓		R1-R5
170	Jam in Punch Unit Movement Motor	✓	✓		R1-R5
171	Jam in Punch Registration Motor	✓	✓		R1-R5
172	Jam in Lower Junction Gate Motor	✓	✓		R1-R5
173	Jam in Jogger Motor	✓	✓		R1-R5
174	Jam in Positioning Roller Motor	✓	✓		R1-R5
175	Jam in Feed-out Belt Motor	✓	✓		R1-R5
176	Jam in Corner Stapler Movement Motor	✓	✓		R1-R5
177	Jam in Corner Stapler Motor	✓	✓		R1-R5
178	Jam in Booklet Jogger Motor	✓	✓		R6-R11
179	Jam in Booklet Jogging Pawl Movement Motor	✓	✓		R6-R11
180	Jam in Booklet Bottom Fence Motor	✓	✓		R6-R11
181	Jam in Booklet Stapler Motor	✓	✓		R6-R11

Cause Code	Cause of Jam	Late Jam	Lag Jam	Stay Jam	Display Code
182	Jam in Shift Roller Drive Motor	✓	✓		R6-R11
183	Jam in Fold Transport Motor	✓	✓		R6-R11
184	Jam in Press Fold Motor	✓	✓		R6-R11
185	Jam in Tray Lift Motor	✓	✓		R1-R5
186	Jam in Shift Motor	✓	✓		R1-R5
187	Jam in Shift Jogger Front Motor	✓	✓		R1-R5
188	Jam in Shift Jogger Rear Motor	✓	✓		R1-R5
189	Jam in Shift Jogger Retreat Motor	✓	✓		R1-R5
190	Jam in Return Roller Motor	✓	✓		R1-R5
191	Jam in Paper Stacking Holder Motor	✓	✓		R1-R5
192	Jam in Positioning Roller Motor	✓	✓		R1-R5
193	Jam in Paper Guide Motor	✓	✓		R1-R5
194	Main instruction data defect	✓	✓		R1-R5, R6-R11

Finisher SR3230

Cause Code	Cause of Jam	Late Jam	Lag Jam	Stay Jam	Display Code
001	Entrance Sensor			✓	R1-R5
001	Horizontal Transport Sensor			✓	R1-R5
001	Switchback Transport Sensor			✓	R1-R5
001	Proof Exit Sensor			✓	R1-R5
001	Shift Tray Exit Sensor			✓	R1-R5
001	Transport Path Paper Sensor			✓	R1-R5
150	Entrance Sensor	✓			R1-R5
151	Entrance Sensor		✓		R1-R5
152	Horizontal Transport Sensor	✓			R1-R5
153	Horizontal Transport Sensor		✓		R1-R5
154	Switchback Transport Sensor	✓			R1-R5
155	Switchback Transport Sensor		✓		R1-R5
156	Proof Exit Sensor	✓			R1-R5
157	Proof Exit Sensor		✓		R1-R5
158	Shift Tray Exit Sensor	✓			R1-R5
159	Shift Tray Exit Sensor		✓		R1-R5
162	Jam in Entrance Transport Motor	✓	✓		R1-R5
163	Jam in Horizontal Transport Motor	✓	✓		R1-R5

Cause Code	Cause of Jam	Late Jam	Lag Jam	Stay Jam	Display Code
164	Jam in Pre-stack Transport Motor	✓	✓		R1-R5
165	Jam in Relay Transport Motor	✓	✓		R1-R5
166	Jam in Upper Tray Exit Motor	✓	✓		R1-R5
167	Jam in Trailing Edge Pressure Plate Motor	✓	✓		R1-R5
168	Jam in Paper Exit Gate Motor	✓	✓		R1-R5
169	Jam in Horizontal registration unit displace motor	✓	✓		R1-R5
170	Jam in Punch Drive Motor	✓	✓		R1-R5
171	Jam in Punch Registration Motor	✓	✓		R1-R5
172	Jam in Lower Junction Gate Motor	✓	✓		R1-R5
173	Jam in Jogger Motor	✓	✓		R1-R5
174	Jam in Positioning Roller Motor	✓	✓		R1-R5
175	Jam in Feed-out Belt Motor	✓	✓		R1-R5
176	Jam in Corner Stapler Movement Motor	✓	✓		R1-R5
177	Jam in Corner Stapler Motor	✓	✓		R1-R5
185	Jam in Tray Lift Motor	✓	✓		R1-R5
186	Jam in Shift Motor	✓	✓		R1-R5
187	Jam in Shift Jogger Front Motor	✓	✓		R1-R5
188	Jam in Shift Jogger Rear Motor	✓	✓		R1-R5
189	Jam in Shift Jogger Retreat Motor	✓	✓		R1-R5
190	Jam in Return Roller Motor	✓	✓		R1-R5
191	Jam in Paper Stacking Holder Motor	✓	✓		R1-R5
192	Jam in Positioning Roller Motor	✓	✓		R1-R5
193	Jam in Paper Guide Motor	✓	✓		R1-R5
194	Main instruction data defect	✓	✓		R1-R5

Booklet Finisher SR3220 / Finisher SR 3210

Cause Code	Cause of Jam	Late Jam	Lag Jam	Stay Jam	Display Code
200	Paper Entrance	✓			R1-R4
201	Paper Entrance		✓		R1-R4
202	Proof Exit	✓			R1-R4
203	Proof Exit		✓		R1-R4
204	Intermediate transport (right)	✓			R1-R4
205	Intermediate transport (left)	✓			R1-R4
206	Intermediate transport (left)		✓		R1-R4

Cause Code	Cause of Jam	Late Jam	Lag Jam	Stay Jam	Display Code
207	Shift Exit	✓			R1-R4
208	Shift Exit		✓		R1-R4
209	Stack Transport	✓			R5-R10
210	Rear Edge Stopper Transport	✓			R5-R10
211	Rear Edge Stopper Transport		✓		R5-R10
212	Paper did not reach middle folding exit	✓			R5-R10
213	Middle Folding exit		✓		R5-R10
220	Jam in entrance transport motor	✓	✓	✓	R1-R4
221	Jam in proof transport motor	✓	✓	✓	R1-R4
222	Jam in paper exit transport motor/positioning roller motor	✓	✓	✓	R1-R4
223	Jam in shift motor	✓	✓	✓	R1-R4
224	Jam in jogger motor	✓	✓	✓	R1-R4
225	Jam in paper exit guide plate open/close motor	✓	✓	✓	R1-R4
226	Jam in feedout pawl motor	✓	✓	✓	R1-R4
227	Jam in tray lift motor	✓	✓	✓	R1-R4
228	Jam in positioning roller motor	✓	✓	✓	R1-R4
229	Jam in stapler unit displacement motor	✓	✓	✓	R1-R4
230	Jam in stapler motor	✓	✓	✓	R1-R4
231	Jam in punch system motor	✓	✓	✓	R1-R4
232	Jam in booklet transport motors	✓	✓	✓	R5-R10
233	Jam in rear edge stopper motor	✓	✓	✓	R5-R10
234	Jam in folding blade motor	✓	✓	✓	R5-R10
235	Jam in paper exit guide drive motor	✓	✓	✓	R1-R4
236	Jam in stapleless stapler transfer motor	✓	✓	✓	R1-R4
237	Jam in stapleless stapler motor	✓	✓	✓	R1-R4
238	Jam in paper guide drive motor	✓	✓	✓	R1-R4
248	Paper exit end is not responding	✓	✓		R1-R4
249	Main instruction data defect	✓	✓		R1-R4

Internal Finisher SR3180

Cause Code	Cause of Jam	Late Jam	Lag Jam	Stay Jam	Display Code
300	Entrance sensor	✓			R1-R2
301	Entrance sensor		✓		R1-R2
302	Paper exit sensor	✓			R1-R2
303	Paper exit sensor		✓		R1-R2

Cause Code	Cause of Jam	Late Jam	Lag Jam	Stay Jam	Display Code
304	Shift motor			✓	R1-R2
305	Junction gate motor			✓	R1-R2
306	Paper Exit Pressure Motor			✓	R1-R2
307	Stapler Drive Motor			✓	R1-R2
348	Paper exit end not responding			✓	R1-R2
349	Main instruction data defect			✓	R1-R2
308	Exit Lag Jam		✓		R1-R2

Internal Finisher SR3130

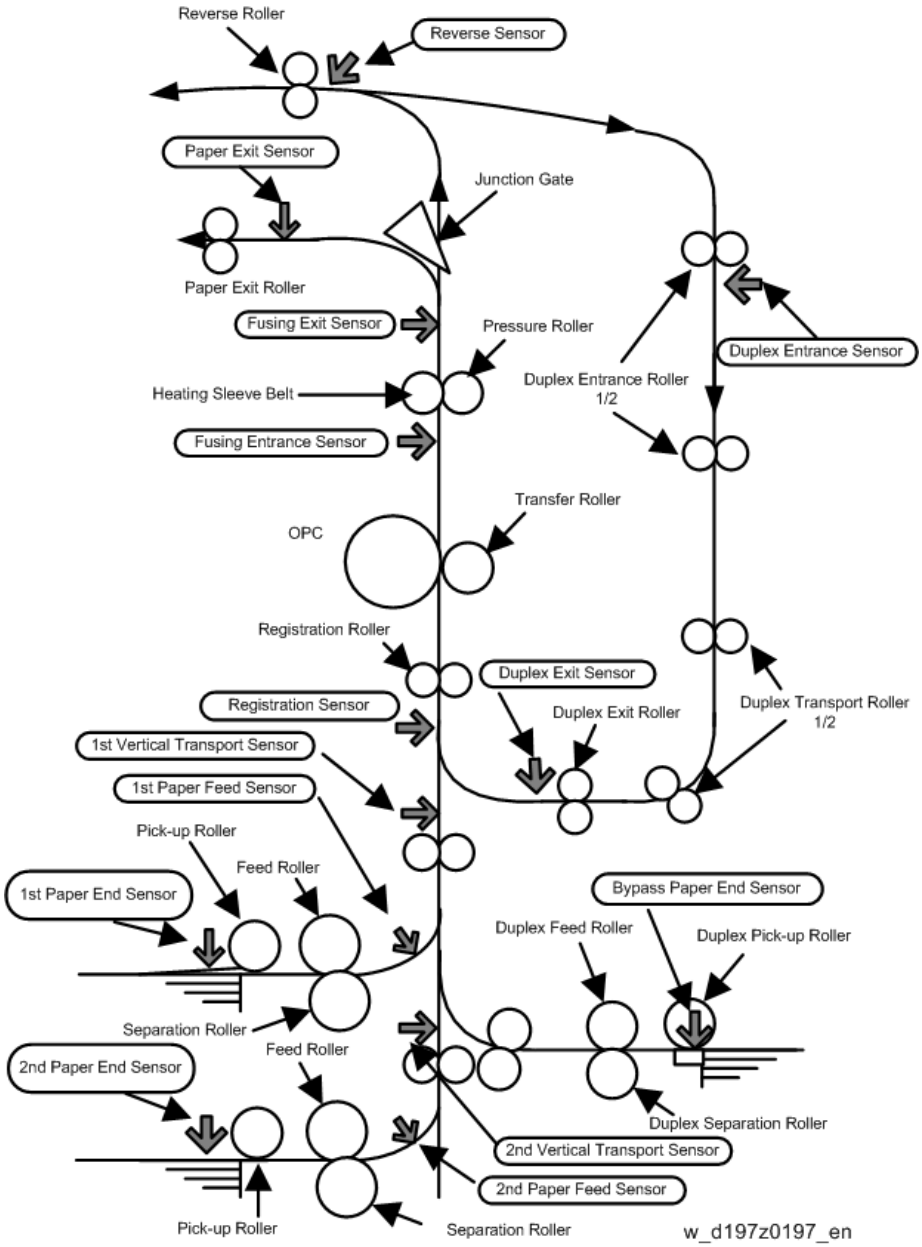
Cause Code	Cause of Jam	Late Jam	Lag Jam	Stay Jam	Display Code
100	Entrance Sensor	✓			R1-R2
101	Entrance Sensor		✓		R1-R2
102	Transport Sensor	✓			R1-R2
103	Transport Sensor		✓		R1-R2
104	Paper Exit Unit		✓		R1-R2
105	Jogger Fence Motor (Front)			✓	R1-R2
106	Jogger Fence Motor (Rear)			✓	R1-R2
107	Shift Motor			✓	R1-R2
108	Positioning Roller Motor			✓	R1-R2
109	Paper Exit Guide Plate Motor			✓	R1-R2
110	Stapler Retreat Motor			✓	R1-R2
111	Tray Lift Motor			✓	R1-R2
112	Stapler Motor			✓	R1-R2
113	Stack Height Lever Motor			✓	R1-R2
114	Punch Unit Motor			✓	R1-R2
115	Horizontal Registration Movement Unit Motor			✓	R1-R2
116	Horizontal Registration Transport Unit Motor			✓	R1-R2
148	Paper exit end not responding			✓	R1-R2
149	Main instruction data defect			✓	R1-R2

Internal Multi-fold Unit FD3000

Cause code	Cause of jam	Late Jam	Lag Jam	Stay Jam	Display code
350	Registration sensor	✓			N1
351	Registration sensor		✓		N1

Cause code	Cause of jam	Late Jam	Lag Jam	Stay Jam	Display code
352	1st Fold sensor	✓			N2-N4
353	1st Fold sensor		✓		N2-N4
354	2nd Fold Sensor	✓			N6-N8
355	2nd Fold Sensor		✓		N6-N8
356	Crease Sensor	✓			N6-N8
357	Crease Sensor		✓		N6-N8
358	Folder Tray Exit Sensor	✓			N2-N4
359	Folder Tray Exit Sensor		✓		N2-N4
360	Horizontal Path Exit Sensor	✓			N2-N4, N5
361	Horizontal Path Exit Sensor		✓		N5
370	Jam in mechanisms driven by Registration Motor	✓	✓	✓	N1
371	Jam in mechanisms driven by JG Crease Motor	✓	✓	✓	N2-N4
372	Jam in mechanisms driven by Transport Motor	✓	✓	✓	N2-N4
373	Jam in mechanisms driven by 1st Fold Motor	✓	✓	✓	N6-N8
374	Jam in mechanisms driven by 2nd Fold Motor	✓	✓	✓	N6-N8
375	Jam in mechanisms driven by JG Crease Motor	✓	✓	✓	N6-N8
398	Paper exit end is not responding	✓	✓		N1
399	Main instruction data defect	✓	✓		N1

Sensor Locations



Paper Size Codes

Paper size codes are as follows.

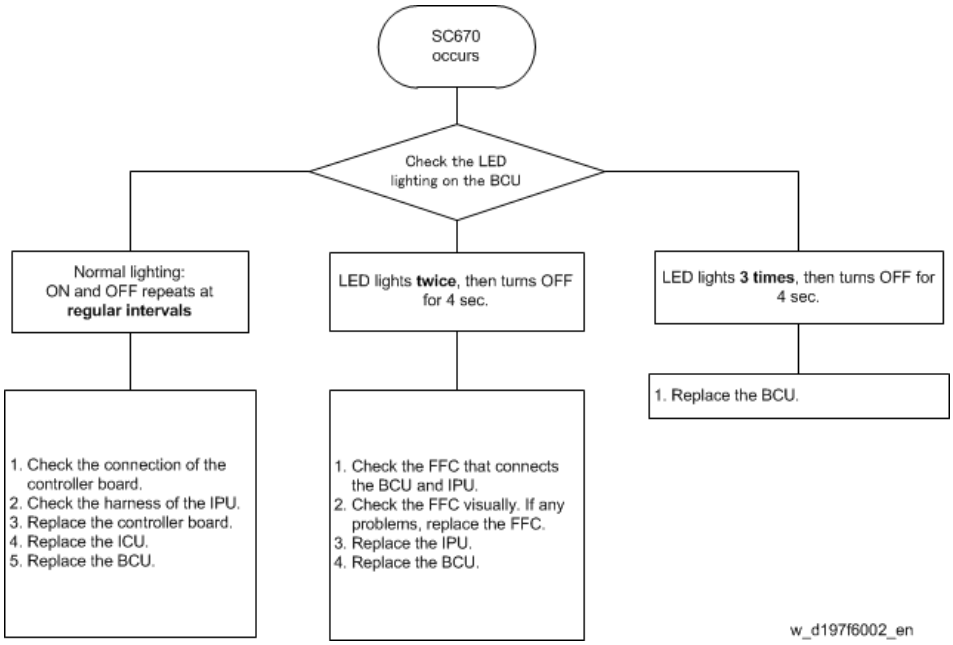
Note: The unit of Main Scan/Sub Scan Length is 0.1 mm.

Size Code	Paper Size Name	Orientation	Main Scan Length	Sub Scan Length
132(84H)	A3	SEF	2970	4200
005(05H)	A4	LEF	2970	2100
133(85H)	A4	SEF	2100	2970
141(8DH)	B4	SEF	2570	3640
006(06H)	A5	LEF	2100	1480
134(86H)	A5	SEF	1480	2100

Size Code	Paper Size Name	Orientation	Main Scan Length	Sub Scan Length
014(0EH)	B5	LEF	2570	1820
142(8EH)	B5	SEF	1820	2570
135(87H)	A6	SEF	1050	1480
143(8FH)	B6	SEF	1280	1820
160(A0H)	11”x17”(DLT)	SEF	2794	4318
164(A4H)	8 1/2”x14”(LG)	SEF	2159	3556
166(A6H)	8 1/2”x11”(LT)	SEF	2159	2794
038(26H)	8 1/2”x11”(LT)	LEF	2794	2159
172(ACH)	5 1/2”x8 1/2”(HLT)	SEF	1397	2159
175(AFH)	12” x 18”	SEF	3048	4572

Other Problems

When SC670 Is Displayed



When SC672 (Controller start up error) is displayed

Symptom:

Note: CTL = Controller

The following occur:

SC672-00	Communication error between operation panel and CTL after machine is powered on.
SC672-10	Communication error (receive) between operation panel and CTL after machine is powered on.
SC672-11	Communication error (send) between operation panel and CTL after machine is powered on.
SC672-12	Communication error between operation panel and CTL after normal start-up.
SC672-13	Communication error between operation panel and CTL after normal start-up; Operation panel not detected.
SC672-20	Operation panel cable error
SC672-21	Controller board error

Note

- SC672 does not appear on the SMC report, as it is not logged.
- The Smart Operation Panel communicates with the controller via a USB cable and IPU. SC672 is triggered when the panel cannot communicate with the controller.

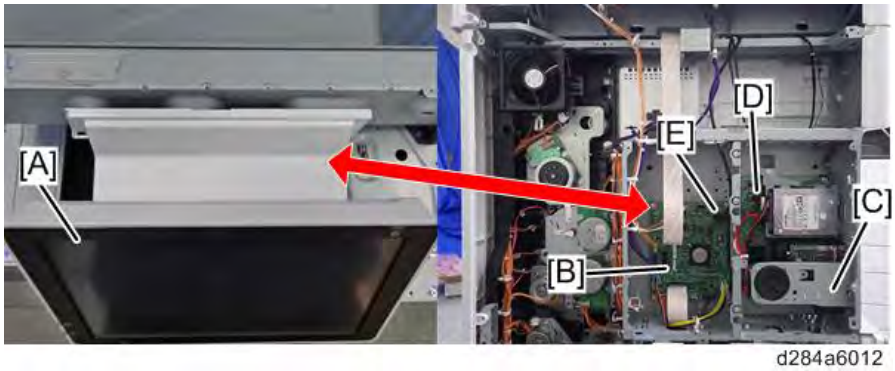
Cause:

Possible causes of SC672 include:

- USB communication path failure (USB cable, IPU)
- CTL boot up error and/or operation panel boot up error due to abnormal break in operations of CTL.

Possible causes of operation panel cannot light include:

- USB communication path failure (USB cable, IPU)
- Operation panel cannot communicate with CTL due to CTL boot-up error



[A]: Operation Panel

[B]: IPU

[C]: FCU

[D]: Controller

[E]: USB cable

Solution:

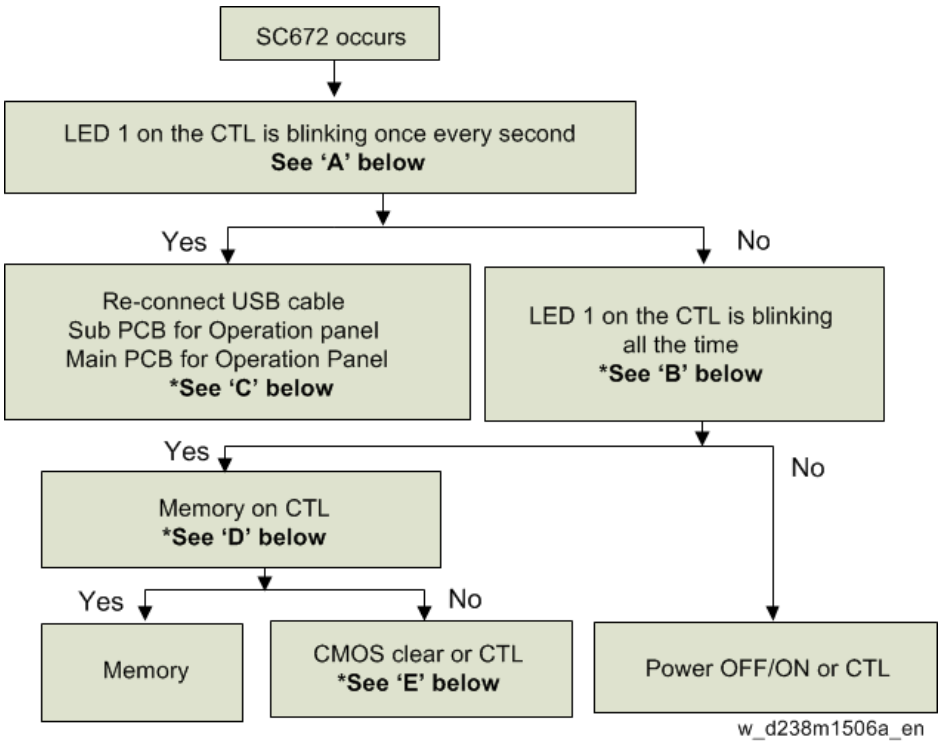
Do the following.

1. Turn the machine power OFF/ON.
2. Do the action in the flowchart below to determine the cause and best course of action when SC672 occurs.

Note

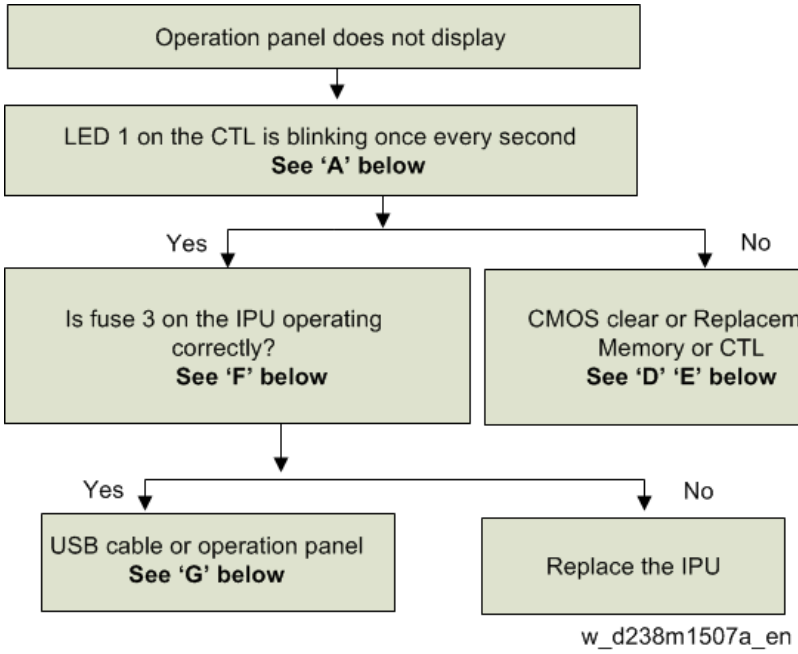
- If the SC recurs after you do the action in this flowchart, do the following.
  - If SC819 (cache error) appears in the SC history, replace the controller board.
  - If SC991 (SCS: scs time count level c') appears in the SC history, replace the controller board and USB cable.

Flowchart to determine parts to replace when SC672 occurs



Parts	How to determine the cause
USB cable	LED on CTL blinks once every second
Operation panel	LED on CTL blinks once every second
CTL	LEDs on CTL blink constantly
Memory	LEDs on CTL blink constantly

Flowchart to determine parts to replace when no display on operation panel



Parts	How to determine the cause
USB cable	LED on CTL blinks once every second
Operation panel	LED on CTL blinks once every second

Parts	How to determine the cause
IPU	Fuse 3 on the IPU
CTL	LED on CTL does not blink
Memory	LED on CTL does not blink

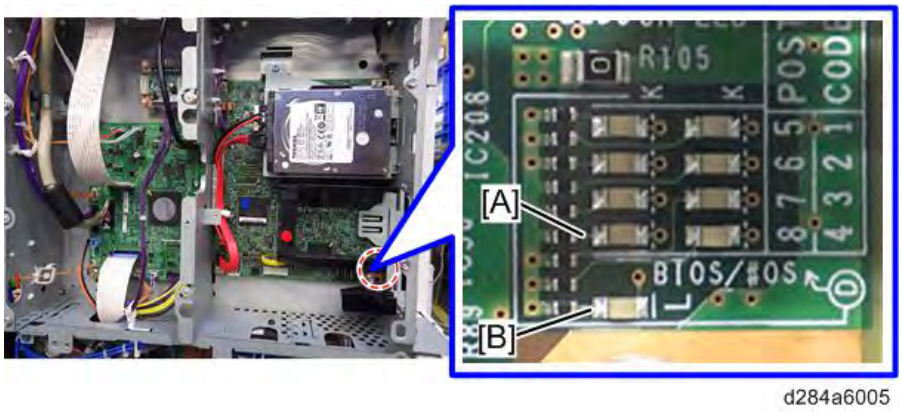
[A]: LEDs on the controller board

Check the condition (lit, off, blinking) of the LED on the CTL.

Normal situation: POSTCODE LED 8 [A] and BIOS LED [B] blinking for 1 second

Note

- The LED lit or off when there is a problem with the CPU.



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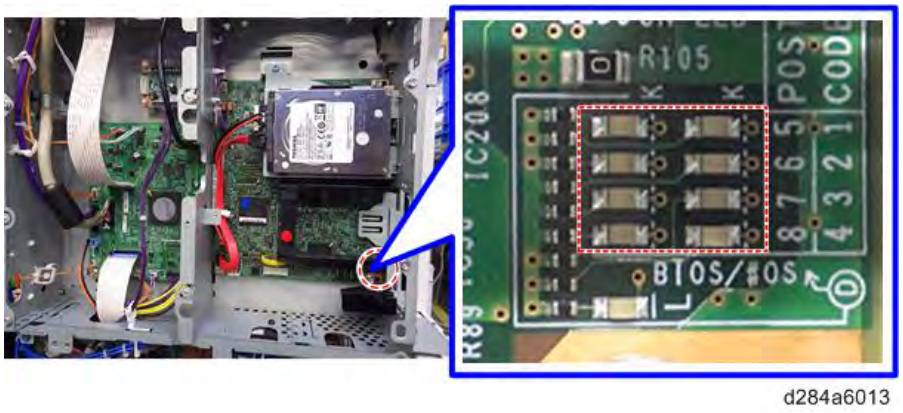
[B]: Abnormal mode: LEDs on the controller board

POSTCODE LEDs 1 to 8 blink constantly



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LED	Note
POSTCODE 1-8	1. For self-diagnosis code (BIOS). 2. After the BIOS starts up, POSTCODE 4,5,7 **turn off** and POSTCODE 1,2,3 ,6 **turn on** and POSTCODE 8 **blinks.** POSTCODE 8 is **lit or off** when there is a problem with the CPU.
BIOS/OS	- LED is **lit** when the BIOS is running. - LED **blinks** when the OS is running.

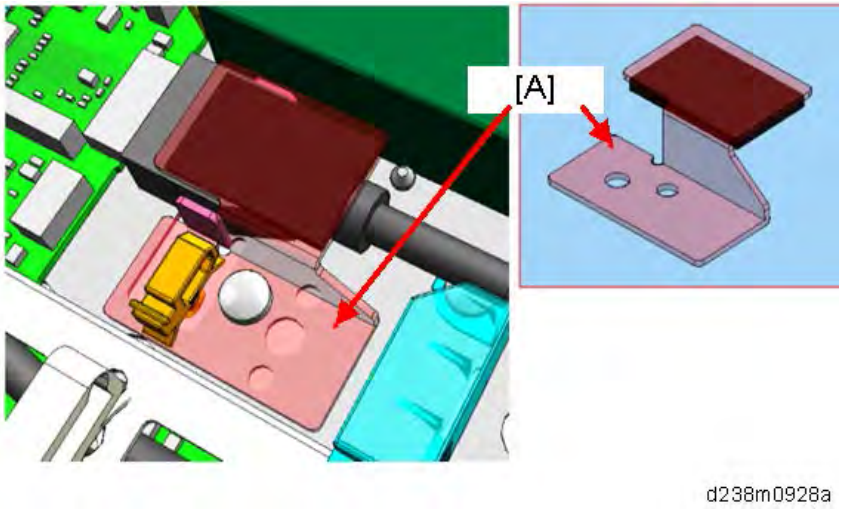
[C]: Reconnecting and replacing the USB cable

1. Re-connect the USB cable between IPU board and operation panel.

When connecting the cable, hold the molded part of the cable as shown in the figure below so as not to apply excessive force on the connector part. Applying excessive force in the upper direction on the connector may cause connection failure.

Applied to the machine built in October 2016 and beyond:

A bracket [A] which covers the upper part of the cable will be added.



PCB for the operation panel

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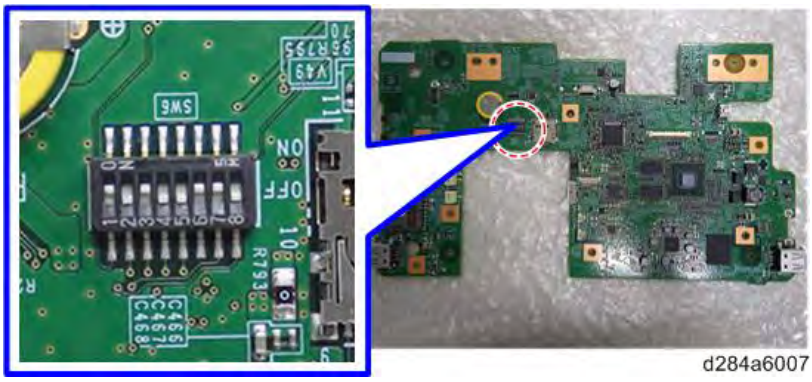
Note

- 1, 3, 6, and 7 are ON for normal.



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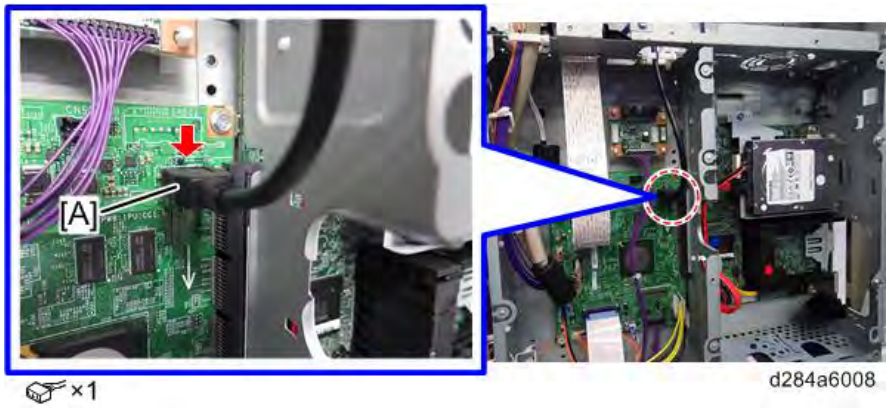
USB connector [A] (IPU)



×1

d284a6008

[D]: Replacing the Memory

1. Turn the machine power OFF.

2. Attach the memory on the CTL as shown (in a vertical orientation).

d238m1513a

3. Lock the hook.

d238m1514a

[E]: CMOS clear

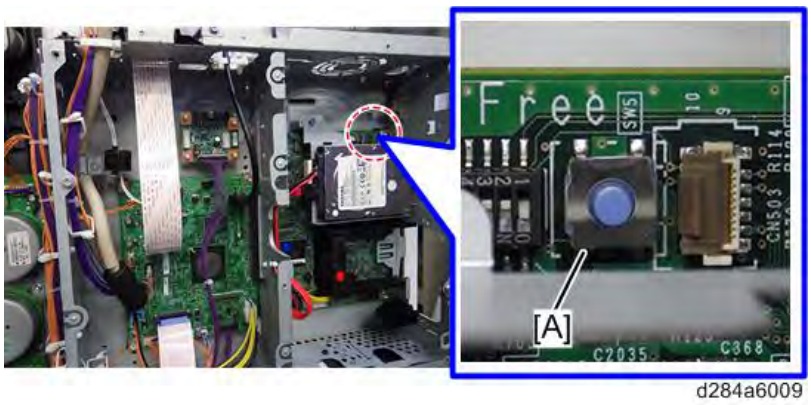
1. Turn the machine power OFF.

2. Turn switch 5 ON for 10 seconds.

3. Turn switch 5 OFF.

4. Turn the machine power ON.

Locatoin of Switch 5 [A] (CTL)



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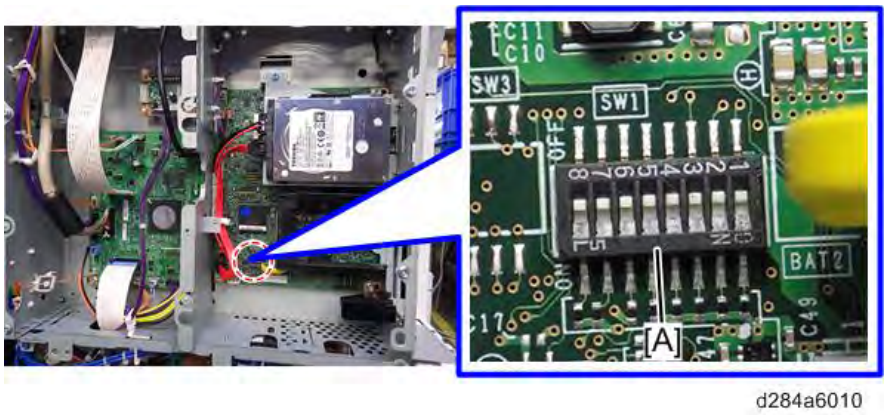
[F]: Fuse on the IPU

Check that the switch 1 [A] is operating normally.



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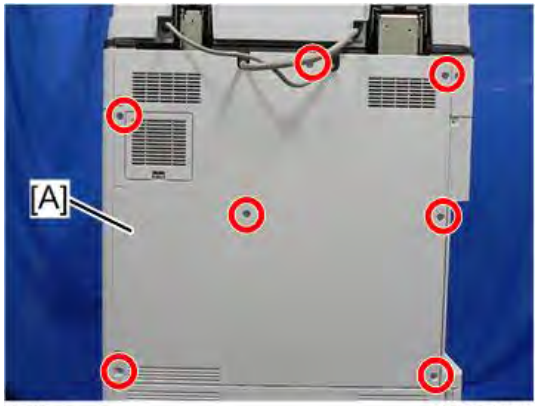
Note

- In the normal operation, all of the switches in the SW1 block are OFF.

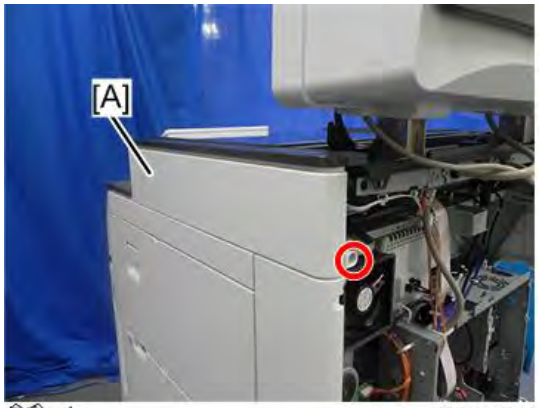
[G]: Replacing the USB cable and the operation panel

1. Remove the platen cover, or ARDF/SPDF. (ADF Removal)
2. Remove the rear cover [A].



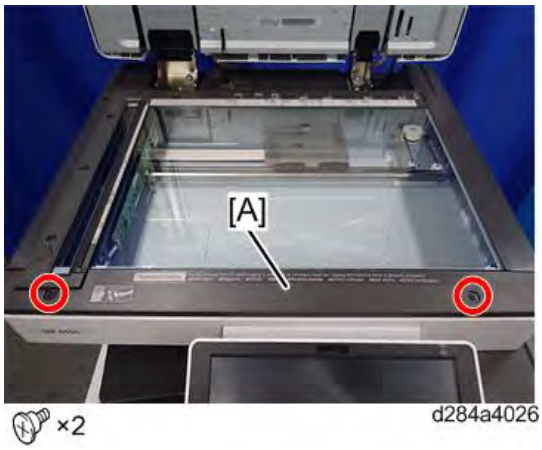
×7 d284a4009

3. Remove the scanner right cover [A].

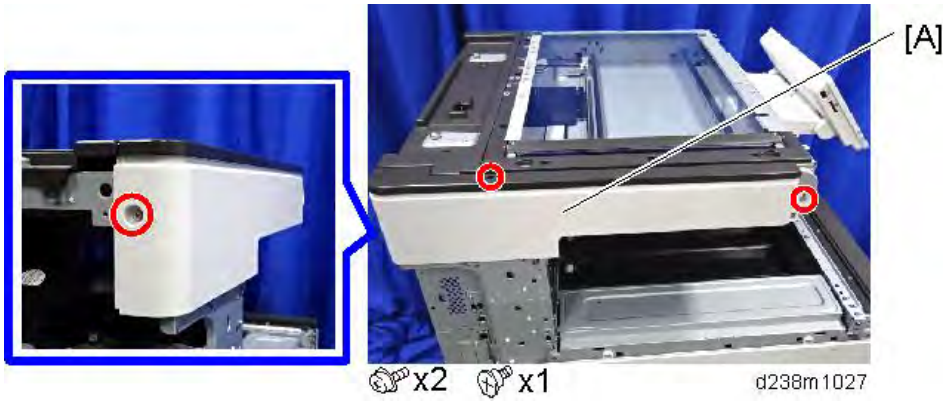


×1 d284a4042

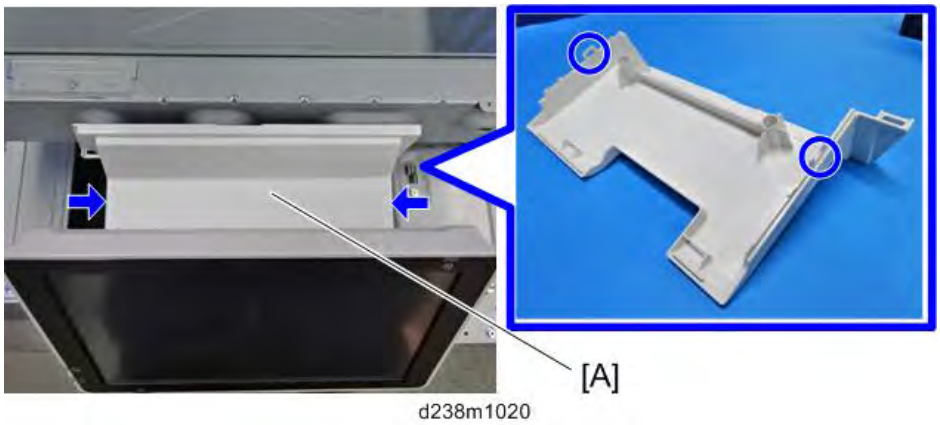
4. Remove the scanner front cover [A].



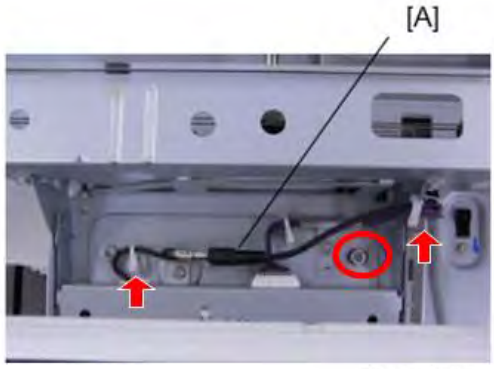
5. Remove the scanner left cover [A].



6. Holding down both the sides of the operation panel upper cover [A], unhook the tabs (indicated by blue circles) and remove the cover.

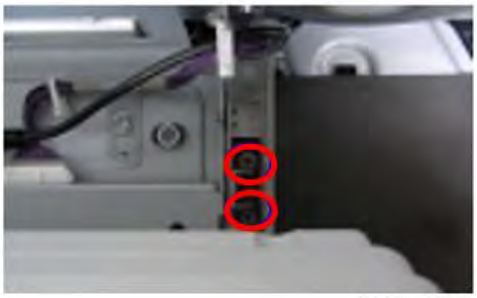


7. Remove the USB cable connector [A] (x1, x2).



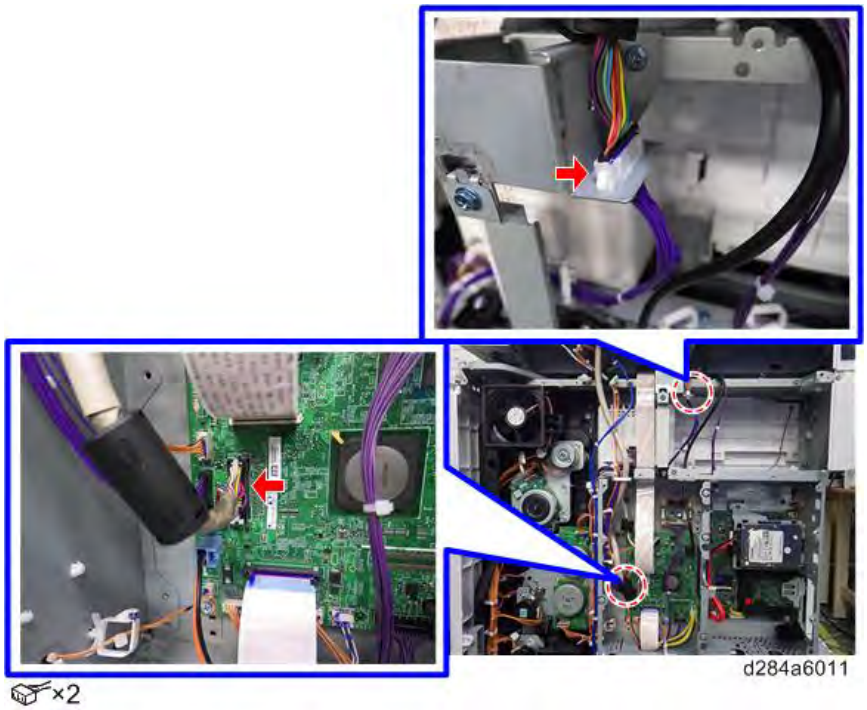
d238m1518a

8. Remove the two screws (x2).



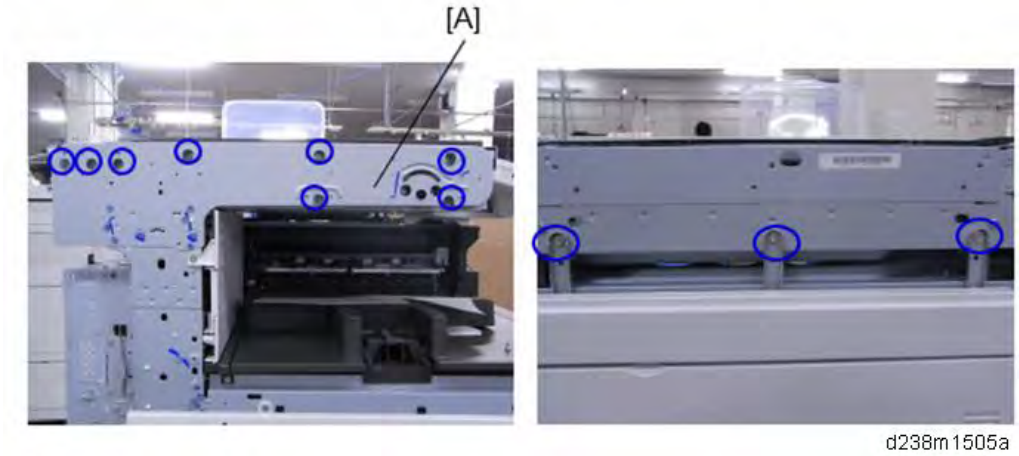
d238m1519a

9. Remove the two connectors.



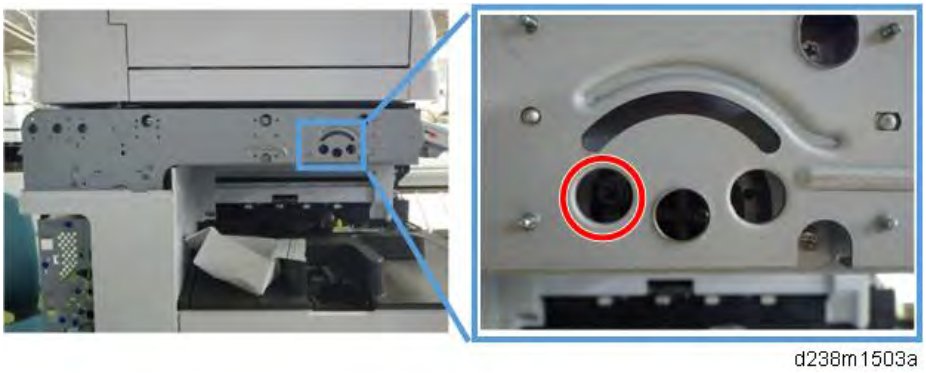
d284a6011

10. Remove the scanner unit [A] (x11).

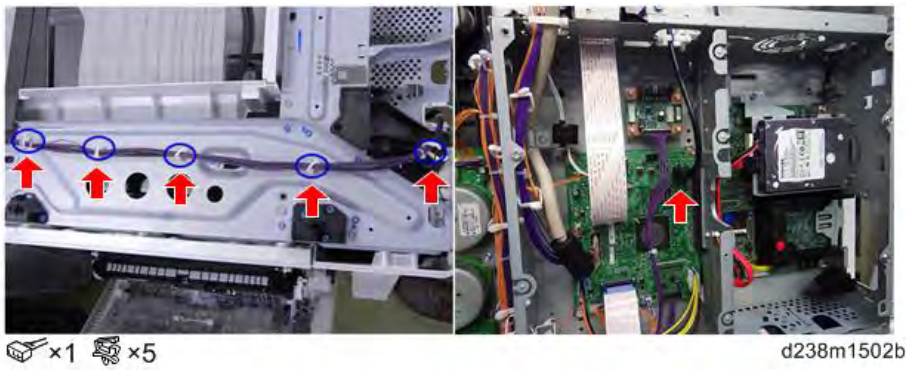


Note

- **Never loosen or remove** the following screw when you remove or re-attach the unit. This screw fixes the scanner cam in place. If the position of the scanner cam changes, the scanner will be misaligned. This will result in image skew and other image alignment issues.



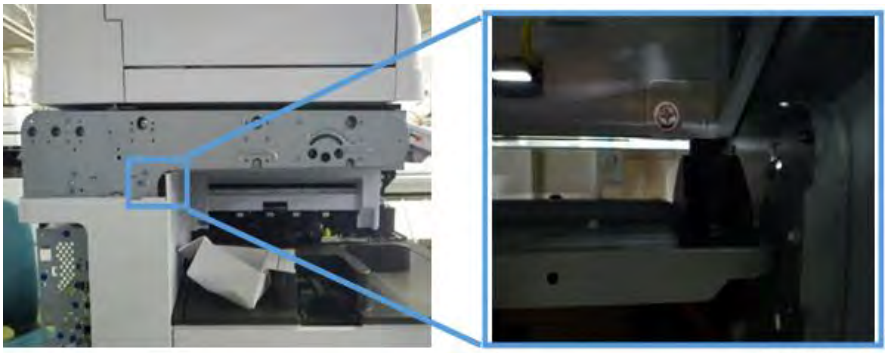
11. Remove the USB cable.



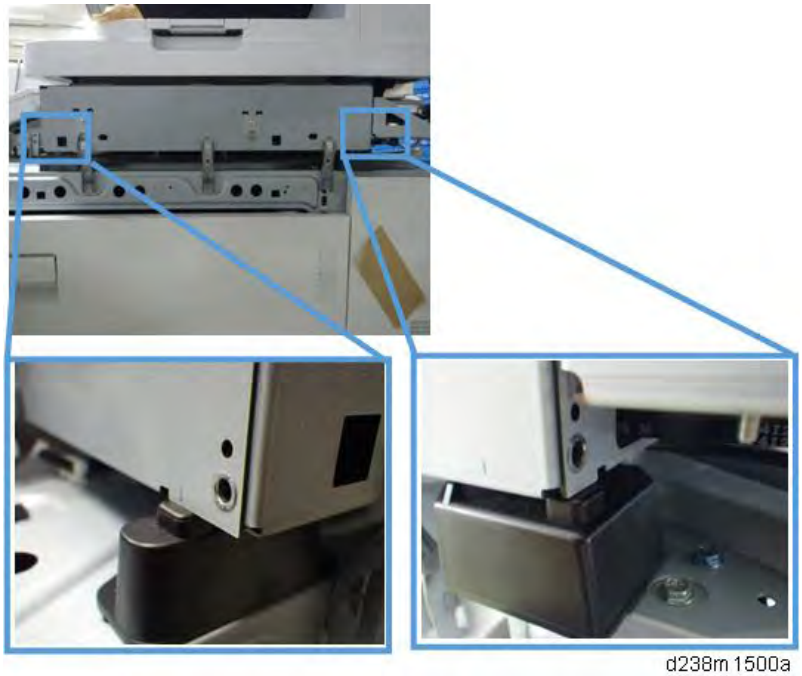
Note

- Make sure that there is no space between the machine frame and the following three areas of the scanner

unit when you re-attach the scanner unit.



d238m1501a



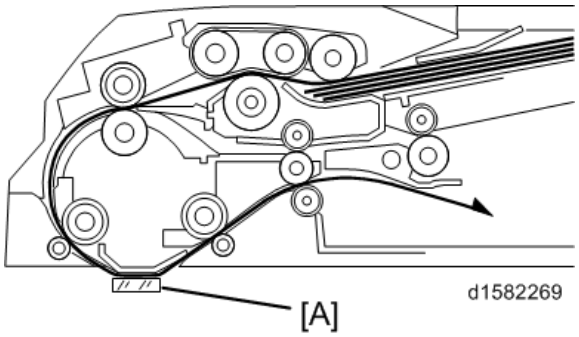
d238m1500a

If the symptom is not resolved, escalate the issue using the normal process, together with the following information for further investigation.

- SC sub code (SC672-10 or 99)
- Date/time of problem occurrence
- Factor(s) that trigger the problem (ex. SC672-11 occurred 3 minutes after tuning ON the main power switch.)
- Occurrence frequency (ex. One out of ten times when turning ON the main power switch)
- Parts replaced
- Date/time when parts were replaced

Marks (Vertical Streaks) on Prints and Copies due to Scanning Problems

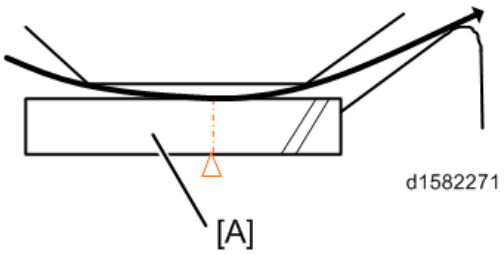
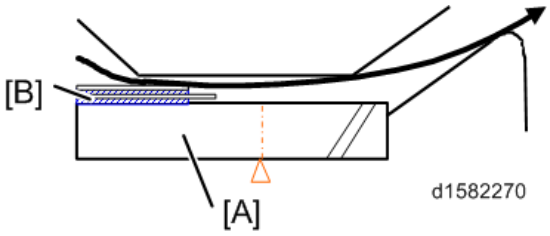
Marks on prints and copies are mostly due to dirt on the DF exposure glass [A], generally caused by adhesive contaminants (such as ball point pen ink and correction fluid).



Compared to non-adhesive contaminants (such as paper fragments and eraser dust), adhesive contaminants are more likely to lead to complaints from customers because of the following:

- Vertical streaks caused by adhesive contaminants are more visible in terms of image quality.
- Unless removed by cleaning, adhesive contaminants continue to produce vertical streaks, while non-adhesive contaminants stop producing streaks after they are dislodged.
- Many adhesive contaminants are difficult to remove by cleaning.

The ARDF DF3090 (D779) features a system (non-contact scanning) to reduce vertical streaks caused by adhesive contaminants.

Contact scanning: Other ADFs/ARDFs	Non-contact scanning: DF3090 (D779)
In contact scanning, the whole of the original comes into contact with the DF exposure glass [A] so that non-adhesive contaminants can be removed. 	By means of the Mylar sheet [B], originals are kept slightly above the DF exposure glass [A], preventing adhesive contaminants from adhering to the glass. 

The ARDF DF3090 (D779) can be converted from non-contact scanning to contact scanning for users who wish to reduce vertical streaks caused by non-adhesive contaminants.

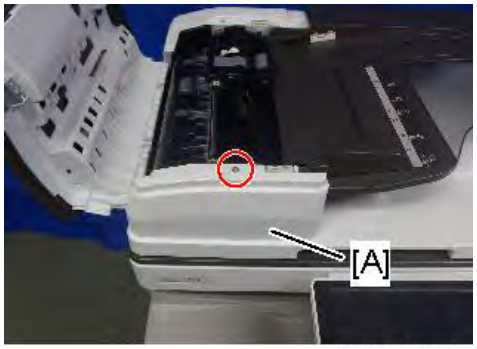
SP No.	Contact scanning	Non-contact scanning
SP4-688-001 (DF Density Adjustment ARDF)	97%	102%

Converting the ARDF DF3090 to Contact Scanning

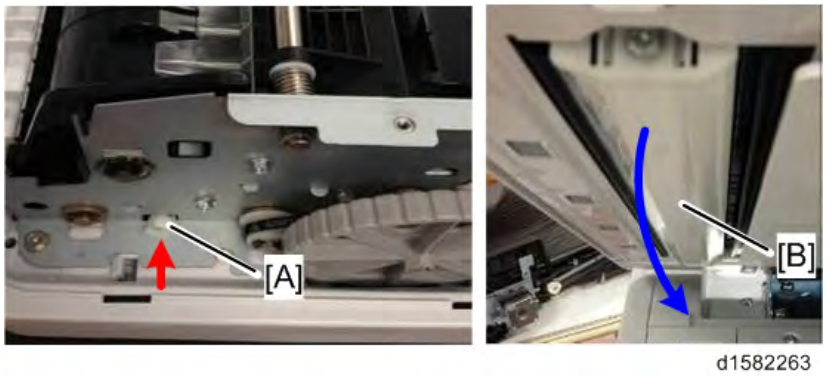
Important

- Turn OFF the main power and unplug the power cord from the wall socket, before starting the following procedure. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

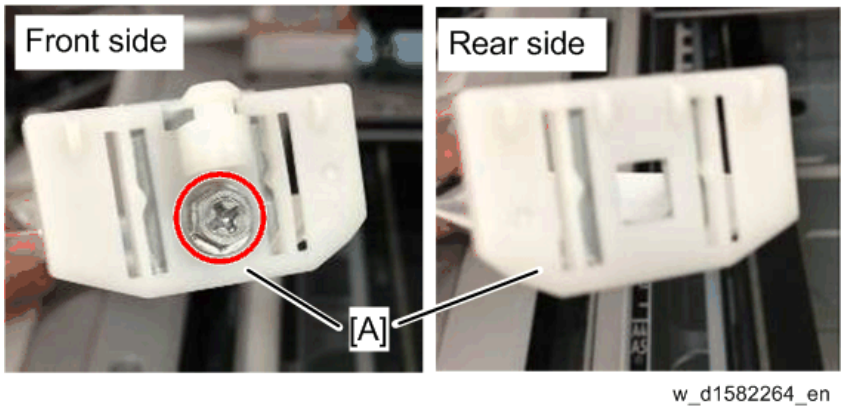
1. Remove the ARDF front cover [A] (x1).



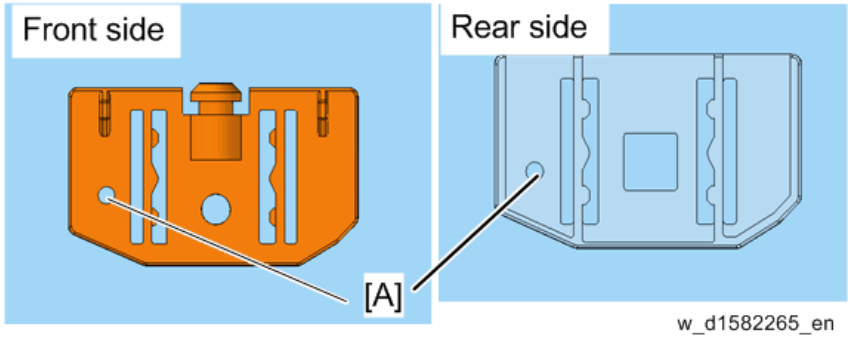
2. Remove the scanning guide plate [B] ([A]x1).



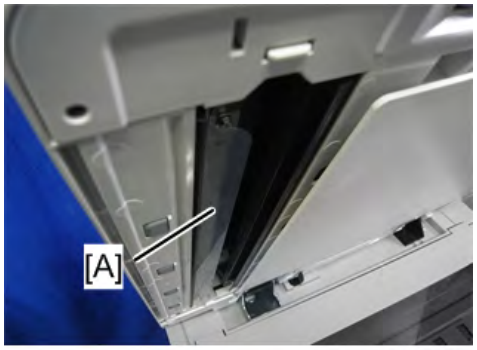
3. Remove the plastic guides [A] on the sides of the scanning guide plate (x1).



4. Attach the guides for contact scanning. Each guide has a hole [A].



5. Mount the scanning guide plate, taking care not to damage the sheet [A].



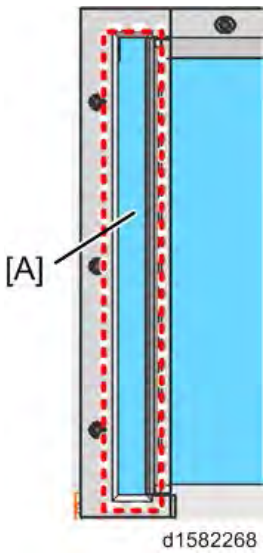
d1582266

6. Peel off the gap sheet [A] from the DF exposure glass with your hands.

d238m0752

7. Clean the DF exposure glass [A] with alcohol.

To avoid paper jams, make sure adhesive is completely removed.



d1582268

8. Turn the main switch on.

9. Start the SP mode.

10. Select SP4-688-001 (DF Density Adjustment ARDF) and change the setting to “97” for contact scanning.

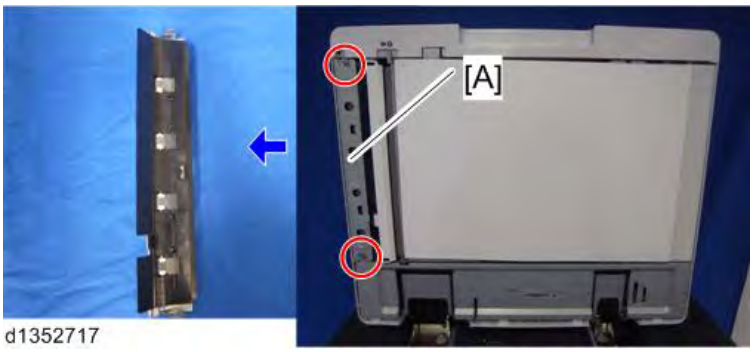
11. Change the DF magnification (SP4-871-003) from [0.11%] to [0.00%].

Note

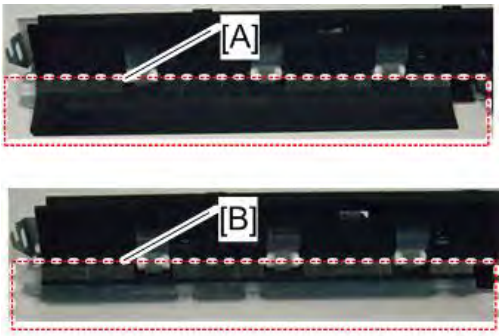
- When returning the setting back to non-contact scanning, return the SP values also.

Converting the SPDF3100 to Contact Scanning

1. Open the SPDF and exchange the entrance lower guide unit [A] to a non-contact type part.



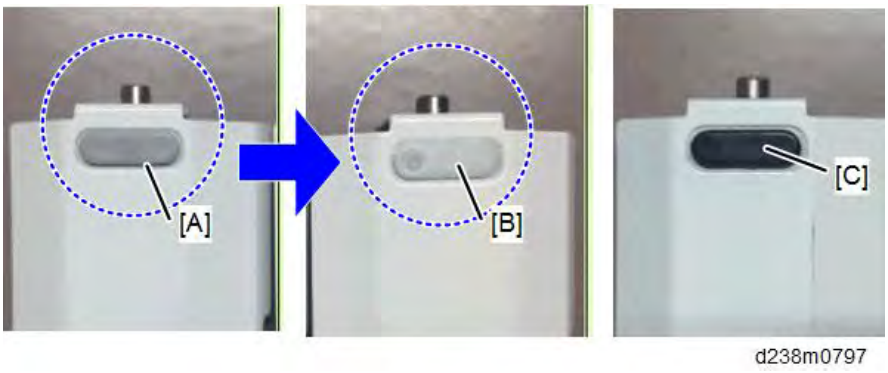
- Entrance lower guide unit for non-contact transport: The following areas are black [A].
- Entrance lower guide unit for contact transport: The following areas are clear and colorless [B].



2. Exchange the scanning guide plate [A] to a non-contact type part (hook x 1).

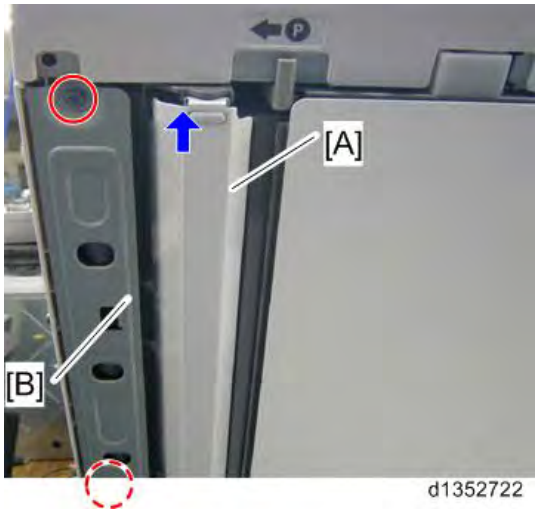
- [A] : The color of the marker of the non-contact type scanning guide plate for this machine is gray.
- [B]: The color of the marker of the contact type scanning guide plate for this machine is white.

- [C]: The color of the marker of the non-contact type scanning guide plate for previous machine is black.



3. Attach the scanning guide plate for contact transport [A] (hook x 1).

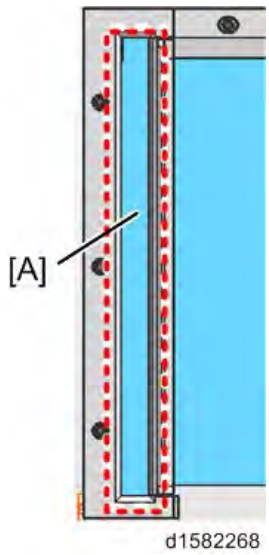
4. Attach the entrance lower guide unit for contact transport [B] (x 2).



5. Peel off the gap sheet [A] from the DF exposure glass with your hands.

6. Clean the DF exposure glass [A] with alcohol.

To avoid paper jams, make sure adhesive is completely removed.



7. Turn the main switch on.
8. Enter the SP mode.
9. Change SP4-688-002 (Scan Image Density Adjustment 1-pass) from “101” to "96".
10. Change the DF magnification (SP4-871-003) from [0.11%] to [0.00%].

Note

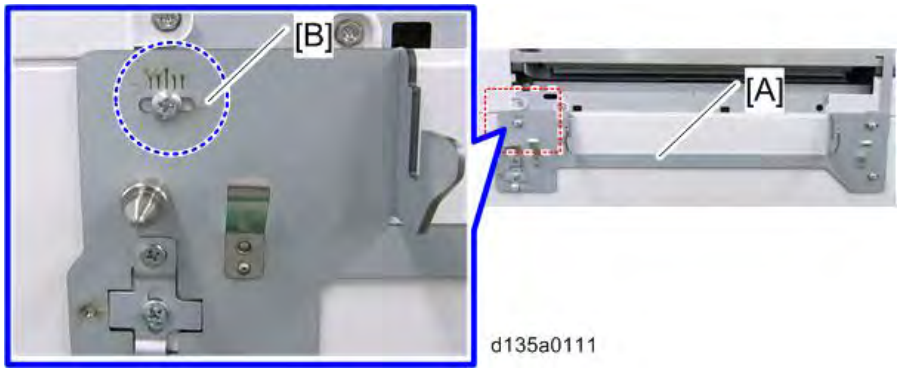
- When returning the setting back to non-contact scanning, return the SP values also.

Finisher Registration Adjustment

A side-to-side registration error can be produced when the paper is being fed from the mainframe to the finisher.

For SR3240/SR3230

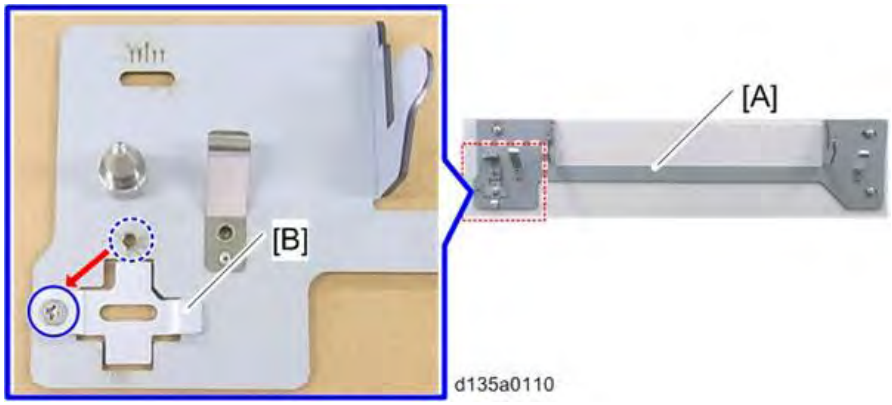
The docking bracket for SR3240/SR3230 [A] (and its screw [B]) can adjust the side-to-side registration.



To adjust the side-to-side registration:

Change the position of the standard bracket [B] by rotating it 90 degrees as shown by the arrow. This makes the docking bracket [A] easier to slide horizontally.

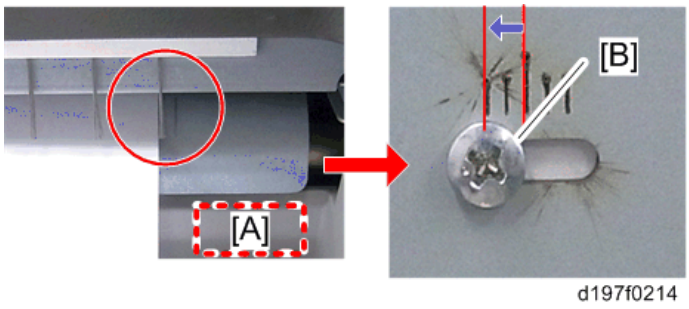
Then reattach the docking bracket [A] to the mainframe.



If the paper shifts toward the front

Slide the docking bracket forward by the amount which corresponds to that of the shift, to move the finisher in the same direction.

e.g.: When paper has shifted by 4 mm from the center toward the front (2 mm/division of the scale), move the docking bracket toward the front by 4 mm (2 divisions).



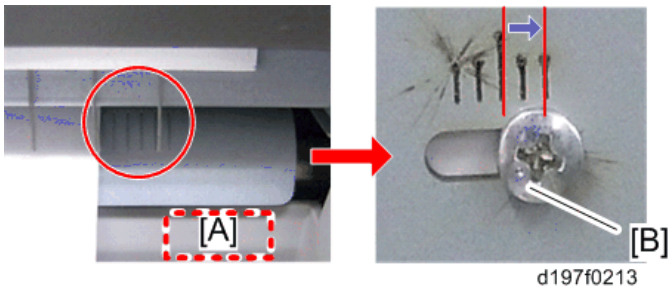
[A]: Proof tray

[B]: Docking Bracket Screw

If the paper shifts toward the rear

Slide the docking bracket backward by the amount which corresponds to that of the shift, to move the finisher in the same direction.

e.g.: When paper has shifted by 4 mm from the center toward the rear (2 mm/division of the scale), move the docking bracket backward by 4 mm (2 divisions).



[A]: Proof tray

[B]: Docking Bracket Screw

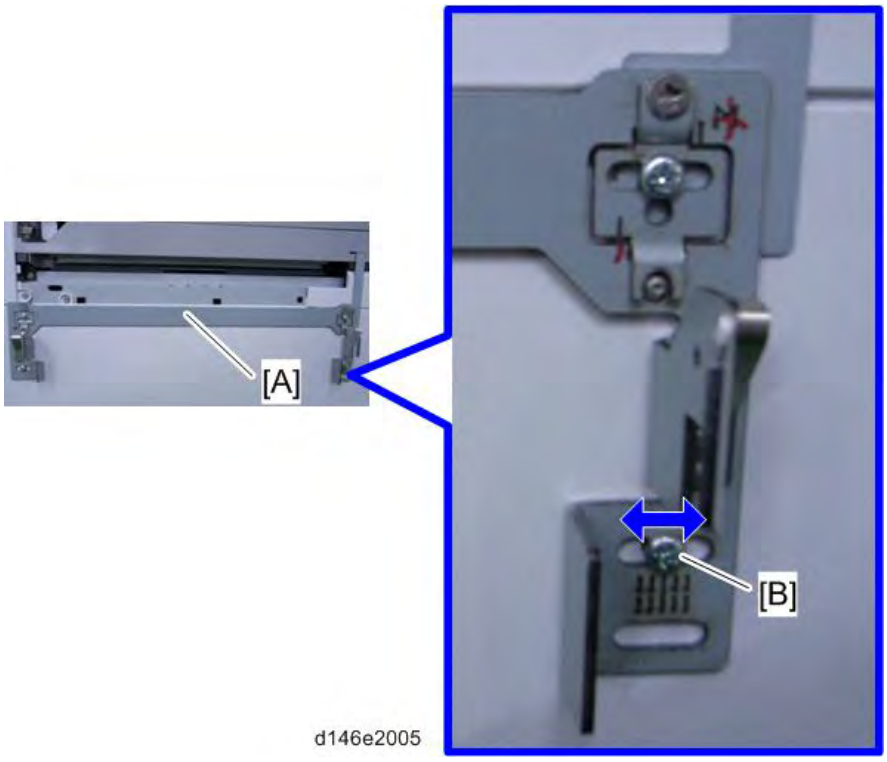
Note

- After the adjustment, check the side-to-side registration by feeding paper out to the proof tray. If the

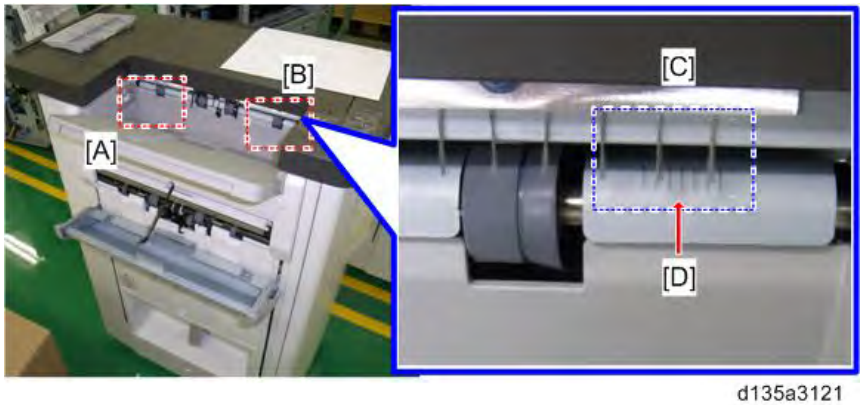
shift has not been solved, adjust the docking bracket (screw for the docking bracket) slightly again.

For SR3220/SR3210

Side-to-side registration can be adjusted by the docking bracket for SR3220/SR3210 [A] (and the docking bracket screw [B]).



1. Eject a sheet of A4(LEF) or A3 paper to the proof tray and check how many divisions of the scale the edge of the paper has shifted from the center.



[A]: Scale marks for DLT

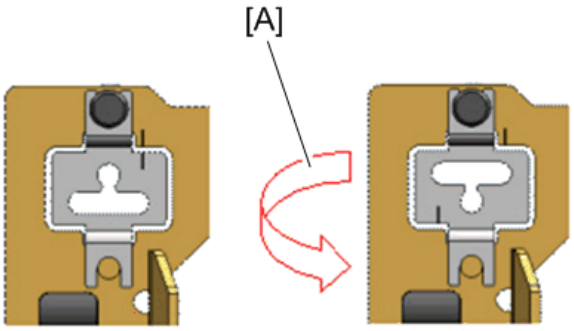
[B]: Scale marks for A3

[C]: 7 scale marks in 2mm intervals

[D]: Center mark

2. Change the position of the standard bracket by rotating it 180 degrees as shown below. This makes the

docking bracket easier to slide horizontally. Then reattach the docking bracket to the mainframe.



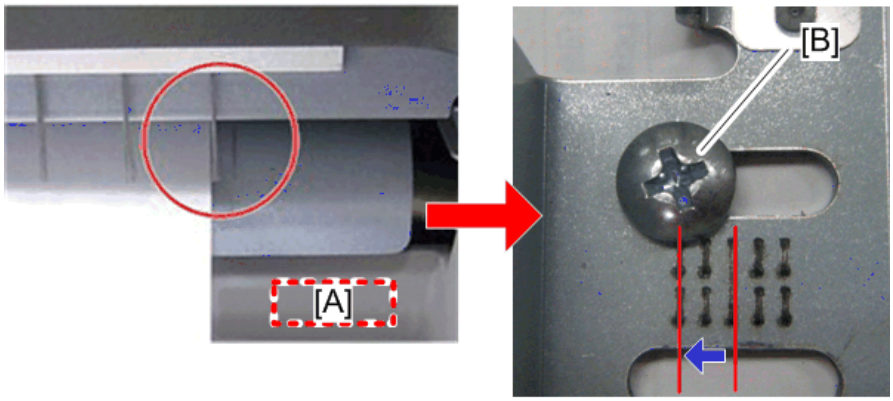
d197f0210

[A]: Reverse

If paper shifts toward the front

Slide the docking bracket backward by the amount which corresponds to that of the shift, in order to move the finisher in the same direction.

e.g.: When paper has shifted by 4 mm from the center toward the rear (2 mm/division of the scale), move the docking bracket backward by 4 mm (2 divisions).



d197f0211

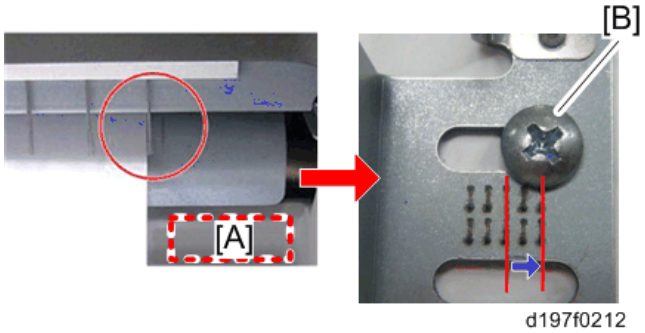
[A]: Proof Tray

[B]: Docking Bracket Screw

If paper shifts toward the rear

Slide the docking bracket backward by the amount which corresponds to that of the shift, in order to move the finisher in the same direction.

e.g.: When paper has shifted by 4mm from the center toward the rear (2 mm/division of the scale), move the docking bracket backward by 4 mm (2 divisions).



[A]: Proof Tray

[B]: Docking Bracket Screw

Note

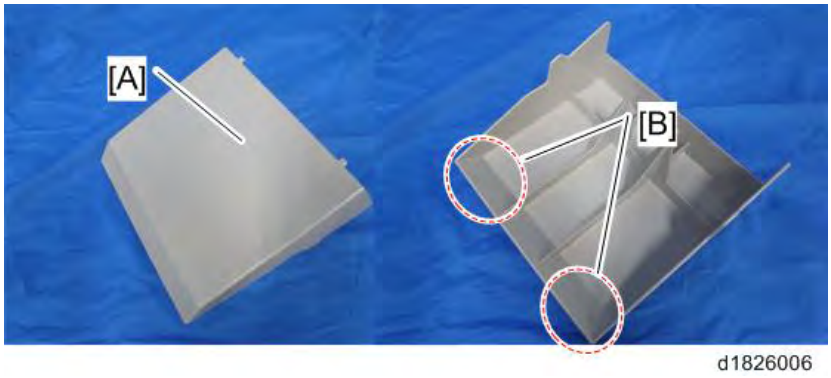
- After the adjustment, check the side-to-side registration by feeding paper out to the proof tray. If the shift has not been solved, adjust the docking bracket (screw for the docking bracket) slightly again.

Stacking Problem at the 1000-sheet Finisher

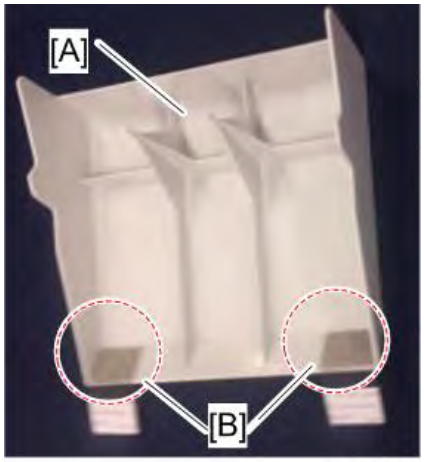
Stacking problems may occur due to paper curl depending on the paper type / size. In this case, it is possible to avoid the problem by attaching the auxiliary tray.

Installation procedure for attaching the sheet

1. Clean the back [B] of the auxiliary tray [A] with alcohol



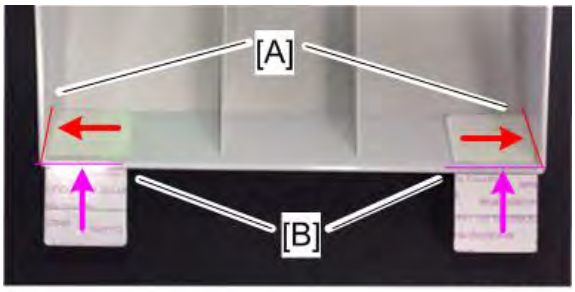
2. Attach the fixing sheets [B] to the auxiliary tray [A].



d1826001

Note

- Place the sheets on the outer ends [A] of the auxiliary tray and hook the bent portion [B] at the edge of the tray.



d1826002

Installation procedure for attaching the auxiliary tray to the 1000-sheet finisher

1. Turn on the machine.

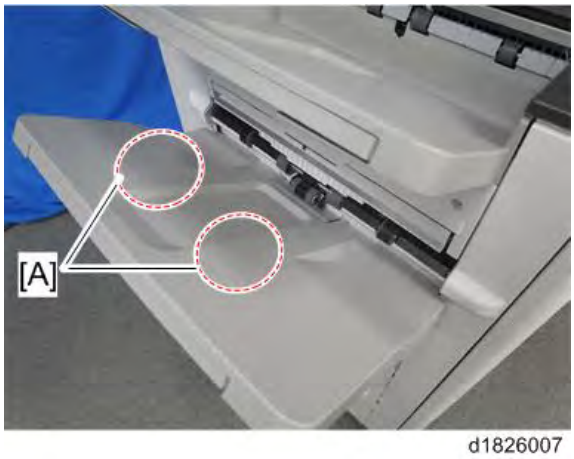
2. Manually lift the paper surface detection feeler [A] to keep the sensor “ON”.
Keep lifting the feeler until step 4.

d1826003

3. Open and close the upper cover [A] or the front cover [B]. The shift tray [C] starts to descend.

4. "JAM227" is displayed about 3 seconds later. The shift tray descent is stopped. Release your hand from the feeler.

5. Clean the place [A] to attach the fixing sheet with alcohol.



6. Place the auxiliary tray [A] on the shift tray.

7. Attach the fixing sheet [B] on the shift tray and fasten the auxiliary tray.

8. Open and close the front cover or the upper cover. The shift tray starts to rise [C], and ”JAM227” is cleared.

Finisher Jogger Problem

Finisher Jogger Problem (For Booklet Finisher SR3220 (D3B9) / Finisher SR3210 (D3B8))

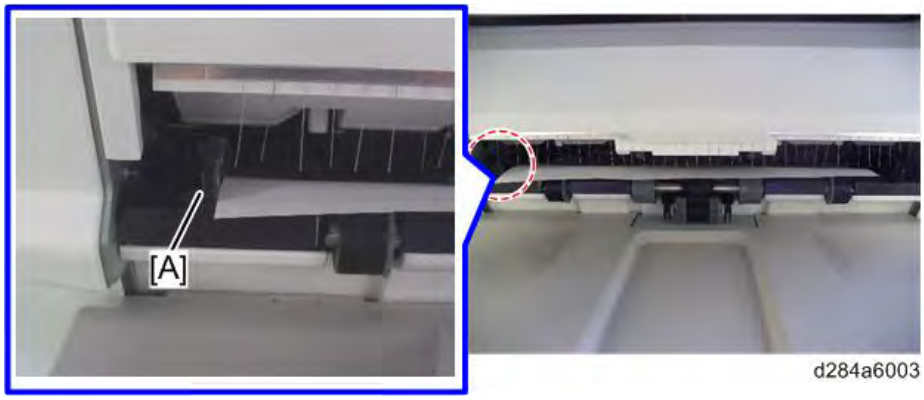
Note

- Check the jogger width in the exposure glass reading mode.

- If a paper alignment problem occurs as below, do the following procedure to adjust the jogger width.

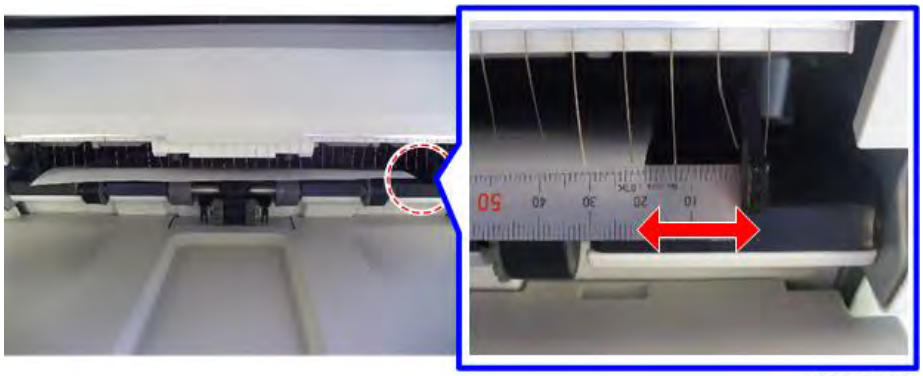
d146z0091

1. Place an A4 original (SEF) on the exposure glass.
2. Select [Staple] on the operation panel (you can select any staple location: top or bottom.)
3. Press [Start].
4. A copy is put out on the staple tray. Put the copy next to the bottom jogger [A].



d284a6003

5. Measure the distance between the aligning side of the top jogger and the edge of the copy with a scale.



d284a6004

6. Press the [#] button.
7. Adjust the jogger width with SP6-143-004 (adjustable threshold: -1.5 to +1.5 mm for each paper size).

   SP6-143-004 (Jogger Pos Adj:1K FIN)

   Note

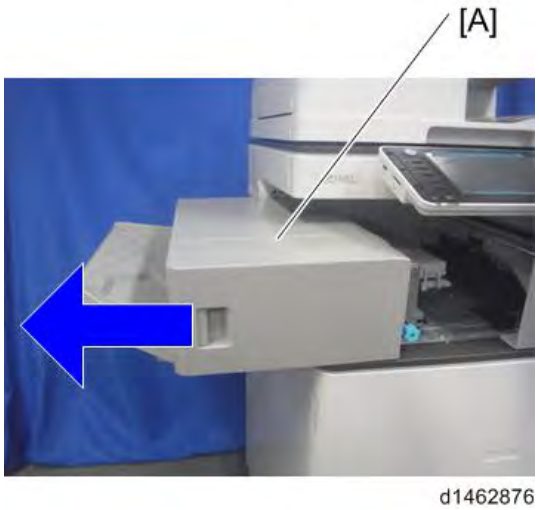
   - Adjust the jogger width to be slightly narrower (approximately -0.5 mm) than the paper width.
8. Repeat step 3 through step 6 to make the jogger width same as the paper width.

Early Paper Tray Full Detection Mylar for Internal Finisher SR3130 (D690)

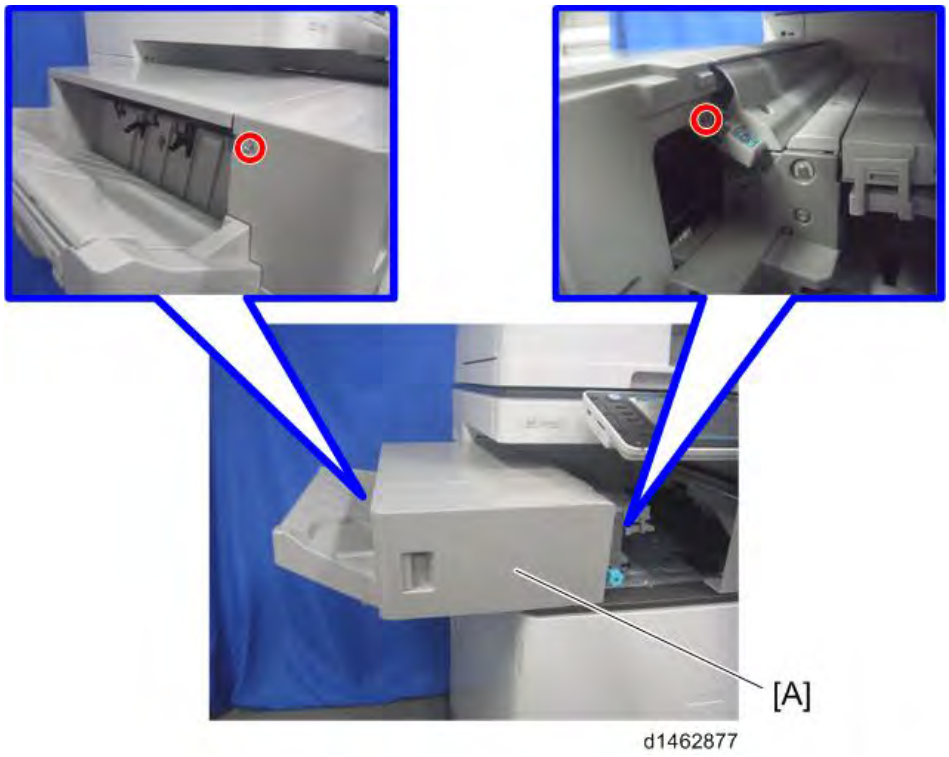
Paper curl may occur when the output tray is nearly full. Attach the mylar to the tray full detection feeler to detect tray full early before paper curl occurs.

Attaching the Mylar

1. Pull the finisher [A].

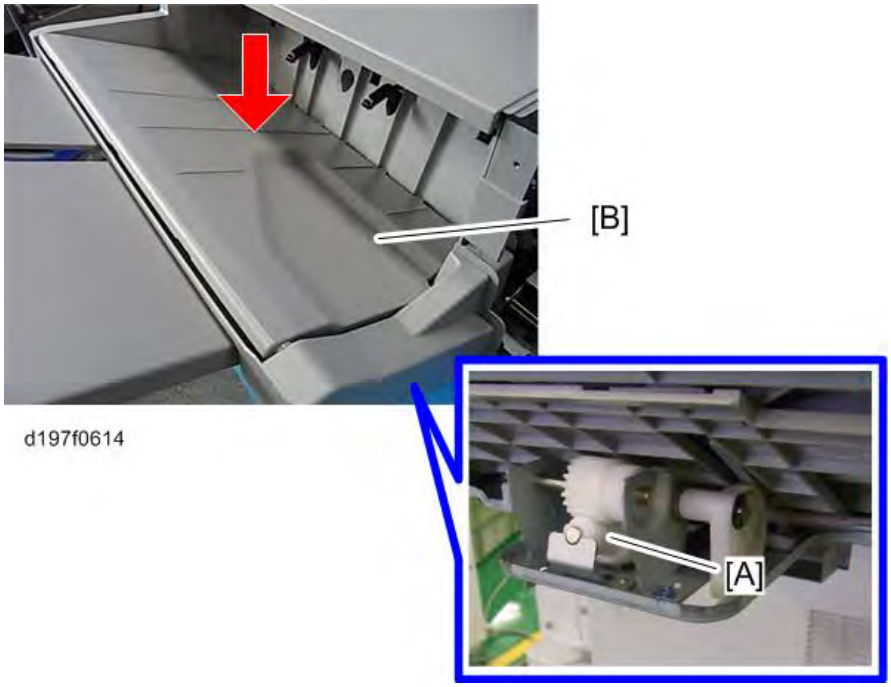


2. Remove the finisher front cover [A]. (x2)

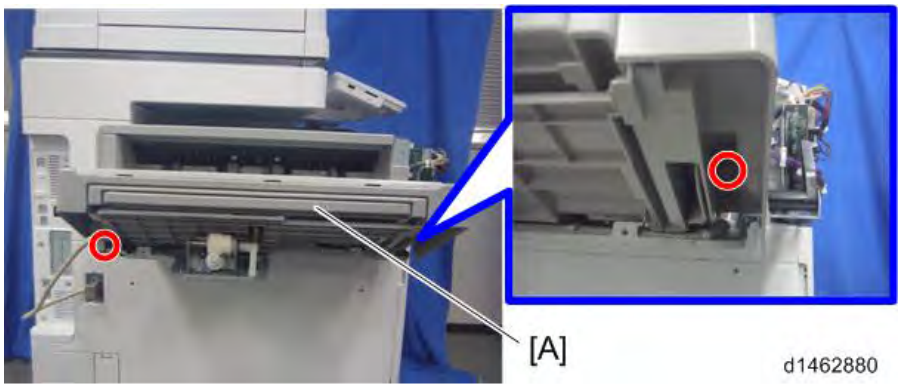


3. Remove the left lower cover [A]. (x2)

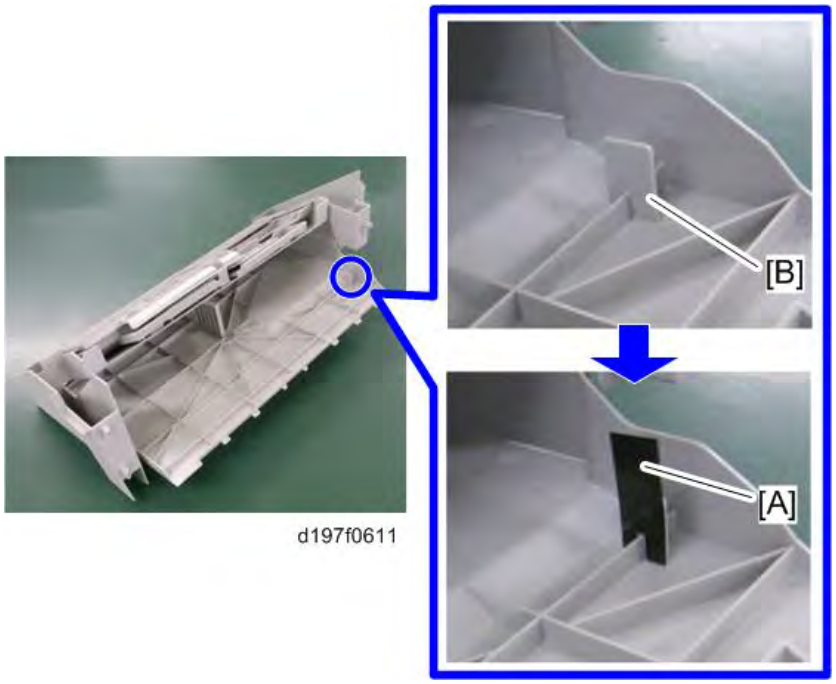
4. Rotate the gear [A] to move down the movable tray [B].



5. Remove the paper exit tray [A]. (x2)

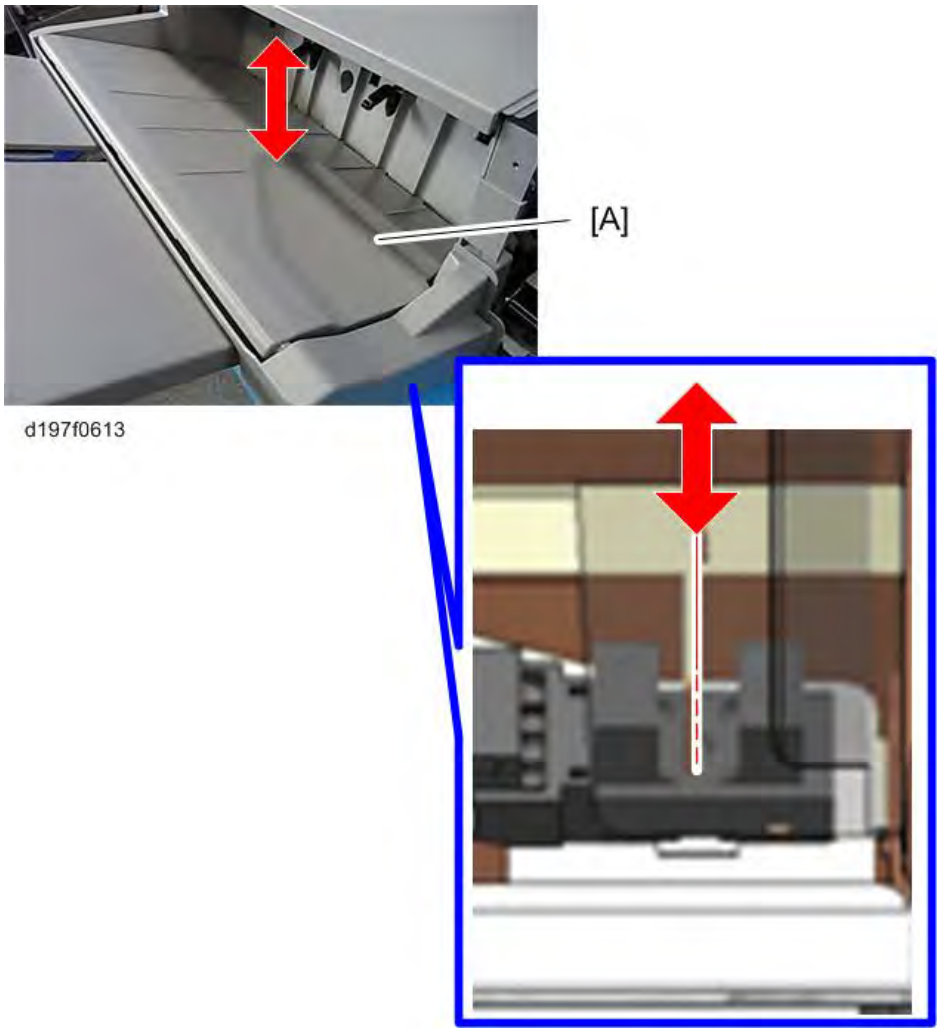


6. Attach the mylar [A] on the tray full detection feeler [B].



7. Re-attach the paper exit tray. (x2)

8. Move the movable tray [A] up and down to check that the mylar does go through the sensor properly.



d197f0613

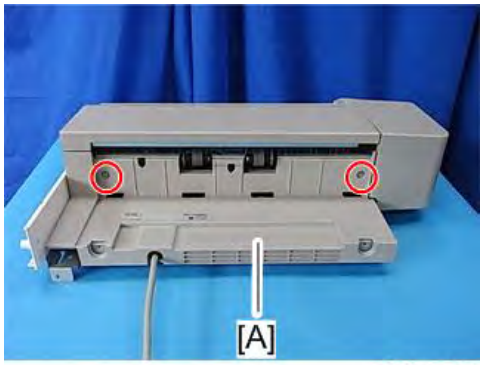
9. Re-attach the left lower cover. (x2)

10. Re-attach the finisher front cover. (x2)

Paper Curl Problem for SR3180

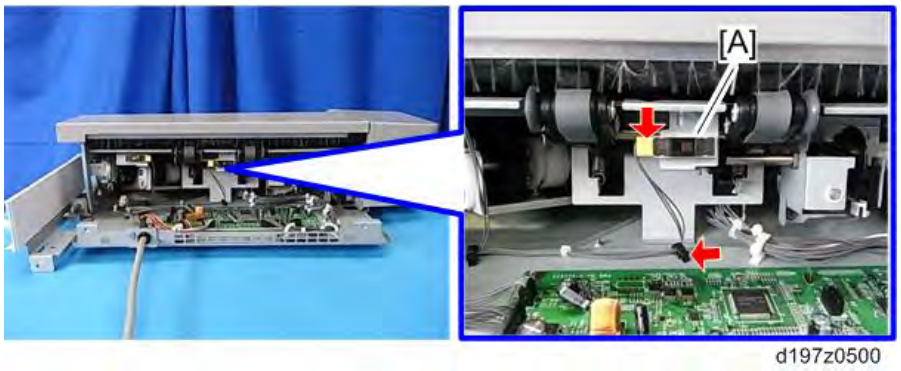
When using mixed mode, with duplex (curls downwards) over simplex (curl upwards) and paper curl occurs, attach the auxiliary tray (D7667010), disable the tray full detection sensor, and paste the mylar.

1. Paper output cover [A] (×2)



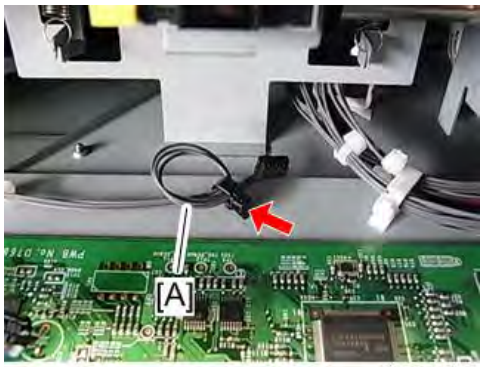
d197z0499

2. Release the clamp and disconnect the harness of the paper exit full sensor 1 [A] (x1,x1).



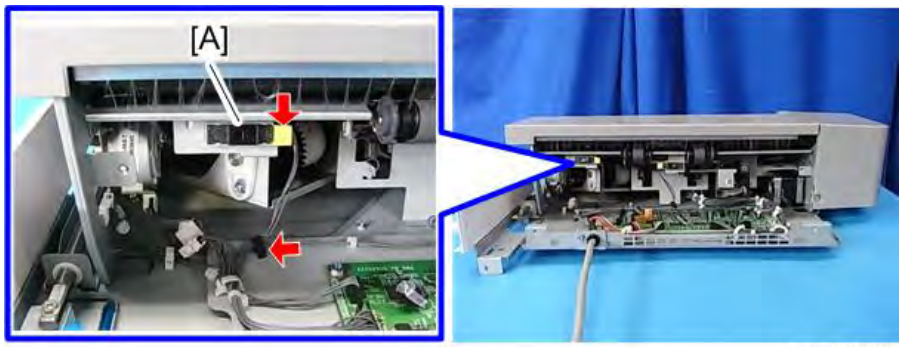
d197z0500

3. Loop and clamp the harness [A] as shown (x1).



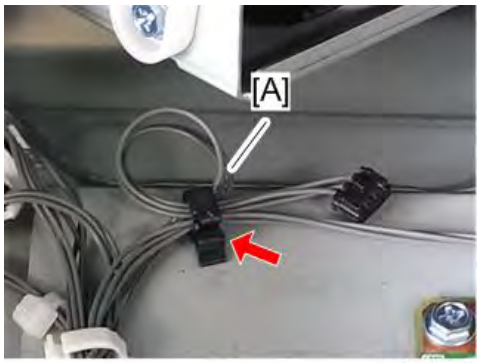
d197z0501

4. Release the clamp and disconnect the harness of the paper exit full sensor 2 (Staple) [A] (x1,x1).



d197z0502

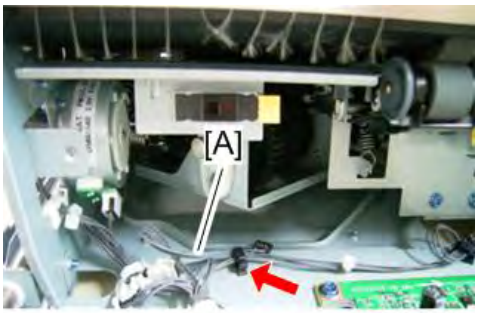
5. Loop and clamp the harness [A] as shown(x1).



d197z0503

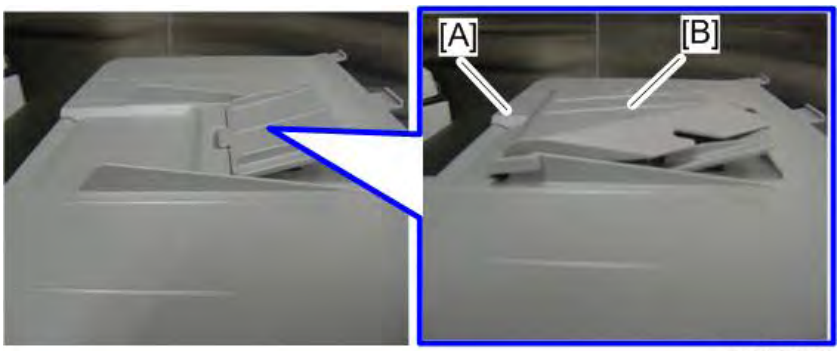
Note

- If the harness cable [A] is too short to loop, clamp the harness without looping (x1).



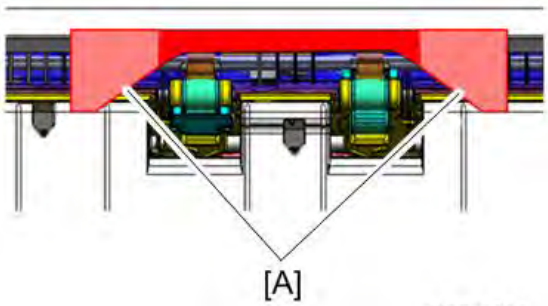
d197z0504

6. Re-attach the paper output cover (×2)
7. Attach the auxiliary tray (D7667010) [B] to the paper output tray [A]



d197z0505

8. Paste the mylars [A] on the frame of the finisher.



d197z0506

Maximum number of sheets for stapling and what happens when the job has too many pages

Behavior: When the number of sheets exceeds the maximum staple capability

When corner stapling

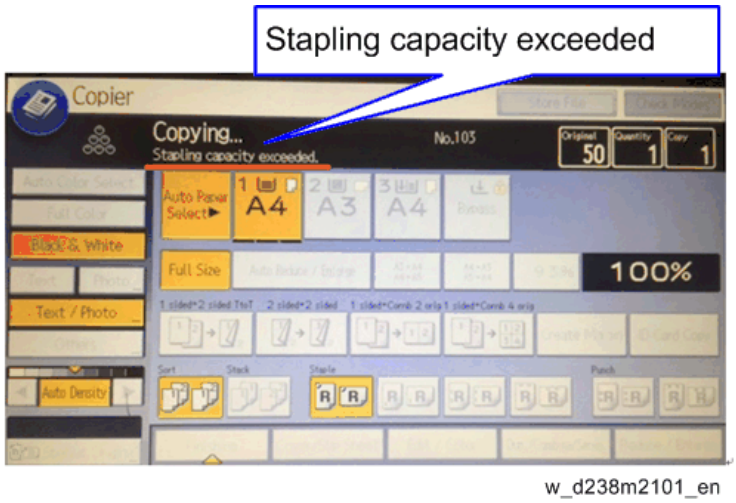
Sheets are fed out without being stapled. First, the maximum number of sheets (50) is stacked in the staple tray and fed out. Following this, any remaining sheets that exceed this maximum are also stacked and fed out without being stapled, in the same way.

Example:

If 60 sheets are set to be stapled, the first 50 are stacked in the staple tray and then fed out without being stapled. The remaining 10 are then stacked in the tray and fed out without being stapled.

When the maximum number of originals for a stapled set has been scanned, "Stapling capacity exceeded" is

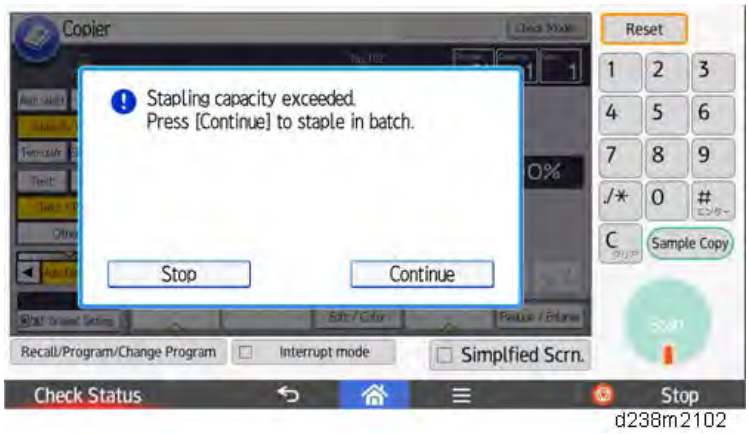
displayed on the LCD.



There is no message displayed prompting the user to cancel or continue with the 51st original.

When booklet stapling

The following dialog is displayed when the maximum number of sheets in a stapled set is reached during the scanning of the originals. The user is prompted before printing begins.



[Stop] The job is canceled (no further scanning, no printing)

[Continue] Sets are stapled at maximum capacity as a batch and fed out.

Example:

The machine stops scanning after 20 out of 30 originals are scanned.

The message shown above is displayed.

If [Continue] is selected, printing starts and sheets are stapled in a batch of one 20-sheet set and one 10-sheet set.

Specifications: Maximum sheet capability for staple jobs

Model	Corner Stapling	Booklet Stapling
Finisher SR3210	50 sheets	-
Booklet Finisher SR3220	50 sheets	15 sheets
Booklet Finisher SR3240	50 sheets	20 sheets

Model	Corner Stapling	Booklet Stapling
Finisher SR3230	50 sheets	-
Internal Finisher SR3130	50 sheets	-

Fusing Offset Occurs at the Edge or Center of the Paper

Symptom:

Fusing offset occurs at the edge or center of the paper.

Note

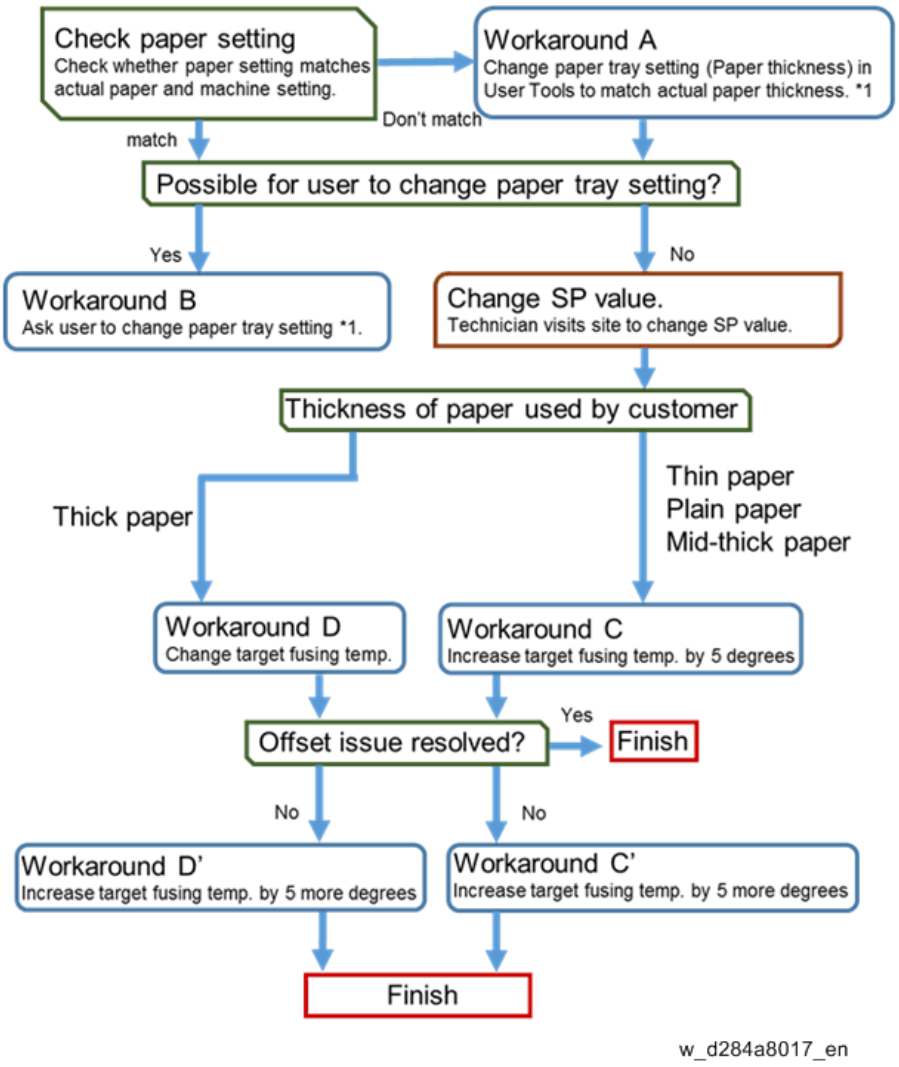
The customer may report a strange odor coming from the machine.

Cause:

The temperature is too low at the edge or center of the paper when the paper enters the fusing unit.

Solution:

If the symptom occurs, do the procedure in the Flowchart below.



w_d284a8017_en

Workaround A:

Change the paper tray setting (paper thickness setting) in User Tools to match the actual paper thickness.

*1: User Tools > Tray paper setting > page 2 > Select tray > Select paper thickness

Workaround B:

Change the paper tray setting in User Tools.

Note

- There is no workaround for Thick Paper 4.

Thin paper -> Plain paper

Plain paper -> Mid thick (For MP 5055/6055 models, Plain paper -> Thick paper 1)

Note

- The copy speed will be reduced from 60cpm to 50cpm on the MP 6055 model.

Mid thick -> Thick paper 1

Note

- The copy speed will be reduced (See the chart below).

Thick paper 1 -> Thick paper 2

Note

- The copy speed will be reduced (See the chart below).

Thick paper 2 -> Thick paper 3

Thick paper 3 -> Thick paper 4

Note

- Auto duplex cannot be used (See the chart below).

Postcards: Thick paper 2 -> Thick paper 3

Side effects: The following may occur, depending on the paper thickness.

- Paper curl
- Decreased productivity

Workaround C:

Increase the target fusing temperature by 5 degrees using the following SPs:

- SP 1-105-003
- SP 1-105-007
- SP 1-105-011
- SP 1-105-015

If the symptom occurs with 1200 dpi printing, also increase the target temperature by 5 degrees for these SPs as well:

- SP 1-105-107
- SP 1-105-137
- SP 1-105-111

Side effects: Paper curl may occur.

Workaround D:

Change the target temperature using the following SPs as shown below.

- SP 1- 105-019: 145 deg -> 150 deg
- SP 1- 105-023: 130 deg -> 140 deg
- SP 1- 105-027: 135 deg -> 140 deg
- SP 1- 105-141: 140 deg -> 145 deg
- SP 1- 105-115: 120 deg -> 125 deg (For 1200 dpi mode)

Side effects: Paper curl may occur.

Workaround C':

Increase the target fusing temperature by 5 more degrees using the following SPs:

- SP 1-105-003
- SP 1-105-007
- SP 1-105-011
- SP 1-105-015

For 1200 dpi printing:

- SP 1-105-107
- SP 1-105-137
- SP 1-105-111

Side effects: Paper curl may occur.

Workaround D':

Increase the target fusing temperature by 5 more degrees using the following SPs:

- SP 1- 105-019: 145 deg -> 150 deg -> 155 deg
- SP 1- 105-023: 130 deg -> 140 deg -> 145 deg
- SP 1- 105-027: 135 deg -> 140 deg -> 145 deg
- SP 1- 105-141: 140 deg -> 145 deg -> 150 deg
- SP 1- 105-115: 120 deg -> 125 deg -> 130 deg (For 1200 dpi mode)

Side effects: Paper curl may occur.

CPM information

	MP2555	MP3055	MP3555	MP4055	MP5055	MP6055
Plain paper	25	30	35	40	50	60
Mid-thick	25	30	35	40	50	50
Thick paper 1	25	28	28	30	30	30
Thick paper 2	18	18	18	18	18	18
Thick paper 3	18	18	18	18	18	18
Thick paper 4	18	18	18	18	18	18

Troubleshooting for Toner Density

Symptom:

The image density decreases with continuous printing, especially in solid image areas (though it is within specification).

Note

- This does not occur in text areas.

Cause:

This may occur due to the condition of the developer, and also occurs more easily when repeat prints are made from the same original.

Solution:

Change the following SP modes as shown.

- SP3-629-001 (Vc Vsp): Set to 530
- SP3-629-101 (Vb Vsp): Set to 330

Note

- This will increase the amount of toner used to develop the image.
- As a side effect, this will shorten the yield of the toner bottle.

Troubleshooting for Blots on Middle Thick Glossy or Coated Paper

Symptom:

Printed images contain blots when using middle thick (or thick) glossy or coated paper.

Note

- This may occur when paper weight is 82 g/m^2 or more and its smoothness is 100(S) or more.

Cause:

Glossy or coated paper contacts the PCU more closely than plain paper, and using middle thick or thick paper increases the transfer pressure.
So more dust or blots on the PCU may be transferred to the paper than usual.
These may result in more blots appearing on printouts.

Solution:

1. Change the following SP modes as shown.
   SP3-629-001 (Vc Vsp): Set to 630 (If the symptom still occurs, set to 680)
   SP3-629-101 (Vb Vsp): Set to 430 (If the symptom still occurs, set to 480)

2. Enter SP3-011-001 (Manual ProCon :Exe), and then press [Execute].
   Note
   Depending on the environment, the printout toner density may decrease.

Blown Fuse Condition

Fuse: EU

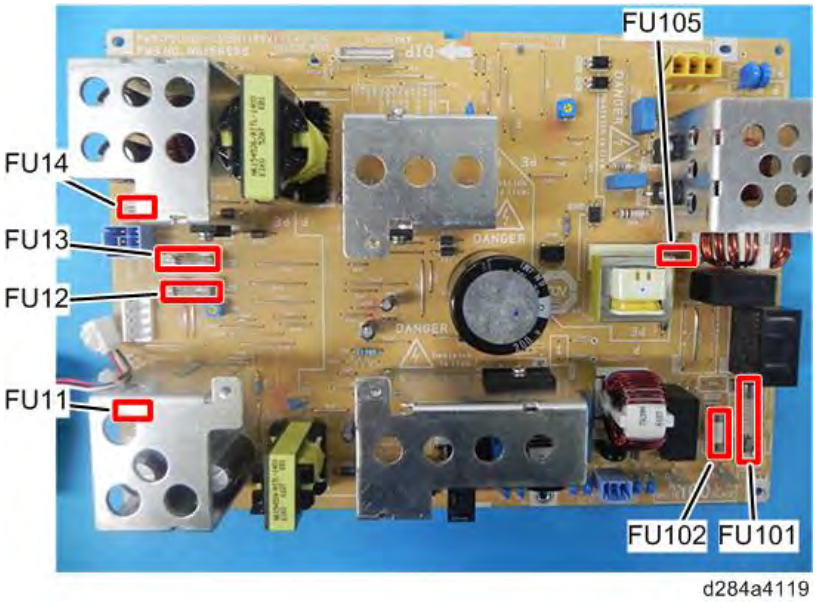
Name	Output connector	Capacity	Part number	Field replacement possible
		Voltage	Part name	Remarks
FU101	CN902 (Fusing Lamp)	8A	11071346	Yes
		AC	FIH250V8A (EM/CR)	-
FU102	CN904 (DHB)	5A	11071344	Yes
		AC	FIH 250V 5A(TP/CR)	-
FU105	CN913-5, 12 (Zero cross circuit / DH Heater)	2A	-	No
		AC	SCT250V2A	-
FU11	CN911-3 (IPU)	5A	-	No
		5V	SLT250V5A	-
FU12	CN912-5, 6 (SIO)	10A	11071216	Yes
		24V	FBT250V10A (EM)	-
FU13	CN912-7 (BCU)	10A	11071216	Yes
		24V	FBT250V10A (EM)	-
FU14	CN912-8 (BCU)	10A	11071216	Yes
		24V	FBT250V10A (EM)	-

Fuse: NA

Name	Output connector	Capacity	Part number	Field replacement possible
		Voltage	Part name	Remarks
FU101	CN902 (Fusing Lamp)	15A	11071241	Yes
		AC	TLC-15A-N4	-
FU102	CN904 (DHB)	10A	11071347	Yes
		AC	FIH 250V 10A(EM/CR)	-
FU105	CN913-5, 12 (Zero cross circuit / DH heater)	2A	-	No
		AC	SLT250V2A	-
FU11	CN911-3 (IPU)	5A	-	No
		5V	SLT250V5A	-
FU12	CN912-5, 6 (SIO)	10A	11071216	Yes
		24V	FBT250V10A (EM)	-
FU13	CN912-7 (BCU)	10A	11071216	Yes

Name	Output connector	Capacity	Part number	Field replacement possible
		Voltage	Part name	Remarks
		24V	FBT250V10A (EM)	-
FU14	CN912-8 (BCU)	10A	11071216	Yes
		24V	FBT250V10A (EM)	-

Fuse Location



7. Detailed Descriptions

Guidance for Those Who are Familiar with Predecessor Products

Changes from the Previous Machine

The difference between this model and the previous (MP 2554/3054/3554/4054/5054/6054) models are as follows:

Scanner

Items	MP 2554/3054/3554/4054/5054/6054	MP 2555/3055/3555/4055/5055/6055
Scanner type	-	Short focus scanner, for distortion correction: After replacing the scanner carriage, the correction value specified on the supplied sheet in the SP code must be entered. For details, see Scanner Carriage.
Main scanning magnification adjustment	Not available	Magnification adjustment is available for the main scanning direction with SP4-871-003, -004.
Scanner shipping retainers	-	Provided
Oiling to guide rails	Launa oil	Grease
Scanner drive	With wire drive	With belt drive
Paper size detection (main scanning direction, width)	Reading all lamps	Reading half lamps in the front side
Paper size detection (sub scanning direction, length)	Put one reflecting sensor in a vertical direction.	Put one reflecting sensor in a horizontal direction.
Option heater	Attach the heater at an angle in the center of the bottom plate.	Attach the heater horizontally in the left rear of the bottom plate.

Image Processing

Items	MP 2554/3054/3554/4054/5054/6054	MP 2555/3055/3555/4055/5055/6055
SIO	Available	Not available The functions of this old board are built into the IPU.
IPU SUB	Available	Not available The functions of this old board are built into the IPU.
Copy Data Security Function	Available by option	Available by default on the IPU

Toner Supply

Items	MP 2554/3054/3554/4054/5054/6054	MP 2555/3055/3555/4055/5055/6055
Resetting the Toner End Counter	The toner end sensor detects “toner remaining” **once**.	To prevent clearing of the toner end condition due to erroneous detection, the counter is reset if the toner end sensor detects “toner remaining” **4 times** in a row.
Toner end sensor’s operation timing	When the development motor is “on”.	When the polygon motor is “on”.

Feed / Transport Part

Items	MP 2554/3054/3554/4054/5054/6054	MP 2555/3055/3555/4055/5055/6055
Bypass tray / Main machine jam code	-	The following codes are used to isolate the cause; • JAM048: Transport Sensor Lag Jam from Bypass Tray • JAM051: Transport Sensor Lag Jam from 1st Feed Tray
Main tray paper exit	-	• Improved stacking performance after feedout by adding resilience to the paper with the paper exit driven roller (drum shape). • To prevent paper jam when the paper is delivered from the machine’s paper exit to the internal exit peripherals, attach the paper support guide (supplied with the peripherals). • Replaced the paper exit driven roller to a flat type

Items	MP 2554/3054/3554/4054/5054/6054	MP 2555/3055/3555/4055/5055/6055
		roller to prevent jamming when paper is fed to the internal exit peripherals.
Paper feed transport mechanism	The solenoid removes the pick-up roller from the paper.	Not available

Electrical parts

Items	MP 2554/3054/3554/4054/5054/6054	MP 2555/3055/3555/4055/5055/6055
SIO	Available	Not available The functions for this old board are included on the IPU
OPU	1st generation Smart Operation Panel	2nd generation Smart Operation Panel
FFC	With hooks	Without hooks

Exterior Cover/Air Flows (Fan Control)

Items	MP 2554/3054/3554/4054/5054/6054	MP 2555/3055/3555/4055/5055/6055
Rear Covers, Screws	5 covers, 20 screws (upper part:4 covers, 15 screws) (lower part: 1 cover, 5 screws)	2 covers, 12 screws (upper part: 1 cover, 7 screws) (lower part: 1 cover, 5 screws)
Main Power Switch	Main power switch cover (front side)	Right side of the 1st paper tray
Labyrinth Structure of the Exterior	-	Available
Fusing Fan	1	2 (MP 4055 SP/5055 SP/6055 SP)
Odor Filter	1	2 (MP 4055 SP/5055 SP/6055 SP)
Particulate Filter	Not available	Available (MP 4055 SP/5055 SP/6055 SP)

Others, Options

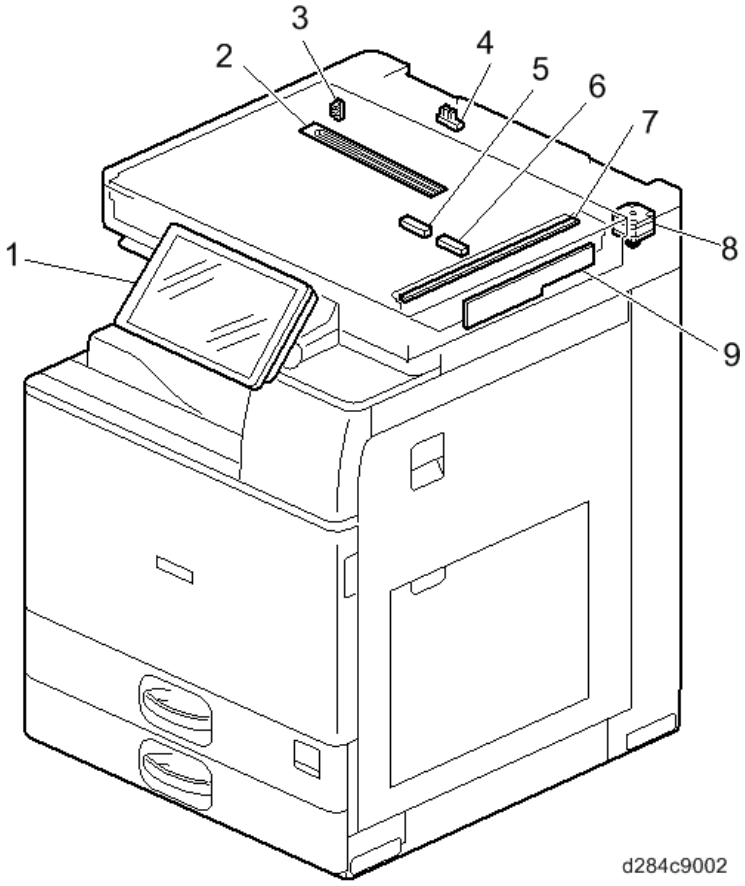
Items	MP 2554/3054/3554/4054/5054/6054	MP 2555/3055/3555/4055/5055/6055
Finisher paper exit guide mechanism	-	Available
Ten key options	-	Available
Inner Finisher SR3180	-	Available
Paper feed accuracy	-	Productivity Mode/Silent Mode (the UP selection is available)

Items	MP 2554/3054/3554/4054/5054/6054	MP 2555/3055/3555/4055/5055/6055
Starting up the machine with all options	-	15 seconds starting up (the UP selection is available)
Replacing a paper exit roller on the main unit side when installing internal paper exit options	-	Replace to the flat roller and attach the paper support guide according to the options.
NFC card R/W options	-	Available
Noise Control	-	Equipped with the sound absorbing material and the sound insulation sheet.

Overview

Parts Layout

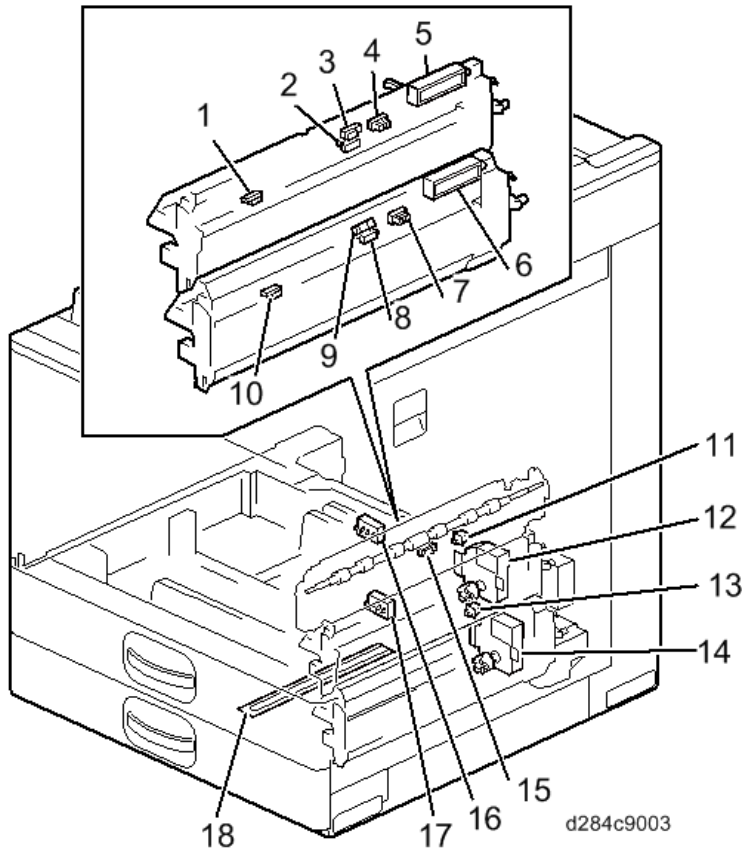
Scanner Unit



No.	Description	No.	Description
1	Operation panel	6	Auto Paper Size (APS) sensor
2	Anti-condensation heater (Scanner heater)*1	7	Scanner lamp unit (LEDB)
3	Scanner HP sensor	8	Scanner motor
4	DF Position Sensor	9	Sensor Board Unit (SBU)
5	Auto Paper Size (APS) sensor		

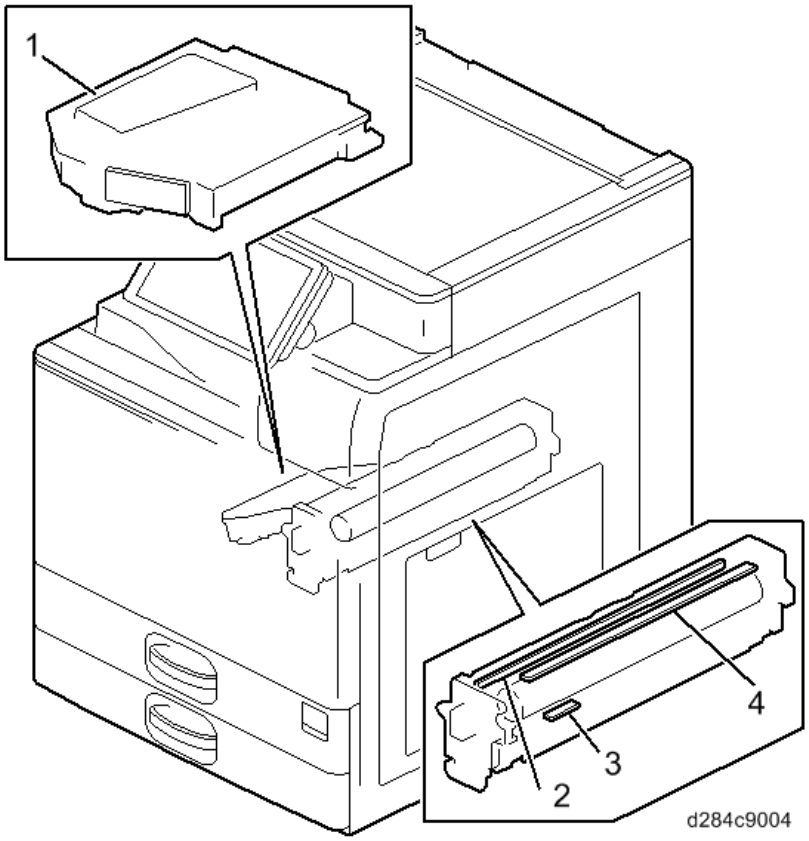
*1: Service part

Paper Feed Unit



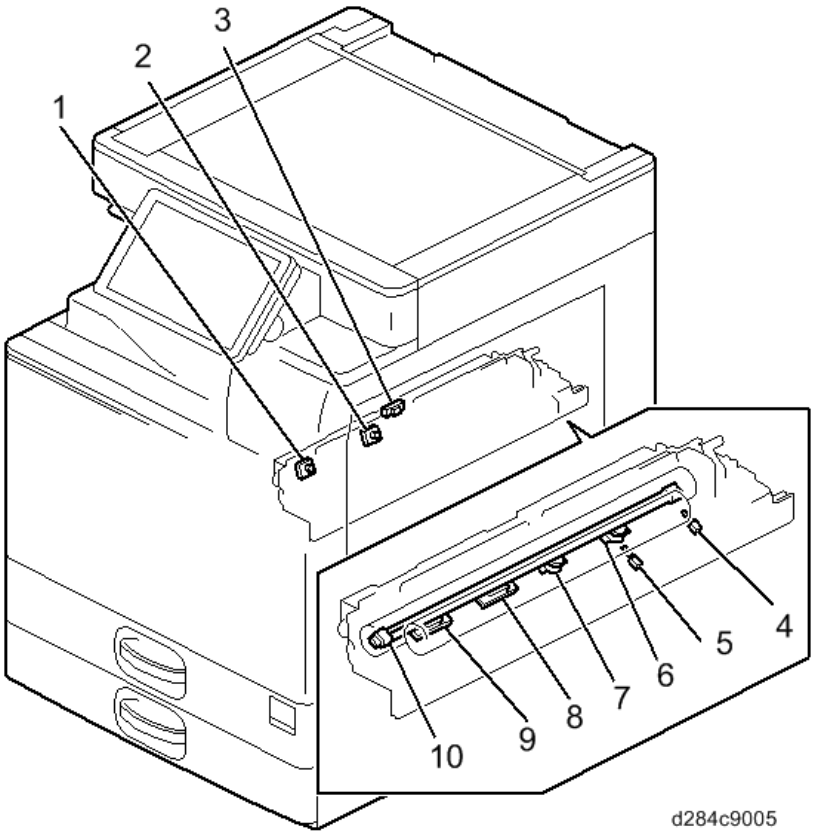
No.	Description	No.	Description
1	1st paper feed sensor	10	2nd paper feed sensor
2	1st vertical transport sensor	11	1st paper feed tray set switch
3	1st paper end sensor	12	1st paper feed tray lift motor
4	1st paper feed tray limit sensor	13	2nd paper feed tray set switch
5	1st paper feed tray pick up solenoid	14	2nd paper feed tray lift motor
6	2nd paper feed tray pick up solenoid	15	Registration sensor
7	2nd paper feed tray limit sensor	16	1st paper feed tray size switch
8	2nd vertical transport sensor	17	2nd paper feed tray size switch
9	2nd paper end sensor	18	Anti-condensation heater *Option

Laser Unit, PCDU



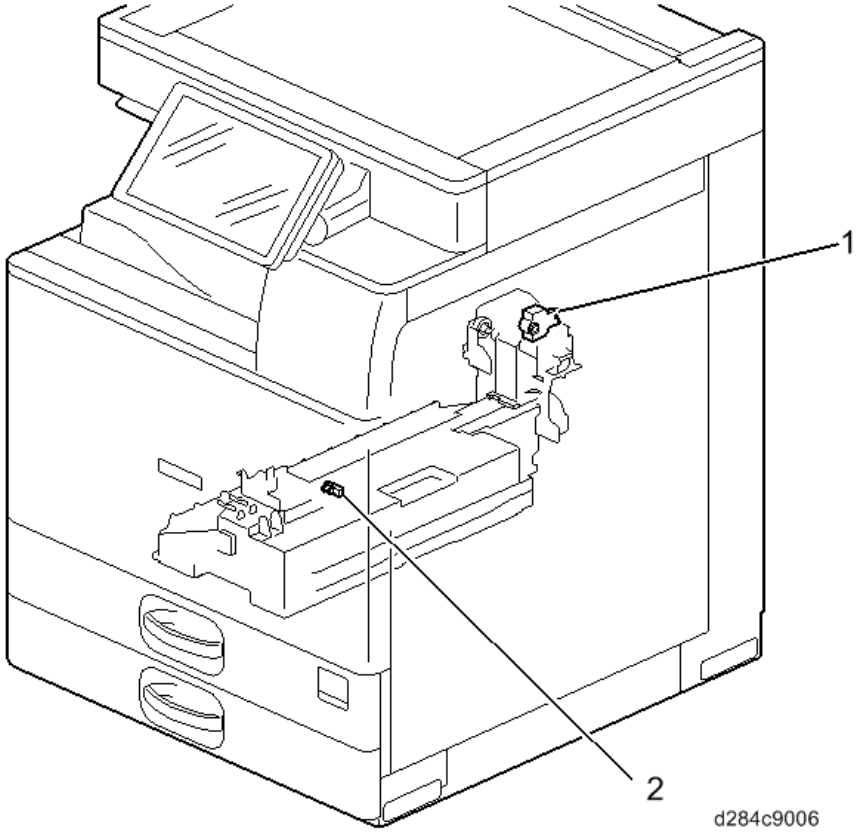
No.	Description	No.	Description
1	Laser Unit	3	TD sensor
2	Quenching lamp	4	PCL (Pre Cleaning Light)

Fusing Unit



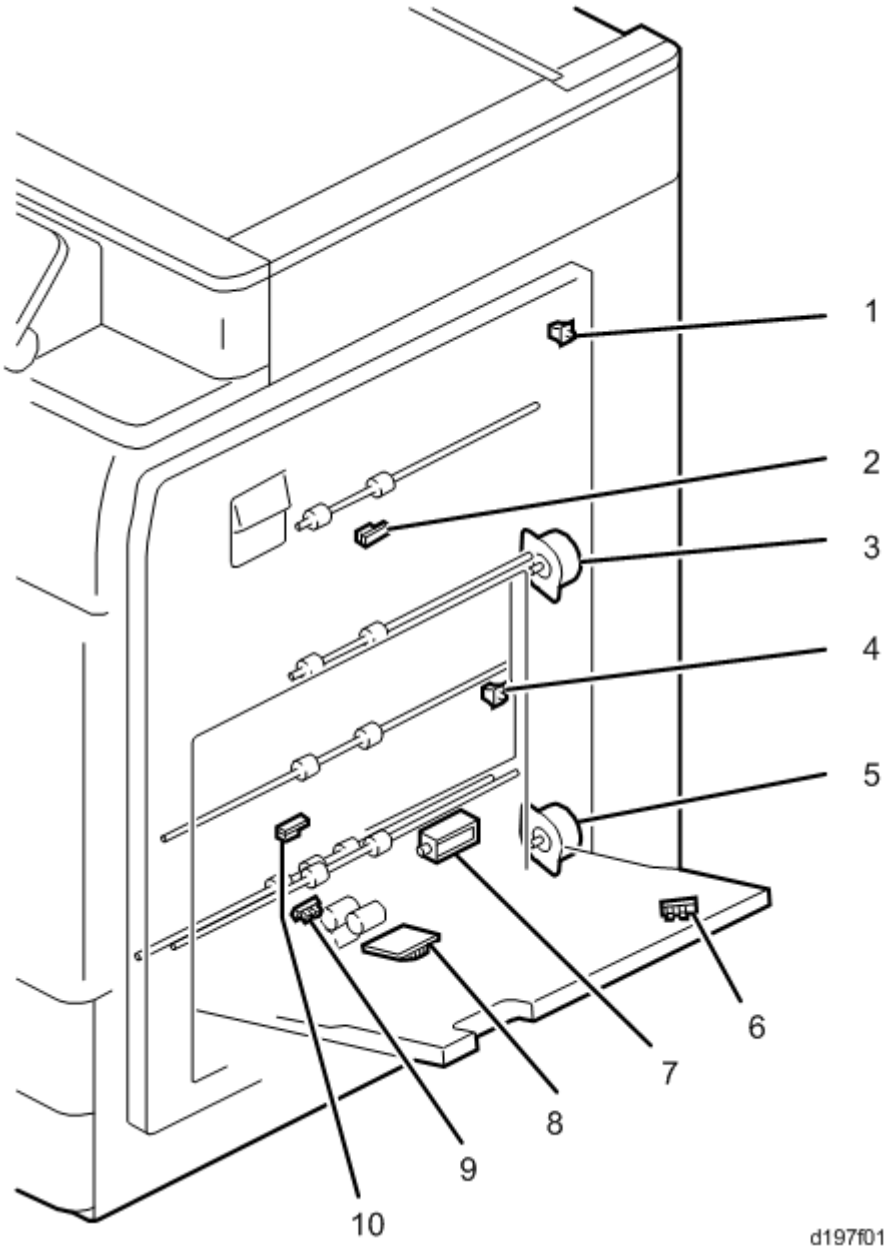
No.	Description	No.	Description
1	Thermopile	6	Thermostat
2	Thermopile	7	Thermostat
3	Fusing exit sensor	8	NC sensor (Center)
4	Pressure roller thermistor (End)	9	NC sensor (End)
5	Pressure roller thermistor (Center)	10	Fusing lamp

Waste Toner Bottle



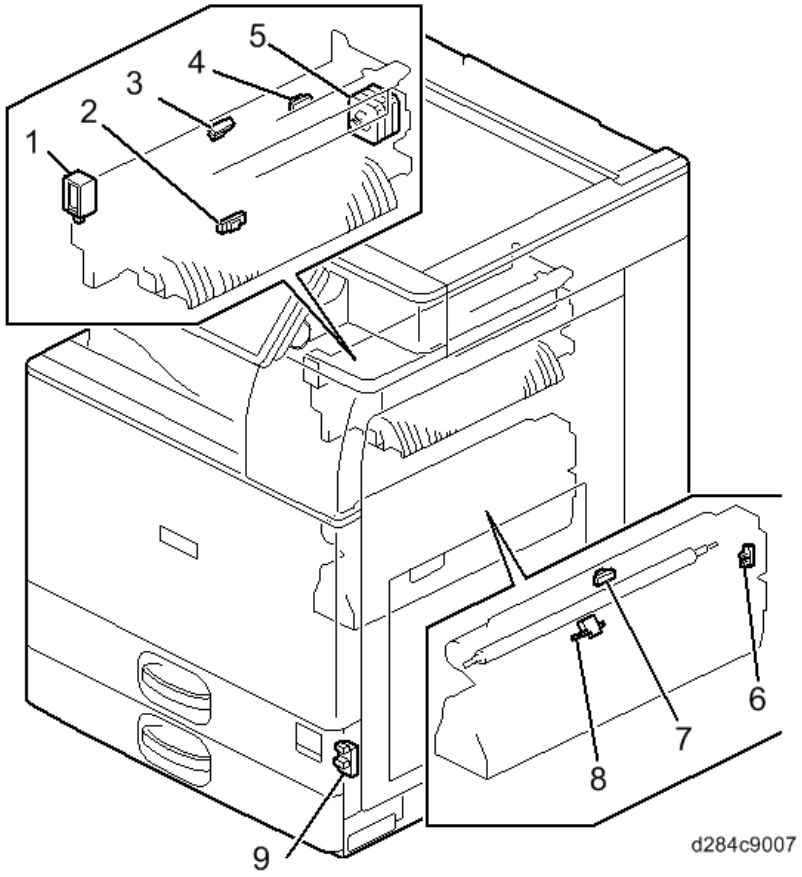
No.	Description	No.	Description
1	Drum/waste toner motor	2	Toner collection full sensor

Duplex/Bypass Unit



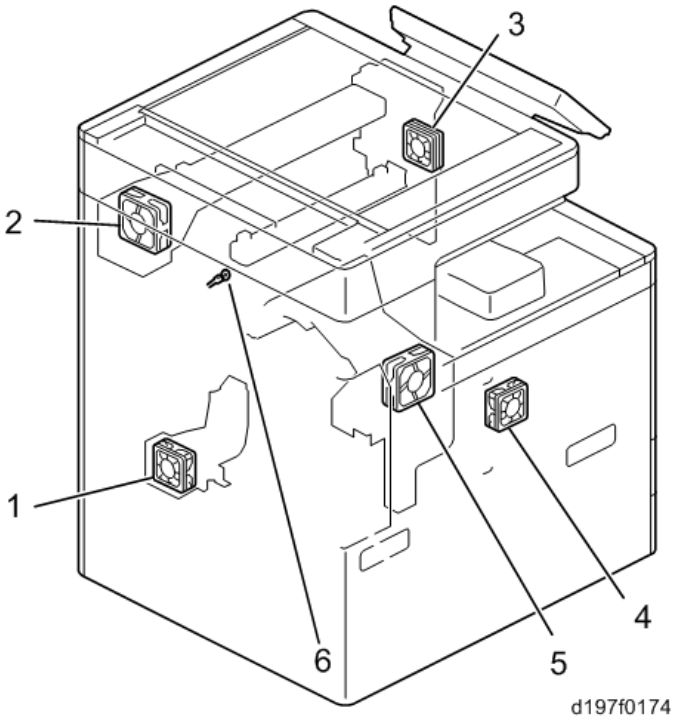
No.	Description	No.	Description
1	Right cover open/closed switch	6	Bypass paper length sensor
2	Duplex entrance sensor	7	Bypass pickup solenoid
3	Duplex entrance motor	8	Bypass paper width switch
4	Duplex guide switch	9	Bypass paper end sensor
5	Duplex/bypass motor	10	Duplex exit sensor

Paper Exit/Reverse Unit



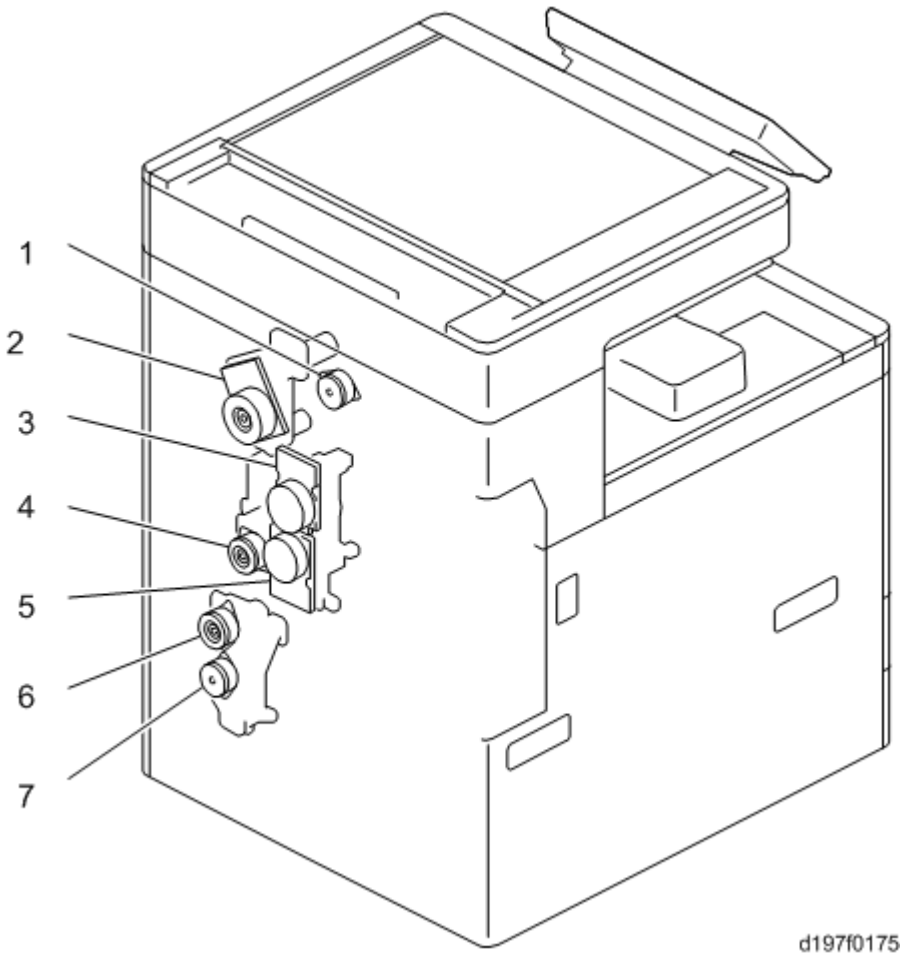
No.	Description	No.	Description
1	Paper exit switching solenoid	6	Transfer unit open/close sensor
2	Paper exit sensor	7	Fusing entrance sensor
3	Reverse sensor	8	Transfer roller contact sensor
4	Paper exit full sensor	9	Temperature / Humidity Sensor
5	Reverse motor		

Air Flow



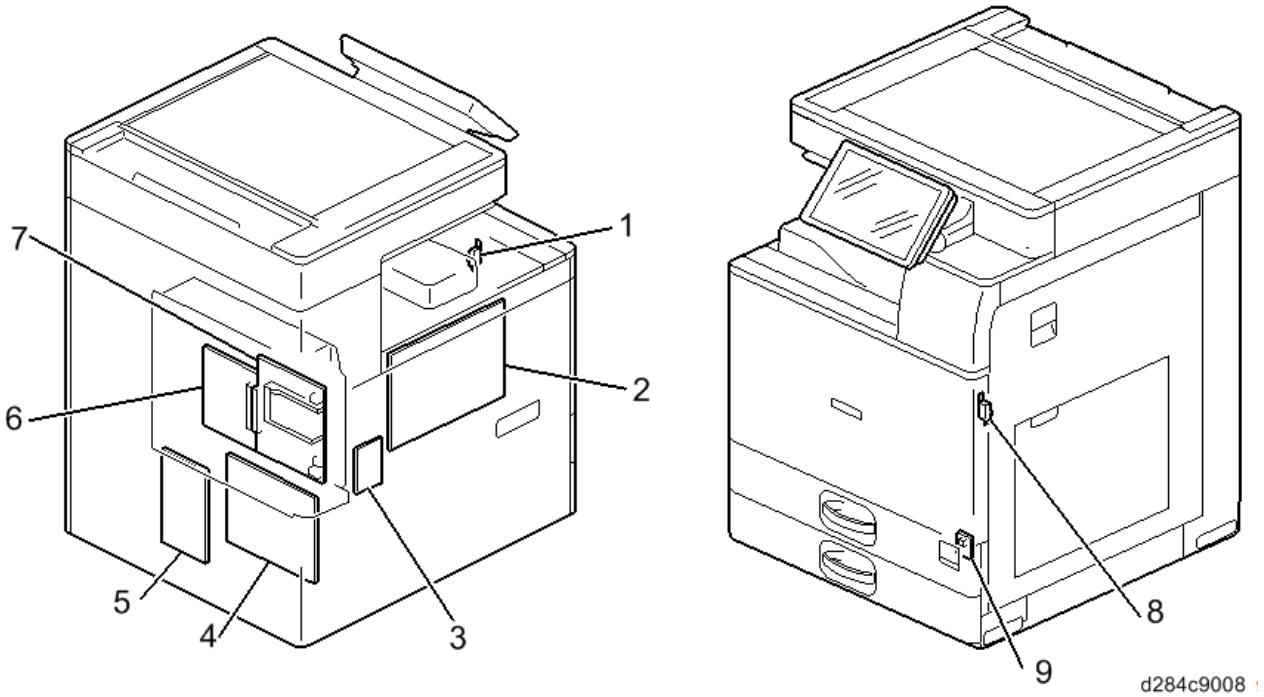
No.	Description	No.	Description
1	Development bearing cooling fan (MP 4055 SP/5055 SP/6055 SP only)	4	PSU cooling fan (MP 4055 SP/5055 SP/6055 SP only)
2	Fusing fan	5	Development exhaust fan
3	Paper exit fan	6	Temperature/humidity sensor

Drive Unit



No.	Description	No.	Description
1	Paper exit motor (MP 4055 SP/5055 SP/6055 SP only)	5	Development motor
2	Fusing motor (MP 4055 SP/5055 SP/6055 SP only) Fusing/paper exit motor (MP 2555 SP/3055 SP/3555 SP only)	6	Vertical transport motor
3	Drum/Waste toner motor	7	Paper feed motor
4	Registration motor		

Electrical Components

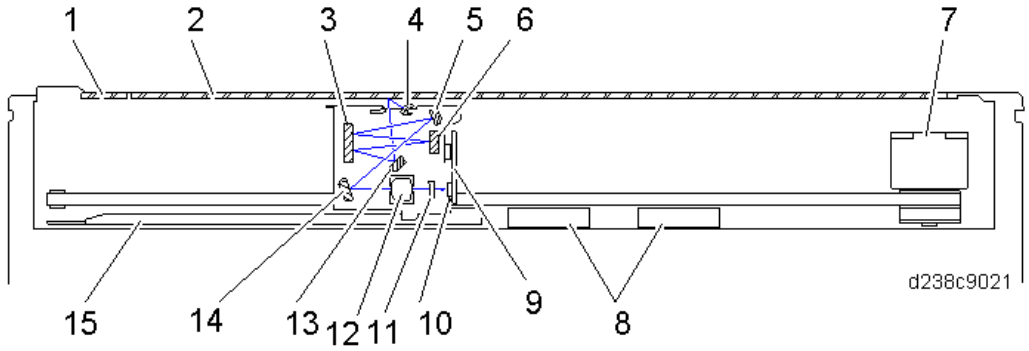


No.	Description	No.	Description
1	Interlock switch (Front Cover)	6	IPU
2	PSU	7	Controller Board
3	DHB (Option)	8	Interlock Switch (Right Cover)
4	BCU	9	Main power switch
5	HVP		

Scanning

Overview

The short focus scanner is realized by implementing a lens block (SBU, CCD, and Lens) on the carriage.
After the scanner lamp unit emits the light to the document, the light goes through the route shown below and reaches the CCD.
Scanner lamp unit (LED) -> Original -> 1st mirror (13) -> 2nd mirror (3) -> 3rd mirror (6) -> 2nd mirror (3) -> 4th mirror (5) -> 5th mirror (14) -> lens -> pre-sensor lens -> CCD



No.	Description	No.	Description
1	Sheet-through exposure glass	9	Sensor board unit (SBU)
2	Exposure glass	10	CCD
3	2nd mirror	11	Pre-sensor lens
4	Scanner lamp unit (LEDB)	12	Lens
5	4th mirror	13	1st mirror
6	3rd mirror	14	5th mirror
7	Scanner motor	15	Anti-condensation heater* (Scanner heater)
8	APS sensors		

*Service part

Reading system

Two scan modes are available: book mode (platen mode) and ADF mode (sheet-through method).
In book mode (platen mode), the scanner scans the document from left to right.
When the ADF is used (ADF mode), the scanner is fixed in the home position on the left side, and the document is transported and read (sheet-through method).

Scanner

Scanner lamp

The light source is an LED. The LED emits little heat (low power consumption), and has excellent light output

rise characteristics.

CCD

The 3 line color CCD converts shade in the document to 3 color (B, G, and R) electrical signals. The use of a 4.7 µm image CCD achieves low-cost and compactness.

Reflection plate (reflector)

The reflection plate reflects light from the scanner lamp, and collects light for the document read unit. The light which illuminates the document is adjusted to be the same on the left and right so as not to cast any shadow on the document.

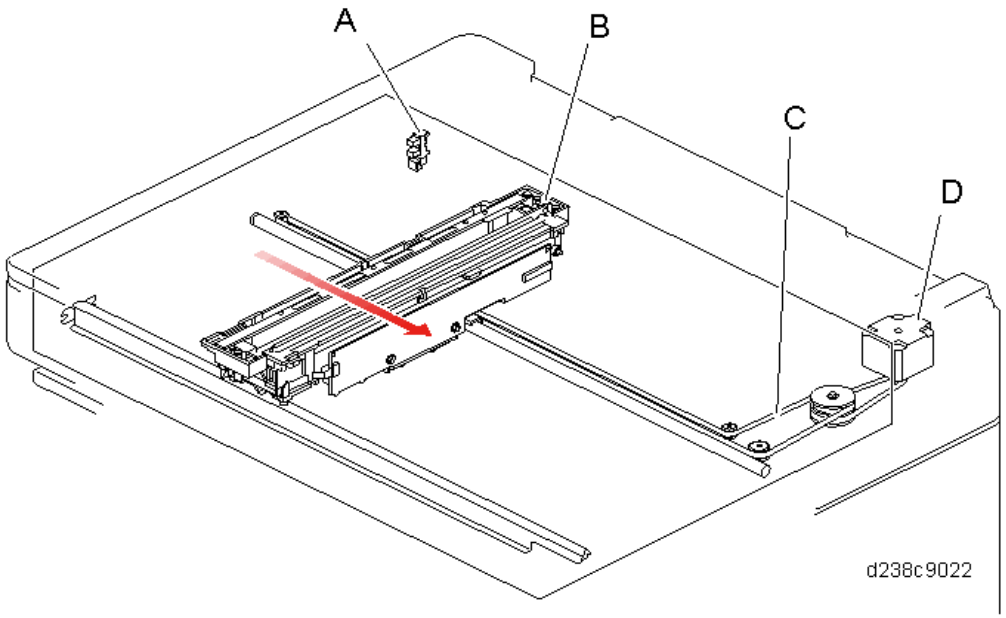
White reference seal

A white reference seal for shading correction is affixed to the underside of the scale on the left of the MFP. This is read by the scanner and CCD when the power is ON. The data read are temporarily stored in a RAM, and used for correction of document image data.

Mechanism

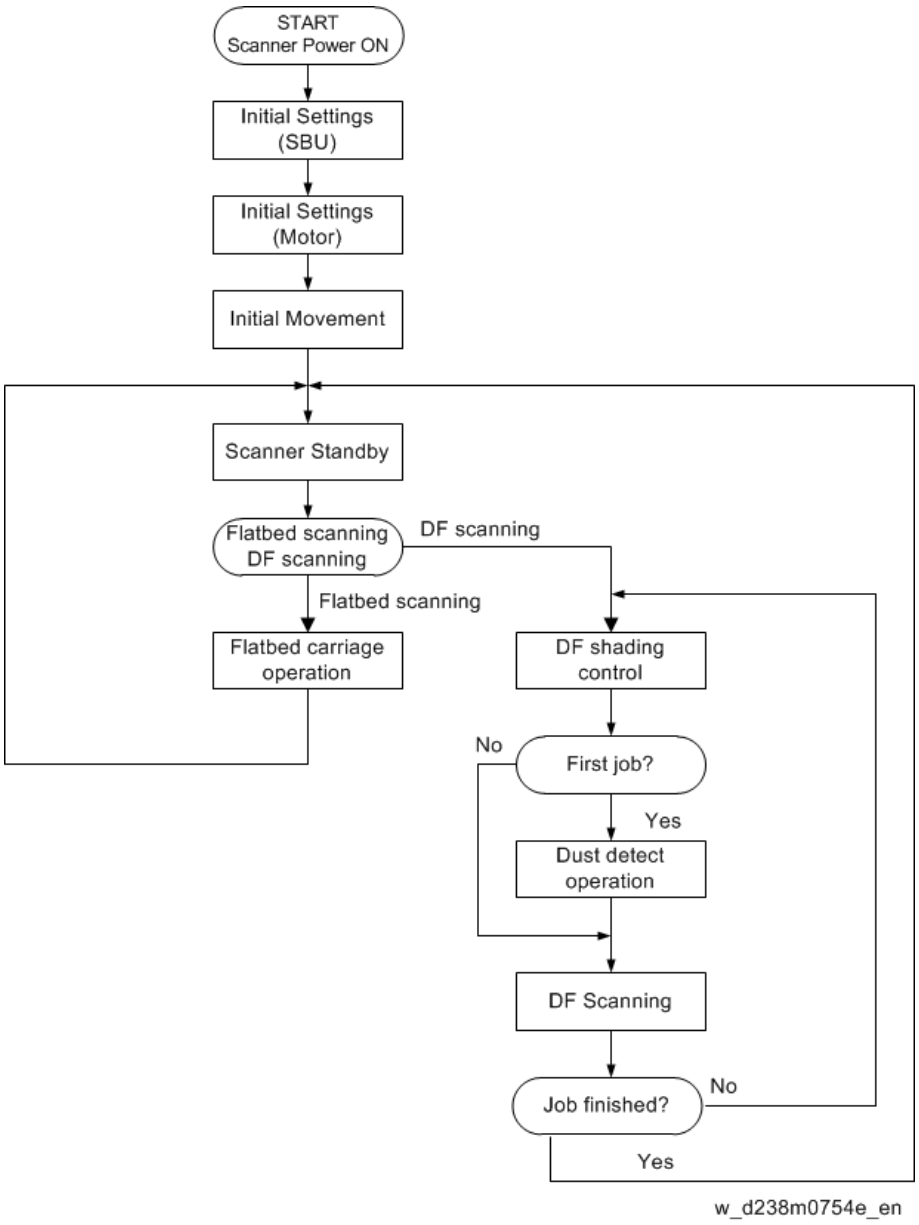
Scanner drive

The scanner is driven by the scanner motor [D] via the timing belt [C]. For each mode, reading is completed in one pass.
Position control of the scanner carriage [B] is based on the scanner HP sensor [A].



Operation Flowchart

Overall Flowchart



Scanner carriage storage control

To protect the scanner carriage, the carriage must be locked to the scanner frame before shipping. The scanner can be moved to the shipping lock position with SP4-806-001 (Scanner carriage storage operation) (Super SP mode). If pre-shipping check is required, make sure to move the scanner carriage to the right position with SP4-806-001 and mount the locking parts.

SC121-00 will occur when the power is turned on or scanning takes place while the carriage is locked.

Document size detection

In this MFP, for document size detection, two reflecting sensors are used for the sub scanning direction, and a

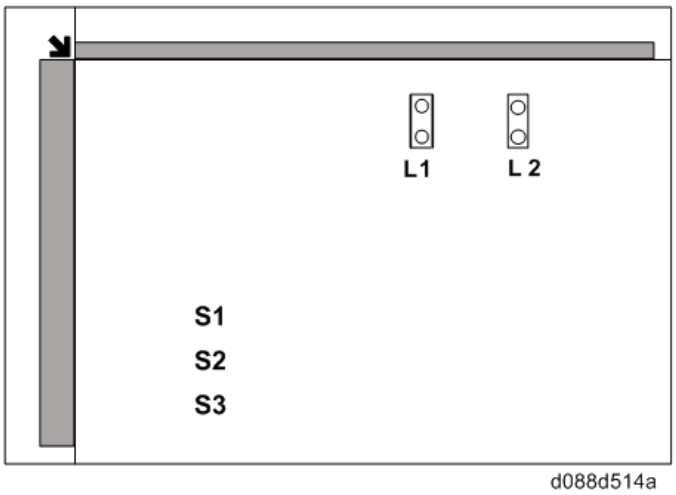
CCD is used for the main scanning direction.

Sub scanning direction

The document size is detected by the ON/OFF states of the sensor (the CCD can also detect the length). The pressure plate open/closed sensor is used for document size detection timing. When the pressure plate open/closed sensor has changed from "no cover" to "cover," the size is detected.

Main scanning direction

RGB color densities at 3 locations (S1, S2, S3) are detected by a CCD, and when any of the RGB densities is 12 digits or more, it is determined that a document is present.
The pressure plate open/closed sensor is used for document size detection timing. When the pressure plate open/closed sensor detects "no cover," the scanner lamp is moved to the right; when it detects "cover," the scanner lamp is moved to home position while lit, and during this time, the size is read.



Document size			Sensor response				
Size	Direction	Dimensions (main × sub)	S1	S2	S3	L1	L2
A3	SEF	297x420	-	-	◎	◎	◎
B4	SEF	257x364	-	◎	-	◎	◎
A4	SEF	210x297	◎	-	-	◎	-
A4	LEF	297x210	-	-	◎	-	-
B5	SEF	182x257	-	-	-	◎	-
B5	LEF	257x182		◎	-	-	-
A5	SEF	148x210	-	-	-	-	-
A5	LEF	210x148	◎	-	-	-	-
B6	SEF	128×182	-	-	-	-	-
B6	LEF	182×128	-	-	-	-	-
DLT	SEF	11"×17"	-	-	◎	-	◎
10×15	SEF	10"×15"	-	◎	-	-	◎

Document size			Sensor response				
USB4	SEF	10"×14"	-	◎	-	-	◎
LG	SEF	8 1/2"×14"	◎	-	-	-	◎
Oficio	SEF	8 1/2"×13.4"	◎	-	-	-	◎
Foolscap	SEF	8 1/2"×13"	◎	-	-	-	◎
Folio	SEF	8 1/4"×13"	◎	-	-	-	◎
F	SEF	8"×13"	◎	-	-	-	◎
LT	SEF	8 1/2"×11"	◎	-	-	◎	-
LT	LEF	11"×8 1/2"	-	-	◎	-	-
8×10	SEF	8"×10"	◎	-	-	◎	-
10×8	LEF	10"×8"	-	◎	-	-	-
Executive	SEF	7 1/4"×10 1/2"	-	-	-	◎	-
HLT	SEF	5 1/2"×8 1/2"	-	-	-	-	-
HLT	LEF	8 1/2"×5 1/2"	◎	-	-	-	-
8kai	SEF	267×388	-	◎	-	-	◎
16kai	SEF	194×267	-	-	-	◎	-
16kai	LEF	267×194	-	◎	-	-	-

Note

- The document width (main scanning direction) is detected by the sensor indicated with '◎'.

How to check the sensor state

- SP4-301 (Operation Check APS Sensor)
  How to read the screen
  (7)00000000(0)
  0: no document
  1: document present
  When the sensor responds, bit 0 is displayed as "1."
- SP4-310 (Scan Size Detect Value)
  Viewed from the control panel, labeling positions from rear to front S1-S3 in that order, the RGB density at each position is displayed in digit units (the value just before scan is displayed).

Other

- SP4-303 (Min Size for APS)
  Sets the display when non-standard (small size) size original is detected.
  0: Display message "Original size unknown".
  1: Operate assuming the original size is A5 LEF (HLT LEF for inches).
- SP4-305-001(8K/16K Detection)
  By changing this SP, you can change between A4 size/letter size or Chinese paper size (8×16).
  0: Normal setting. (Default)

1: When detecting A4/LT size -> Assume that it is A4 when SEF, LT when LEF.

2: When detecting A4/LT size -> Assume that it is LT when SEF, A4 when LEF.

3: Change to 8K/16K settings.

A3, B4 -> 8K LEF

A4 LEF, B4 LEF, A5 LEF -> 16K LEF

A4 SEF, B4 SEF, A5 SEF -> 16K SEF

- SP5-126 (Set F-size Document)

  Selects the paper size for the F-size original.

  0: When detecting Foolscap -> Assume that the size is 8 1/2"x13". (Default)

  1: When detecting Folio -> Assume that the size is 8 1/4"x13".

  2: When detecting F -> Assume that the size is 8"/13".

- SP4-308 (Scan Size Detection)

  Sets CCD original size detection and APS original size detection.

  0: Disable: Does not detect original size

  1: Enable: Detects original size with the CCD unit

  2: APS: APS sensor is used for detecting original size. (Do not select this option because this is for special order.)

- SP4-309-004 (Scan Size Detect:Setting LED PWM Duty)

  If the user specifies that the pre-scan lamp is too bright, the brightness pre-scan can be reduced by decreasing the value of SP4-309-004 (Scan Size Detect:Setting LED PWM Duty). However, if the lamp brightness is reduced, size detection for a document with a large number of solid images will be less accurate.

- SP5-135 (LG_Oficio Change)

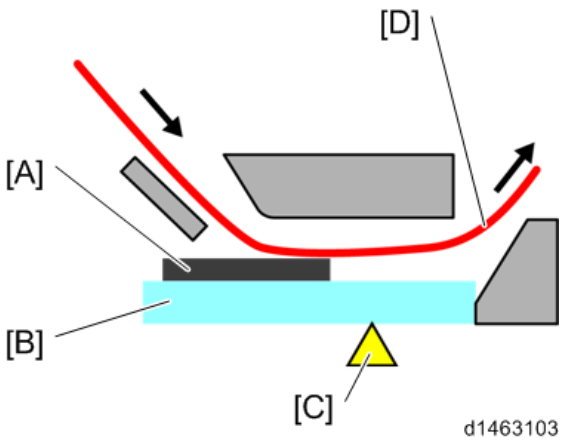
  1: When detecting LG size -> Assume that the size is 8 1/2"x14".

  2: When detecting Oficio size -> Assume that the size is 8 1/2"x13.4". (Default)

Improved tolerance to black lines when paper passes through ARDF/SPDF

The original document does not come in contact with the sheet-through exposure glass, which prevents adhesive dirt (ball pen ink) on the document from adhering to the sheet-through exposure glass.

ADF cross-section diagram, non-contact scanning



[A]: Sheet

[B]: Sheet-through exposure glass

[C]: Read position

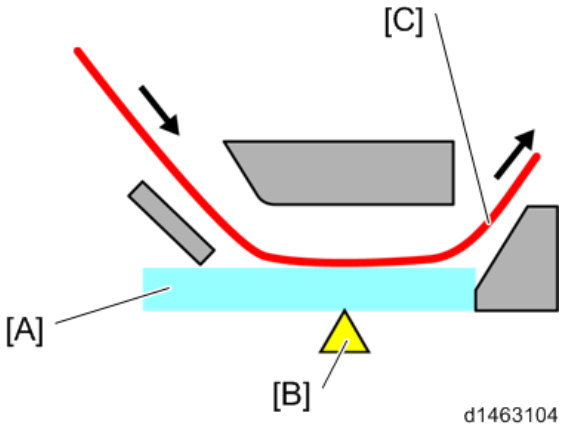
[D]: Document

- Contact scanning

  As the document comes in contact with the sheet-through exposure glass this is useful for dealing with adhesion of free dirt particles (paper scraps, etc.). (Self-cleaning mechanism using paper)

  On the other hand, sticky dirt adhering to the document sticks to the sheet-through exposure glass, and may give rise to the appearance of black lines.

  ADF cross-section diagram, contact scanning



  [A]: Sheet-through exposure glass

  [B]: Read position

  [C]: Document

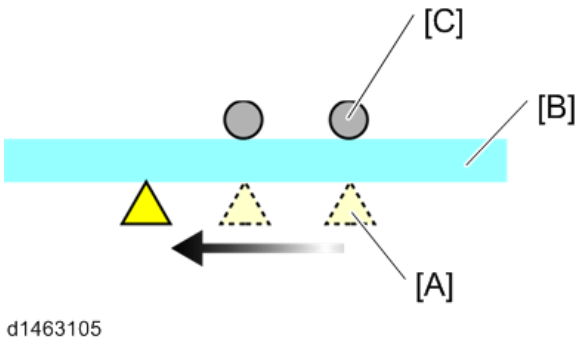
  If black lines due to free dirt particles appear within a short time, such as when users have documents with large amounts of paper scraps, you can change from the non-contact scanning system to the contact scanning system with the procedure in Troubleshooting - Vertical Streaks on Copies due to Scanning Problems.

- Reference (reading position correction)

  By changing SP4-020-001 (Dust Check Dust Detect:On/Off), when dirt is detected at the reading position, the reading position may be changed to avoid the dirt.

  (If it cannot be avoided, an alert is displayed on the control panel advising the user to perform target glass cleaning).

  Image diagram



[A]: Read position

[B]: Sheet-through exposure glass

[C]: Dirt

Note

- Dirt is detected when a document passes through, so the alert will not disappear until reading of the next document begins, even after the sheet-through exposure glass cleaning is performed.
- If dirt is detected not on the sheet-through exposure glass but on the background guide plate, the alert will not disappear even if the glass is wiped.
- The time required for the first copy is slightly (almost imperceptibly) longer.
- The detection threshold value can be changed using SP4-020-002 (Dust Check Dust Detect:Lvl). (The larger the value is, the smaller the dirt particles that can be detected become.)
- It is prohibited to change the setting of SP4-020-003 (Dust Check Lvl Dust Reject:Lvl).

Difference between Non-contact Transport and Contact Transport in DF Scanning

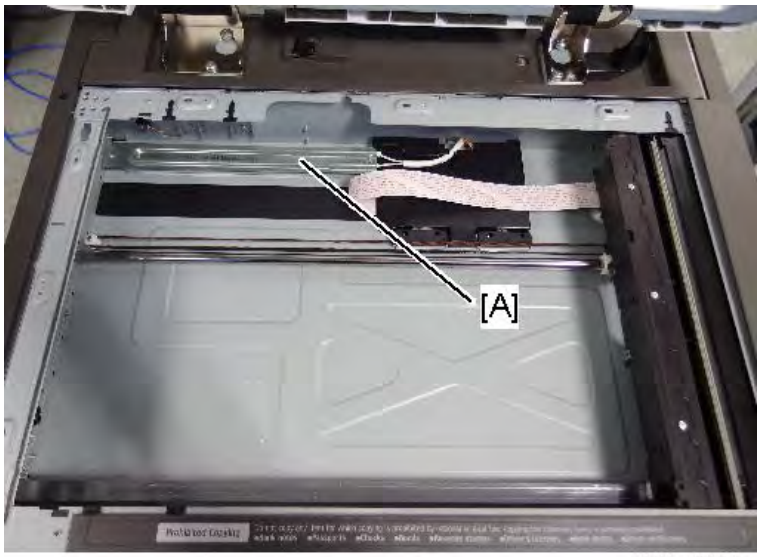
Transport Method	Non-contact Transport	Contact Transport
Descriptions	 Because of the film attached to the glass, the original doesn't contact the glass.	 While passing, the original contacts the glass.
Merit	It almost never causes stripes on the image that arise from foreign substances transferring from the original to the glass.	It almost never causes stripes on the image that arise from dust on the glass, because the glass is cleaned by contact with the transported original.
Demerit	Compared with the contact method, stripes on the image caused by dust occur more often.	Compared with the non-contact method, stripes on the image caused by foreign substances transferred from the surface of an original to the glass occur more often.
Aim	To improve prevention of stripes in the image caused by sticky foreign substances.	Considering the target users of this machine, it's important to improve prevention of stripes caused by dust in the path
Note	1. Be sure to replace the sheet-through glass with the film attached on the glass. 2. When you attach the film on the glass, you need to keep the left scale attached on the glass in order to fix the location of the film.*1	-

Transport Method	Non-contact Transport	Contact Transport
	3. You can change the method (contact method to non-contact, or vice versa) by replacing some parts.*1	

*1: For details, Vertical Streaks on Copies due to Scanning Problems.

Anti-Condensation Heater

Under low temperature conditions, condensation may appear on optical parts (such as mirrors). This will cause image deletion, blacked out images, and gray images. As a countermeasure, there is an anti-condensation heater [A] that is an optional service part. This heater turns on automatically when the power source turns off.



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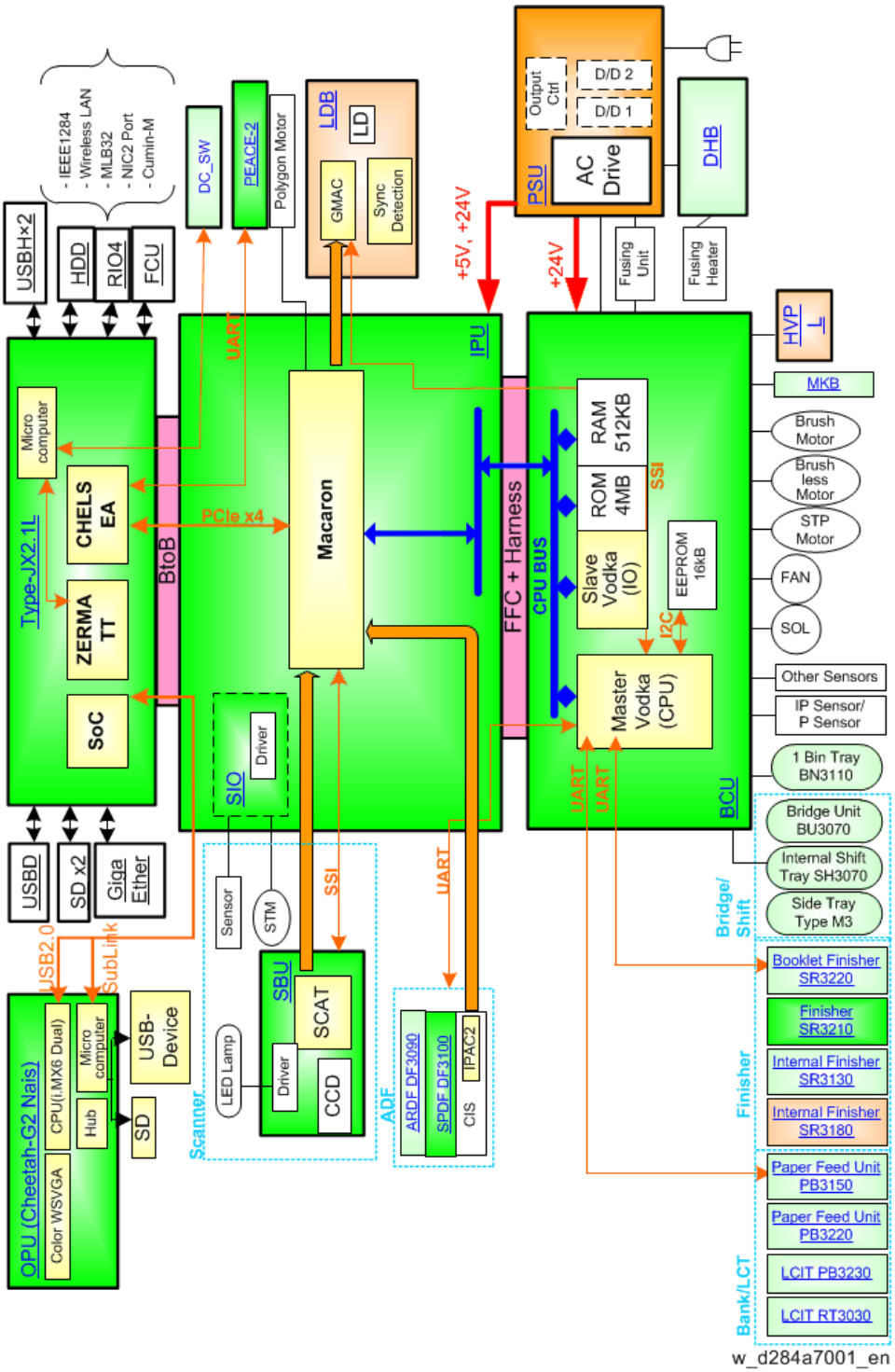
A	Anti-condensation heater

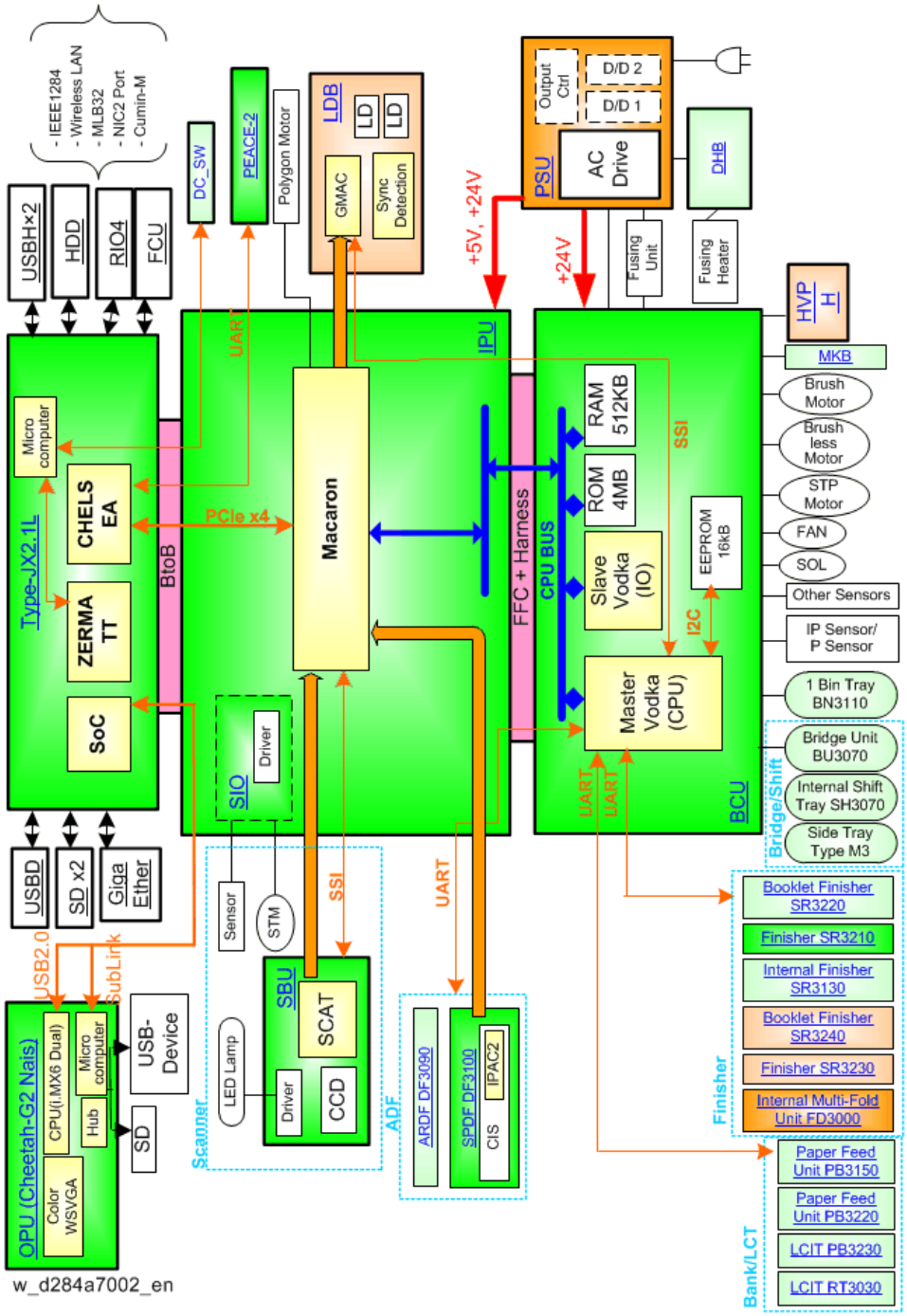
Image Processing

Structural block diagram

For MP 2555 SP/3055 SP/3555 SP models



For MP 4055 SP/5055 SP/6055 SP models



Mechanism

SBU

Functions

Performs Black level correction and White level correction (AGC), Creating the SBU test pattern, and A/D conversion.

Operation overview

Samples 2 analog signals (ODD, EVEN) from RGB output from the 3-line CCD by an analog ASIC: SCAT, and converts them to digital signals (output 10 bit) by a built-in 12-bit A/D converter.
The digital signals which are A/D converted by the analog ASIC are output to the IPU as an LVDS signal.

SP correction value storage

The SBU correction value is stored in an EEPROM of the BCU. This correction value must be re-adjusted when the lens block is replaced.

- SP4-008 (Sub Scan Magnification Adj)
- SP4-010 (Sub Scan Registration Adj)
- SP4-011 (Main Scan Reg)
- SP4-688-001 (DF Density Adjustment ARDF) or SP4-688-002 (Scan Image Density Adjustment 1-pass DF)

Note

Dirty Background Adjustment When Using DF:

- The image density scanned by using the DF may be lower compared to the image density scanned by using the platen. The image density value of DF scanning can be adjusted by SP4-688-001 (DF Density Adjustment ARDF) or SP4-688-002 (Scan Image Density Adjustment 1-pass DF).

IPU

Image processing function overview

The image signals from the SBU are subjected to various image processing, and output to the controller (memory) via a PCI bus. The image signals from the controller (memory) are received via the PCI bus, and output to the LDB via a GAVD (the LDB is provided in the write unit).
For the direct fax transmission application, the image signals from the SBU are subjected to various image processing, and output to the FCU via the PCI bus.

Image processing overview (copy application)

Digital signal data output from the SBU is subjected to shading correction and line interval correction, as well as image processing, which are performed by the IPU. Finally, the data is sent to the MFP unit as digital signals-2 bit/pixels.

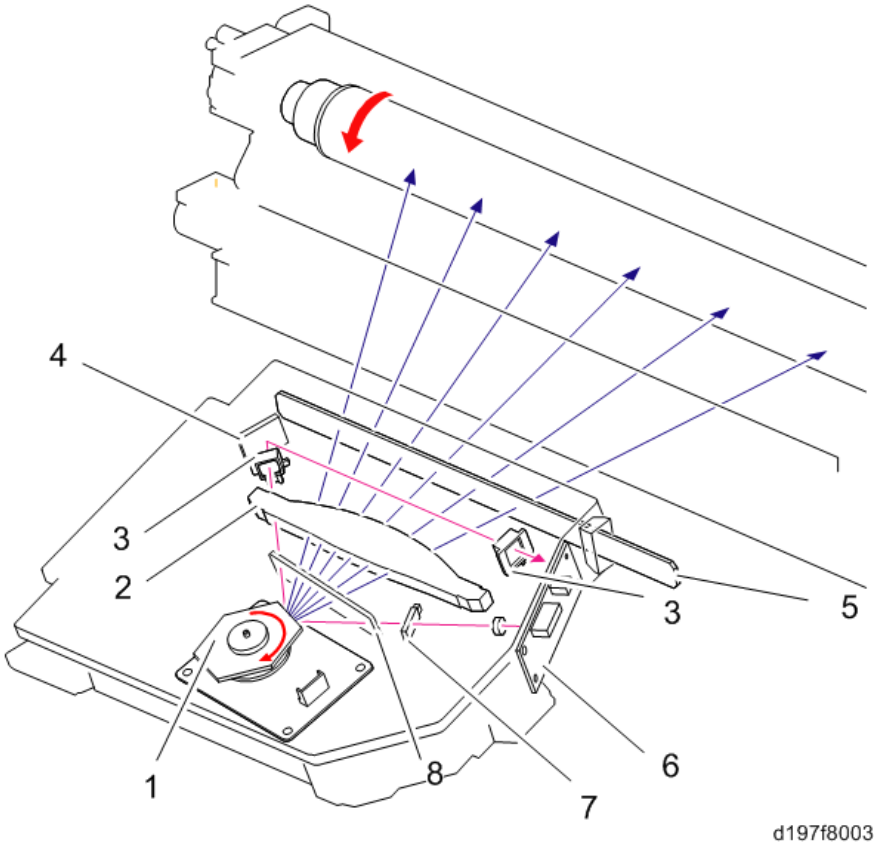
Image processing items	Details
Shading correction	Corrects for uneven scanner lamp lighting, and scatter in CCD light receiving sensitivity.
Line interval correction	Line shift during subscanning magnification/reduction by scanner. Corrects integer part.
Dot correction	Line shift during subscanning magnification/reduction by scanner. Corrects below decimal point.
Vertical line correction	Corrects a vertical striped image during sheet-through ADF.
Image area separation	Determines text parts and photo parts of image.

Image processing items	Details
Scanner gamma correction	Corrects scatter of image data relative to exposure amount. From reflectivity linear to density linear.
Filter	Performs image sharpness adjustment and removes moire.
ADS	Performs natural complexion removal in full color mode.
Color compensation preprocessing	Determines hue in masking mode, and improves chromaticity.
Color compensation	Converts RGB data to density value CMYK data of color materials.
Image magnification change	Arbitrarily changes main scanning magnification, subscanning fixed image reduction and magnification of scanner image.
Image shift function	Shifts image data in the main scanning or subscanning directions.
Image binarization function	In scanner mode, outputs a binary signal.
Image mask	Masks an area outside a frame of an arbitrary region in scanner or printer data.
Image compression/expansion	Compresses or expands an image.
Printer gamma correction	Adjusts exposure amount of photosensitive body relative to image density.
Gradation processing	Applies 600dpi, 4bit 16 value gradation processing.

Plotter Process

Laser Exposure

Overview

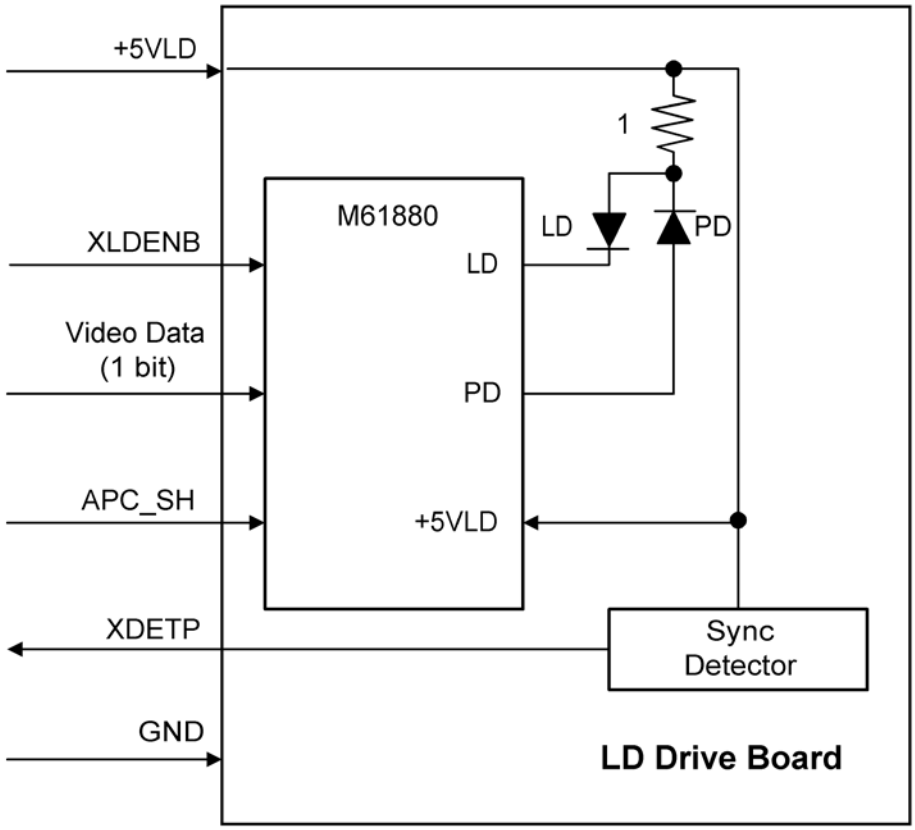


	Name
1	Polygon Mirror
2	F-theta Lens
3	Synchronization Detector Lens
4	Synchronization Detector Mirror
5	Toner Shield Glass
6	LD Board
7	Cylindrical Lens
8	Shield Glass

Note

- The LD drive board controls both the laser output and laser synchronization mechanism.
- The machine cuts off the power supply to the LD drive board if the front or right cover is opened.

Auto Power Control (APC)



The LD driver IC drives the laser diode. To prevent the intensity of the laser beam from changing because of the temperature, the machine monitors the current passing through the laser diode (LD). The machine adjusts the current to the laser diode by comparing it with the reference level from the reference circuit.

This auto power control is done just after the machine is turned on and during printing.

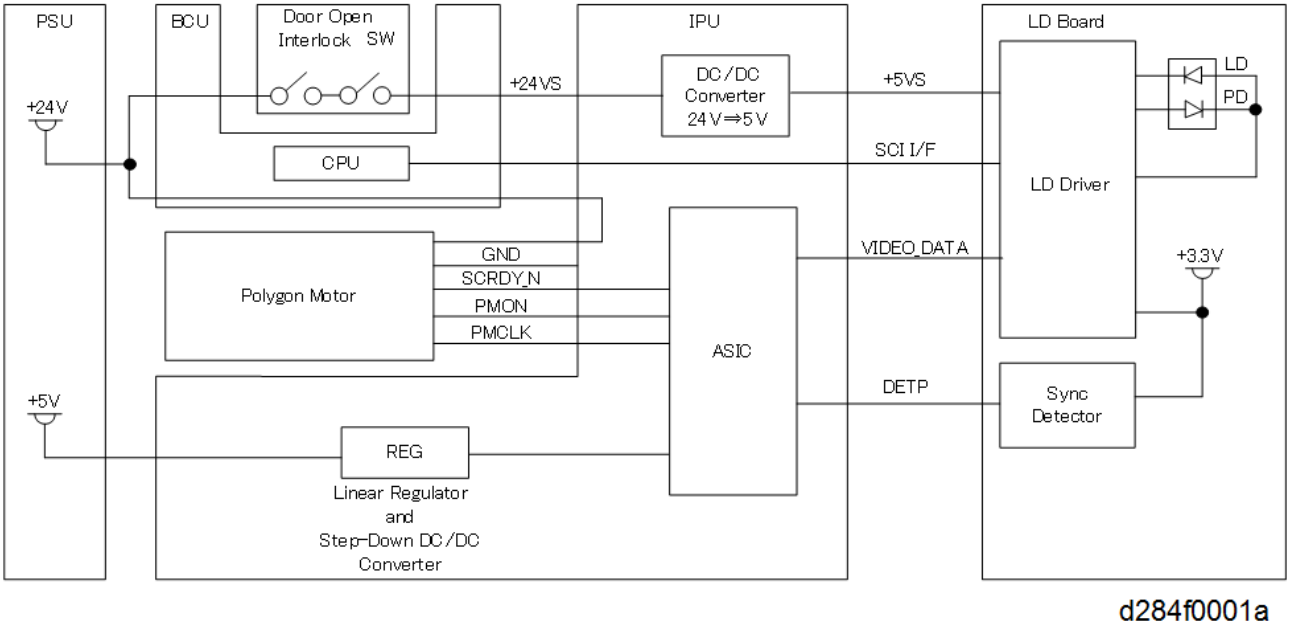
The laser diode power is adjusted on the production line.

Note

- Do not touch the variable resistors on the LD unit in the field.

LD Safety Switch

For MP 2555 SP/3055 SP/3555 SP models



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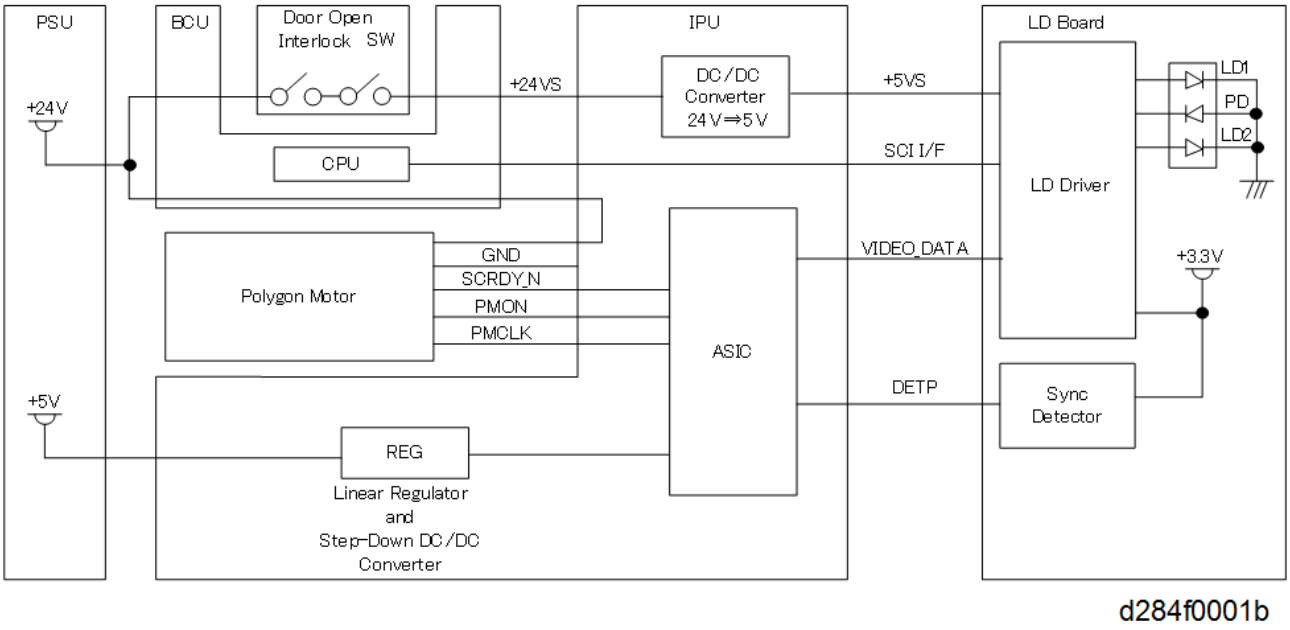
For MP 4055 SP/5055 SP/6055 SP models



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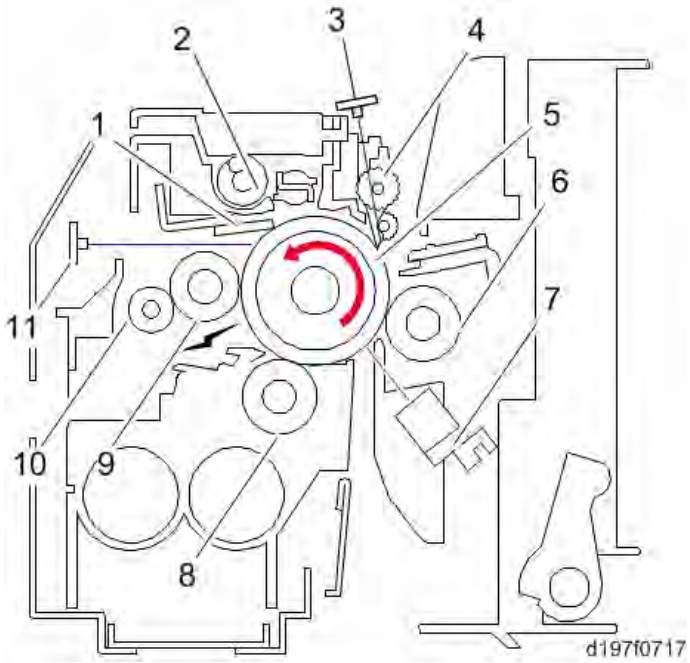
“+24V” goes through the BCU and is converted to “+5VS” on the IPU. “+5VS” is supplied to the LD Board. The interlock switch turns off when the front cover or the right door is opened. As a result, the power supply (“+24VS”) to the BCU is cut off.

This system prevents unexpected laser emission, and ensures user safety and technician safety.

PCU

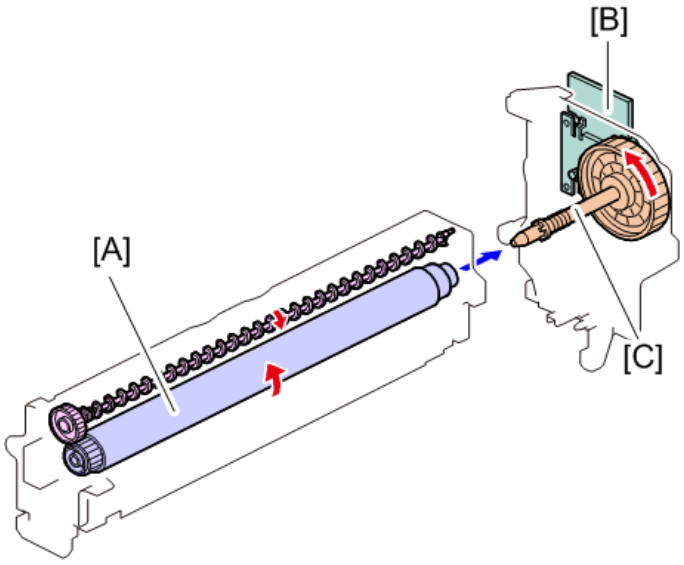
Overview



No.	Part Name	No.	Part Name
1	Cleaning Blade	7	ID Sensor
2	Toner Collection Coil	8	Development Sleeve
3	PCL (Pre Cleaning Light) *1	9	Charge Roller
4	Pick-off Pawl	10	Brush Roller
5	OPC Drum	11	Quenching Lamp
6	Transfer Roller		

*1 New feature. The PCL decreases the electro-static adhesion force generated between the OPC drum and remaining toner to enhance cleaning efficiency.

OPC Drum Drive Mechanism



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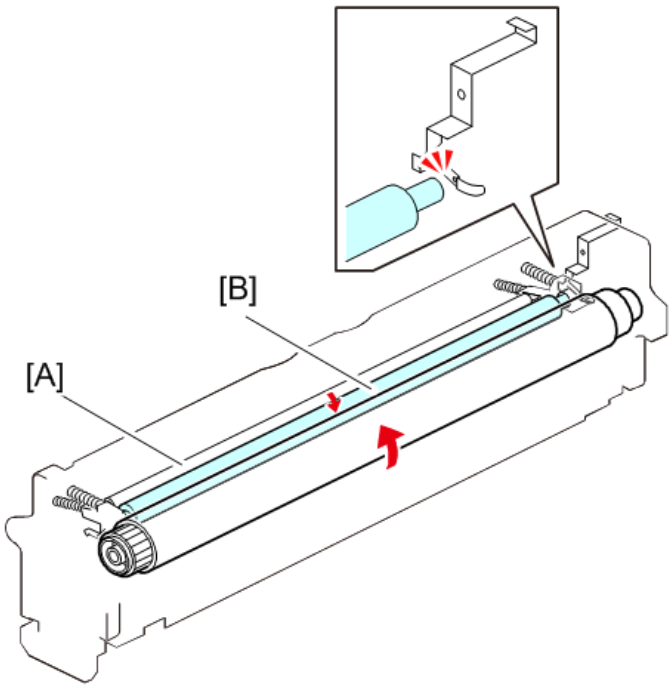
The drum/waste toner motor [B] drives the OPC drum [A] through gears and the drum drive shaft [C].

Drum Charge



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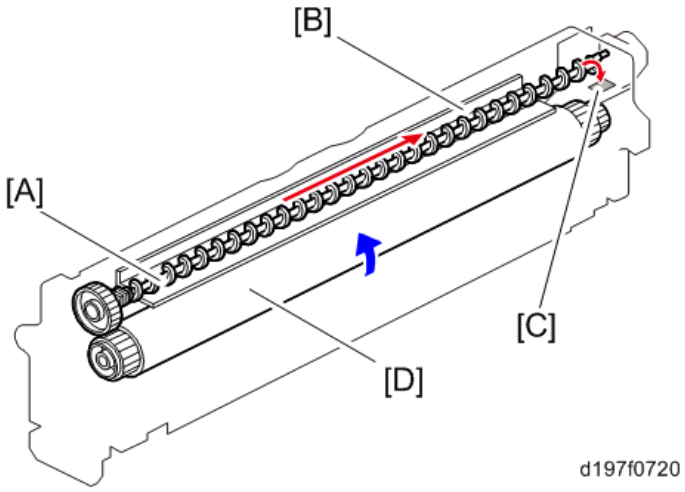
Charging to the drum is performed by the charge roller [B]. The charge roller always contacts the surface of the drum and applies a charge bias.

A power pack applies the bias to the charge roller via a receptacle and electrode terminal. Dirt can easily adhere to the charge roller because the roller always contacts to the drum with the pressure spring. Therefore, the brush roller [A] is in contact with the charge roller for cleaning.

Drum Cleaning, Toner Discarding



A counter blade cleaning system is used for drum cleaning. A cleaning blade [B] removes toner on the drum by always contacting the drum against the drum rotation. Toner scraped off by the blade is transferred by the toner collection coil [A] from the front to the rear, to be discarded into the waste toner bottle via the transportation route [C] to the rear of the drum. Depending on the job conditions, used toner may be discarded by the toner recycle/discard switch mechanism. Paper dust that adheres to the edge of the cleaning blade is removed by rotating the drum [D] in reverse after job end.

ID Sensor

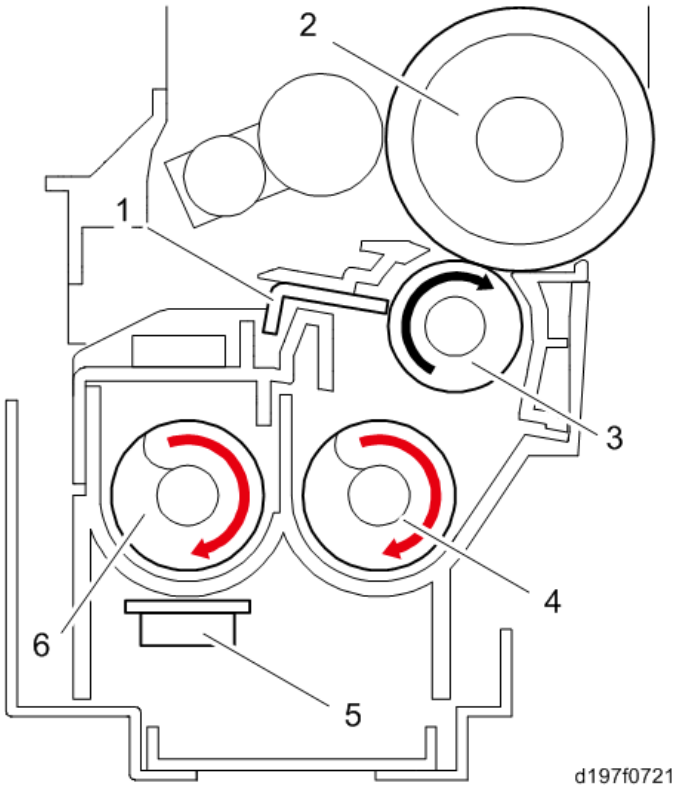
The ID sensor is used to keep image density by changing the value of ID sensor standard, development bias, drum potential and LD power with Vsp and Vsg.

The ID sensor operats at the following times:

1. When the machine has been unused beyond the time determined and the printed sheet count has exceeded the predetermined value.
2. When the temperature and/or humidity has changed by more than a certain range, and the machine restarts the engine (i.e. the main power is turned on, warming-up after the fusing-off mode, and the front cover is closed.)
3. When the machine is processing a job that has more than a set number of sheets (job is interrupted) or when the machine has completed a job that has the set number of sheets.

Development

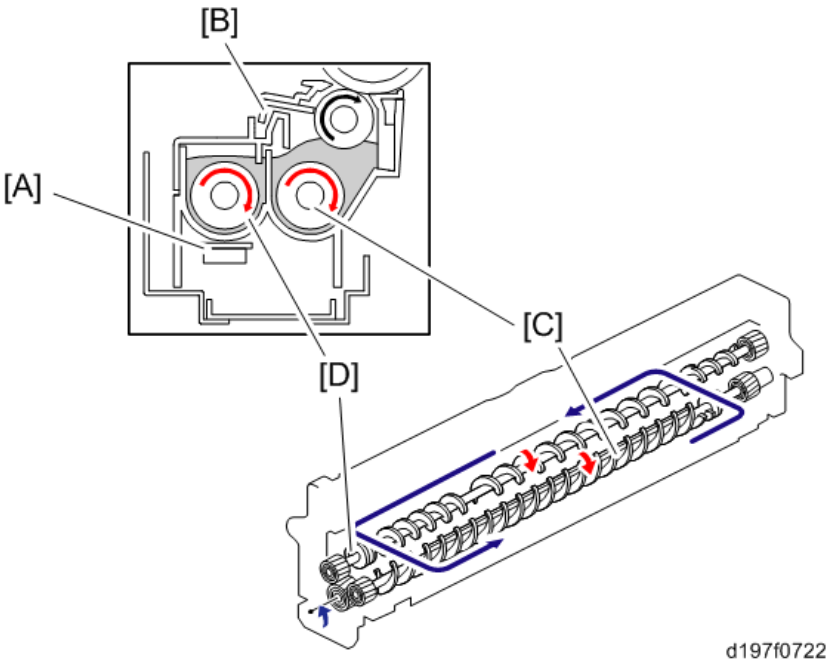
Overview



The development unit consists of the following parts.

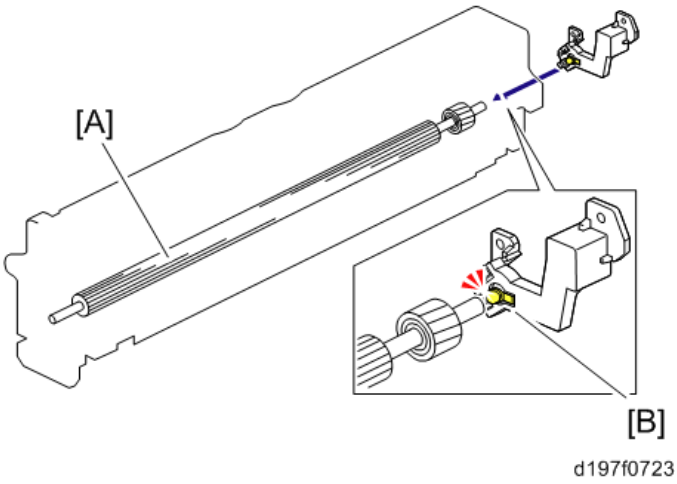
	Description		Description
1	Doctor Blade	4	Mixing Auger 2
2	OPC Drum	5	TD Sensor
3	Development Sleeve	6	Mixing Auger 1

Development Mechanism



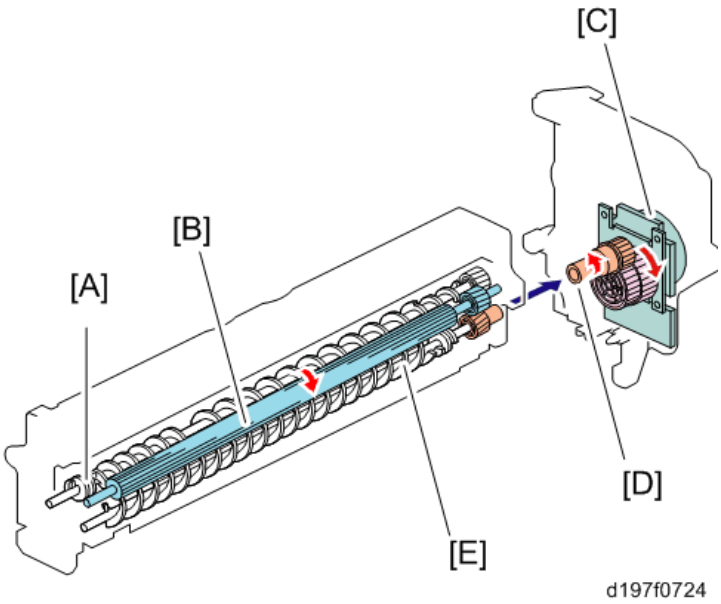
This machine uses a dry two-component magnetic brush development system.
This machine uses 2 mixing augers [C] and [D] to keep the developer evenly mixed. Mixing auger 2 [C] transports excess developer, scraped off the development roller by the doctor blade [B], towards the rear of the machine. Mixing auger 1 [D] returns the excess developer, along with new toner, to the front of the mixing assembly. Here the developer is reapplied to the development roller.
The TD sensor [A] detects the toner density in the development unit.

Development Bias



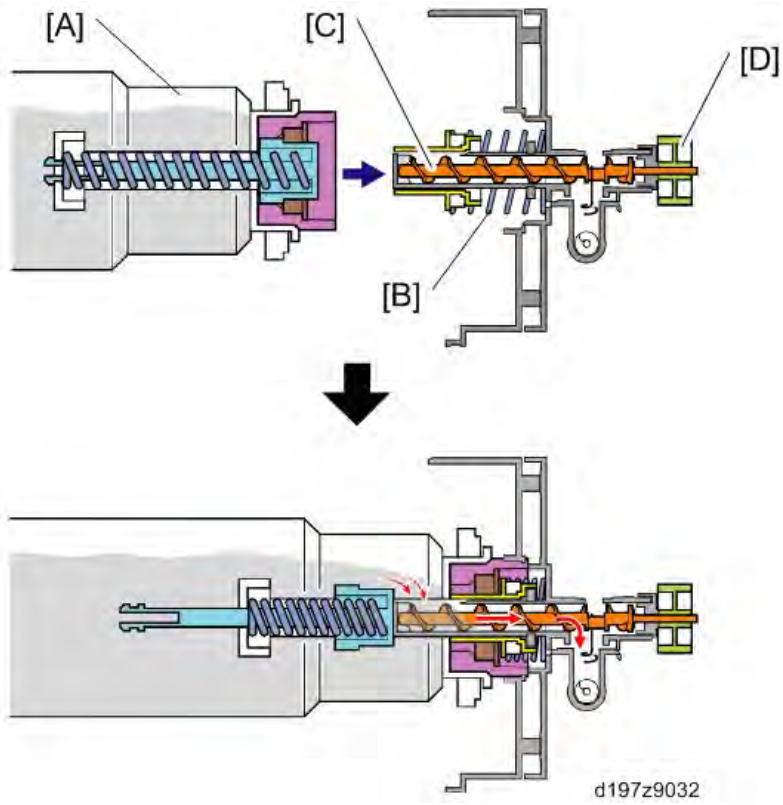
Development bias is generated by a power pack and is applied to the development sleeve [A] via the development sleeve drive shaft and bias terminal [B].

Drive



The development motor [C] drives the mixing auger 1 [A], mixing auger 2 [E] and development sleeve [B] through a serration gear [D].

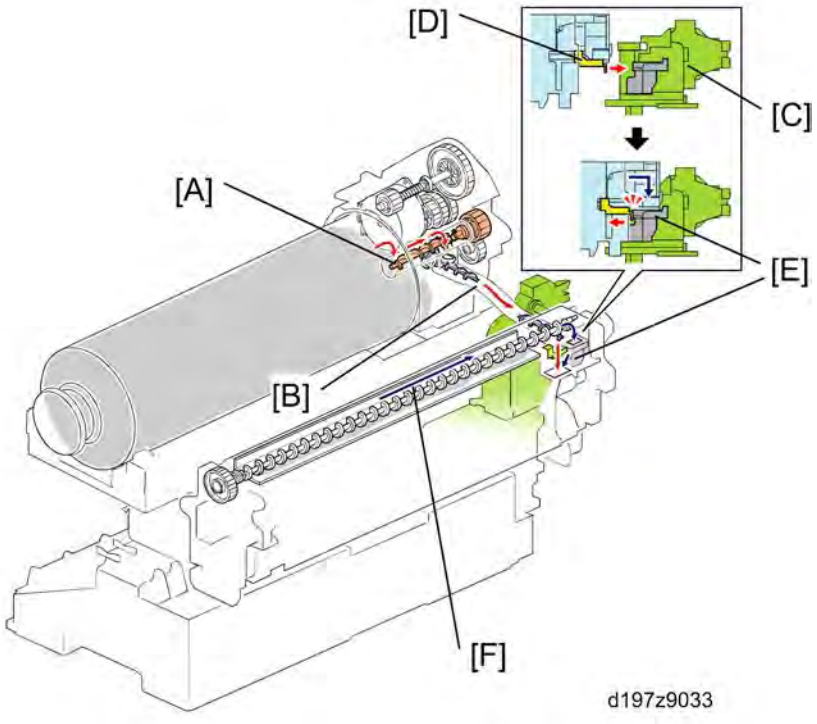
Toner Supply



When the toner bottle [A] is set, the transport nozzle [B] on the side of the main machine is inserted into the bottle (Hi-ACT system).

The drive of the toner supply motor is transmitted to the toner transport coil [F] through the drive gear [E], which transports the toner in the bottle horizontally. Transporting by a coil provides a stable and accurate toner supply

and low toner remaining.



Toner transported by the coil [A] falls directly into the development unit from the sub-hopper via the transport pipe [B]. To prevent toner from remaining, a coil is provided in the transport pipe.
When the PCDU is put in the machine, the sub-hopper [C] slides the shutter [D] on the bottle assembly and the toner goes to the entrance [E] of the development unit.

Toner Density Control

There is only one toner density control mode, called PID mode.

Mode	Toner supply decision	TD Sensor Reference Value	Toner Supply Amount	Toner End Detection
PID	Compares Vt with Vtref	ID sensor control corrects the TD sensor reference value.	The toner supply amount Is calculated with the difference between Vt and Vtref.	Available

Toner End Detection

The TD sensor detects toner near end.
If the difference between the TD sensor output and the target value is equal to or larger than the near end threshold, the machine detects that a “possible” toner near end exists. As the machine continues to operate, it starts to calculate an integrated value. If the integrated value is equal to or larger than the near end total threshold, the machine determines that a “true” toner near end exists. The toner near end indicator blinks on the operation panel at this time.
If the difference between the TD sensor output and the target value is less than the near end threshold twice in a row, the toner near end indicator is turned off.

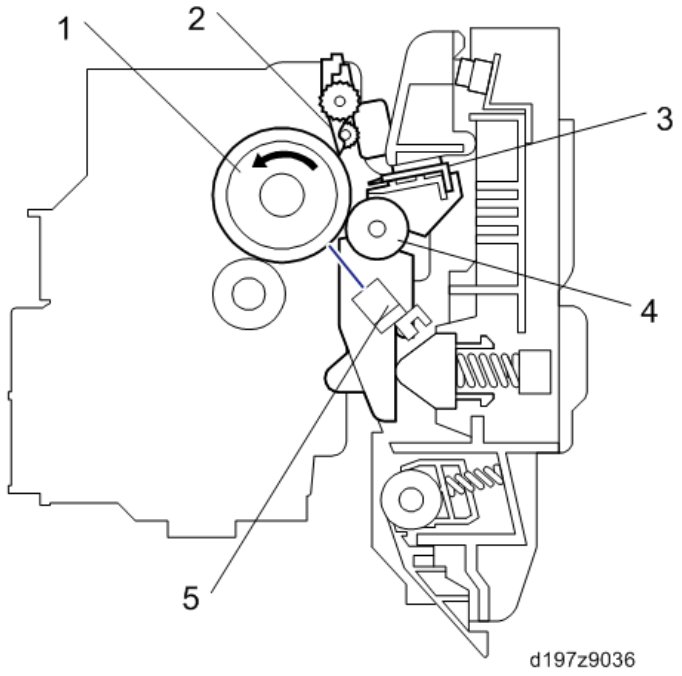
If the difference between the TD sensor output and the target is equal to or larger than the end threshold, the machine detects that a “possible” toner end exists. As the machine continues to operate, it starts to calculate an integrated value. If the integrated value is equal or larger than the toner end total threshold, the machine determines that a “true” toner end exists.

Toner End Recovery

In a toner end condition or toner near end condition, if the front cover is kept open for more than 5 seconds and then it is closed, the machine changes to a toner end recovery mode. You must keep the main power on when you replace the toner bottle or toner end recovery will not work.

Transfer and Separation

Overview

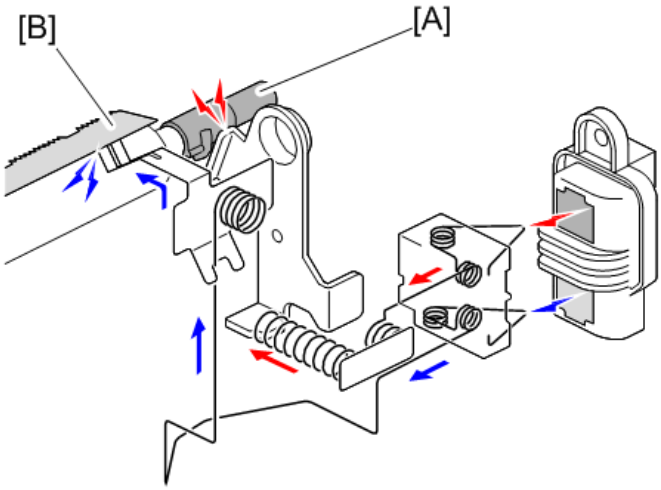


	Description		Description
1	OPC Drum	4	Transfer Roller
2	Pick-off Pawl	5	ID Sensor
3	Discharge Plate		

The machine uses a transfer roller [4], which touches the surface of the OPC drum [1]. The high voltage supply board supplies a positive current to the transfer roller, which attracts the toner from the drum onto the paper. The current depends on the paper width, paper type, and paper feed tray.

The curvature of the drum and the discharge plate [3] help the paper to separate from the drum. The high voltage supply board also supplies a negative dc voltage to the discharge plate. The drum/waste toner motor drives the transfer roller through the OPC drum [1].

Transfer Roller Unit Charge



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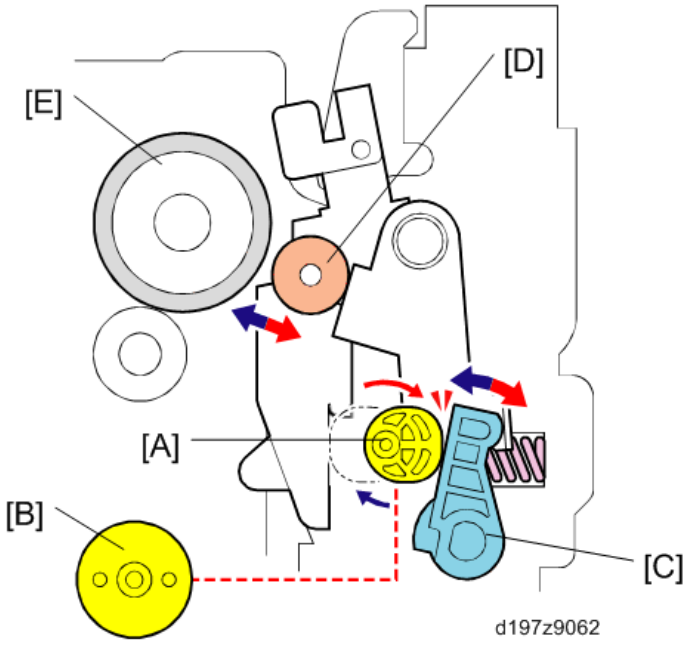
The high voltage supply board supplies a positive current to the transfer roller [A], which attracts the toner from the drum onto the paper. The current depends on the paper width, paper type, and paper feed tray.

The curvature of the drum and the discharge plate [B] help the paper to separate from the drum. The high voltage supply board also supplies a negative dc voltage to the discharge plate [B], which helps the paper to separate from the drum..

Transfer Roller Contact and Release Mechanism

The transfer roller contact and release mechanism prevents dirt and distortion. A transfer roller contact cam [A] in the front right side of the mainframe is driven by the transfer roller contact motor [C]. The transfer roller contact cam moves the transfer roller contact arm [C] by its rotation. The transfer roller [D] and OPC drum [E] are separated by the movement of the transfer roller contact arm during process control, discarding toner, or when the main power is turned off.



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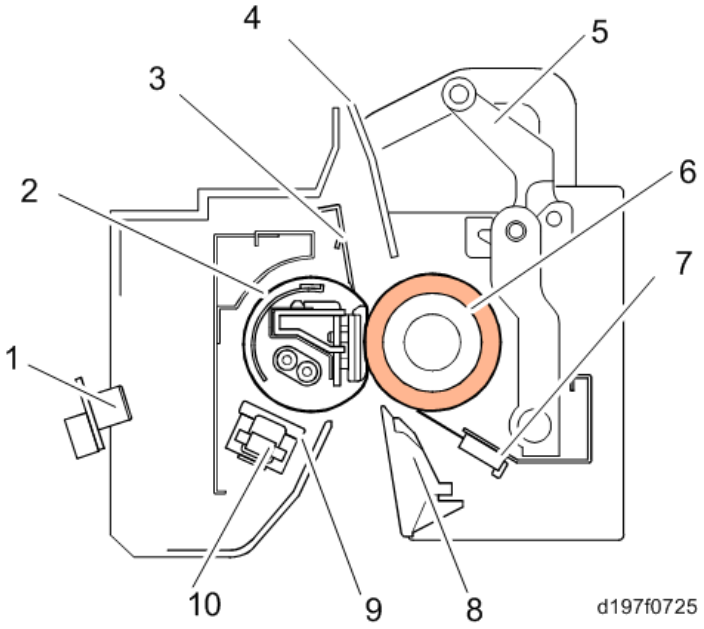
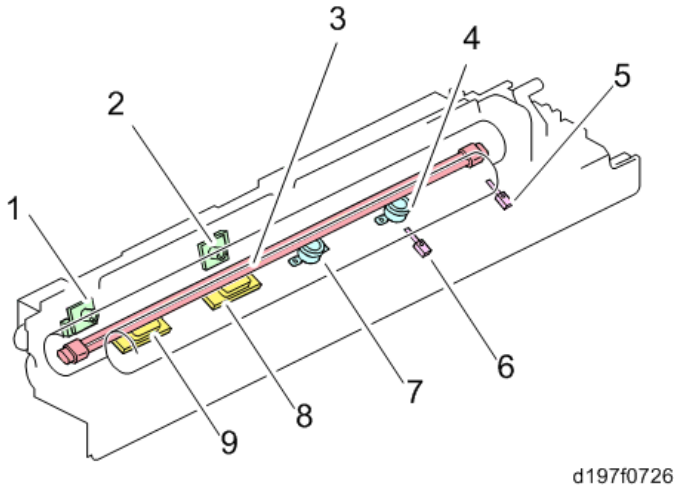
Fusing

Overview

This product uses a QSU-DH fusing system, in which a heater emits light to heat a fusing belt.



No.	Description	No.	Description
1	Thermopile	6	Pressure Roller
2	Heating Sleeve Belt	7	Pressure Roller Thermistor
3	Stripper Plate	8	Fusing Entrance Guide Plate
4	Fusing Exit Guide Plate	9	Thermostat
5	Pressurizing/depressurizing Lever	10	NC Sensor

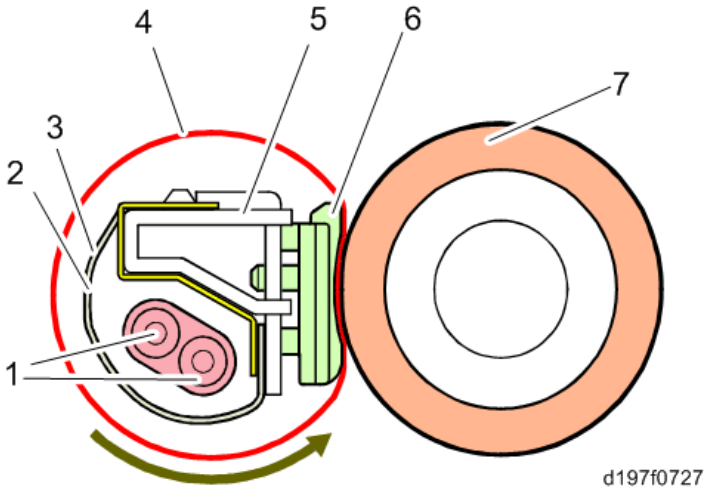


No.	Description	No.	Description
1	Thermopile (edge)	6	Thermistor (center)
2	Thermopile (center)	7	Thermostat (center)

No.	Description	No.	Description
3	Fusing lamp	8	Non-contact Thermistor (center)
4	Thermostat (edge)	9	Non-contact Thermistor (end)
5	Thermistor (edge)		

Mechanism

QSU-DH Fixing System



No.	Description	No.	Description
1	Halogen heater (Fusing Lamps)	5	Stay
2	Light Shielding Plate (at both ends)	6	Nip Pad (heat conduction plate method)
3	Reflector	7	Pressure Roller
4	Heating Sleeve Belt		

The heating sleeve belt is driven by drag rotation following the pressure roller, and presses a nip pad against the pressure roller to fix toner to the paper.

The fusing lamp emits light, and the area of the fusing sleeve belt which is heated moves in an anticlockwise direction so that heat is transmitted up to the contact point with the pressure roller.

- Fusing lamp

  There are two lamps

  Lamp power:

Center	800 W
Edge	412 W

- Nip pad

  Presses against the Pressure roller to form a fusing nip. The top surface is covered with a slippery sheet.

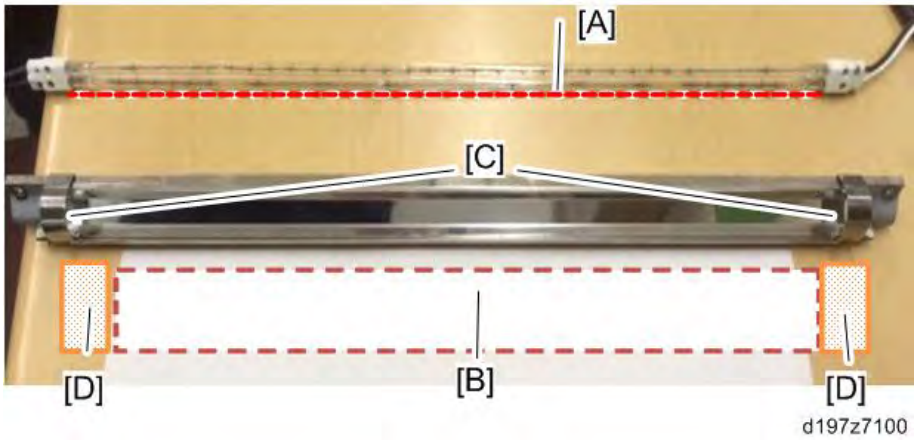
  Light Shielding plate and Heat Conduction Plate

  The heating sleeve belt unit in this model has light shielding and heat conduction plates. These prevent the fusing sleeve from damage caused by temperature increase. Otherwise, this could happen at parts of the sleeve where paper does not pass by during a multi-page job using paper widths that are less than the full

width of the sleeve.

When handling an A3 (SEF) or A4 (LEF) sheet

A cylindrical-shaped light shielding plate [C] covers the ends [D] of fusing lamp [A] where paper does not pass by, to prevent the temperature from rising at those places.

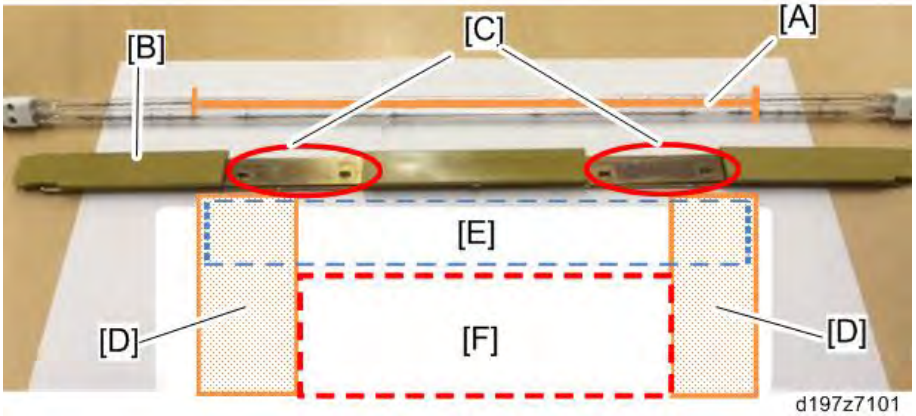


	Description
[A]	Area where the fusing lamp lights up
[B]	Print width of A3 (SEF) / A4 (LEF)
[C]	Light shielding plates
[D]	Areas where paper does not pass by and that would heat up without the light shielding plates

When handling an A4 (SEF) or smaller sheet

The machine lights up only the fusing lamp for center [A]. At this time, the temperature increases around the area [D] where paper does not pass. This is the gap between the lit part of the fusing lamp [A] and the edge of the sheet being fed.

To prevent the heating sleeve belt unit from damage caused by the temperature increase, heat conduction plates [C] which are made of a highly heat conductive material are attached to the nip pad [B] to release the heat.



	Description
[A]	Area where the fusing lamp lights up
[B]	Nip pad

	Description
[C]	Heat conductive plates
[D]	Areas where paper does not pass by and that would heat up without the heat conducting plates
[E]	Print width of A4 (SEF)
[F]	Print width of small size

- Reflector

  Transmits heat efficiently to the left of the fusing belt.

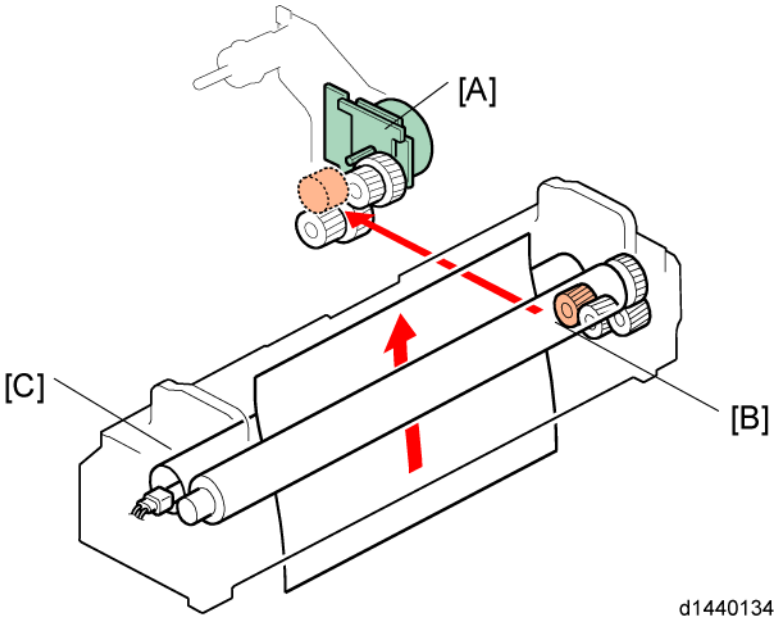
- Flanges

  Situated on both ends of the fusing belt. They maintain the shape of the belt.

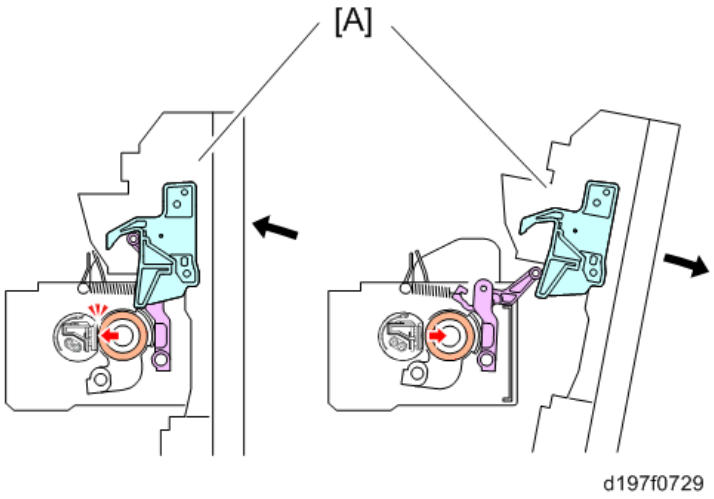
Fusing Drive

The pressure roller [B] is driven by the fusing motor or fusing/paper exit motor [A] (depending on the model).

The fusing belt [C] is driven by the pressure roller (drag rotation).



Pressure Release Mechanism



To easily remove paper in the event of a jam in the fusing unit, a pressure release mechanism is provided.

The pressing or releasing movement is applied together when the right cover [A] opens/closes: When the right cover is closed, pressure is applied. When the right cover is open, the pressure is released.

Fusing Temperature Control

- Warm-up mode
  After power ON, fusing warm-up begins. The fusing motor or fusing/paper exit motor is switched ON, the halogen heater is energized, and the fusing temperature is increased to the “reload target temperature.”
  When the fusing warm-up is completed, the fusing motor or fusing/paper exit motor is switched ON for a certain time, and the fusing temperature is maintained at the “reload target temperature.”
- Standby mode
  After fusing reload, when a certain time has elapsed, power supply to the halogen heater is switched OFF, and the fusing motor or fusing/paper exit motor is switched OFF. At the same time, the temperature is maintained at the “standby target temperature (SP1107-001)” by the halogen heater.
  In standby mode, the fusing motor or fusing/paper exit motor is switched ON intermittently.
- Printing ready mode
  After returning to standby mode, the halogen heater is re-energized, and the fusing temperature is raised to the “printing ready target temperature.” If printing is not required, the machine again enters the standby mode after a certain time has elapsed.
  If printing is required during return to standby, the halogen heater is energized, the fusing temperature is increased to “target temperature after reload/after paper feed,” and the print job starts.

CPM Down Control

To maintain image quality and MFP quality, this MFP has a low-temperature CPM mode and high-temperature CPM mode, and implements 3 levels of CPM down according to the usage situation and MFP state.

- Low-temperature CPM mode
  In a low-temperature environment, the fusing lamp cannot keep up, and it may be difficult to maintain the target temperature. To handle this, the detection temperature of the fusing center thermopile is checked at given intervals, and if the detected temperature is below a threshold value, the CPM is decreased by 1 level.
  This low temperature CPM reduction is performed in the following 3 levels:

CPM down level

Mode	Level
Normal CPM	100%
CPM down 1	80%
CPM down 2	65%
CPM down 3	50%

- Hot CPM mode
  To shorten warm-up time and reduce the TEC value, this MFP employs a fusing unit with a low heat capacity.
  For this reason, the temperature of those parts of the fusing belt where paper does not pass easily increases, and outside of the paper width it may get extremely hot. In order to prevent the belt from breaking due to this

excessive temperature rise, CPM down is implemented depending on the usage conditions. CPM down can be implemented in the following 3 levels depending on the detected temperature at the temperature sensor, or the paper passage time.

Note

- The down level % is a value for the case where a typical paper (Normal paper: A3/DLT/LT/A4) passes through the SEF. There may be some differences depending on paper size/paper thickness.

CPM down level

Mode	Level
Normal CPM	100%
CPM down 1	80%
CPM down 2	50%
CPM down 3	30%

CPM down determination using a temperature sensor

The temperature sensor is checked at given intervals, and if the detected temperature is above a threshold value, the CPM is decreased by 1 level.

Since the points at which temperature tends to increase depend on the paper size, the sensor used is changed depending on the paper size.

Paper width	Sensor used
A3/DLT/B4 (SEF)	Fusing thermistor (pressure roller end)
LT/A4 (SEF)	Fusing thermopile (end)
B5/A5/B6/A6 (SEF)	Fusing thermistor (pressure roller center)

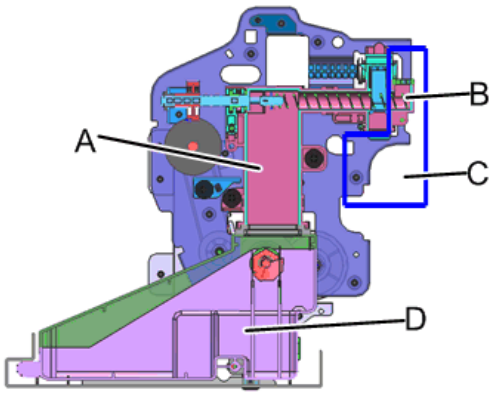
- CPM down determination using paper passage time

Depending on the paper size, it may not be possible to use a sensor to determine the points on the fusing belt which tend to rise in temperature.

Therefore, time conditions are also used to determine CPM down, and if continuous paper passage time is above a threshold value, CPM is decreased by 1 level.

(When CPM down is performed by time conditions, CPM does not increase thereafter.)

Waste Toner



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A: Silicone Pipe	C: PCDU
B: Waste Toner Transfer Coil	D: Waste Toner Bottle

The waste toner transfer coil transfers waste toner from the PCU to the waste toner bottle via a silicone pipe. The silicone pipe is part of the main machine.

Toner Discarding

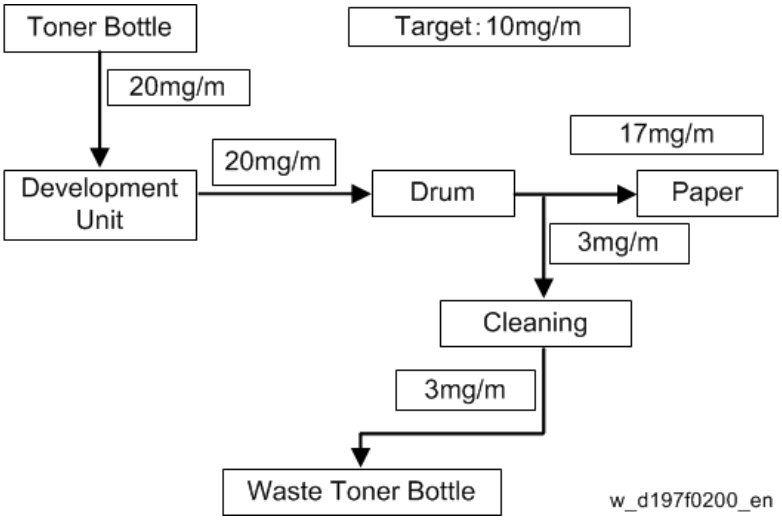
Overview

Printing with low toner coverage leaves a lot of uncharged toner in the development unit. This degrades developer more quickly. To keep toner in the development unit fresh, the machine makes a belt pattern on the drum at the end of a job when image coverage is less than 3%, to make sure that the equivalent toner for 3% coverage is consumed. This supplies a certain amount of fresh toner to the development unit. The belt pattern is cleaned off the drum, and the waste toner is stored in the cleaning unit and from there it goes to the waste toner bottle.

For these examples, let us say that toner consumption at 3% is 10 mg/m.

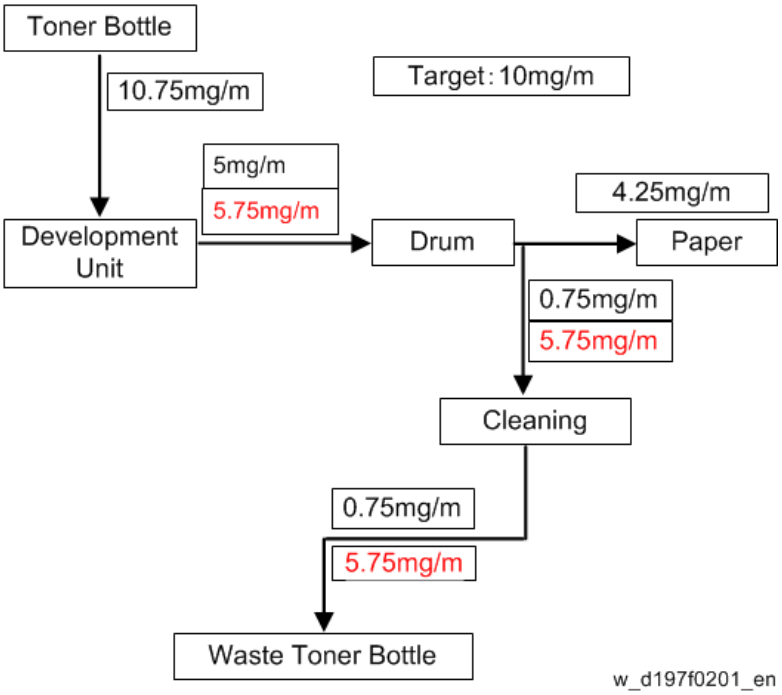
6% Coverage (Toner consumption ratio = 20 mg/m)

In the first example, we have 6% coverage. 20 mg/m of toner is sent from the development unit to the drum. 17 mg/m ends up on the paper and 3 mg/m is cleaned off the drum and goes to the waste toner bottle. 3 mg/m = 20 mg/m x 0.15. This factor of 0.15 is a constant for this development mechanism. In other words, at all times, 15% of the toner applied to the drum does not get on the paper, and is discarded.



1.5% Coverage (Toner consumption ratio = 5 mg/m)

In this example, we have a lot less than 3% coverage. 1.5% coverage is only 5 mg/m of toner. The development unit sends 5 mg/m of toner to the drum. 4.25 mg/m of this gets on the paper, and 0.75 mg/m is cleaned off the drum and sent to the waste toner bottle (this is the 15% factor we talked about above). In this job, only 4.25 mg/m was consumed. The machine has to consume 10 mg/m for each job. So, to make this 4.25 up to 10 mg/m for the preceding job, the machine then consumes 5.75 mg/m by making patterns on the drum (shown in red in the diagram). This toner is cleaned off the drum and sent to the waste toner bottle.

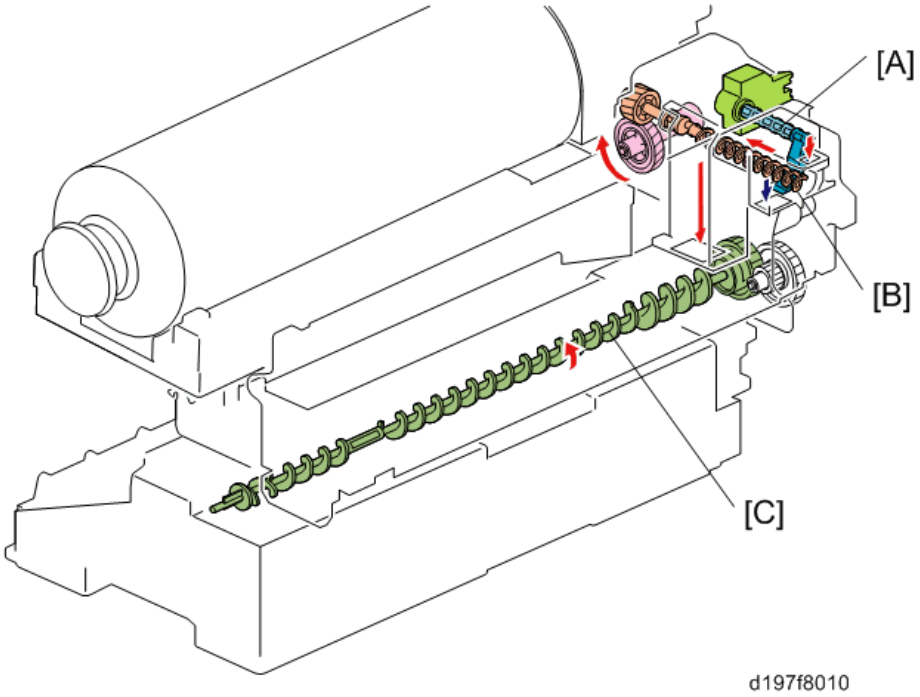


Note

- Red letters indicate the toner amount that the belt patterns forcibly consume.

Waste Toner Bottle

Waste Toner Bottle Drive Mechanism

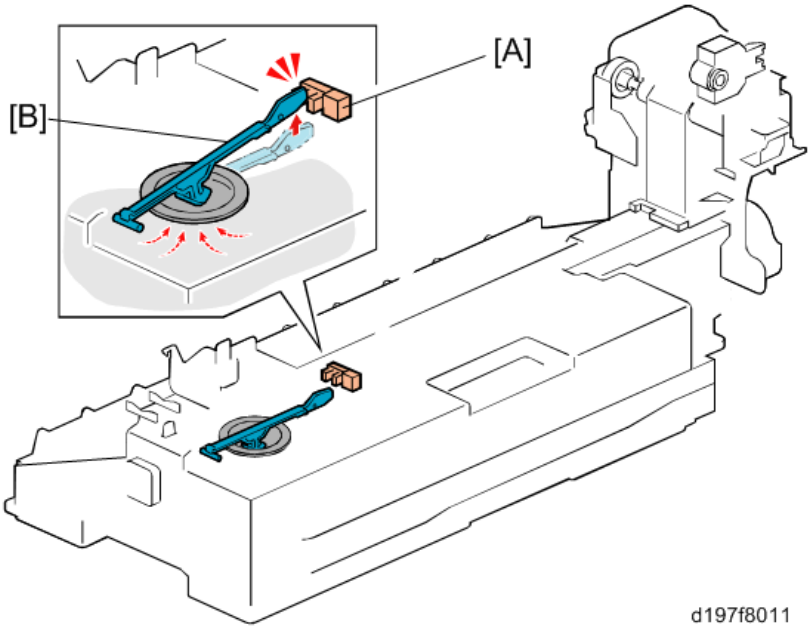


When the recycling shutter solenoid [A] moves the recycling shutter, collected toner is transported to the left side by the waste toner transfer coil [B] and falls into the development unit.

The collected toner in the waste toner bottle is moved to the front side by the waste toner bottle coil [C]. As a result, the height of the collected toner is kept level.

The drum/waste toner motor drives the waste toner transfer coil [B] and waste toner bottle coil [C]. In this model, there is no set detection mechanism for the waste toner bottle.

Toner Collection Full Detection Mechanism



The toner collection full sensor [A] is located above the feeler [B] of the waste toner bottle. When the amount of collected toner in the waste toner bottle reaches about 90%, the feeler [B] is lifted and interrupts the toner collection full sensor. After the machine detects that the waste toner bottle is full based on the coverage counter or page counter, whichever comes first, the pixel counter calculates the remaining days for the waste toner bottle replacement. When the machine prints 7,500 sheets after detecting a bottle near full, the status is changed to bottle full. SP3-810-011 allows you to adjust the duration between bottle near full and bottle full.

The remaining day counter = 15 days: The machine informs the status via @remote (if connected).

The remaining day counter = 5 days: The machine displays a message that indicates the near full condition on the operation panel.

The remaining day counter = 0 days: The machine displays a warning on the operation panel and the machine stops.

(Reference) Waste Toner Bottle Life (Sheet count)

Coverage 3%: 460K

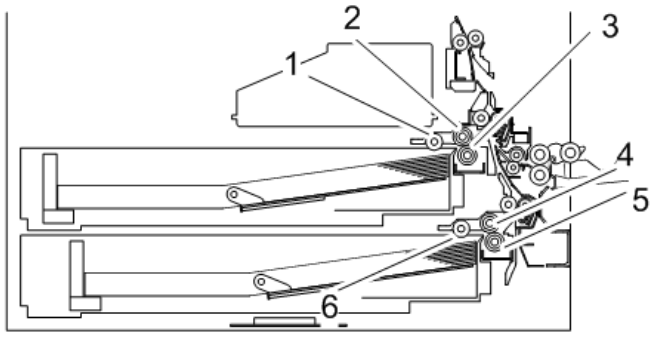
Coverage 6%: 320K

Coverage 10%: 230K

*MP 5055 SP model / 5 pages per job

Feed/ Transport part

Overview



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No.	Description	No.	Description
1	Pick-up roller (1st paper tray)	4	Feed roller (2nd paper tray)
2	Feed roller (1st paper tray)	5	Friction roller (2nd paper tray)
3	Friction roller (1st paper tray)	6	Pick-up roller (2nd paper tray)

Feed / transport part

The paper feed tray consists of 2 stages, i.e., a main double tray and a bypass feed tray. By using both the 1st and 2nd tray as universal trays, a space-saving two-step feed is enabled.

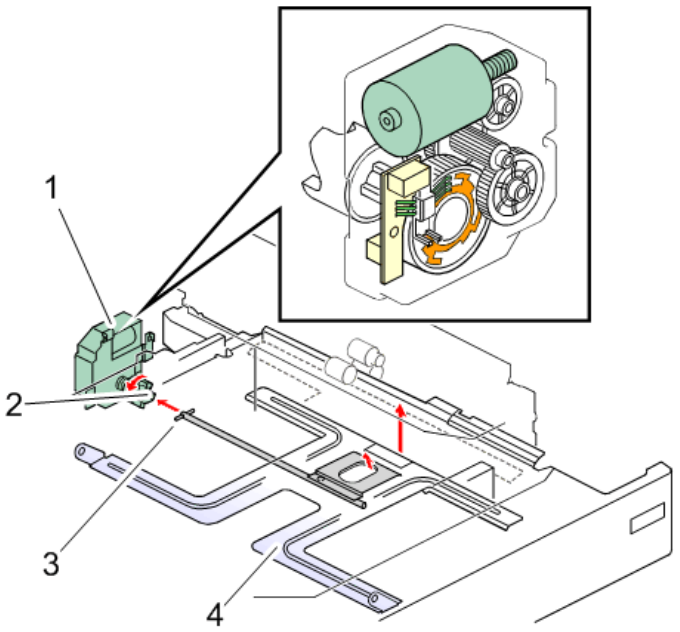
Tray	Paper size	Loading number of sheets	Corresponding paper thickness
1st/2nd paper tray	A3 - postcard	550 sheets	60 – 300 g/m^2
Bypass feed tray	12 x 18 - postcard	100 sheets	52 – 300 g/m^2
Duplex unit	A3 - postcard	Interleave	52 – 256 g/m^2

Tray bottom plate lifting

When the paper feed tray is set in the machine, the set switch at the rear of the tray switches ON, and it is detected that the tray is set.

The coupling between the shaft at the rear of the tray and the lift motor then engages, the motor rotates, and the tray bottom plate is lifted. The tray bottom plate lifts until the paper surface pushes up the pick-up roller, the upper limit sensor switches OFF (interrupt), and the machine enters the paper feed standby mode.

When the tray is removed, the coupling is released, and the tray bottom plate moves down. The lift motor then rotates until the coupling returns to the home position.



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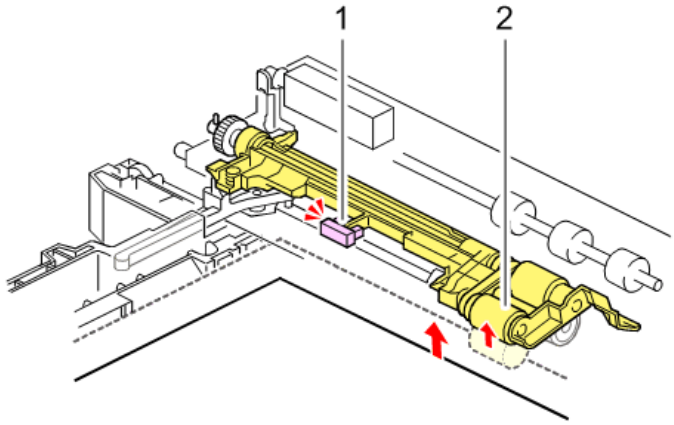
No.	Description	No.	Description
1	Tray lift motor	3	Tray rear axis
2	Coupling	4	Tray bottom plate



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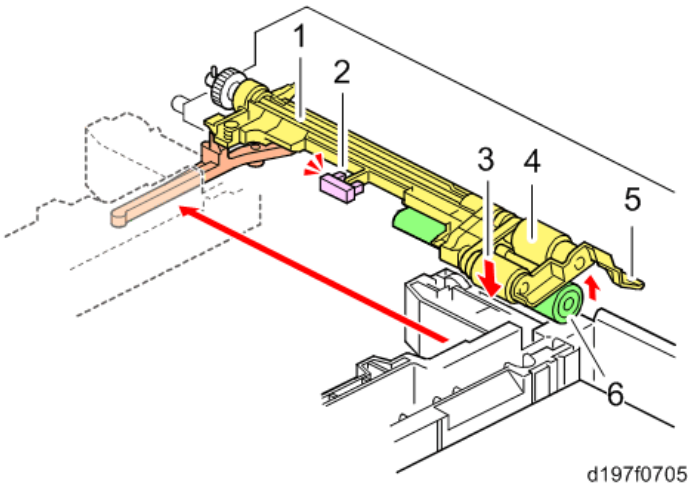
No.	Description	No.	Description
1	Upper limit sensor	2	Pick-up roller

Paper feed mechanism



No.	Description	No.	Description
1	Pickup arm	4	Feed roller
2	Upper limit sensor	5	Feed guide
3	Pick-up roller	6	Friction roller

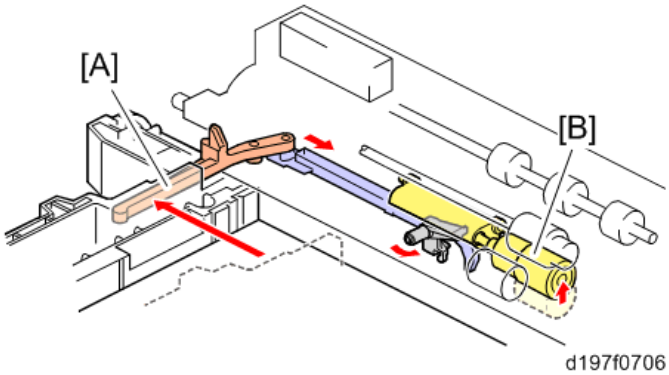
The paper feed unit employs an RF system.

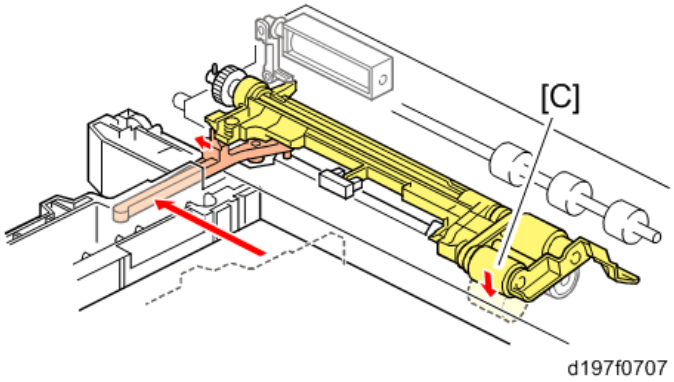
In a conventional FRR system, transport of 2 sheets at a time is prevented by reverse rotation of the separating roller, but in the RF system, paper separation is assisted by the resistance of a separating roller with a torque limiter (reverse drive is not performed).

When the paper feed tray is set in the machine, an arm [A] is pressed, the friction roller [B] comes in contact with the feed roller, and the pick-up roller [C] contacts the top of the paper (to prevent paper remaining, when the paper feed tray is withdrawn, the arm returns and contact with the rollers is released).

The machine enters paper supply standby mode when the tray bottom plate moves up. When the paper feed motor is switched ON, the rollers rotate and paper is supplied.

The roller holder functions as a paper guide and roller clip ring. The roller holder prevents the paper from winding up.





Paper feed transport mechanism

In order to maintain a proper interval of each paper, this machine has a paper feed sensor near the paper feed roller to adjust the timing of paper feeding.

1. The Paper feed motor is switched ON, and the first sheet is supplied.
2. The paper feed motor switches OFF right before the rear edge of the first sheet completely passes the paper feed roller.
3. The pick-up arm lowers the pick-up roller, which makes the pick-up roller contacting with the surface of the paper when the rear edge of the first sheet finishes passing the paper feed roller.
4. The paper feed motor switches ON to supply the second sheet of paper when the first sheet is transported for a predetermined distance by the downstream transport roller.

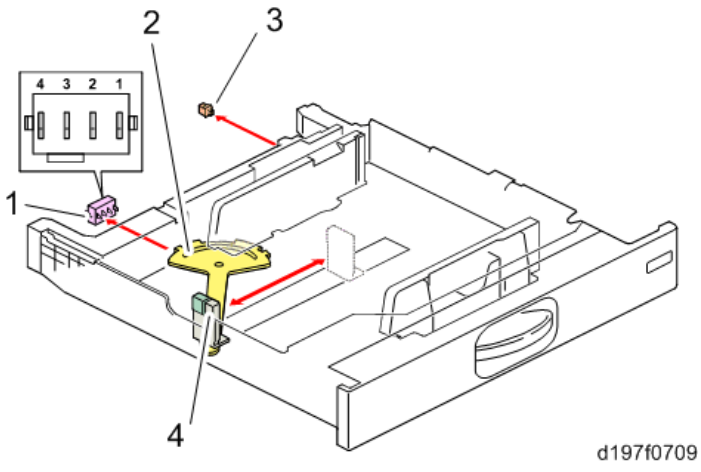
Paper size detection (1st / 2nd paper tray)

The end fence interlocking rotation detection plate is an automatic detection system which recognizes patterns by a 4-position push switch.

Size is detected by the detection patterns of knobs 1, 2, 3, and 4. Tray set is detected by the tray set switch.

If there has been a change in the pattern, “machine tray automatic size detection” control is performed continuously.

If the paper size is selected manually by user setting, the automatic size detection is overridden.



No.	Description	No.	Description
1	Size detection switch	3	Tray set switch
2	Size detection feeler	4	End fence

- Tray detection sizes:

  SRA3, A3, B4, A4 SEF, LT SEF, B5 SEF, A4 LEF, B5 LEF, and A5 LEF

- Tray size detection patterns

Size	Knob			
	4	3	2	1
A3(DLT)	0	1	0	0
B4(LG)	0	0	1	1
	0	1	1	1
A4 SEF	1	1	1	0
LT SEF	1	1	0	0
B5 SEF	1	0	0	0
A4 LEF (LT LEF)	0	0	0	1
B5 LEF (Exe LEF)	0	0	1	0
A5 LEF	0	1	0	1

  * “0” is switch ON (PUSH), “1” is switch OFF.

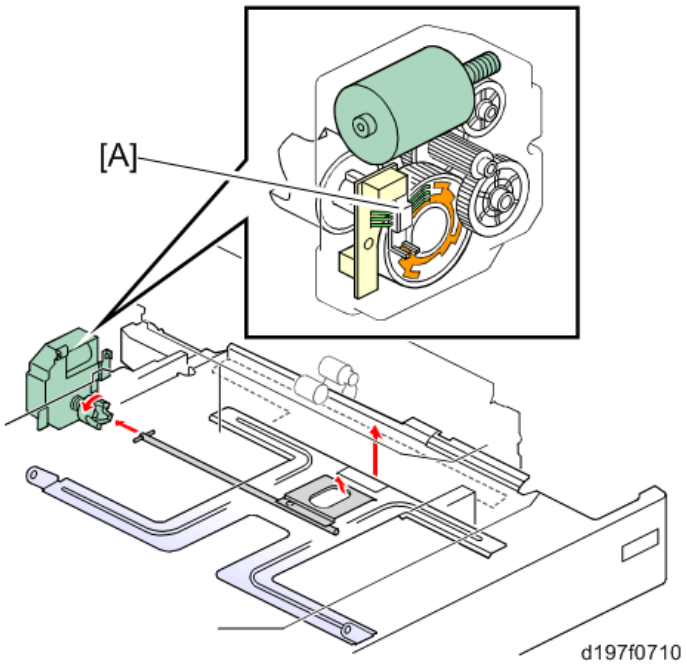
  * The figures in parentheses are automatic detection sizes which can be switched over in SP mode (for SP settings, see “SP mode (paper supply transport)” : SP5-181-005 to 008, SP5-131-001).

  * Exe LEF=10.5" x 7.25"

  * If a pattern other than the above is detected, “Unknown Pattern” is displayed on the control panel.

Remaining paper detection

When the tray lift motor rotates, the remaining paper detection sensors 1, 2 [A] built into the motor switch ON (pass) or OFF (interrupt). Paper remaining in the paper feed tray is detected by a combination of this ON/OFF.

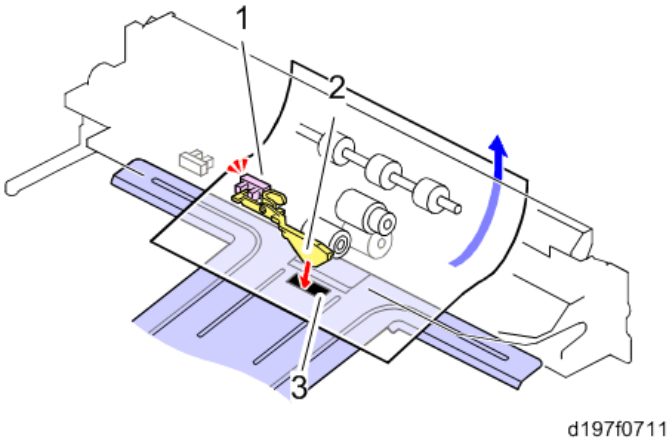


These are the following 4 remaining paper detection levels:

Remaining paper status	100%	70%	30%	10%
Remaining paper status sensor 1	ON	OFF	OFF	ON
Remaining paper status sensor 2	ON	ON	OFF	OFF
Control panel remaining paper display	Bar 4	Bar 3	Bar 2	Bar 1

Paper end detection

When there is no more paper in the paper feed tray, the leading edge of the paper end feeler falls into a notch in the tray bottom plate, and the paper end detection sensor at the rear edge of the end feeler switches ON (pass).

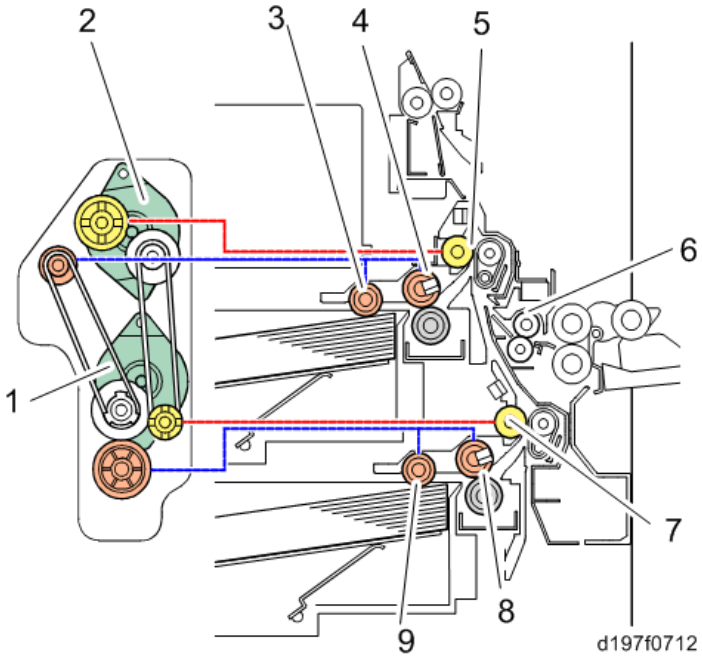


No.	Description	No.	Description
1	Paper end sensor	3	Notch
2	End feeler		

Paper feed drive

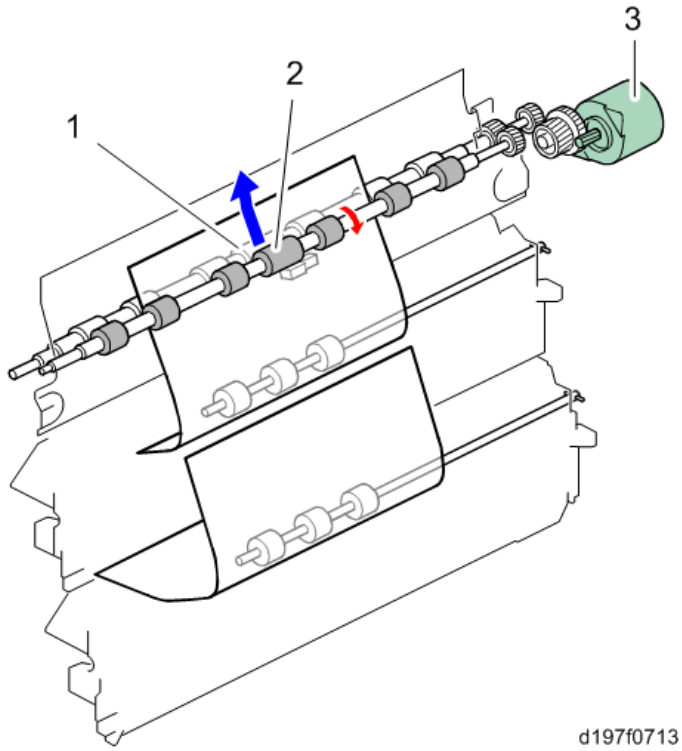
The 1st/2nd pick-up rollers and 1st/2nd paper feed rollers are driven by the paper feed motor. The 1st/2nd separating rollers are driven by the vertical transport motor.

A bypass transport roller is driven by a duplex/bypass motor, and the registration roller is driven by the registration motor.



No.	Description	No.	Description
1	Paper feed motor	6	Bypass transport roller
2	Vertical transport motor	7	Vertical transport roller (2nd tray)
3	Pick-up roller (1st tray)	8	Paper feed roller (2nd tray)
4	Paper feed roller (1st tray)	9	Pick-up roller (2nd tray)
5	Vertical transport roller (1st tray)		

Registration roller corrects skews of paper to match a leading edge of an image on the drum with paper selections. The registration roller (Driven) employs a plastic roller to correct skews. The registration roller (Drive) employs a rubber roller to enhance its transport capability. Registration buckle for each tray or paper type can be adjustable with SP1-003.



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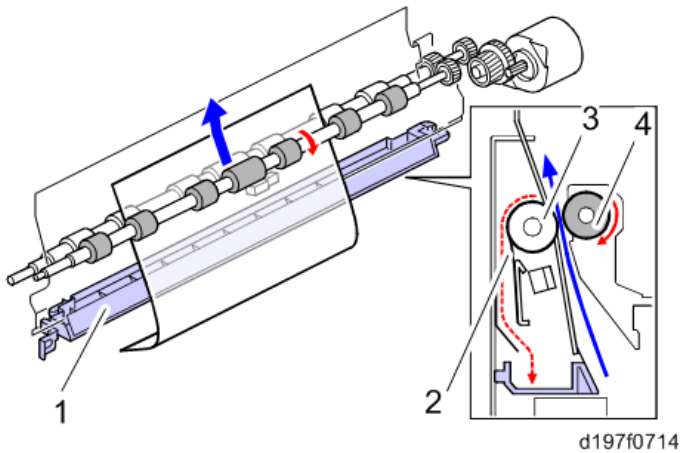
No.	Description	No.	Description
1	Registration roller (Driven)	3	Registration motor
2	Registration roller (Drive)		

Paper powder removal mechanism

The registration part of the machine removes paper scrap by 1 paper removal sheet in contact with the driven roller (resin). Paper scrap removed by the paper removal sheet is collected in a paper removal container.



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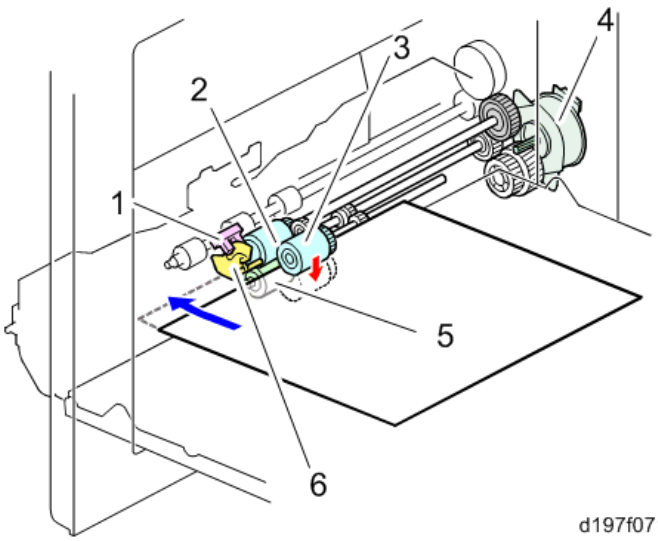
No.	Description	No.	Description
1	Paper powder removal container	3	Registration roller (Driven)
2	Paper powder removal sheet	4	Registration roller (Drive)

Bypass feed section



No.	Description	No.	Description
1	Bypass paper end sensor	4	Bypass/Duplex motor
2	Bypass paper feed roller	5	Bypass Reverse roller
3	Bypass pick-up roller	6	Paper detection filler

Bypass feed paper/separation mechanism

The manual paper feed mechanism employs an FRR system. The bypass feed unit comprises a paper feed roller, reverse roller and bypass pick-up roller.

When the paper feed tray is selected and the machine is started, the bypass pick-up solenoid is switched OFF, and paper is supplied by the duplex/bypass motor (CCW).

*1 The bypass pick-up roller does not come in contact with the paper surface by default. It is opposite to the paper feed tray.

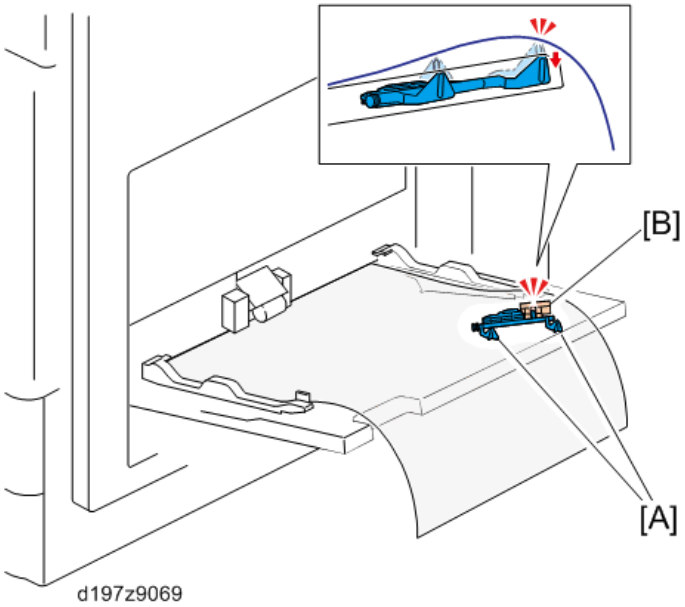
Bypass feed paper size detection

Paper size width detection is performed by a bypass feed size detection switch (rotary switch).

The bypass feed size detection switch has a rotation plate which rotates together with the side fence of the bypass feed table, and detects the paper size.

Paper portrait/landscape is determined by a length detection sensor.

Two feelers [A] for the bypass paper length sensor [B] are added to the rear of the tray to prevent a false detection in paper length detection caused by floating on the rear of paper when large size paper is set without pulling out the extension bypass tray.



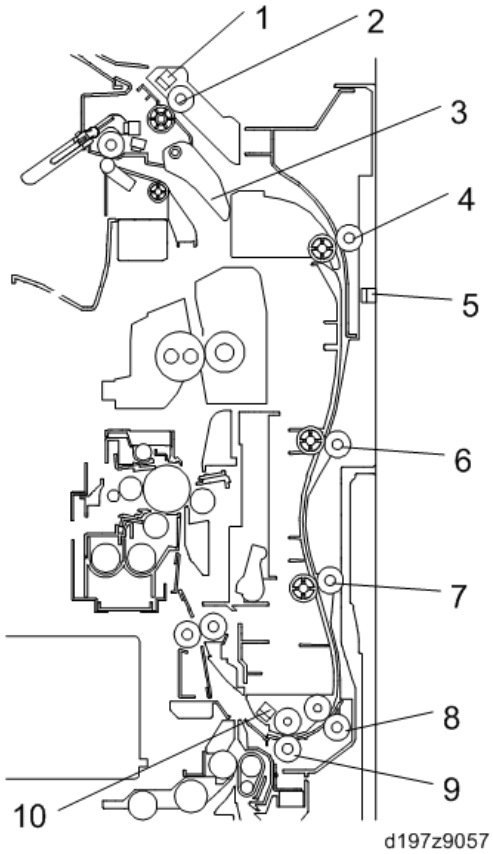
Bypass feed paper end detection

To detect bypass feed paper end, a paper detection filler and bypass feed paper end sensor are provided.
When the paper is set, the bypass paper end sensor switches ON (interrupt), and paper set is detected.
When there is no more paper, a detection filler falls into a hole in the bypass feed table, the bypass paper end sensor switches OFF (pass), and paper end is detected.

Bypass paper feed drive

The paper feed roller, reverse roller and pick-up roller are driven by the duplex/bypass feed motor.

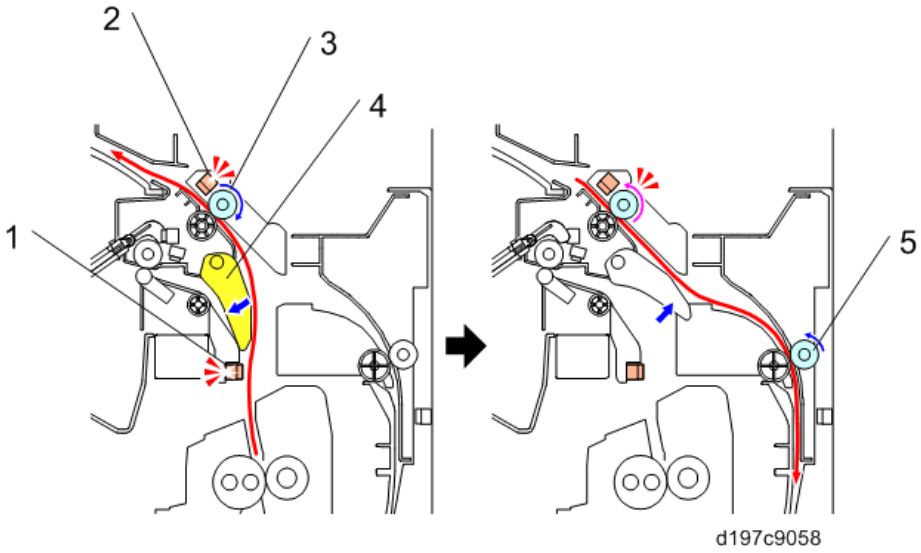
Duplex section



No.	Description	No.	Description
1	Reverse sensor	6	Duplex entrance roller 2
2	Reverse roller	7	Duplex transport roller 1
3	Junction gate	8	Duplex transport roller 2
4	Duplex entrance roller 1	9	Duplex exit roller
5	Duplex entrance sensor	10	Duplex exit sensor

Transport reverse mechanism

The paper passes through the junction gate, and is transported to the reverse tray by the reverse roller. After the trailing edge of paper has left the fusing exit sensor, the junction gate is moved to the duplex path direction and the reverse motor starts rotating reversely.



No.	Description	No.	Description
1	Fusing exit sensor	4	Junction gate
2	Reverse sensor	5	Duplex entrance roller 1
3	Reverse roller		

Duplex drive

The rollers are driven by the following motors:

Rollers	Drive sources
Reverse roller	Reverse motor
Duplex entrance roller 1	Duplex entrance motor
Duplex entrance roller 2	Duplex entrance motor
Duplex transport roller 1	Duplex/bypass motor
Duplex exit roller	Duplex/bypass motor

Interleave mechanism

The duplex unit performs interleave to reduce the overall duplex copying time.

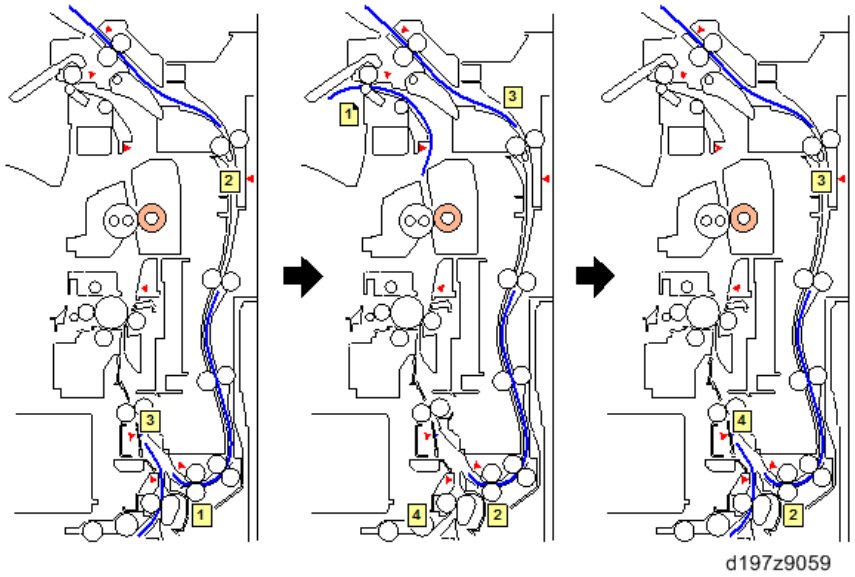
<Paper exit from machine>

Length	No. of interleaves
Less than 216 mm	3
216-432 mm	2
*When bypass/duplexing (regardless of paper sizes)	1

<1bin exit from machine>

Length	No. of interleaves
Less than 216 mm	2
216-432 mm	1

- 3 sheet leave

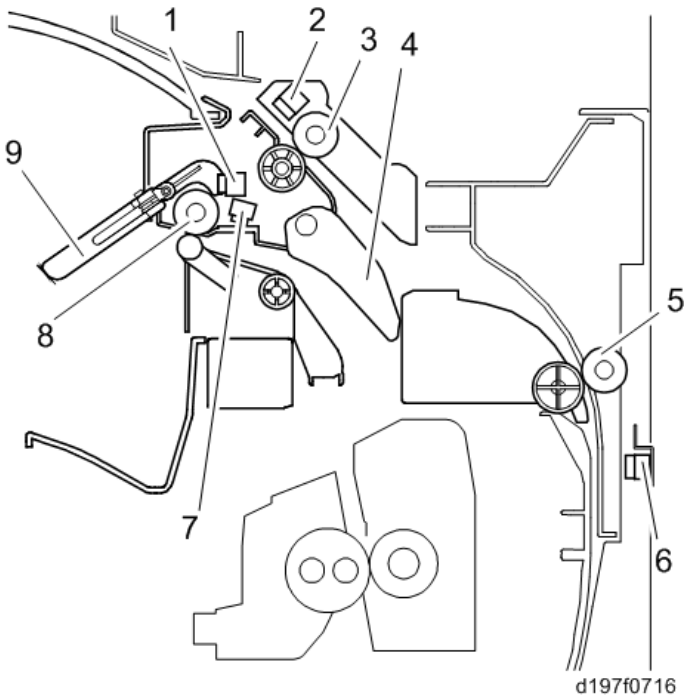


Back side of 1st sheet -> Back side of 2nd sheet -> Back side of 3rd sheet -> Front side of 1st sheet -> Back side of 4th sheet -> Front side of 2nd sheet

- 2 sheet leave

Back side of 1st sheet -> Back side of 2nd sheet -> Front side of 1st sheet -> Back side of 3rd sheet -> Front side of 2nd sheet

Paper exit unit



No.	Description	No.	Description
1	Paper exit full sensor	6	Duplex entrance sensor
2	Reverse sensor	7	Paper exit sensor

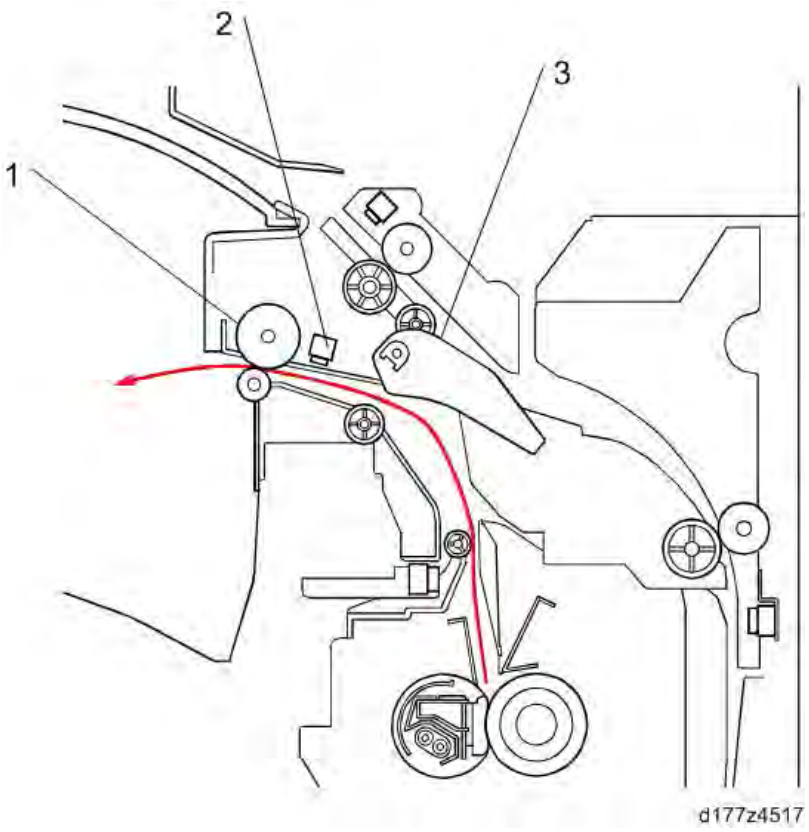
No.	Description	No.	Description
3	Reverse roller	8	Paper exit roller
4	Junction gate	9	Paper exit full feeler
5	Duplex entrance roller		

Delivery location change-over

The paper transported from the fusing unit is changed over by the junction gate in the “machine paper exit/bridge unit” direction or the “reverse tray/1 bin unit” direction.

Machine paper exit/bridge unit direction

1. The registration sensor switches ON.
2. The fusing/ paper exit motor (*MP 2555 SP/3055 SP/3555 SP) or the paper exit motor (*MP 4055 SP/5055 SP/6055 SP) switches ON (CCW).
3. When the rear edge of the paper leaves the paper exit roller, the fusing/paper exit motor or the paper exit motor switches OFF.

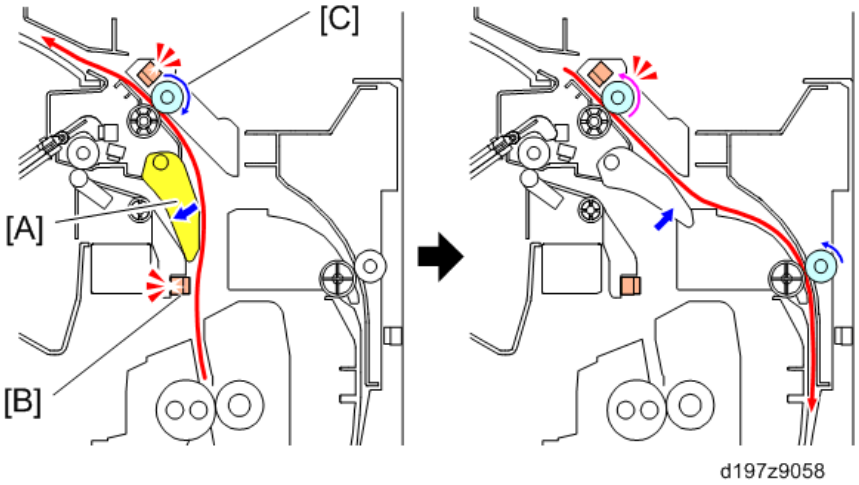


No.	Description
1	Paper exit roller
2	Paper exit sensor
3	Junction gate

Reverse tray/1 bin unit direction

1. Registration sensor switches ON.

2. The reverse motor switches ON (CCW).
3. Before the leading edge of the paper reaches the junction gate [A], the junction gate moves in the reverse tray/1 bin unit direction.
   * If the junction gate is in the reverse tray/1 bin unit direction, the junction gate is not changed over.
4. After the trailing edge of the paper has left the fusing exit sensor [B], the exit junction solenoid switches OFF.
5. When the trailing edge of the paper leaves the reverse roller [C], the reverse motor switches OFF.



Paper Exit Full and Jam Detection

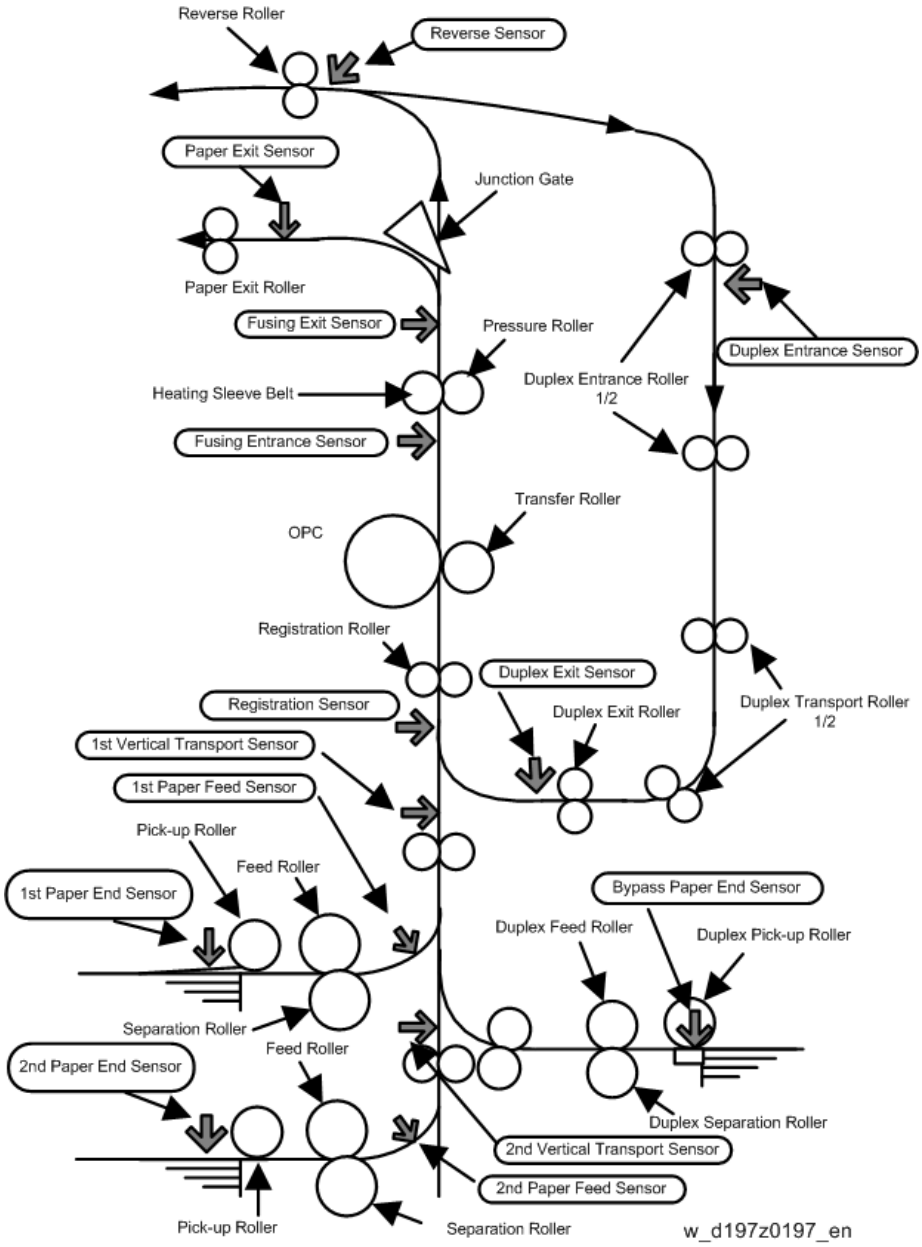
The paper exit full sensor detects paper exit jam.

When outputs push up the paper exit full feeler, the paper exit full sensor detects that standard output tray is full of outputs and a jam message is displayed after a job end.

Paper exit sensor

When a sheet of paper stays in the paper exit unit, the paper exit sensor detects the paper jam and a jam message is displayed.

Paper Path and Sensor Locations



Intervals of Rollers

Module	From	To	Interval (mm)
1st Paper Feed Unit	Pick-up Roller (1st tray)	Feed Roller (1st tray)	30.0
	Feed Roller (1st tray)	1st Vertical Transport Roller	43.0
2nd Paper Feed Unit	Pick-up Roller (2nd tray)	Feed Roller (2nd tray)	30.0
	Feed Roller (2nd tray)	2nd Vertical Transport Roller	43.0
	2nd Vertical Transport Roller	1st Vertical Transport Roller	96.9
Registration Unit	1st Vertical Transport Roller	Registration Roller	84.8
	Registration Roller	Transfer Roller	83.5
Fusing Unit	Transfer Roller	Heating Sleeve Belt	102.9
Paper Exit Unit	Heating Sleeve Belt	Paper Exit Roller	138.5
Reverse Unit	Heating Sleeve Belt	Reverse Roller	138.5

Module	From	To	Interval (mm)
	Reverse Roller	Duplex Entrance Roller 1	131.3
Duplex Unit	Duplex Entrance Roller 1	Duplex Entrance Roller 2	120.1
	Duplex Entrance Roller 2	Duplex Transport Roller 1	89.6
	Duplex Transport Roller 1	Duplex Transport Roller 2	84.0
	Duplex Transport Roller 2	Duplex Exit Roller	27.1
	Duplex Exit Roller	Registration Roller	88.0
Bypass Feed Unit	Duplex Pick-up Roller	Duplex Feed Roller	30.0
	Duplex Feed Roller	Duplex Transport Roller	24.5
	Duplex Transport Roller	1st Vertical Transport Roller	56.0

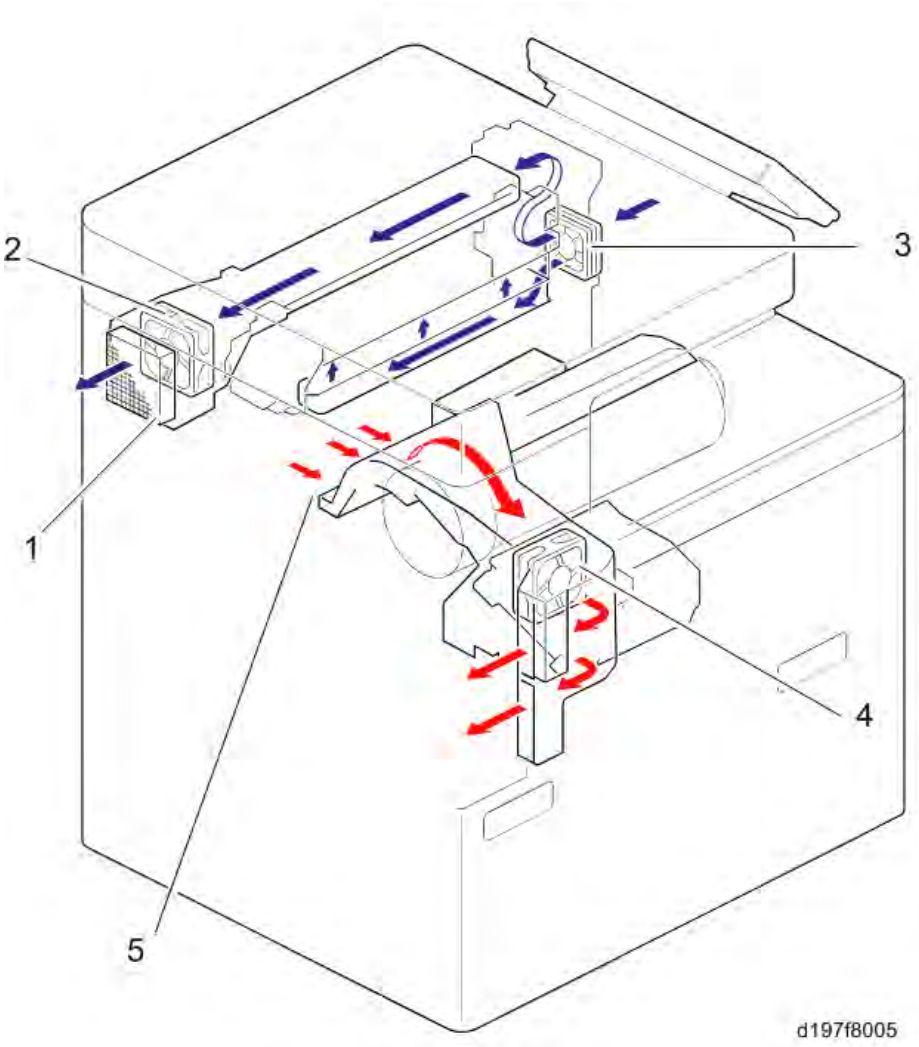
Intervals of Sensors

Module	From	To	Interval (mm)
1st Paper Feed Unit	Feed Roller (1st tray)	1st Paper Feed Sensor	5.0
	1st Vertical Transport Roller	1st Vertical Transport Sensor	16.8
2nd Paper Feed Unit	Feed Roller (2nd tray)	2nd Paper Feed Sensor	5.0
	2nd Vertical Transport Roller	2nd Vertical Transport Sensor	24.3
	2nd Vertical Transport Sensor	1st Vertical Transport Sensor	88.7
Registration Unit	Registration Sensor	Registration Roller	17.0
Paper Exit Unit	Paper Exit Sensor	Paper Exit Roller	17.0
Reverse Unit	Reverse Roller	Reverse Sensor	14.0
Duplex Unit	Duplex Entrance Roller 1	Duplex Entrance Sensor	34.0
	Duplex Exit Roller	Duplex Exit Sensor	17.1
1-bin Unit	Reverse Sensor	1-bin Exit Roller	-

Air Flows (Fan Control)

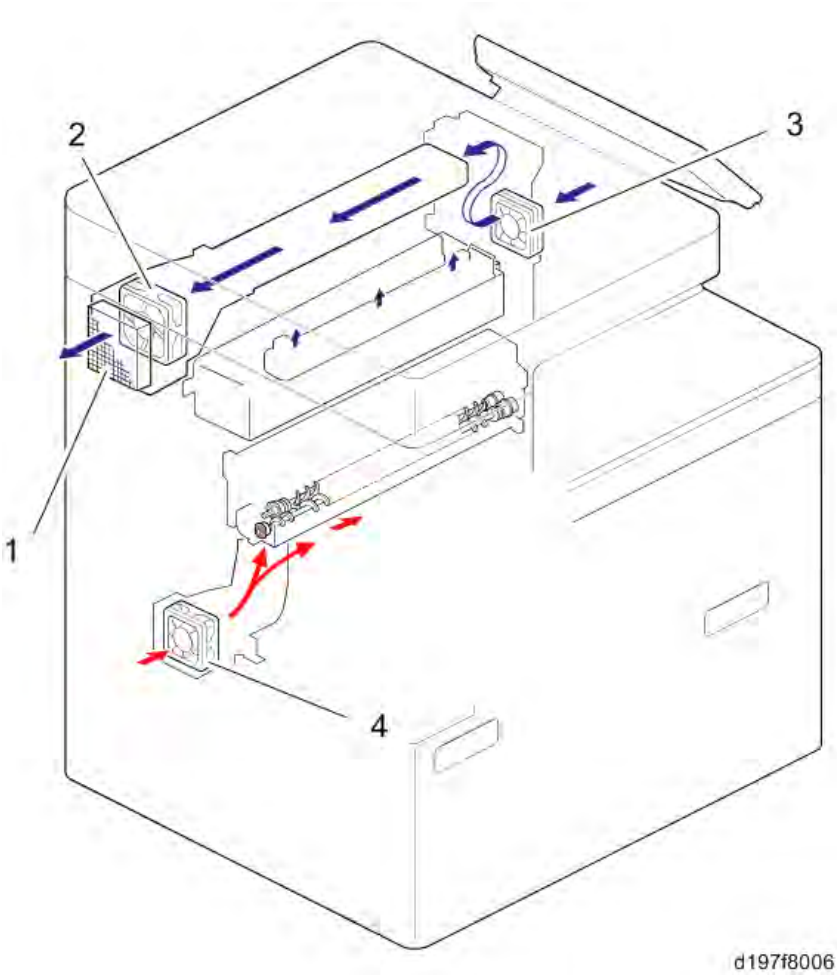
Overview

Around the Development Unit / Laser Unit



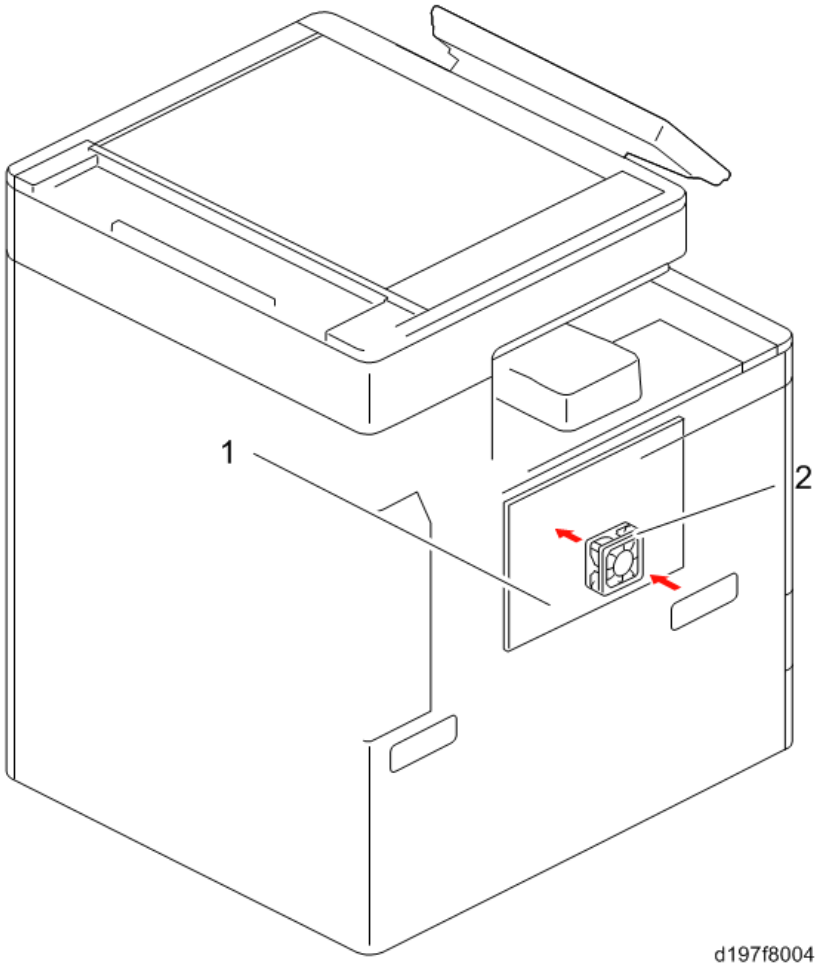
No.	Part Name
1	Odor filter
2	Fusing fan
3	Paper exit fan
4	Development exhaust fan
5	Dust filter

Around the Fusing Unit and Development Unit



No.	Part Name
1	Odor filter
2	Fusing fan
3	Paper exit fan
4	Development bearing cooling fan (MP 4055 SP/5055 SP/6055 SP only)

Around the PSU



No.	Part Name
1	PSU board
2	PSU cooling fan (MP 4055 SP/5055 SP/6055 SP only)

Mechanism

By installing the duct corresponding to each fan, the air flow is efficiently controlled to a cooling target. Moreover, improvement in quietness and energy-saving efficiency is achieved by performing stepwise operation of the fan according to the imaging temperature.

Cooling of PSU

The PSU is cooled by the PSU cooling fan, cooling the PSU board directly. Note that the PCU cooling fan is installed on MP 4055 SP/5055 SP/6055 SP models only.

Cooling of Development Unit

The cooling for development unit is provided by a development bearing cooling fan that takes air in from the rear of the machine outside and applies the air to the bearing of mixing auger and bottom side of the development unit. Note that the development bearing cooling fan is installed on MP 4055 SP/5055 SP/6055 SP models only.

Cooling of PCDU

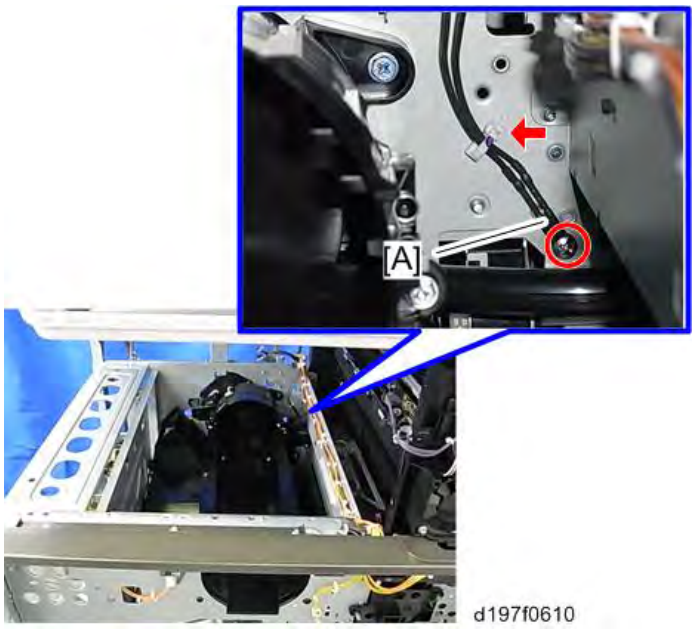
Air taken in from the PCDU cleaning unit is taken out from the left rear exhaust. An air-flow duct is installed at between the fusing unit and the toner bottle, to suppress excessive temperature rise of the toner bottle.

Cooling of Fusing Unit

Air taken in from the paper exit fan at the front is discharged from the fusing fan at the rear to outside the machine. By cooling the paper immediately after fusing, it is used for not only cooling of the paper exit sensor but also reduction of stored heat of stack paper and reduction of curl are realized. This also serves to prevent dew condensation of the paper discharge guide sheet. As a measure against odor, an odor filter is installed downstream from the fusing fan.

Crisis management when temperature rises in the MFP

In order to suppress excessive temperature rise in the MFP and maintain equipment quality, a temperature detection sensor (imaging temperature sensor (thermistor)) [A] is installed in the MFP. The imaging temperature sensor (thermistor) detects the temperature environment in the MFP, and controls cooling operation (x1,x1).



Overview of cooling operation in the machine

The temperature in the machine is detected during output and after output, and the interior of the machine is cooled by fan operation (stepwise operation of fan, prolonged fan rotation after paper has passed through) according to the temperature inside the machine.
However, if the temperature inside the machine rises significantly due to passing a large volume of paper, in addition to fan operation, the CPM is specified to control the temperature in the machine.

The Conditions of Fans Operation

The following table illustrates how/when the fans operate under the specific conditions of the main machine.

Condition	Development Exhaust Heat Fan	Paper Exit Fan	Fusing Fan	Development Bearing Cooling Fan*2	PSU Cooling Fan*2
Warm-up	Stops	Stops	Stops	Stops	Stops
Standby	Rotates in low speed	Stops	Rotates in low speed	Stops	Stops
During printing	Rotates	Rotates	Rotates	Rotates	Rotates
After printing	Rotates in low speed *1	Stops*1	Rotates in low speed*1	Stops*1	Stops*1
Abnormal (Jams)	Stops	Stops	Stops	Stops	Stops

*1 When the temperature in the machine reaches 45.5 degrees, these fans keep revolving until the temperature decreases by two degrees.

*2 MP 4055 SP/5055 SP/6055 SP only

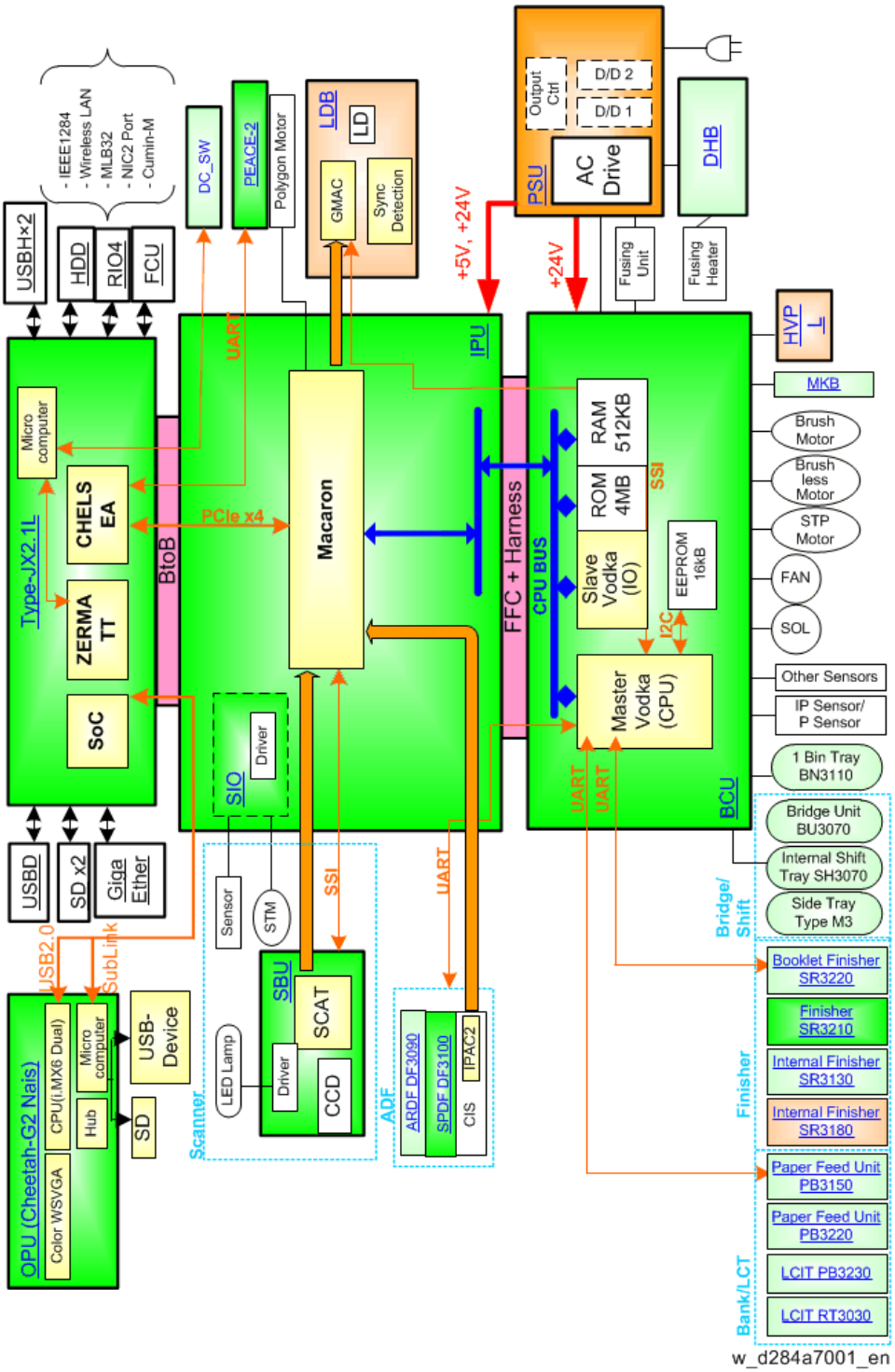
Print Duty Control

1. The machine repeats a 16-page-print and 25-second-pause. The following two messages will alternatively appear on the operation panel.
   “The printing speed is now being limited, because the internal cooling fan is active.”
   “Internal cooling fan is active.”
2. All the fan motors in the machine works after printing and standby. The message will appear on the operation panel.
   “Internal cooling fan is active.”
3. If the temperature of the image processing unit reaches under the pre-set temperature, the machine turns to the normal control.

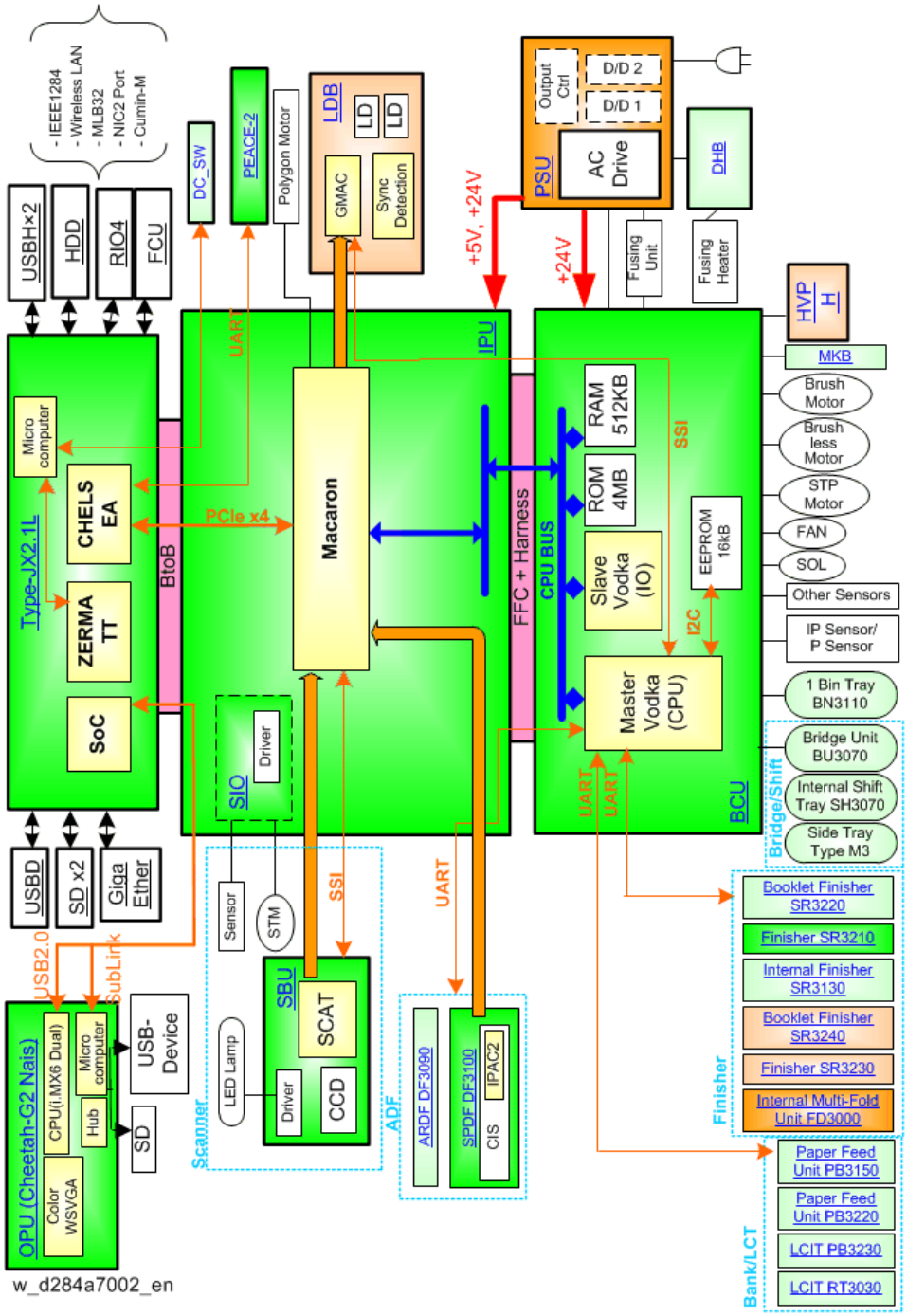
Electrical parts

Block diagram

For MP 2555 SP/3055 SP/3555 SP models



For MP 4055 SP/5055 SP/6055 SP models



Board outline

Controller

Controls the MFP system overall. Comprises an x86 CPU, controller ASIC, IO control ASIC, and RAM.

SBU

Read control circuit which performs analog signal processing and AD image conversion of the CCD read image. It also has an IPU I/F, and controls scanner input output signals according to CPU commands.

LDB

LD control circuit which drives the laser diode by a universal driver.

BCU

Controls the engine, as well as MFP engine sensor, motor and solenoid (The BCU has the IOB functions).

IPU

Processes digital signals by an IPU.

FCU

Controls the fax program.

OPU

Controls the control panel.

HVPS

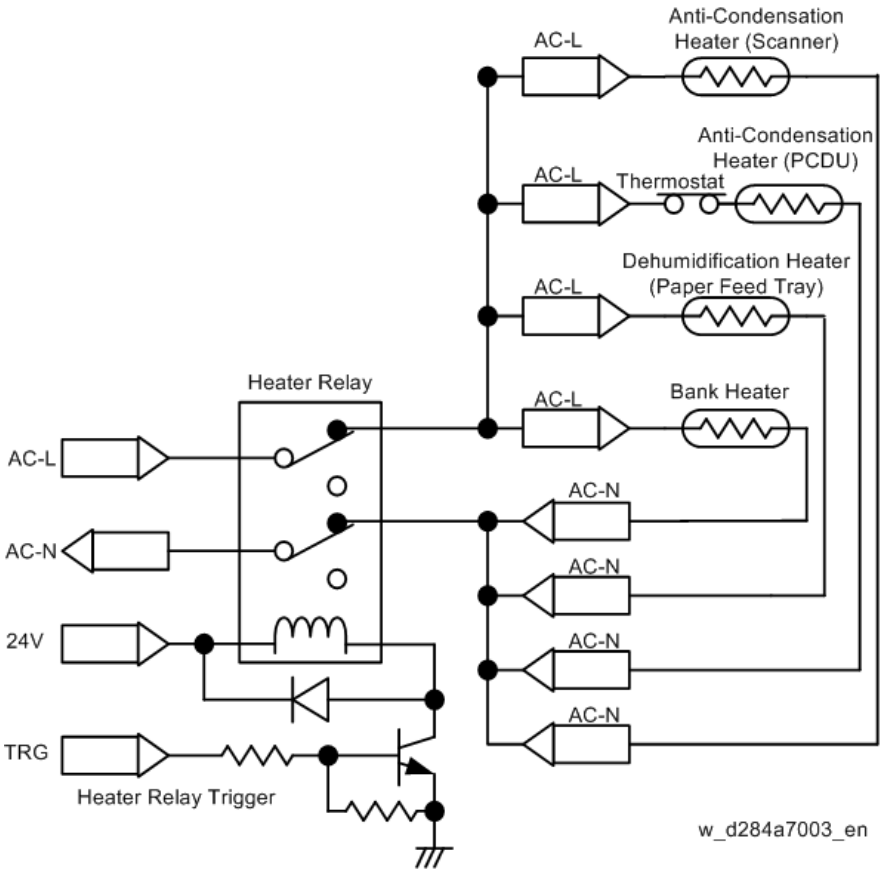
Generates the high-voltage power required for process control. The HVPS consists of two units: TTS for transfer and CB for charging/developing.

PSU

Generates DC power from a commercial AC power supply, and supplies it to each control circuit. Comprises an A/C drive circuit for controlling the fusing lamp.

Feed tray dehumidifier heater, Scanner/PCDU anti-condensation heater

Circuit configuration



If a heater is used in the main machine, it is required that the harness from the heater sub-board is connected to the BCU. When this harness is connected to the BCU, the supply power is controlled based on the main machine operation and the setting of SP5-805-001 as shown in the following table.

Heater	SP5-805-001	Plug-in	Sleep Mode	JAM/ Door Open/ SC	Stand-by Mode/ Fusing Unit Off Mode	Printing
Dehumidification Heater (Paper Feed Tray: Standard)	0 (OFF)	On	On	Off	Off	Off
	1 (ON)	On	On	On	On	Off
Dehumidification Heater (Paper Feed Tray: Option)	0 (OFF)	On	On	Off	Off	Off
	1 (ON)	On	On	On	On	Off
Anti-condensation heater (Scanner)	0 (OFF)	On	On	Off	Off	Off
	1 (ON)	Disabled*				
Anti-condensation heater (PCDU)	0 (OFF)	On	On	Off	Off	Off
	1 (ON)	Disabled *				

* If SP5-805-001 is set to “1” (ON), disconnect the harnesses of anti-condensation heaters (Scanner and PCDU) manually to disable. Otherwise, the followings may occur:

- Malfunctions such as toner fixation
- Failure or deterioration of the stabilizer in the scanner due to temperature rise

Note

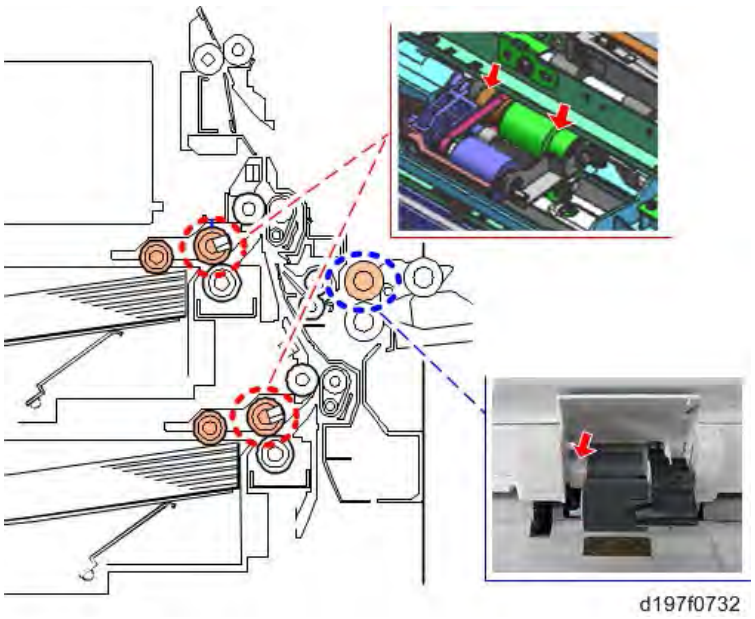
- As the heater circuit of this machine comprises of a single system, the machine cannot control the heaters for paper feed trays and for the main machine individually. If the SP is set to “1” (ON), all the heaters are turned on even though the machine is in “Sleep Mode” or “Fusing Unit Off Mode”. Activating the anti-condensation heaters (Scanner and PCDU) in “Sleep Mode” or “Fusing Unit Off Mode” causes a part failure in the machine. Be sure to deactivate these heaters (Scanner and PCDU) beforehand.

One-way Clutches

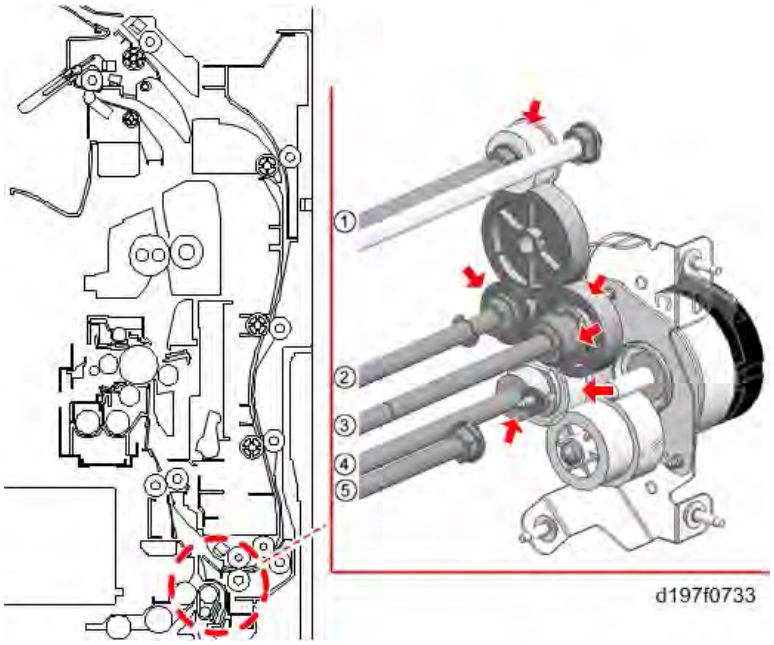
This machine adapts one-way clutches, used for paper feed mechanism.

Each one-way clutch locations are pointed below.

Paper Feed/Bypass



Duplex



No.	Description
(1)	Duplex exit roller
(2)	Bypass Paper Feed Roller
(3)	Bypass Pick-up Roller

No.	Description
(4)	Bypass Separation Roller Drive Shaft
(5)	Bypass Separation Roller

Process Control

Image Density Control (Process Control)

Outline

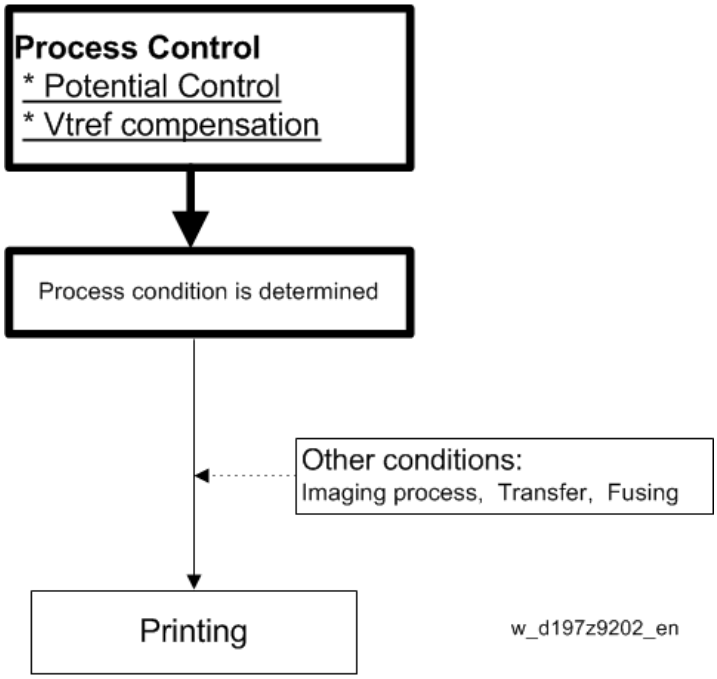
Process control is a system that adjusts the image creation process to maintain a constant image density. Process control is executed at the following conditions.

	Trigger	Operative Condition	Notes
1	• Power ON • Recovering from Energy Saver • Closing the front cover	• When a certain time passes after the previous job end, and when a certain number of sheets are printed after the last process control at the previous Power ON, recovering from Energy Saver mode or closing the front cover. • When a new PCDU is detected. • When the TD sensor detects a toner end before turning the power on.	No retry if an SC occurs during adjusting.
2	Job End	When the job end counter becomes more than the threshold.	• Process Control clears the Job end counter.
3	Job Interruption	When the job interrupt counter becomes more than the threshold.	Process control clears the job interrupt counter.
4	Non-use (Idle)	• When the non-use time counter becomes more than the threshold. • When significant environmental changes occur after the last job end.	Available only when the energy saver mode is off.
5	Manual process control	When SP 3-011-001 is executed.	-

The process control consists of the following features.

- Potential Control (Charge/Development Bias and LD power Control)
- Vtref Compensation

Flowchart: From Process Control to Printing



Potential Control

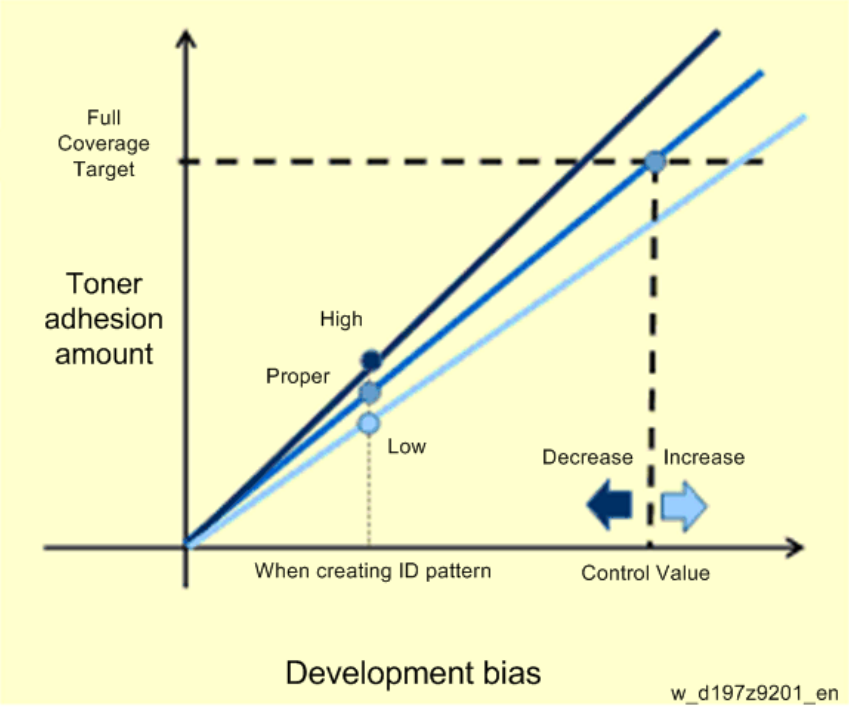
Potential Control adjusts Charge/Development bias and LD power to maintain a constant image output.
Charge roller, development roller, OPC drum and laser unit involve with imaging process.
Charge bias (Vc) is a bias for charge roller. Applying a charge bias to the OPC drum increases the potential of the OPC drum.
Development bias (Vb) is a bias for development roller. When a development bias is applied to developer (carrier), the OPC drum which is charged the opposite bias from development part attracts toner.
Development potential (Vd – Vb) is the ability to attract the toner to the OPC drum. A larger development potential increases the amount of toner adhesion.
In image density adjusting, the potential control process creates an ID pattern patch using the “bias for ID pattern creation” which has a lower density and lower Charge/Development bias than for printing.
With the results of Vsp (the ID sensor output from ID pattern patch) and Vsg (the ID sensor output from bare surface of the OPC drum), the potential control process adjusts the development bias so that the amount of toner adhesion becomes a specified target value.
Charge/Development Bias is done with the following operation. The operation time differs depending on the line speed.

- ID sensor Vsg Adjustment
  The machine adjusts the LED strength of the ID sensor so that the value of Vsg (the charge which is detected from the bare surface of the OPC drum) is in the range of 4.0V ±0.5V. When Vsg is detected as not within the target range three times, SC370 (ID sensor error) appears.
- Developer Stirring (0 to 5 seconds)
  The machine agitates the developer and reads the μ sensor output.
- Bias Compensation
  The machine compensates the development bias (Vb) using the Vsp/Vsg ratio. The machine also

compensates charge bias (Vc) and LD power based on the Vb result.

Vsp/Vsg	Toner Density	Vb Compensation SP
High	High	SP3-235-011
Slightly high	Slightly high	SP3-235-012
Correct	Correct	SP3-235-013
Slightly low	Slightly low	SP3-235-014
Low	Low	SP3-235-015

Fig. 1: Relation b/w Dev. bias and Toner adhesion amount



Vtref Compensation

To maintain a constant/proper toner density, the toner density in the developer must be controlled as well as the bias control. Vtref is the target of the toner density in the developer.

- Vtref Determination
  With the output of ID sensor and μ sensor in ID sensor detection, the machine determines the Vtref used for the reference value for μ sensor.

TD Sensor Initial Setting When a New PCDU Is Installed

When a new PCDU is set in the mainframe, this is detected by the machine as a new PCDU, and the initial μ count (the output from the μ sensor of initial developer setting) is determined after entering the TD sensor initial setting mode. The TD sensor initial setting is done as follows.

- Starting the developer initial setting
  The new unit detecting mechanism performs the TD sensor initial setting.
- Developer Agitation
  The developer is stirred, with the development roller and the transport coil rotating (30 seconds).

- Initial µ Count Detection

  The machine detects the µ sensor output while mixing the developer, and stores the output as the initial µ count. The followings are the stored data location in machine types.

  - MP 2555 SP/3055 SP: SP3-030-062 Initial µ count (Line speed 3)
  - MP 3555 SP/4055 SP: SP3-030-121 Initial µ count (Line speed 2)
  - MP 5055 SP/6055 SP: SP3-030-061 Initial µ count (Line speed 1)
- Vt Calculation

  The machine refers to the initial µ count with the above SP according to the machine type and calculates Vt with the difference of the present µ count.
- If the initial µ count detected is out of the upper/lower output limit, the machine displays a TD sensor calibration error (SC360-01).
- After replacing an AIT and performing the initial TD sensor setting, the machine forcibly executes the process control.

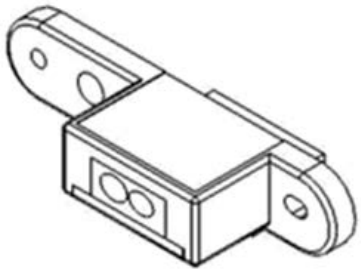
Mechanism

Sensor Composition

Sensor	Description
ID sensor	Used to measure the amount of toner that adhered on the OPC drum
TD Sensor	Used to measure the toner density in the developer

ID Sensor

An ID sensor consists of a light-receiving element located at the opposite position of LED.
It detects the amount of toner adhered using reflection from the LED.



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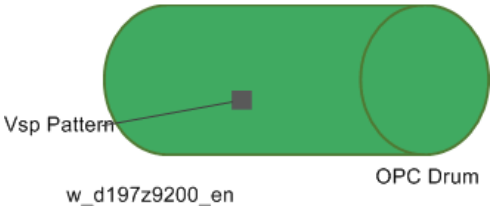
ID sensor is fixed in the right cover of the mainframe and detects the patch density formed on the center of the OPC drum.



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TD Sensor

In this model, a non-contact toner density (TD) sensor, which we call µ sensor, is used for the toner density control.

The TD sensor is attached on the lower side of the development unit. Unlike HST sensor, the board of TD sensor is exposed. So there is a cover around the sensor to protect the sensor and to maintain a good contact condition of the sensor and development unit.

The TD sensor measures the permeability of the developer without contacting from outside of the case, and converts the measured value to the toner density.

According to the toner density measured by this sensor, the proper amount of toner is supplied to the developer.

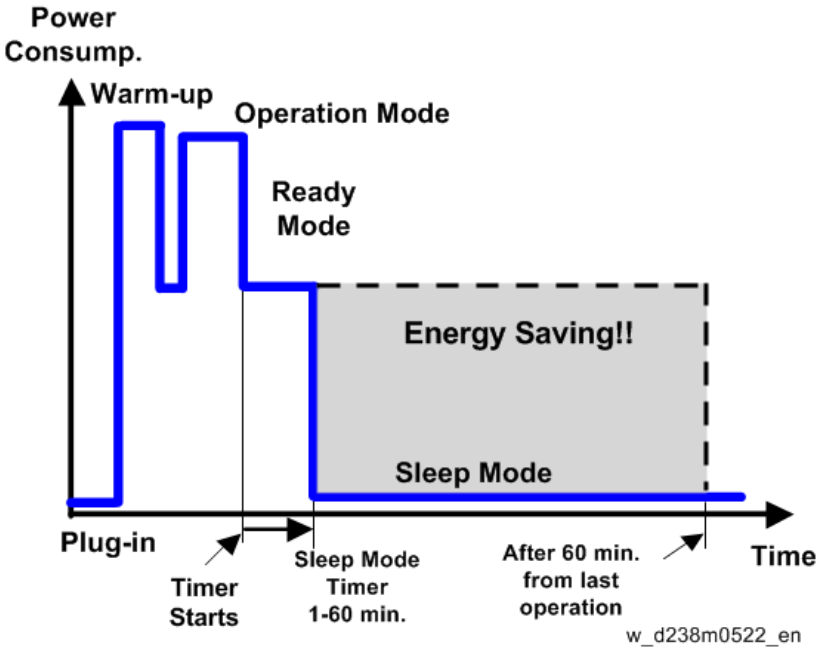
A counter corresponding to the frequency is used as the unit of TD sensor output. Thus, unlike HST sensor which directly detects Vt, the TD sensor output is converted into Vt for the toner supply control.

In the TD sensor, there is an ID chip storing the machine identification information, the running distance information of Development unit and PCU, and other information used by the image density control.

Energy Save

Energy Saver Modes

Customers should use energy saver modes properly, to save energy and protect the environment.



The area shaded grey in this diagram represents the amount of energy that is saved when the timers are at the default settings. If the timers are changed, then the energy saved will be different. For example, if the timers are all set to 60 min., the grey area will disappear, and no energy is saved before 60 min. expires.

Setting items that are related to Energy Saving

The user can set these timers with User Tools (System settings > Timer setting)

Sleep Mode Timer

User Tools (System settings > Timer setting)

After a specified period has passed, or [Energy Saver] is pressed, the machine enters Sleep mode in order to conserve energy. Specify the time to elapse before Sleep mode.

Default: [1 minute(s)]

Sleep Mode Timer may not work when error messages appear.

Depending on which Embedded Software Architecture application is installed on it, the machine might take longer than indicated to enter Sleep mode.

Fusing Unit Off Mode (Energy Saving) On/Off

User Tools (System settings > Timer setting)

Specifies whether Fusing Unit Off mode is enabled or not.

When Fusing Unit Off mode is enabled, the display is on but the fusing unit is off to save energy.

The machine requires roughly the same time as warm-up time to recover from Fusing Unit Off mode.

Default: [Off]

If [Fusing Unit Off Mode (Energy Saving) On/Off] is set to [On], you can specify when to exit Fusing Unit Off mode and the time to elapse before entering Fusing Unit Off mode.

If [Exit Fusing Unit Off Mode] is set to [On Printing], the machine exits Fusing Unit Off mode when printing is performed.

If [Exit Fusing Unit Off Mode] is set to [On Operating Control Panel], the machine exits Fusing Unit Off mode when a key other than the copy function key is pressed on the control panel of the machine.

If printing is performed with the copy function or a key in the copy function is pressed on the control panel of the machine, the machine exits Fusing Unit Off mode regardless of this setting. If the timer is set to [On], you can set the time from 10 seconds to 240 minutes, using the number keys.

Energy Saving Recvry. for Business Applicatn.

User Tools (System settings > General Settings)

Specify whether or not to enable low-energy recovery from Sleep mode to use applications independent of the machine, such as Address Book Management or Browser.

Default: [Off]

If [On (Energy Saving)] is selected, it takes longer than usual to be ready to use the machine.

Recovery Time/Reduced Electrical Consumption

Reduced electrical consumption in Sleep mode

	MP 2555	MP 3055	MP 3555	MP 4055	MP 5055	MP 6055
mainly Europe and Asia	0.84 W	0.84 W	0.84 W	0.82 W	0.82 W	0.82 W
mainly North America	0.74 W	0.74 W	0.74 W	0.79 W	0.79 W	0.79 W

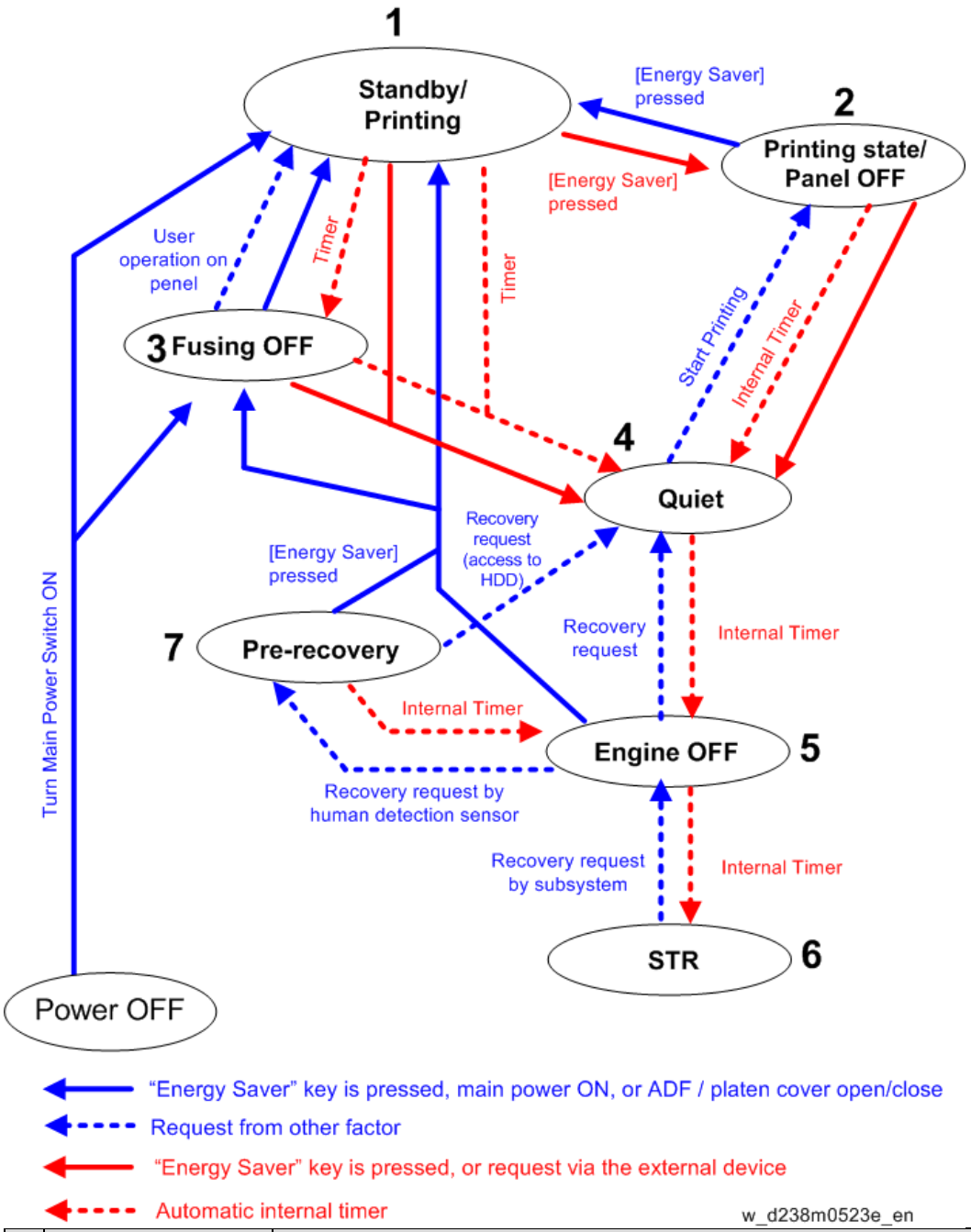
Recovery time from Sleep mode

	MP 2555	MP 3055	MP 3555	MP 4055	MP 5055	MP 6055
mainly Europe and Asia	7.9 sec.	7.9 sec.	7.9 sec.	8.0 sec.	8.4 sec.	8.8 sec.
mainly North America	7.9 sec.	7.9 sec.	7.9 sec.	7.9 sec.	8.2 sec.	8.7 sec.

Note

- The time it takes to switch out from energy saving functions and electrical consumption may differ depending on the conditions and environment of the machine.

Power States of this Machine



	State	Description
1	Standby/Printing	• State where normal operation is possible after warm-up • State during printing
2	Printing state/Panel OFF	State when printing with the backlight of the operation panel turned off
3	Fusing OFF	State where the Standby Fusing OFF state is entered when the time set with the **"Fusing Unit Off Mode (Energy Saving) On/Off"** setting of the User Tools has elapsed. • State where the operation panel is flashing and the fusing heater is OFF. • The bottom plate of the paper feed tray is raised.
4	**Quiet** state	**Quiet** state is entered when the Energy Saving key is pressed or the time set with the

	State	Description
		"**Sleep Mode Timer**" of the User Tools has elapsed. This is a temporary energy saving state before entering sleep mode. • Basically, no homing (initialization) of peripheral devices is performed. • The bottom plate of the paper feed tray is raised. • The fusing heater is turned OFF.
5	Engine OFF (Sleep mode)	Entered from **Quiet** state with internal timer. • The relevant power systems (24V, 12V, 5V) are turned OFF at the same time as the fusing heater. • When receiving a fax or printing is performed in engine OFF state, warm-up is started and printing is performed while the backlight of the operation panel is turned OFF.
6	STR state (Sleep mode)	Supplying of power and clock to the CPU and peripheral chips on the controller board is stopped.
7	**Pre-recovery**	The **Pre-recovery** state is entered from STR state when the Proximity Sensor detects presence of a person. This is the Energy Saving state where the power of the operation panel and HDD is ON and the power of the engine is OFF, but the backlight of the operation panel LCD is off.

Device state for each Energy Saving state

State	Energy Saving LED	Operation panel LCD	Engine (Printer/Scanner)	HDD	CTL
Standby/Printing	ON	ON	ON	ON	ON
Printing state/Panel OFF	ON	OFF	ON (Only scanner is in **Quiet** state)	ON	ON
fusing OFF	ON	ON	ON (Both printer/scanner are in **Quiet** state)	ON	ON
Quiet state	ON	OFF **ON*1**	ON (Both printer/scanner are in **Quiet** state)	ON	ON
Engine OFF	Blinking gradually **ON*1**	Sleep **OFF or ON*1**	OFF	OFF **ON*1**	ON
STR state	Blinking gradually	Sleep	OFF	OFF	STR
Pre-recovery	ON	OFF	OFF	ON	ON

State	Energy Saving LED	Operation panel LCD	Engine (Printer/Scanner)	HDD	CTL
		ON*1			

*1 When [Energy Saving Recvry. for Business Applicatn.] is [On (Energy Saving)], ON/OFF is determined by the internal timer of the Smart Operation Panel.

Transition of operation panel to Energy Saving when [Energy Saving Recvry. for Business Applicatn.] is [On (Energy Saving)]

Normally, the Energy Saving state of the operation panel LCD changes in step with the energy saving state of the MFP/LP main unit, but to support the scenario where an application that does not use the engine (printer/scanner) is executed from the operation panel, the Energy Saving state of the operation panel is transitioned through the three states ON, OFF, and Sleep with its internal timer when [Energy Saving Recvry. for Business Applicatn.] is [On (Energy Saving)].

Verification of Up Time for each Energy Saving State

The up time for each power state of the machine can be checked with SP8-961 (Electricity Status). It is also output on the SMC sheet.

SP	Name	Description
SP8-961-001	Ctrl Standby Time	Cumulative time of Engine OFF mode, Quiet mode, and Standby mode
SP8-961-002	STR Time	Cumulative time of STR mode
SP8-961-003	Main Power Off Time	Cumulative time of state in which the power plug is connected to the outlet but the main power is off
SP8-961-004	Reading and Printing Time	Cumulative time of state in which both the plotter engine and scanner engine are running or warming up
SP8-961-005	Printing Time	Cumulative time of the state in which the plotter engine is running
SP8-961-006	Reading Time	Cumulative time of the state in which the scanner engine is running
SP8-961-007	Eng Waiting Time	Cumulative time of state in which the power state of the engine is Standby state
SP8-961-008	Low Power State Time	Not used for this machine
SP8-961-009	**Quiet** State Time	Cumulative time of the state in which the power state of the engine is **Quiet** state
SP8-961-	Heater Off State	Cumulative time of the state in which the power state of the engine is

SP	Name	Description
010	Time	Fusing OFF state
SP8-961-011	LCD on Time	Cumulative time of the state in which the backlight of the LCD is on.

Checking the Up time by Device State

SP 8941 (Machine Status) keeps a record of the amount of time that the machine spends in each mode.

SP8-941-001	Operation Time	Cumulative time of the state in which the engine state notification is enabled. The state in which the engine is not running (such as when storing to HD only with the controller) is excluded from the running state.
SP8-941-002	Standby Time	Cumulative time of the state in which the engine state is not running.
SP8-941-003	Low Power Time	Not used for this machine
SP8-941-004	Sleep mode time	Cumulative time in Sleep Mode state.
SP8-941-005	Off Mode Time	Cumulative time in which the Energy Saving state of the device is Engine OFF state.
SP8-941-006 to 009	Down time	Cumulative time in which the device is disabled because itself or its component is in the following state. • SP8-941-006: SC (excluding mode SC) • SP8-941-007: Jam (plotter) • SP8-941-008: Jam (scanner) • SP8-941-009: Supply/PM unit end

With this data, and the power consumption values from the specifications, we can estimate the amount of energy that is used by the machine.

This should only be used as a reference value, because the power consumption specifications are measured in a controlled environment with a constant power supply.

To get an exact measurement at the customer's site, a watt meter must be used to measure the actual energy consumed.

To use SP8941 to calculate the energy consumed:

- At the start of the measurement period, read the values of SP8-941-001 to 005.
- At the end of the measurement period, read the values of SP8-941-001 to 005 again.
- Find the amount of time spent in each mode (subtract the earlier measurement from the later measurement).
- Multiply this by the power consumption spec for each mode.
- Convert the result to kWh (kilowatt hours)

Recommendation

We recommend that the default settings related to energy saving should be kept.

- If the customer requests that these settings should be changed, please explain that their energy costs could increase, and that they should consider the effects on the environment of extra energy use.

Adobe PS vs. Clone PS

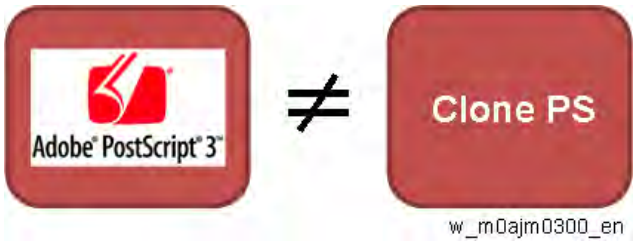
Overview

This machine is equipped with a clone program for emulating Adobe PostScript/PDF (hereafter “Clone PS”) as a standard feature. So, by default, it can perform printing using PostScript 3 and PDF Direct Print, in addition to RPCS.

- **What is Clone PS?**

  Based on the specifications of PostScript/PDF languages developed by Adobe, clone programs for interpretation of PostScript and PDF documents have been created by various companies other than Adobe. While the original program sold by the developer of the language is named Adobe PS, compatible programs made by other manufacturers are called clones. Strictly speaking, these clones must be fully compatible with the original program; however, they are called clones even if they have some differences, because they cannot completely imitate the original.

  Clone PS is basically designed to perform similar functions to Adobe PS, except for several differences such as inability to use Adobe fonts.



Note

- Adobe PS, previously offered as an optional product for past models, is available again as an option. (It comes in an SD card, as was the case for former models.)
- Clone PS and Adobe PS cannot be run simultaneously.
- The same printer driver can be used for Clone PS and Adobe PS.
- Clone PS emulates Adobe PostScript 3 version 3017. (The version of Adobe PS used in the SD card option is v. 3018.)
- For the PDF Direct Print function, Clone PS emulates Adobe PDF version 1.7.

How to Distinguish Adobe PS from Clone PS

In the operation panel screen, it is difficult to tell whether Adobe PS or Clone PS is in use.
Both “PS3” and “PDF” are shown on the screen, regardless of whether Adobe PS or Clone PS is used.
Identification can be done as follows:

- **Configuration Page**

  The description of the Firmware Version listed on the page varies as shown below:

PS type	Description of Firmware Version
Adobe PS	RPCS [x.xx.xx] **Adobe PostScript 3** [x.xx], **Adobe PDF** [x.xx]
Clone PS	RPCS [x.xx.xx] **PS3** [x.xx], **PDF** [x.xx]

The manufacturers name “Adobe” is shown in the list if Adobe PS is used.

- **PS Configuration / Font Page**

  The “Adobe” logo is printed on the page if Adobe PS is used.

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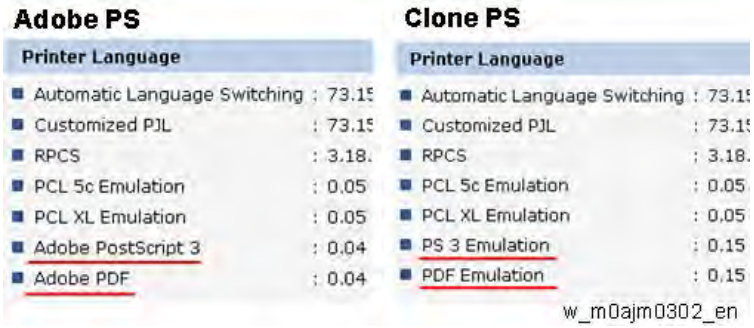
- **Web Image Monitor**

  Go to Status/Information > Device Info, and open the Printer Language menu.

  If Adobe PS is used, the screen shows the program name “Adobe PostScript 3” and "Adobe PDF".



w_m0ajm0302_en

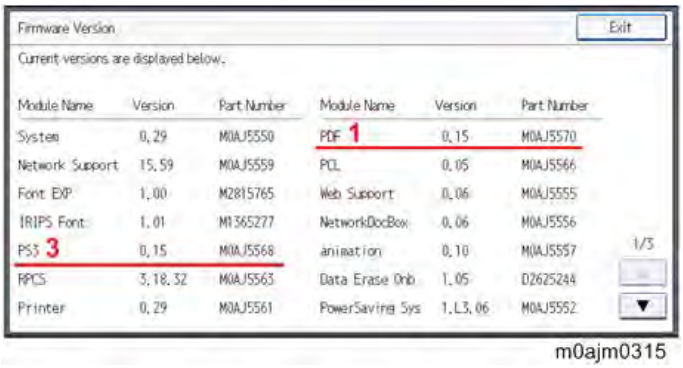
- **Operation Panel: Firmware Version**

  User Tools > Machine Features > System Settings > Administrator Tools > Firmware Version

  When PostScript3 Unit Type M29(Adobe PS) is installed:

m0ajm0303

Clone PS only:



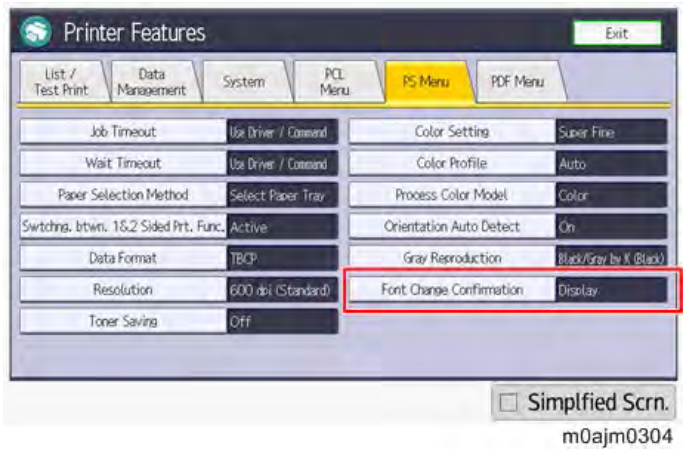
m0ajm0315

No.	Module Name	Description
1	PDF (1st page)	The **Clone PS** firmware number appears. The clone PS firmware number starts with "**D289**".
2	PDF (2nd page)	The Adobe PS firmware number "D3DW5733" appears. This module name appears in the firmware list only if PostScript3 Unit Type M29 is installed.
3	PS3 (Left)	The **Clone PS** firmware number appears. The clone PS firmware number starts with "**D289**".
4	PS3 (Right)	The Adobe PS firmware number "D3DW5731". This module name appears in the firmware list only if PostScript3 Unit Type M29 is installed.

- **Font Change Confirmation screen**

  The "Font Change Confirmation" screen is accessible only when Clone PS is used.

  On the Home screen, select the User Tools icon > Machine Features > Printer Features > PS Menu > Font Change Confirmation.



Difference in Device Fonts

The variety and number of built-in fonts (device fonts) differ between Adobe PS and Clone PS.

PS type	Number of European fonts
Adobe PS	136 fonts
Clone PS	93 fonts

For license reasons, the device fonts for Adobe PS cannot be handled by Clone PS. Instead, Clone PS is equipped with fonts similar to Adobe device fonts under different names; when an Adobe PS font is specified in the data to be printed, Clone PS will replace it with a similar font.

Use of a substitute font sometimes leads to different printing results, as shown in the table below.

Example 1

PS type	Helvetica
Adobe PS	Helvetica findfont: Change before you have to!
Clone PS	Helvetica findfont: Change before you have to!
	When Helvetica is used in the original document, Clone PS applies a substitute font named NimbusSans-Regular, maintaining almost the same appearance as the original data.

Example 2

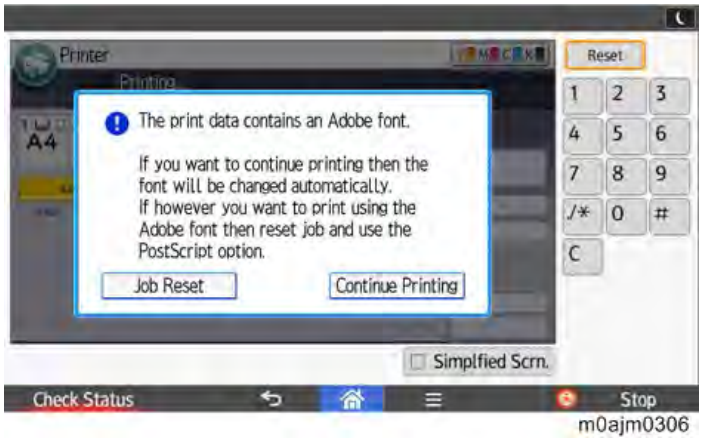
PS type	LetterGothic
Adobe PS	LetterGothic: Change before you have to!
Clone PS	LetterGothic: Change before you have to!
	When LetterGothic is originally used, Clone PS substitutes it with LetterGothic-Regular. In this case, the character spacing differs from that in the original data.

Example 3

PS type	Chicago
Adobe PS	**Chicago: Change before you have to!**
Clone PS	Chicago: Change before you have to!
	Clone PS does not support alternative fonts for Chicago; instead, the Courier font (*) is used. (The font shape differs significantly from Chicago.) * Since Courier itself is named among the Adobe PS device fonts, Clone PS substitutes it with an alternative font, NimbusMonoPS-Regular.

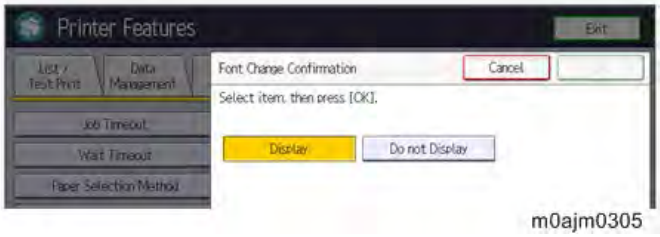
Font Change Confirmation Screen

Clone PS itself incorporates no Adobe fonts in it, and therefore replaces them with similar fonts when Adobe PS fonts are specified in the print data output to the printer.
However, there is a possibility that a substitute font not desired by the customer may be used; to cope with this issue, the operation panel shows a confirmation screen whenever an Adobe font is to be replaced by a similar font.



If the customer often prints data containing Adobe fonts that are almost the same in terms of spacing and shape as their substitutes, the confirmation screen appears every time printing is performed, making the printing operation cumbersome. In such a case, the font change confirmation screen can be hidden.

- User Tools icon on Home screen > Machine Features > Printer Features > PS Menu > Font Change Confirmation



List of fonts and their replacements (Adobe PS -> Clone PS)

No.	Adobe PS	Clone PS
1	Courier	NimbusMonoPS-Regular

No.	Adobe PS	Clone PS
2	Courier-Bold	NimbusMonoPS-Bold
3	Courier-BoldOblique	NimbusMonoPS-BoldItalic
4	Courier-Oblique	NimbusMonoPS-Italic
5	Helvetica	NimbusSans-Regular
6	Helvetica-Bold	NimbusSans-Bold
7	Helvetica-BoldOblique	NimbusSans-BoldOblique
8	Helvetica-Oblique	NimbusSans-Oblique
9	Symbol	StandardSymL
10	Times-Bold	NimbusRoman-Bold
11	Times-BoldItalic	NimbusRoman-BoldItalic
12	Times-Italic	NimbusRoman-Italic
13	Times-Roman	NimbusRoman-Regular
14	AlbertusMT	NimbusMonoPS-Regular
15	AlbertusMT-Italic	NimbusMonoPS-Regular
16	AlbertusMT-Light	NimbusMonoPS-Regular
17	AntiqueOlive-Roman	NimbusMonoPS-Regular
18	AntiqueOlive-Italic	AntiqueOlive-Italic
19	AntiqueOlive-Bold	AntiqueOlive-Bold
20	AntiqueOlive-Compact	NimbusMonoPS-Regular
22	Apple-Chancery	NimbusMonoPS-Regular
22	ArialMT	NimbusSansNo2-Regular
23	Arial-ItalicMT	NimbusSansNo2-Italic
24	Arial-BoldMT	NimbusSansNo2-Bold
25	Arial-BoldItalicMT	NimbusSansNo2-BoldItalic
26	AvantGarde-Book	URWGothic-Book
27	AvantGarde-BookOblique	URWGothic-BookOblique
28	AvantGarde-Demi	URWGothic-Demi
29	AvantGarde-DemiOblique	URWGothic-DemiOblique
30	Bodoni	NimbusMonoPS-Regular
31	Bodoni-Italic	NimbusMonoPS-Regular
32	Bodoni-Bold	NimbusMonoPS-Regular
33	Bodoni-BoldItalic	NimbusMonoPS-Regular
34	Bodoni-Poster	NimbusMonoPS-Regular
35	Bodoni-PosterCompressed	NimbusMonoPS-Regular
36	Bookman-Light	URWBookman-Light
37	Bookman-LightItalic	URWBookman-LightItalic
38	Bookman-Demi	URWBookman-Demi

No.	Adobe PS	Clone PS
39	Bookman-DemiItalic	URWBookman-DemiItalic
40	Carta	NimbusMonoPS-Regular
41	Chicago	NimbusMonoPS-Regular
42	Clarendon	NimbusMonoPS-Regular
43	Clarendon-Light	NimbusMonoPS-Regular
44	Clarendon-Bold	NimbusMonoPS-Regular
45	CooperBlack	NimbusMonoPS-Regular
46	CooperBlack-Italic	NimbusMonoPS-Regular
47	Copperplate-ThirtyTwoBC	NimbusMonoPS-Regular
48	Copperplate-ThirtyThreeBC	NimbusMonoPS-Regular
49	Coronet-Regular	NimbusMonoPS-Regular
50	Eurostile	NimbusMonoPS-Regular
51	Eurostile-Bold	NimbusMonoPS-Regular
52	Eurostile-ExtendedTwo	NimbusMonoPS-Regular
53	Eurostile-BoldExtendedTwo	NimbusMonoPS-Regular
54	Geneva	NimbusMonoPS-Regular
55	GillSans	NimbusMonoPS-Regular
56	GillSans-Italic	NimbusMonoPS-Regular
57	GillSans-Bold	NimbusMonoPS-Regular
58	GillSans-BoldItalic	NimbusMonoPS-Regular
59	GillSans-Condensed	NimbusMonoPS-Regular
60	GillSans-BoldCondensed	NimbusMonoPS-Regular
61	GillSans-Light	NimbusMonoPS-Regular
62	GillSans-LightItalic	NimbusMonoPS-Regular
63	GillSans-ExtraBold	NimbusMonoPS-Regular
64	Goudy	NimbusMonoPS-Regular
65	Goudy-Italic	NimbusMonoPS-Regular
66	Goudy-Bold	NimbusMonoPS-Regular
67	Goudy-BoldItalic	NimbusMonoPS-Regular
68	Goudy-ExtraBold	NimbusMonoPS-Regular
69	Helvetica-Condensed	NimbusMonoPS-Regular
70	Helvetica-Condensed-Oblique	NimbusMonoPS-Regular
71	Helvetica-Condensed-Bold	NimbusMonoPS-Regular
72	Helvetica-Condensed-BoldObl	NimbusMonoPS-Regular
73	Helvetica-Narrow	NimbusSansNarrow-Regular
74	Helvetica-Narrow-Oblique	NimbusSansNarrow-Oblique
75	Helvetica-Narrow-Bold	NimbusSansNarrow-Bold

No.	Adobe PS	Clone PS
76	Helvetica-Narrow-BoldOblique	NimbusSansNarrow-BoldOblique
77	HoeflerText-Regular	NimbusMonoPS-Regular
78	HoeflerText-Italic	NimbusMonoPS-Regular
79	HoeflerText-Black	NimbusMonoPS-Regular
80	HoeflerText-BlackItalic	NimbusMonoPS-Regular
81	HoeflerText-Ornaments	NimbusMonoPS-Regular
82	JoannaMT	NimbusMonoPS-Regular
83	JoannaMT-Italic	NimbusMonoPS-Regular
84	JoannaMT-Bold	NimbusMonoPS-Regular
85	JoannaMT-BoldItalic	NimbusMonoPS-Regular
86	LetterGothic	LetterGothic-Regular
87	LetterGothic-Slanted	NimbusMonoPS-Regular
88	LetterGothic-Bold	LetterGothic-Bold
89	LetterGothic-BoldSlanted	NimbusMonoPS-Regular
90	LubalinGraph-Book	NimbusMonoPS-Regular
91	LubalinGraph-BookOblique	NimbusMonoPS-Regular
92	LubalinGraph-Demi	NimbusMonoPS-Regular
93	LubalinGraph-DemiOblique	NimbusMonoPS-Regular
94	Marigold	Mauritius-Regular
95	Monaco	NimbusMonoPS-Regular
96	MonaLisa-Recut	NimbusMonoPS-Regular
97	NewCenturySchlbk-Roman	URWCenturySchoolbook-Roman
98	NewCenturySchlbk-Italic	URWCenturySchoolbook-Italic
99	NewCenturySchlbk-Bold	URWCenturySchoolbook-Bold
100	NewCenturySchlbk-BoldItalic	URWCenturySchoolbook-BdIta
101	NewYork	NimbusMonoPS-Regular
102	Optima	NimbusMonoPS-Regular
103	Optima-Italic	NimbusMonoPS-Regular
104	Optima-Bold	NimbusMonoPS-Regular
105	Optima-BoldItalic	NimbusMonoPS-Regular
106	Oxford	NimbusMonoPS-Regular
107	Palatino-Roman	Palladio-Roman
108	Palatino-Italic	Palladio-Italic
109	Palatino-Bold	Palladio-Bold
110	Palatino-BoldItalic	Palladio-BoldItalic
111	StempelGaramond-Roman	NimbusMonoPS-Regular
112	StempelGaramond-Italic	NimbusMonoPS-Regular

No.	Adobe PS	Clone PS
113	StempelGaramond-Bold	NimbusMonoPS-Regular
114	StempelGaramond-BoldItalic	NimbusMonoPS-Regular
115	Tekton	NimbusMonoPS-Regular
116	TimesNewRomanPSMT	NimbusRomanNo9-Regular
117	TimesNewRomanPS-ItalicMT	NimbusRomanNo9-Italic
118	TimesNewRomanPS-BoldMT	NimbusRomanNo9-Bold
119	TimesNewRomanPS-BoldItalicMT	NimbusRomanNo9-BoldItalic
120	Univers	NimbusMonoPS-Regular
121	Univers-Oblique	NimbusMonoPS-Regular
122	Univers-Bold	URWClassicSans-Bold
123	Univers-BoldOblique	NimbusMonoPS-Regular
124	Univers-Light	NimbusMonoPS-Regular
125	Univers-LightOblique	NimbusMonoPS-Regular
126	Univers-Condensed	NimbusMonoPS-Regular
127	Univers-CondensedOblique	NimbusMonoPS-Regular
128	Univers-CondensedBold	NimbusMonoPS-Regular
129	Univers-CondensedBoldOblique	NimbusMonoPS-Regular
130	Univers-Extended	NimbusMonoPS-Regular
131	Univers-ExtendedObl	NimbusMonoPS-Regular
132	Univers-BoldExt	NimbusMonoPS-Regular
133	Univers-BoldExtObl	NimbusMonoPS-Regular
134	Wingdings-Regular	URWDingbats
135	ZapfChancery-MediumItalic	URWChancery-MediumItalic
136	ZapfDingbats	Dingbats

Differences in Driver Functions

As shown below, there are differences in available driver functions between Adobe PS and Clone PS.

1. Font Substitution Table (Applicable only to driver for Windows OS)

Start > Device and Printer > Printer Properties > Device Settings

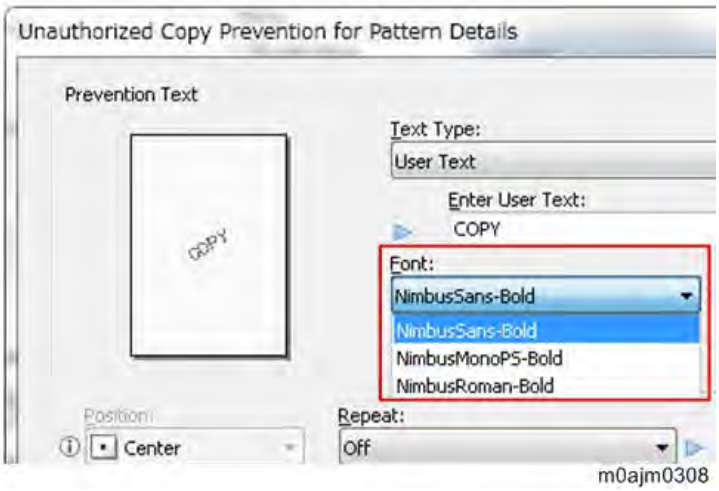
For Clone PS, the Font Substitution Table under the Device Settings menu will not be displayed. Clone PS has font substitution table data similar to that of Adobe PS, and performs font replacement as appropriate.

To disable font replacement, go to Printing Preferences > Detailed Settings > “Print Quality: Option” > “True Type Font:” option, and select “Download as SoftFont”.

2. Fonts used for unauthorized copy prevention (Common to drivers for Windows OS and Mac OS X)

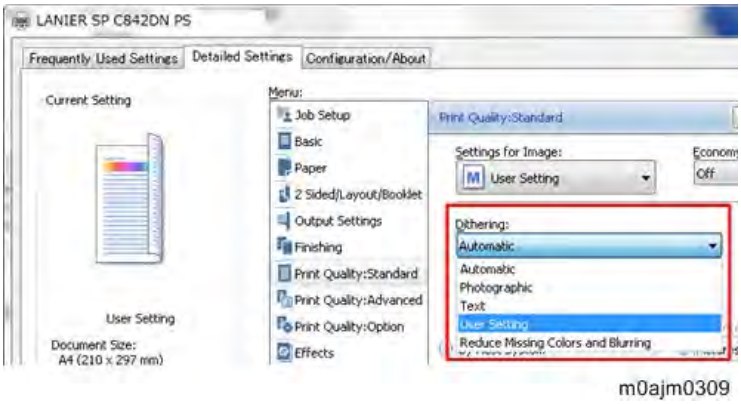
The watermark text used for unauthorized copy prevention consists of a device font. The range of available fonts varies between Adobe PS and Clone PS because of the difference in available device fonts.

Adobe PS provides a choice from 136 fonts while 3 fonts are selectable for Clone PS.



3. "User Setting" for dithering (Common to drivers for Windows OS and Mac OS X)

Clone PS ignores the "User Setting" option for dithering and performs dithering in the same manner as when the "Automatic" setting (*) is selected.



* "Text Priority" is selected for text, and "Photo" for graphic objects and image objects.

In the driver menu for Mac OS X, the "User Setting" option is shown at half brightness and cannot be selected.

MP 2555/3055/3555/4055/5055/6055
Machine Code:
D284/D285/D286/D287/D288/D289
Appendices
Ver 1.0

Initial Release: Nov, 2016
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1. Specifications

Machine Specifications

Mainframe

Item	Spec.
Configuration	Desktop
Hard disk	320 GB
Photosensitivity type	OPC drum
Original scanning	One-dimensional solid-state scanning system through CCD
Copy process	Laser beam scanning and electro-photographic printing
Development	Laser beam scanning and electro-photographic printing
Fusing	Direct Heating (DH) fusing
Resolution	• Scanning originals: 600 dpi • Printing: 600 dpi
Exposure glass	Stationary original exposure type
Original reference position	Rear left corner
Warm-up time (23 °C (73.4 °F), rated voltage)	• Normal mode: 54 seconds • Quick mode: 20 seconds
Originals	Sheet, book, three-dimensional object
Maximum original size	• NA: 11x17 SEF • EU/Asia: A3 SEF
Paper size (Tray 1-4)	**Plain Paper 1–Thick Paper 4** (Paper sizes that can be detected automatically.) • NA A4 SEF, A5 LEF,B5 JIS SEF, 11x17 SEF, 8 1/2” x14 SEF, 8 1/2” x11 SEF/LEF, 7 1/4” x10 1/2” LEF, 8 1/2” x13 2/5” SEF • EU/Asia A3 SEF, A4 SEF/LEF, A5 LEF, B4 JIS SEF,B5 JIS SEF/LEF, 8 1/2” x11 SEF **Plain Paper 1–Thick Paper 4** (Select the paper size using the Tray Paper Settings menu. Adjust the supporting side fence before loading B4 JIS SEF, A3 SEF, or 11x17 SEF paper into Trays 3–4.) • NA A3 SEF, A4 LEF, A5 SEF, A6 SEF, B4 JIS SEF,B5 JIS LEF, B6 JIS SEF, 8 1/2” x14 SEF, 8 1/2” x13 SEF, 8 1/4” x13 SEF, 8x13 SEF, 8x10 SEF, 7

Item	Spec.
	1/4" x10 1/2" SEF, 5 1/2" x8 1/2" SEF, 8K SEF, 16K SEF/LEF, 11x15 SEF, 10x14 SEF • EU/Asia A5 SEF, A6 SEF, B6 JIS SEF, 11x17 SEF, 8 1/2" x14 SEF, 8 1/2" x13 SEF, 8 1/2" x11 LEF, 8 1/4" x14 SEF, 8 1/4" x13 SEF, 8x13 SEF, 8x10 SEF, 7 1/4" x10 1/2" SEF/LEF, 5 1/2" x8 1/2" SEF, 8K SEF, 16K SEF/LEF, 11x15 SEF, 10x14 SEF, 8 1/2" x13 2/5" SEF **Custom size** When loading paper with a vertical length of more than 279.4 mm (11.0 inches) in Tray 1, use paper that has a horizontal width of 420 mm (16.6 inches) or less. • NA Vertical: 3.55–11.69 inches Horizontal: 5.83–17.00 inches • EU/Asia Vertical: 90.0–297.0 mm Horizontal: 148.0–431.8 mm **Envelopes** 4 1/8" x9 1/2" SEF/LEF, 3 7/8" x7 1/2" SEF, C5 Env SEF/LEF, C6 Env SEF/LEF, DL Env SEF/LEF
Paper size (Bypass tray)	**Plain Paper 1–Thick Paper 4** (Paper sizes that can be detected automatically.) • NA A5 LEF,B5 JIS SEF, 11x17 SEF, 8 1/2" x11 SEF/LEF, 5 1/2" x8 1/2" SEF, 7 1/4" x10 1/2" LEF, 12x18 SEF • EU/Asia A3 SEF, A4 SEF/LEF, A5 SEF/LEF, A6 SEF, B4 JIS SEF,B5 JIS SEF/LEF, B6 JIS SEF **Plain Paper 1–Thick Paper 4** (Select the paper size using the Tray Paper Settings menu.) • NA A3 SEF, A4 SEF/LEF, A5 SEF, A6 SEF, B4 JIS SEF, B5 JIS LEF, B6 JIS SEF, 8 1/2" x14 SEF, 8 1/2" x13 SEF, 8 1/4" x14 SEF, 8 1/4" x13 SEF, 8x13 SEF, 8x10 SEF, 7 1/4" x10 1/2" SEF, 8K SEF, 16K SEF/LEF, 11x15 SEF, 10x14 SEF, 8 1/2" x13 2/5" SEF • EU/Asia 11x17 SEF, 8 1/2" x14 SEF, 8 1/2" x13 SEF, 8 1/2" x11 SEF/LEF, 8 1/4" x14 SEF, 8 1/4" x13 SEF, 8x13 SEF, 8x10 SEF, 7 1/4" x10 1/2" SEF/LEF, 5 1/2"

Item	Spec.
	x8 1/2" SEF, 8K SEF, 16K SEF/LEF, 12x18 SEF, 11x15 SEF, 10x14 SEF, 8 1/2" x13 2/5" SEF **Custom size** Vertical: When only the Internal Multi-folding unit is installed, the vertical size range is limited to 90.0–297.0 mm (3.55–11.69 inches). Horizontal: (Paper that has a horizontal length of 432 mm (17.1 inches) or more is prone to creasing, feed failures, and jamming. • NA Vertical: 3.55–12.00 inches Horizontal: 5.83–23.62 inches • EU/Asia Vertical: 90.0–304.8 mm Horizontal: 148.0–600.0 mm **OHP transparencies** A4 SEF/LEF, 8 1/2" x11 SEF/LEF **Translucent paper** A3 SEF, A4 SEF/LEF, B4 JIS SEF, B5 JIS SEF/LEF Label paper (adhesive labels) A4 SEF/LEF, B4 JIS SEF **Envelopes** 4 1/8" x9 1/2" SEF/LEF, 3 7/8" x7 1/2" SEF/LEF, C5 Env SEF/LEF, C6 Env SEF/LEF, DL Env SEF/LEF
Paper size (Tray 3 (LCT))	**Plain Paper 1–Thick Paper 4** • NA 8 1/2" x11 LEF • EU/Asia A4 LEF **Plain Paper 1–Thick Paper 4** (To load paper any of the sizes specified above, contact your service representative.) • NA A4 LEF • EU/Asia 8 1/2" x11 LEF
Paper size (Large capacity tray (LCT))	**Plain Paper 1–Thick Paper 4** • NA

Item	Spec.
	8 1/2” x11 LEF • EU/Asia A4 LEF **Plain Paper 1–Thick Paper 4** (To load paper any of the sizes specified above, contact your service representative.) • NA A4 LEF, B5 JIS LEF • EU/Asia B5 JIS LEF, 8 1/2” x11 LEF
Paper size (Duplex)	A3 SEF, A4 SEF/LEF, A5 SEF/LEF, A6 SEF, B4 JIS SEF,B5 JIS SEF/LEF, B6 JIS SEF, 11x17 SEF, 8 1/2” x14 SEF, 8 1/2” x13 SEF, 8 1/2” x11 SEF/LEF, 8 1/4” x14 SEF, 8 1/4” x13 SEF, 8x13 SEF, 8x10 SEF, 7 1/4” x10 1/2” SEF/LEF, 5 1/2” x8 1/2” SEF, 8K SEF, 16K SEF/LEF, 12x18 SEF, 11x15 SEF, 10x14 SEF, 8 1/2” x13 2/5” SEF • Custom size Vertical: 90.0–297.0 mm (3.55–11.69 inches) Horizontal: 148.0–431.8 mm (5.83–17.00 inches)
Paper weight	• Trays 1-4 60–300 g/m2 (16 lb. Bond–110 lb. Cover) • Bypass tray 52–300 g/m2 (14 lb. Bond–110 lb. Cover) • Tray 3 (LCT) 60–300 g/m2 (16 lb. Bond–110 lb. Cover) • Large capacity tray (LCT) 60–300 g/m2 (16 lb. Bond–110 lb. Cover) • Duplex 52–256 g/m2 (14 lb. Bond–140 lb. Index)
Missing image area (Copier)	• Leading edge: 4.2 ± 1.5 mm (0.17 ± 0.06 inches) • Trailing edge: 0.5–6.0 mm (0.02–0.24 inches) • Left edge: 0.5–4.0 mm (0.02–0.16 inches) • Right edge: 0.5–4.0 mm (0.02–0.16 inches)
First copy/print time (A4 LEF, 8 1/2” x11 LEF, 100% reproduction, feeding from tray 1, on the exposure glass)	MP 2555: 4.6 seconds MP 3055: 4.6 seconds MP 3555: 4.3 seconds MP 4055: 4.0 seconds MP 5055: 2.9 seconds MP 6055: 2.9 seconds

Item	Spec.
Copy/print speed (A4 LEF, 8 1/2" x11 LEF)	MP 2555: 25 sheets/minute MP 3055: 30 sheets/minute MP 3555: 35 sheets/minute MP 4055: 40 sheets/minute MP 5055: 50 sheets/minute MP 6055: 60 sheets/minute
Reproduction ratio (%)	• NA Enlargement: 400, 200, 155, 129, 121 Full size: 100 Reduction: 93, 85, 78, 73, 65, 50, 25 • EU/Asia Enlargement: 400, 200, 141, 122, 115 Full size: 100 Reduction: 93, 82, 75, 71, 65, 50, 25 • Zoom: From 25–400% in increments of 1%
Maximum continuous copy run	999 sheets
Paper capacity (80 g/m2, 20 lb. Bond)	**Trays 1–4** • Plain Paper 1–Thick Paper 4 550 sheets • Envelopes (LEF) 50 sheets • Envelopes (LEF) Double flap: 15 sheets Single flap: 25 sheets **Bypass tray** • Thin Paper–Thick Paper 4 100 sheets (up to 10 mm in height) Thick Paper 1: 40 sheets Thick Paper 2–Thick Paper 3: 20 sheets Thick Paper 4: 16 sheets • OHP transparencies 50 sheets • Translucent paper 1 sheet • Label paper (adhesive labels) 30 sheets

Item	Spec.
	• Envelopes 10 sheets **Tray 3 (LCT)** 1000 sheets x 2 **Large capacity tray (LCT)** 500 sheets
Power requirements	• NA 120–127 V, 12 A, 60 Hz • EU/Asia 220–240 V, 8 A, 50/60 Hz
Dimensions	**NA** • Models equipped with the ARDF (W x D x H up to ADF): 587 x 665 x 913 mm (23.2 x 26.2 x 36.0 inches) • Models equipped with the one-pass duplex scanning DF (W x D x H up to ADF): 587 x 665 x 963 mm (23.2 x 26.2 x 38.0 inches) **EU** • Models equipped with the ARDF (W x D x H up to ADF): 587 x 665 x 913 mm (23.2 x 26.2 x 36.0 inches) • Models equipped with the one-pass duplex scanning ADF (W x D x H up to ADF): 587 x 665 x 963 mm (23.2 x 26.2 x 38.0 inches) **Asia** • Models equipped with the exposure glass cover (W x D x H up to exposure glass): 587 x 665 x 788 mm (23.2 x 26.2 x 31.1 inches) • Models equipped with the ARDF (W x D x H up to ADF): 587 x 665 x 913 mm (23.2 x 26.2 x 36.0 inches) • Models equipped with the one-pass duplex scanning ADF (W x D x H up to ADF): 587 x 665 x 963 mm (23.2 x 26.2 x 38.0 inches)
Space for main unit (W x D) (including the paper trays, bypass tray, and output trays)	• Models equipped with the ARDF 1,149 x 1,160 mm (45.3 x 45.7 inches) • Models equipped with the one-pass duplex scanning ADF 1,149 x 1,205 mm (45.3 x 47.5 inches) • Main unit without the ADF 1,149 x1,104 mm (45.3 x 43.5 inches)
Weight	**NA**

Item	Spec.
	• MP 2555/ 3055/ 3555: Approx. 62.5 kg (137.8 lb.) • MP 2555/ 3055/ 3555 (Models equipped with the ARDF): Approx. 71.5 kg (157.6 lb.) • MP 4055/ 5055/ 6055: Approx. 76.5 kg (168.7 lb.) **EU** • MP 2555/ 3055/ 3555/ 4055/ 5055 (Models equipped with the ARDF): Approx. 71.5 kg (157.6 lb.) • MP 2555/ 3055/ 3555/ 4055/ 5055 (Models equipped with the one-pass duplex scanning ADF): Approx. 76.5 kg (168.7 lb.) • MP 6055: Approx. 76.5 kg (168.7 lb.) **Asia** • MP 2555/ 3055/ 3555/ 4055/ 5055: Approx. 62.5 kg (137.8 lb.) • MP 6055: Approx. 76.5 kg (168.7 lb.)
HDD	
HDD	73GB
Maximum	9,000 pages (The total number of pages that can be stored with all functions combined.)
Copier/A4 original	9,000 pages
Printer/A4/600 dpi, 2 bits	9,000 pages
Scanner/Full Color/A4/200 dpi, 8 bits/JPEG	9,000 pages (In the printer and scanner modes, the number of pages that can be stored depends on the print image and the original.)
Stored documents	
maximum	3,000 pages
Number of pages supported by memory sorting	
Maximum	2,000 pages
Copier/A4 original	2,000 pages
Printer/A4/600 dpi, 2 bits	2,000 pages (In the printer mode, the number of pages that can be sorted depends on the print image.)

Sound power level (NA)

Main unit only

	MP 2555	MP 3055	MP 3555	MP 4055	MP 5055	MP 6055
Stand-by	31.0 dB (A)	31.0 dB (A)	31.0 dB (A)	30.5 dB (A)	30.4 dB (A)	30.7 dB (A)
Copying	58.0 dB (A)	58.6 dB (A)	59.5 dB (A)	60.5 dB (A)	63.6 dB (A)	63.8 dB (A)

Complete system

	MP 2555	MP 3055	MP 3555	MP 4055	MP 5055	MP 6055
Stand-by	33.2 dB (A)	33.2 dB (A)	33.2 dB (A)	32.9 dB (A)	33.0 dB (A)	32.8 dB (A)
Copying	67.6 dB (A)	67.6 dB (A)	69.0 dB (A)	69.2 dB (A)	70.1 dB (A)	69.9 dB (A)

Sound pressure level (NA)

Main unit only

	MP 2555	MP 3055	MP 3555	MP 4055	MP 5055	MP 6055
Stand-by	22.7 dB (A)	22.4 dB (A)	22.6 dB (A)	19.5 dB (A)	19.4 dB (A)	19.7 dB (A)
Copying	46.0 dB (A)	46.0 dB (A)	46.6 dB (A)	48.9 dB (A)	51.6 dB (A)	51.9 dB (A)

Complete system

	MP 2555	MP 3055	MP 3555	MP 4055	MP 5055	MP 6055
Stand-by	18.8 dB (A)	18.9 dB (A)	18.9 dB (A)	18.8 dB (A)	18.9 dB (A)	19.0 dB (A)
Copying	54.8 dB (A)	54.9 dB (A)	56.1 dB (A)	56.4 dB (A)	57.3 dB (A)	56.7 dB (A)

- Sound power level and sound pressure level are actual values measured in accordance with ISO 7779.
- Sound pressure level is measured from the position of the bystander.
- The complete system of MP 2555/3055/3555 consists of the main unit, ARDF, lower paper trays, internal tray 2, bridge unit, and Booklet Finisher SR3220.
- The complete system of MP 4055/5055 consists of the main unit, ARDF, lower paper trays, internal tray 2, bridge unit, and Booklet Finisher SR3240.
- The complete system of MP 6055 consists of the main unit, one-pass duplex scanning ADF, lower paper trays, internal tray 2, bridge unit, and Booklet Finisher SR3240.

Sound power level (EU/Asia)

Main unit only

	MP 2555	MP 3055	MP 3555	MP 4055	MP 5055	MP 6055
Stand-by	31.0 dB (A)	31.0 dB (A)	31.0 dB (A)	30.9 dB (A)	30.9 dB (A)	31.0 dB (A)
Copying	58.0 dB (A)	58.6 dB (A)	59.5 dB (A)	61.0 dB (A)	63.2 dB (A)	63.8 dB (A)

Complete system

	MP 2555	MP 3055	MP 3555	MP 4055	MP 5055	MP 6055
Stand-by	33.2 dB (A)	33.1 dB (A)	33.2 dB (A)	32.9 dB (A)	32.8 dB (A)	32.9 dB (A)
Copying	67.6 dB (A)	67.6 dB (A)	69.0 dB (A)	69.4 dB (A)	70.0 dB (A)	69.8 dB (A)

Sound pressure level (EU/Asia)

Main unit only

	MP 2555	MP 3055	MP 3555	MP 4055	MP 5055	MP 6055
Stand-by	22.7 dB (A)	22.4 dB (A)	22.6 dB (A)	21.1 dB (A)	20.7 dB (A)	21.0 dB (A)
Copying	46.0 dB (A)	46.0 dB (A)	46.6 dB (A)	49.0 dB (A)	51.7 dB (A)	52.0 dB (A)

Complete system

	MP 2555	MP 3055	MP 3555	MP 4055	MP 5055	MP 6055
Stand-by	18.8 dB (A)	18.9 dB (A)	18.9 dB (A)	18.8 dB (A)	18.7 dB (A)	18.9 dB (A)
Copying	54.8 dB (A)	54.9 dB (A)	56.1 dB (A)	56.7 dB (A)	57.2 dB (A)	56.6 dB (A)

- Sound power level and sound pressure level are actual values measured in accordance with ISO 7779.
- Sound pressure level is measured from the position of the bystander.
- The complete system of MP 2555/3055/3555 consists of the main unit, ARDF, lower paper trays, internal tray 2, bridge unit, and Booklet Finisher SR3220.
- The complete system of MP 4055/5055 consists of the main unit, ARDF, lower paper trays, internal tray 2, bridge unit, and Booklet Finisher SR3240.
- The complete system of MP 6055 consists of the main unit, one-pass duplex scanning ADF, lower paper trays, internal tray 2, bridge unit, and Booklet Finisher SR3240.

Printer Specifications

Item	Spec.
Resolution	200 dpi, 300 dpi, 400 dpi, 600 dpi, 1200 dpi
Printing speed (A4 LEF, 8 1/2” x11 LEF, plain paper)	• MP 2555: 25 sheets/minute • MP 3055: 30 sheets/minute • MP 3555: 35 sheets/minute • MP 4055: 40 sheets/minute • MP 5055: 50 sheets/minute • MP 6055: 60 sheets/minute Printing speeds depend on the machine. Check which type of machine you have. See Read This First.
Interface	• Standard Ethernet interface (1000BASE-T/100BASE-TX/10BASE-T) USB 2.0 (Type A) port (on the control panel) SD card slot (on the control panel) • Option IEEE 1284 parallel interface IEEE 802.11a/b/g/n wireless LAN interface File Format Converter Extended USB board

Item	Spec.
	USB device server
Network protocol	TCP/IP (IPv4, IPv6)
Printer language	• Standard RPCS, PCL 5e/6, PDF, MediaPrint(JPEG, TIFF), PostScript 3 • Option RPCS, PCL 5e/6, PDF, MediaPrint(JPEG, TIFF), PostScript 3
Fonts	• Standard PostScript 3: 93 fonts • Option Adobe PostScript 3: 136 fonts IPDS: 108 fonts
Memory	2 GB
USB interface	• Supported operating system Windows Vista/7/8/8.1/10, Windows Server 2008/2008 R2/2012/2012 R2, OS X 10.8 or later • Transmission spec USB 2.0 Standard • Connectable device Devices corresponding to USB 2.0 Standard

- The maximum length for the cable connecting the machine to an Ethernet network is 100 meters.

Scan Specifications

Item	Spec.
Type	Full-color scanner
Scan method	Flatbed scanning
Image sensor type	CCD Image Sensor
Scan type	Sheet, book, three-dimensional object
Original sizes that can be scanned	• Length 10–297 mm (0.4–11 inches) • Width 10–432 mm (0.4–17 inches)
Scan sizes automatically detectable from the exposure glass	• NA 11x17 SEF, 8 1/2” x14 SEF, 8 1/2” x13 2/5” SEF, 8 1/2” x11 SEF/LEF, 5 1/2” x8 1/2” LEF • EU/Asia A3 SEF, A4 SEF/LEF, A5 LEF, B4 JIS SEF, B5 JIS SEF/LEF, 8 1/2” x13 SEF

Item	Spec.
Scan sizes automatically detectable from the ADF	• NA A3 SEF, A4 SEF/LEF, 11x17 SEF, 8 1/2” x14 SEF, 8 1/2” x13 2/5” SEF, 8 1/2” x11 SEF/LEF, 7 1/4” x10 1/2” SEF, 5 1/2” x8 1/2” SEF/LEF, 10x14 SEF • EU/Asia A3 SEF, A4 SEF/LEF, A5 SEF/LEF, B4 JIS SEF, B5 JIS SEF/LEF, B6 JIS SEF/LEF, 11x17 SEF, 8 1/2” x13 SEF, 8 1/2” x11 SEF/LEF
Scan speed (the machine equipped with the ARDF)	When using the E-mail, Scan to Folder, WSD (Push Type), or Scan to Removable device (Original size: A4 LEF, 8 $^1/_2$” x11 LEF, Resolution: 200 dpi/300 dpi) • Black and white: 80 pages/minute (A4 LEF), 79 pages/minute (8 1/2” x11 LEF) (Original Type: B & W: Text / Line Art, Compression (Black & White): MMR, ITU-T No1 Chart) • Full Color: 80 pages/minute (A4 LEF), 79 pages/minute (8 1/2” x11 LEF) (Original Type: Full Color: Text / Photo, Compression (Gray Scale / Full Color): Default, Original Chart)
Scan speed (the machine equipped with the one-pass duplex scanning ADF)	When using the E-mail, Scan to Folder, WSD (Push Type), or Scan to Removable device (Original size: A4 LEF, 8 $^1/_2$” x11 LEF, Resolution: 200 dpi/300 dpi) • When scanning one-sided originals Black and white: 110 pages/minute • When scanning two-sided originals Black and white: 180 pages/minute (Original Type: B & W: Text / Line Art, Compression (Black & White): MMR, ITU-T No1 Chart) • When scanning one-sided originals Full Color: 110 pages/minute • When scanning two-sided originals Full Color: 180 pages/minute (Original Type: Full Color: Text / Photo, Compression (Gray Scale / Full Color): Default, Original Chart) Scanning speed differs depending on the following; operating environment of the machine and computer, scan settings, and the content of originals (denser images require more time).
Tone	• Black and white: 2 tones • Full color / Gray scale: 256 tones
Basic scanning resolution	200 dpi
Image compression type	TIFF (MH, MR, MMR, JBIG2)

Item	Spec.
for black and white (two-value)	
Image compression type for gray scale/full color	JPEG
Interface	• Standard Ethernet interface (1000BASE-T/100BASE-TX/10BASE-T) USB 2.0 (Type A) port (on the control panel) SD card slot (on the control panel) • Option IEEE 802.11a/b/g/n wireless LAN interface
Network protocol	TCP/IP
Selectable scanning resolutions when using the E-mail function	100 dpi, 200 dpi, 300 dpi, 400 dpi, 600 dpi
Protocol for sending e-mail	POP, SMTP, IMAP4
Sendable file formats when using the E-mail function	TIFF, JPEG, PDF, High Compression PDF, PDF/A When you select [PDF], [High Compression PDF], or [PDF/A] for the file format, you can attach a digital signature. You can also specify the security settings for [PDF] or [High Compression PDF]. For details, see “Specifying Digital Signature for PDF files”, “Security Settings for PDF Files”, Scan.
Selectable scanning resolutions when using the Scan to Folder function	100 dpi, 200 dpi, 300 dpi, 400 dpi, 600 dpi
Protocol for Scan to Folder	SMB, FTP
Sendable file formats when using the Scan to Folder function	TIFF, JPEG, PDF, High Compression PDF, PDF/A When you select [PDF], [High Compression PDF], or [PDF/A] for the file format, you can attach a digital signature. You can also specify the security settings for [PDF] or [High Compression PDF]. For details, see “Specifying Digital Signature for PDF files”, “Security Settings for PDF Files”, Scan.
WSD	Supported.
DSM	Supported.
Selectable scanning resolution when using TWAIN scanner	100–1,200 dpi
Protocol for TWAIN scanner	TCP/IP
Operating system for	Windows Vista/7/8/8.1/10, Windows Server 2008/2008 R2/2012/2012 R2

Item	Spec.
TWAIN scanner	(TWAIN scanner runs in 32-bit compatible mode on a 64-bit operating system, so TWAIN scanner is not compatible with 64-bit applications. Use it with 32-bit applications.)
Selectable scanning resolutions when using WIA scanner	100–1,200 dpi
Protocol for WIA scanner	TCP/IP
Operating system for WIA scanner	Windows Vista (SP1 or later)/7/8/8.1/10, Windows Server 2008/2008 R2/2012/2012 R2 (WIA scanner can function under both 32- and 64-bit operating systems.)

- Specifications are subject to change without notice.
- The maximum length for the cable connecting the machine to an Ethernet network is 100 meters.

Software Accessories

The printer drivers and utility software are provided on one CD-ROM. An auto-run installer allows you to select which components to install.

Printer Drivers

Operating System*1	Printer Language		
	PCL 5c	PCL 6	PostScript 3
Windows Vista *2	Supported	Supported	Supported
Windows 7 *3	Supported	Supported	Supported
Windows 8 *4	Supported	Supported	Supported
Windows 8.1 *5	Supported	Supported	Supported
Windows 10*6	Supported	Supported	Supported
Windows Server 2003 *7	Supported	Supported	Supported
Windows Server 2008 *8	Supported	Supported	Supported
Windows Server 2012 *9	Supported	Supported	Supported
OS X *10	**Not available**	**Not available**	Supported

*1 Windows operating system supports both versions (32/64 bit).

*2 Microsoft Windows Vista Ultimate/Microsoft Windows Vista Enterprise/Microsoft Windows Vista Business/Microsoft Windows Vista Home Premium/Microsoft Windows Vista Home Basic

*3 Microsoft Windows 7 Home Premium/Microsoft Windows 7 Professional/Microsoft Windows 7 Ultimate/Microsoft Windows 7 Enterprise

*4 Microsoft Windows 8/Microsoft Windows 8 Pro/Microsoft Windows 8 Enterprise

*5 Microsoft Windows 8.1/Microsoft Windows 8.1 Pro/Microsoft Windows 8.1 Enterprise

*6 Microsoft Windows 10 Home/Microsoft Windows 10 Pro/Microsoft Windows 10 Enterprise/Microsoft Windows 10 Education

*7 Microsoft Windows Server 2003 Standard Edition/Microsoft Windows Server 2003 Enterprise Edition/Microsoft Windows Server 2003 R2 Standard Edition/Microsoft Windows Server 2003 R2 Enterprise Edition

*8 Microsoft Windows Server 2008 Standard/Microsoft Windows Server 2008 Enterprise/Microsoft Windows Server 2008 R2 Standard/Microsoft Windows Server 2008 R2 Enterprise

*9 Microsoft Windows Server 2012 Foundation/Microsoft Windows Server 2012 Essentials/Microsoft Windows Server 2012 Standard/Microsoft Windows Server 2012 R2 Foundation/Microsoft Windows Server 2012 R2 Essentials/Microsoft Windows Server 2012 R2 Standard

*10 OS X 10.7 or later

Note

- Some applications may require installation of the PCL 5c printer driver. In this case, you can install PCL 5c without having to install PCL 6.
- Adobe PostScript printer driver allows the computer to communicate with the printer using a

printer language. PPD files allow the printer driver to enable specific printer functions.

Scanner and LAN Fax Drivers

Operating System	TWAIN*1	PC-FAX
Windows Vista	Supported	Supported
Windows 7	Supported	Supported
Windows 8	Supported	Supported
Windows 8.1	Supported	Supported
Windows 10	Supported	Supported
Windows Server 2003/2003 R2	Supported	Supported
Windows Server 2008/2008 R2	Supported	Supported
Windows Server 2012/2012 R2	Supported	Supported
OS X	**Not available**	**Not available**

*1 TWAIN scanner runs on a 64-bit operating system, but is not compatible with 64-bit applications. Use it with 32-bit applications.

Supported Paper Sizes

Original Size Detection

Size (W x L) [mm]	NA		EU/AP	
	Book	ADF	Book	ADF
A3 SEF (297 x 420)	-	Y	Y*4	Y
B4 SEF (257 x 364)	-	-	Y*4	Y
A4 SEF (210 x 297)	Y*5	Y	Y*4, 5	Y
A4 LEF (297 x 210)	Y*5	Y	Y*4, 5	Y
B5 SEF (182 x 257)	-	-	Y*4	Y
B5 LEF (257 x 182)	-	-	Y*4	Y
A5 SEF (148 x 210)	-	-	Y*2, 4	Y
A5 LEF (210 x 148)	-	-	Y*4	Y
B6 SEF (128 x 182)	-	-	-	Y
B6 LEF (182 x 128)	-	-	-	Y
DLT SEF (11" x 17")	Y	Y*Db	-	Y*Df
LG SEF (8 1/2" x 14")	Y*6	Y*Dc, 6	-	-
Oficio SEF (8 1/2" x 13.4")	Y*6	Y*Dc, 6	-	-
LT SEF (8 1/2" x 11")	Y*5	Y*Dd	Y*5	Y*Dg
LT LEF (11" x 8 1/2")	Y*5	Y*De	Y*5	Y*Dh
HLT SEF (5 1/2" x 8 1/2")	Y*2	Y	-	-
HLT LEF (8 1/2" x 5 1/2")	Y	Y	-	-
F SEF (8" x 13")	-	-	Y*S3	Y*S3
Foolscap SEF (8 1/2" x 13")	-	Y*Sc	Y*D3	Y*D3
Folio SEF (8 1/4" x 13")	-	-	Y*S3	Y*S3
Folio SEF (11" x 15")	-	Y*Sb	-	-
Folio SEF (10" x 14")	-	Y	-	-
Folio SEF (8" x 10")	-	Y*Sd	-	-
US EXE SEF (7 1/4" x 10 1/2")	-	Y	-	-
US EXE LEF (10 1/2 x 7 1/4")	-	Y*Se	-	-
8K SEF (267 x 390)	-	-	Y*4	Y*Sf
16K SEF (195 x 267)	-	-	Y*4	Y*Si
16K LEF (267 x 195)	-	-	Y*4v	Y*Sg

Sizes with letters (a to h) means only either size with the corresponding letter can be selected for size detection. “D” is for default set sizes, and when setting “S” sizes for size detection from SP mode, “D” sizes can no longer be detected.

(*2)For detected originals smaller then A5 size, with SP mode either “detect as A5” or “Detect as Unknown” can

be selected. (Default is “Detect as unknown”)

(*3)F Sizes (8.5” x 13” SEF, 8.25” x 13” SEF, 8” x 13” SEF) will be available by SP mode settings.

(*4)Switch Book scanner original detection between “K” series and ”A/B” series from SP mode.

(Can not set both to detect, but 8K/16K detect can de set from SO mode)

8K SEF -> Switch between A3, B4 SEF

16K SEF -> Switch between A4, A5, B5 SEF

16K LEF -> Switch between A4, A5, B5 LEF *Can not switch only either size.

(*5)Can be selected with switching A4/LT from SP mode:

- Standard detect (default)
- When placing A4/LT size LEF, detect as A4 LEF. When placing SEF, detect as LT SEF.
- When placing A4/LT size LEF, detect as LT LEF. When placing SEF, detect as A4 SEF.

(*6)The machine can detect either LG or Oficio, depending on a UP mode setting. For the ADF, "C" sizes from SP should be set to "LG setting" in advance.

Remarks:

Y	Yes; available
-	Not available

Paper Feed

Tray 1 to 4, and the side LCT

Size (W x L) [mm]	Tray 1		Tray 2		Tray 3/4 1 drawer /2 drawers bank		Tray 3 Tandem LCT	
Region (EU/AA)	NA	EU/AA	NA	EU/AA	NA	EU/AA	NA	EU/AA
A3 SEF (297 x 420)	G2	A2	G2	A2	G2	A2	-	-
A4 SEF (210 x 297)	A	A	A	A	A	A	-	-
A4 LEF (297 x 210)	G1	A1	G1	A1	G1	A1	K	H
A5 SEF (148 x 210)	B	B	B	B	B	B	-	-
A5 LEF (210 x 148)	A	A	A	A	A	A	-	-
A6 SEF (105 x 148)	B	B	B	B	B	B	-	-
B4 SEF (257 x 364)	G3	A3	G3	A3	G3	A3	-	-
B5 SEF (182 x 257)	A	A	A	A	A	A	-	-
B5 LEF (257 x 182)	G4	A4	G4	A4	G4	A4	-	-
B6 SEF (128 x 182)	B	B	B	B	B	B	-	-
DLT SEF (11" x 17")	A2	G2	A2	G2	A2	G2	-	-
Legal SEF ($8^1/_2$" x 14")	A3	G3	A3	G3	A3	G3	-	-
Foolscap SEF ($8^1/_2$" x 13")	B	B	B	B	B	B	-	-
LT SEF ($8^1/_2$" x 11")	A	A	A	A	A	A	-	-

Size (W x L) [mm]	Tray 1		Tray 2		Tray 3/4 1 drawer /2 drawers bank		Tray 3 Tandem LCT	
Region (EU/AA)	NA	EU/AA	NA	EU/AA	NA	EU/AA	NA	EU/AA
LT LEF (11" x 8$^1/_2$")	A1	G1	A1	G1	A1	G1	H	K
Gov. LG SEF (8$^1/_4$" x 14")	B	B	B	B	B	B	-	-
Folio SEF (8$^1/_4$" x 13")	B	B	B	B	B	B	-	-
F/GL SEF (8" x 13")	B	B	B	B	B	B	-	-
Eng Quatro SEF (8" x 10")	B	B	B	B	B	B	-	-
Executive SEF (7$^1/_4$" x 10$^1/_2$")	B	B	B	B	B	B	-	-
Executive LEF (10$^1/_2$" x 7$^1/_4$")	A4	G4	A4	G4	A4	G4	-	-
HLT SEF (5$^1/_2$" x 8$^1/_2$")	B	B	B	B	B	B	-	-
Com10 SEF (104.8 x 241.3)	B	B	B	B	B	B	-	-
Com10 LEF (241.3 x 104.8)	B	B	B	B	B	B	-	-
Monarch SEF (98.4 x 190.5)	B	B	B	B	B	B	-	-
Monarch LEF (190.5 x 98.4)	-	-	-	-	-	-	-	-
C5 SEF (162 x 229)	B	B	B	B	B	B	-	-
C5 LEF (229 x 162)	B	B	B	B	B	B	-	-
C6 SEF (114 x 162)	B	B	B	B	B	B	-	-
C6LEF (162 x 114)	B	B	B	B	B	B	-	-
DL Env SEF (110 x 220)	B	B	B	B	B	B	-	-
DL Env LEF (220 x 110)	B	B	B	B	B	B	-	-
8K SEF (267 x 390)	B	B	B	B	B	B	-	-
16K SEF (195 x 267)	B	B	B	B	B	B	-	-
16K LEF (267 x 195)	B	B	B	B	B	B	-	-
12" x 18" SEF	-	-	-	-	-	-	-	-
11" x 15" SEF	B	B	B	B	B	B	-	-
10" x 14" SEF	B	B	B	B	B	B	-	-
8.5” x 13.4” SEF	A3	B	A3	B	A3	B	-	-

Remarks:

A	Auto detectable. Also can be selected with size button of initial setting.
B	Can be selected with size button from initial setting.
C	Select this size by setting the dial.
D	Set dial to “*”, then select with size button from initial setting.
E	<Bypass setting> Copy window/Bypass/Standard size/Size select or select with the print bypass paper size/size button from initial setting.
F	Select with SP from preset paper sizes.

	Cannot be selected from printer driver.
G	Switches which size to set as auto detect with SP. *Example: The combination of A1-G1. G (When not auto detectable) will be as same as B. Combinations are only made from same region same tray. *Example: The combination of G1 and J1. G (When not auto detectable) will be as same as E. Combinations are only made from same region same tray.
H	Size fixed when shipping.
I	<Bypass setting> With bypass tray, after 1st sheet trailing edge goes through, auto detects size, then fixed to size detected from the 2nd sheet.
J	<Bypass setting> Auto detect of Copy window/Bypass/Standard size/Select with size button.
K	Select with SP from preset paper sizes. Can be selected from printer driver.
-	Not available

Bypass Trays

Size (W x L) [mm]	LCT		Bypass	
Region (EU/AA)	NA	EU/AA	NA	EU/AA
A3 SEF (297 x 420)	-	-	E	J
A4 SEF (210 x 297)	-	-	E	J
A4 LEF (297 x 210)	K	H	E	J
A5 SEF (148 x 210)	-	-	E	J
A5 LEF (210 x 148)	-	-	J	J
A6 SEF (105 x 148)	-	-	E	J
B4 SEF (257 x 364)	-	-	E	J
B5 SEF (182 x 257)	-	-	J	J
B5 LEF (257 x 182)	K	K	E	J
B6 SEF (128 x 182)	-	-	E	J
DLT SEF (11" x 17")	-	-	J	E
Legal SEF (8 1/2" x 14")	-	-	G1	E
Foolscap SEF (8 1/2" x 13")	-	-	E	E
LT SEF (8 1/2" x 11")	-	-	J1	E
LT LEF (11" x 8 1/2")	H	K	J	E
Gov. LG SEF (8 1/4" x 14")	-	-	E	E
Folio SEF (8 1/4" x 13")	-	-	E	E

Size (W x L) [mm]	LCT		Bypass	
Region (EU/AA)	NA	EU/AA	NA	EU/AA
F/GL SEF (8" x 13")	-	-	E	E
Eng Quatro SEF (8" x 10")	-	-	E	E
Executive SEF ($7^1/_4$" x $10^1/_2$")	-	-	E	E
Executive LEF ($10^1/_2$" x $7^1/_4$")	-	-	J	E
HLT SEF ($5^1/_2$" x $8^1/_2$")	-	-	J	E
Com10 SEF (104.8 x 241.3)	-	-	E*1	E*1
Com10 LEF (241.3 x 104.8)	-	-	E*1	E*1
Monarch SEF (98.4 x 190.5)	-	-	E*1	E*1
Monarch LEF (190.5 x 98.4)	-	-	E*1	E*1
C5 SEF (162 x 229)	-	-	E*1	E*1
C5 LEF (229 x 162)	-	-	E*1	E*1
C6 SEF (114 x 162)	-	-	E*1	E*1
C6LEF (162 x 114)	-	-	E*1	E*1
DL Env SEF (110 x 220)	-	-	E*1	E*1
DL Env LEF (220 x 110)	-	-	E*1	E*1
8K SEF (267 x 390)	-	-	E	E
16K SEF (195 x 267)	-	-	E	E
16K LEF (267 x 195)	-	-	E	E
12" x 18" SEF	-	-	J	E
11" x 15" SEF	-	-	E	E
10" x 14" SEF	-	-	E	E
8.5” x 13.4” SEF	-	-	E	E

Remarks:

A	Auto detectable. Also can be selected with size button of initial setting.
B	Can be selected with size button from initial setting.
C	Select this size by setting the dial.
D	Set dial to “*”, then select with size button from initial setting.
E	<Bypass setting> Copy window/Bypass/Standard size/Size select or select with the print bypass paper size/size button from initial setting.
F	Select with SP from preset paper sizes. Cannot be selected from printer driver.
G	Switches which size to set as auto detect with SP. *Example: The combination of A1-G1. G (When not auto detectable) will be as same as B. Combinations are only made from same region same tray.

	*Example: The combination of G1 and J1. G (When not auto detectable) will be as same as E. Combinations are only made from same region same tray.
H	Size fixed when shipping.
I	<Bypass setting> With bypass tray, after 1st sheet trailing edge goes through, auto detects size, then fixed to size detected from the 2nd sheet.
J	<Bypass setting> Auto detect of Copy window/Bypass/Standard size/Select with size button.
K	Select with SP from preset paper sizes. Can be selected from printer driver.
-	Not available

*1	Even the paper size is in the range or available sizes for duplex, envelopes cannot be done so.

Paper Exit

Main unit tray, 1-bin tray, Internal shift tray SH3070, Side tray

Size (W x L) [mm]	Main unit tray	1 bin tray	Internal shift tray SH3070		Side Tray	
	Main unit tray	Upper tray	Shift	Shifting	Bridge upper exit	Side tray
A3 SEF (297 x 420)	A	A	A	A	A	A
A4 SEF (210 x 297)	A	A	A	A	A	A
A4 LEF (297 x 210)	A	A	A	A	A	A
A5 SEF (148 x 210)	A	A	A	A	A	A
A5 LEF (210 x 148)	A	A	A	A	A	A
A6 SEF (105 x 148)	A	B*1	A*1	A	A*1	A*1
B4 SEF (257 x 364)	A	A	A	A	A	A
B5 SEF (182 x 257)	A	A	A	A	A	A
B5 LEF (257 x 182)	A	A	A	A	A	A
B6 SEF (128 x 182)	A	B*1	A*1	A	A*1	A*1
DLT SEF (11" x 17")	A	A	A	A	A	A
Legal SEF (8 1/2" x 14")	A	A	A	A	A	A
Foolscap SEF (8 1/2" x 13")	A	A	A	A	A	A
LT SEF (8 1/2" x 11")	A	A	A	A	A	A
LT LEF (11" x 8 1/2")	A	A	A	A	A	A
Gov. LG SEF (8 1/4" x 14")	A	A	A	A	A	A

Size (W x L) [mm]	Main unit tray	1 bin tray	Internal shift tray SH3070		Side Tray	
	Main unit tray	Upper tray	Shift	Shifting	Bridge upper exit	Side tray
Folio SEF (8 1/4" x 13")	A	A	A	A	A	A
F/GL SEF (8" x 13")	A	A	A	A	A	A
Eng Quatro SEF (8" x 10")	A	A	A	A	A	A
Executive SEF (7 1/4" x 10 1/2")	A	A	A	A	A	A
Executive LEF (10 1/2" x 7 1/4")	A	A	A	A	A	A
HLT SEF (5 1/2" x 8 1/2")	A	A	A	A	A	A
Com10 SEF (104.8 x 241.3)	A	B	A*1	A	A*1, 3	B
Com10 LEF (241.3 x 104.8)	A	B	A*1	A	A*1, 3, 4	-
Monarch SEF (98.4 x 190.5)	A	B	A*1	A	A*1, 3	B
Monarch LEF (190.5 x 98.4)	A	B	A*1	A	A*1, 3, 4	-
C5 SEF (162 x 229)	A	B	A*1	A	A*1, 3	B
C5 LEF (229 x 162)	A	B	A*1	A	A*1, 3, 4	B
C6 SEF (114 x 162)	A	B	A*1	A	A*1, 3	B
C6LEF (162 x 114)	A	B	A*1	A	A*1, 3, 4	-
DL Env SEF (110 x 220)	A	B	A*1	A	A*1, 3	B
DL Env LEF (220 x 110)	A	B	A*1	A	A*1, 3, 4	-
8K SEF (267 x 390)	A	A	A	A	A	A
16K SEF (195 x 267)	A	A	A	A	A	A
16K LEF (267 x 195)	A	A	A	A	A	A
12" x 18" SEF	-	A*1	A*1	B	A	A
11" x 15" SEF	A	A	A	A	A	A
10" x 14" SEF	A	A	A	A	A	A

Size (W x L) [mm]	Main unit tray	1 bin tray	Internal shift tray SH3070		Side Tray	
	Main unit tray	Upper tray	Shift	Shifting	Bridge upper exit	Side tray
8.5” x 13.4” SEF	A	A	A	A	A	A

Shift: The paper is fed out to the shift tray, but without shifting.

Shifting: The paper is fed out to the shift tray, and the shifting function is used.

Internal Finisher SR3130

Size (W x L) [mm]	Paper exit		Staple		Punch			
	Shift	Shifting	Single/Double size	Stapling amount	EU 2 SC 4 Holes	NA 3 EU 4 Holes	NA 2 Holes	SC 4 Holes
A3 SEF (297 x 420)	A	A	A	30	A	A	A	A
A4 SEF (210 x 297)	A	A	A	50	A	-	B	A
A4 LEF (297 x 210)	A	A	A	50	A	A	A	A
A5 SEF (148 x 210)	A*1	A*1	-	-	-	-	-	-
A5 LEF (210 x 148)	A*1	A*1	-	-	-	-	-	-
A6 SEF (105 x 148)	A*1	-	-	-	-	-	-	-
B4 SEF (257 x 364)	A	A	A	30	A	-	-	A
B5 SEF (182 x 257)	A	A	A	50	A	-	-	A
B5 LEF (257 x 182)	A	A	A	50	A	-	-	A
B6 SEF (128 x 182)	A*1	-	-	-	-	-	-	-
DLT SEF (11" x 17")	A	A	A	30	A	A	A	A
Legal SEF (8 1/2" x 14")	A	A	A	30	A	-	A	A
Foolscap SEF (8 1/2" x 13")	A	A	A	30	A	-	A	A
LT SEF (8 1/2" x 11")	A	A	A	50	A	-	A	A
LT LEF (11" x 8 1/2")	A	A	A	50	A	A	A	A
Gov. LG SEF (8 1/4" x 14")	A	A	A	30	-	-	-	-
Folio SEF (8 1/4" x 13")	A	A	A	30	-	-	-	-
F/GL SEF (8" x 13")	A	A*1	-	-	-	-	-	-
Eng Quatro SEF (8" x 10")	A	A*1	-	-	-	-	-	-
Executive SEF (7 1/4" x 10 1/2")	A	A	A	50	A	-	A	A

1.Specifications

Size (W x L) [mm]	Paper exit		Staple		Punch			
	Shift	Shifting	Single/Double size	Stapling amount	EU 2 SC 4 Holes	NA 3 EU 4 Holes	NA 2 Holes	SC 4 Holes
Executive LEF ($10^1/_2$" x $7^1/_4$")	A	A	A	50	-	-	-	-
HLT SEF ($5^1/_2$" x $8^1/_2$")	A*1	-	-	-	-	-	-	-
Com10 SEF (104.8 x 241.3)	A*1	-	-	-	-	-	-	-
Com10 LEF (241.3 x 104.8)	A*1,3,4	-	-	-	-	-	-	-
Monarch SEF (98.4 x 190.5)	A*1	-	-	-	-	-	-	-
Monarch LEF (190.5 x 98.4)	A*1,3,4	-	-	-	-	-	-	-
C5 SEF (162 x 229)	A*1	-	-	-	-	-	-	-
C5 LEF (229 x 162)	A*1	-	-	-	-	-	-	-
C6 SEF (114 x 162)	A*1	-	-	-	-	-	-	-
C6LEF (162 x 114)	A*1,3,4	-	-	-	-	-	-	-
DL Env SEF (110 x 220)	A*1	-	-	-	-	-	-	-
DL Env LEF (220 x 110)	A*1,3,4	-	-	-	-	-	-	-
8K SEF (267 x 390)	A	A	A	30	A	-	-	-
16K SEF (195 x 267)	A	A	A	50	A	-	-	-
16K LEF (267 x 195)	A	A	A	50	A	-	-	-
12" x 18" SEF	A	-	-	-	-	-	-	-
11" x 15" SEF	A	A	-	-	-	-	-	-
10" x 14" SEF	A	A	-	-	-	-	-	-
8.5” x 13.4” SEF	A	A	A	30	A	-	A	A

Finisher SR3230/SR3240

Size (W x L) [mm]	Paper exit			Half fold	Staple				Punch		
	Proof/shift	shifting	Half fold	Middle fold	Single/Double stitch	Stapling amount	Saddle stitch	Saddle stitch amount	EU2 SC4 Holes	NA2 Holes	NA3 EU4 Holes
A3 SEF (297 x 420)	A	A	A	A*2	A	50	A	20	A	A	A
A4 SEF (210 x 297)	A	A	A	A*2	A	50	A	20	A	B	-
A4 LEF (297 x 210)	A	A	-	-	A	50	-	-	A	A	A
A5 SEF (148 x 210)	A	A	-	-	-	-	-	-	A	A	-
A5 LEF (210 x 148)	A	A	-	-	-	-	-	-	A	B	-
A6 SEF (105 x 148)	A	-	-	-	-	-	-	-	-	-	-
B4 SEF (257 x 364)	A	A	A	A*2	A	50	A	20	A	A	A
B5 SEF (182 x 257)	A	A	A	A*2	A	50	A	20	A	A	-
B5 LEF (257 x 182)	A	A	-	-	A	50	-	-	A	A	A
B6 SEF (128 x 182)	A	B	-	-	-	-	-	-	-	-	-
DLT	A	A	A	A*2	A	50	A	20	A	A	A

1.Specifications

Size (W x L) [mm]	Paper exit			Half fold	Staple				Punch		
	Proof/shift	shifting	Half fold	Middle fold	Single /Double stitch	Stapling amount	Saddle stitch	Saddle stitch amount	EU2 SC4 Holes	NA2 Holes	NA3 EU4 Holes
SEF (11" x 17")											
Legal SEF ($8^1/_2$" x 14")	A	A	A	A*2	A	50	A	20	A	A	
Foolscap SEF ($8^1/_2$" x 13")	A	A	-	-	A	50	-	-	A	A	-
LT SEF ($8^1/_2$" x 11")	A	A	A	A*2	A	50	A	20	A	A	
LT LEF (11" x $8^1/_2$")	A	A	-	-	A	50	-	-	A	A	A
Gov. LG SEF ($8^1/_4$" x 14")	A	A	A	A*2	A	50	A	20	A	A	-
Folio SEF ($8^1/_4$" x 13")	A	A	A	A*2	A	50	A	20	A	A	-
F/GL SEF (8" x 13")	A	A	-	-	A	50	-	-	A	A	-
Eng Quatro SEF (8" x 10")	A	A	-	-	A	50	-	-	A	A	-
Executive SEF	A	A	-	-	A	50	-	-	A	A	-

Size (W x L) [mm]	Paper exit			Half fold	Staple				Punch		
	Proof/shift	shifting	Half fold	Middle fold	Single/Double stitch	Stapling amount	Saddle stitch	Saddle stitch amount	EU2 SC4 Holes	NA2 Holes	NA3 EU4 Holes
($7^1/_4$" x $10^1/_2$")											
Executive LEF ($10^1/_2$" x $7^1/_4$")	A	A	-	-	A	50	-	-	A	A	A
HLT SEF ($5^1/_2$" x $8^1/_2$")	A	A	-	-	-	-	-	-	A	A	-
Com10 SEF (104.8 x 241.3)	-	-	-	-	-	-	-	-	-	-	-
Com10 LEF (241.3 x 104.8)	-	-	-	-	-	-	-	-	-	-	-
Monarch SEF (98.4 x 190.5)	-	-	-	-	-	-	-	-	-	-	-
Monarch LEF (190.5 x 98.4)	-	-	-	-	-	-	-	-	-	-	-
C5 SEF (162 x 229)	-	-	-	-	-	-	-	-	-	-	-
C5 LEF (229 x 162)	-	-	-	-	-	-	-	-	-	-	-
C6 SEF	-	-	-	-	-	-	-	-	-	-	-

1.Specifications

Size (W x L) [mm]	Paper exit			Half fold	Staple				Punch		
	Proof/shift	shifting	Half fold	Middle fold	Single /Double stitch	Stapling amount	Saddle stitch	Saddle stitch amount	EU2 SC4 Holes	NA2 Holes	NA3 EU4 Holes
(114 x 162)											
C6LEF (162 x 114)	-	-	-	-	-	-	-	-	-	-	-
DL Env SEF (110 x 220)	-	-	-	-	-	-	-	-	-	-	-
DL Env LEF (220 x 110)	-	-	-	-	-	-	-	-	-	-	-
8K SEF (267 x 390)	A	A	-	-	A	50	-	-	A	A	A
16K SEF (195 x 267)	A	A	-	-	A	50	-	-	A	A	-
16K LEF (267 x 195)	A	A	-	-	A	50	-	-	A	A	A
12" x 18" SEF	A	A	-	-	-	-	-	-	-	-	-
11" x 15" SEF	A	A	A	A*2	A	50	A	20	A	A	A
10" x 14" SEF	A	A	A	A*2	A	50	A	20	A	A	A
8.5” x 13.4” SEF	A	A	A	A*2	A	50	A	20	A	A	-

Booklet Finisher SR3220

Size (W x L) [mm]	Paper exit				Half fold	Staple				Punch		
	Proof	Shift	Shifting	Saddle stitch	Middle fold	Single/Double stitch	Staple amount	Saddle stitch	Saddle stitch amount	EU2 SC4 Holes	NA2 Holes	NA3 EU4 Holes
A3 SEF (297 x 420)	A	A	A	A	A*5	A	30	A	15	A	A	A
A4 SEF (210 x 297)	A	A	A	A	A*5	A	50	A	15	A	B	-
A4 LEF (297 x 210)	A	A	A	-	-	A	50	-	-	A	A	A
A5 SEF (148 x 210)	A	A	A*1	-	-	-	-	-	-	A	A	-
A5 LEF (210 x 148)	A	A	A	-	-	-	-	-	-	A	B	-
A6 SEF (105 x 148)	A	B	-	-	-	-	-	-	-	-	-	-
B4 SEF (257 x 364)	A	A	A	A	A*5	A	30	A	15	A	A	A
B5 SEF (182 x 257)	A	A	A*1	A	A*5	A	50	A	15	A	A	-
B5 LEF (257 x 182)	A	A	A	-	-	A	50	-	-	A	A	A
B6 SEF (128 x 182)	A	A	A*1	-	-	-	-	-	-	-	-	-

1.Specifications

Size (W x L) [mm]	Paper exit				Half fold	Staple				Punch		
	Proof	Shift	Shifting	Saddle stitch	Middle fold	Single/Double stitch	Staple amount	Saddle stitch	Saddle stitch amount	EU2 SC4 Holes	NA2 Holes	NA3 EU4 Holes
DLT SEF (11" x 17")	A	A	A	A	A*5	A	30	A	15	A	A	A
Legal SEF (8 1/2" x 14")	A	A	A	A	A*5	A	30	A	15	A	A	-
Foolscap SEF (8 1/2" x 13")	A	A	A	-	-	A	30	-	-	A	A	-
LT SEF (8 1/2" x 11")	A	A	A	A	A*5	A	50	A	15	A	A	-
LT LEF (11" x 8 1/2")	A	A	A	-	-	A	50	-	-	A	A	A
Gov. LG SEF (8 1/4" x 14")	A	A	A	-	-	A	30	-	-	A	A	-
Folio SEF (8 1/4" x 13")	A	A	A	-	-	A	30	-	-	A	A	-
F/GL SEF (8" x 13")	A	A	A	-	-	A	30	-	-	A	A	-
Eng Quatro SEF (8"	A	A	A	-	-	A	50	-	-	A	A	-

Size (W x L) [mm]	Paper exit				Half fold	Staple				Punch		
	Proof	Shift	Shifting	Saddle stitch	Middle fold	Single/Double stitch	Staple amount	Saddle stitch	Saddle stitch amount	EU2 SC4 Holes	NA2 Holes	NA3 EU4 Holes
x 10")												
Executive SEF ($7^1/_4$" x $10^1/_2$")	A	A	A	-	-	A	50	-	-	A	A	-
Executive LEF ($10^1/_2$" x $7^1/_4$")	A	A	A	-	-	A	50	-	-	A	A	A
HLT SEF ($5^1/_2$" x $8^1/_2$")	A	A	A*1	-	-	-	-	-	-	A	A	-
Com10 SEF (104.8 x 241.3)	-	-	-	-	-	-	-	-	-	-	-	-
Com10 LEF (241.3 x 104.8)	-	-	-	-	-	-	-	-	-	-	-	-
Monarch SEF (98.4 x 190.5)	-	-	-	-	-	-	-	-	-	-	-	-
Monarch LEF (190.5 x 98.4)	-	-	-	-	-	-	-	-	-	-	-	-
C5 SEF (162 x 229)	-	-	-	-	-	-	-	-	-	-	-	-

1.Specifications

Size (W x L) [mm]	Paper exit				Half fold	Staple				Punch		
	Proof	Shift	Shifting	Saddle stitch	Middle fold	Single/Double stitch	Staple amount	Saddle stitch	Saddle stitch amount	EU2 SC4 Holes	NA2 Holes	NA3 EU4 Holes
C5 LEF (229 x 162)	-	-	-	-	-	-	-	-	-	-	-	-
C6 SEF (114 x 162)	-	-	-	-	-	-	-	-	-	-	-	-
C6LEF (162 x 114)	-	-	-	-	-	-	-	-	-	-	-	-
DL Env SEF (110 x 220)	-	-	-	-	-	-	-	-	-	-	-	-
DL Env LEF (220 x 110)	-	-	-	-	-	-	-	-	-	-	-	-
8K SEF (267 x 390)	A	A	A	-	-	A	30	-	-	A	A	A
16K SEF (195 x 267)	A	A	A	-	-	A	50	-	-	A	A	-
16K LEF (267 x 195)	A	A	A	-	-	A	50	-	-	A	A	A
12" x 18" SEF	-	-	-	-	-	-	-	-	-	-	-	-
11" x	A	A	A	-	-	A	30	-	-	A	A	A

Size (W x L) [mm]	Paper exit				Half fold	Staple				Punch		
	Proof	Shift	Shifting	Saddle stitch	Middle fold	Single/Double stitch	Staple amount	Saddle stitch	Saddle stitch amount	EU2 SC4 Holes	NA2 Holes	NA3 EU4 Holes
15" SEF												
10" x 14" SEF	A	A	A	-	-	A	30	-	-	A	A	A
8.5” x 13.4” SEF	A	A	A	A	A*5	A	30	A	15	A	A	-

Bridge Unit

Size (W x L) [mm]	Paper exit	Bridge
	Bridge upper paper exit	Finisher Bridge
A3 SEF (297 x 420)	A	A
A4 SEF (210 x 297)	A	A
A4 LEF (297 x 210)	A	A
A5 SEF (148 x 210)	A	A
A5 LEF (210 x 148)	A	A
A6 SEF (105 x 148)	A	A
B4 SEF (257 x 364)	A	A
B5 SEF (182 x 257)	A	A
B5 LEF (257 x 182)	A	A
B6 SEF (128 x 182)	A	A
DLT SEF (11" x 17")	A	A
Legal SEF (8 1/2" x 14")	A	A
Foolscap SEF (8 1/2" x 13")	A	A
LT SEF (8 1/2" x 11")	A	A
LT LEF (11" x 8 1/2")	A	A
Gov. LG SEF (8 1/4" x 14")	A	A
Folio SEF (8 1/4" x 13")	A	A
F/GL SEF (8" x 13")	A	A
Eng Quatro SEF (8" x 10")	A	A

Size (W x L) [mm]	Paper exit	Bridge
	Bridge upper paper exit	Finisher Bridge
Executive SEF ($7^1/_4$" x $10^1/_2$")	A	A
Executive LEF ($10^1/_2$" x $7^1/_4$")	A	A
HLT SEF ($5^1/_2$" x $8^1/_2$")	A	A
Com10 SEF (104.8 x 241.3)	A*1, 3	-
Com10 LEF (241.3 x 104.8)	A*1, 3, 4	-
Monarch SEF (98.4 x 190.5)	A*1, 3	-
Monarch LEF (190.5 x 98.4)	A*1, 3, 4	-
C5 SEF (162 x 229)	A*1, 3	-
C5 LEF (229 x 162)	A*1, 3, 4	-
C6 SEF (114 x 162)	A*1, 3	-
C6LEF (162 x 114)	A*1, 3 ,4	-
DL Env SEF (110 x 220)	A*1, 3	-
DL Env LEF (220 x 110)	A*1, 3, 4	-
8K SEF (267 x 390)	A	A
16K SEF (195 x 267)	A	A
16K LEF (267 x 195)	A	A
12" x 18" SEF	A	A
11" x 15" SEF	A	A
10" x 14" SEF	A	A
8.5” x 13.4” SEF	A	A

Internal Finisher SR3180

Size (W x L) [mm]	Paper exit		Staple	
	Shift	Shifting	Single stitch	Staple amount
A3 SEF (297 x 420)	A	A	A	5
A4 SEF (210 x 297)	A	A	A	5

Size (W x L) [mm]	Paper exit		Staple	
	Shift	Shifting	Single stitch	Staple amount
A4 LEF (297 x 210)	A	A	A	5
A5 SEF (148 x 210)	B	B	-	-
A5 LEF (210 x 148)	B	B	-	-
A6 SEF (105 x 148)	B	-	-	-
B4 SEF (257 x 364)	A	A	A	5
B5 SEF (182 x 257)	A	A	A	5
B5 LEF (257 x 182)	A	A	A	5
B6 SEF (128 x 182)	B	B	-	-
DLT SEF (11" x 17")	A	A	A	5
Legal SEF ($8^1/_2$" x 14")	A	A	A	5
Foolscap SEF ($8^1/_2$" x 13")	A	A	A	5
LT SEF ($8^1/_2$" x 11")	A	A	A	5
LT LEF (11" x $8^1/_2$")	A	A	A	5
Gov. LG SEF ($8^1/_4$" x 14")	A	A	A	5
Folio SEF ($8^1/_4$" x 13")	A	A	A	5
F/GL SEF (8" x 13")	B	B	-	-
Eng Quatro SEF (8" x 10")	B	B	-	-
Executive SEF ($7^1/_4$" x $10^1/_2$")	A	A	A	5
Executive LEF ($10^1/_2$" x $7^1/_4$")	A	A	A	5
HLT SEF ($5^1/_2$" x $8^1/_2$")	B	B	-	-
Com10 SEF (104.8 x 241.3)	B	-	-	-
Com10 LEF (241.3 x 104.8)	B*1,3,4	-	-	-
Monarch SEF (98.4 x 190.5)	B	-	-	-
Monarch LEF (190.5 x 98.4)	B*1,3,4	-	-	-
C5 SEF (162 x 229)	B	-	-	-
C5 LEF (229 x 162)	B	-	-	-
C6 SEF (114 x 162)	B	-	-	-
C6LEF (162 x 114)	B*1,3,4	-	-	-
DL Env SEF (110 x 220)	B	-	-	-
DL Env LEF (220 x 110)	B*1,3,4	-	-	-
8K SEF (267 x 390)	A	A	A	5
16K SEF (195 x 267)	A	A	A	5
16K LEF (267 x 195)	A	A	A	5
12" x 18" SEF	B	-	-	-
11" x 15" SEF	B	B	-	-
10" x 14" SEF	B	B	-	-

Size (W x L) [mm]	Paper exit		Staple	
	Shift	Shifting	Single stitch	Staple amount
8.5” x 13.4” SEF	A	A	A	5

Internal Multi-Fold Unit FD3000

For the unit without a finisher

Size (W x L) [mm]	Paper exit	Fold-supporting paper size (for folding one sheet)		
		Z-fold	Half fold	Letter fold in/Letter fold out
A3 SEF (297 x 420)	A	A	A	A
A4 SEF (210 x 297)	A	A	A	A
A4 LEF (297 x 210)	A	-	-	-
A5 SEF (148 x 210)	A	-	-	-
A5 LEF (210 x 148)	A	-	-	-
A6 SEF (105 x 148)	A	-	-	-
B4 SEF (257 x 364)	A	A	A	-
B5 SEF (182 x 257)	A	-	-	-
B5 LEF (257 x 182)	A	-	-	-
B6 SEF (128 x 182)	A	-	-	-
DLT SEF (11" x 17")	A	A	A	A
Legal SEF ($8^1/_2$" x 14")	A	A	A	A
Foolscap SEF ($8^1/_2$" x 13")	A	-	-	-
LT SEF ($8^1/_2$" x 11")	A	A	A	A
LT LEF (11" x $8^1/_2$")	A	-	-	-
Gov. LG SEF ($8^1/_4$" x 14")	A	-	-	-
Folio SEF ($8^1/_4$" x 13")	A	-	-	-
F/GL SEF (8" x 13")	A	-	-	-
Eng Quatro SEF (8" x 10")	A	-	-	-
Executive SEF ($7^1/_4$" x $10^1/_2$")	A	-	-	-
Executive LEF ($10^1/_2$" x $7^1/_4$")	A	-	-	-
HLT SEF ($5^1/_2$" x $8^1/_2$")	A	-	-	-
Com10 SEF (104.8 x 241.3)	B[*1,3,4]	-	-	-
Com10 LEF (241.3 x 104.8)	B[*1,3,4]	-	-	-
Monarch SEF (98.4 x 190.5)	B[*1,3,4]	-	-	-
Monarch LEF (190.5 x 98.4)	B[*1,3,4]	-	-	-
C5 SEF (162 x 229)	B[*1,3,4]	-	-	-
C5 LEF (229 x 162)	B[*1,3,4]	-	-	-
C6 SEF (114 x 162)	B[*1,3,4]	-	-	-
C6LEF (162 x 114)	B[*1,3,4]	-	-	-

Size (W x L) [mm]	Paper exit	Fold-supporting paper size (for folding one sheet)		
		Z-fold	Half fold	Letter fold in/Letter fold out
DL Env SEF (110 x 220)	B*1,3,4	-	-	-
DL Env LEF (220 x 110)	B*1,3,4	-	-	-
8K SEF (267 x 390)	A	A	A	-
16K SEF (195 x 267)	A	-	-	-
16K LEF (267 x 195)	A	-	-	-
12" x 18" SEF	-	-	-	-
11" x 15" SEF	A	-	-	-
10" x 14" SEF	A	-	-	-
8.5” x 13.4” SEF	A	A	A	A

For the unit with a finisher

Size (W x L) [mm]	Paper exit		Fold-supporting paper size (for folding one sheet)		
	Fold tray	Finisher	Z-fold	Half fold	Letter fold in/Letter fold out
A3 SEF (297 x 420)	A*6	A	A	A	A
A4 SEF (210 x 297)	A*6	A	A	A	A
A4 LEF (297 x 210)	A*7	A	-	-	-
A5 SEF (148 x 210)	-	A	-	-	-
A5 LEF (210 x 148)	A*7	A	-	-	-
A6 SEF (105 x 148)	-	A	-	-	-
B4 SEF (257 x 364)	A*6	A	A	A	-
B5 SEF (182 x 257)	-	A	-	-	-
B5 LEF (257 x 182)	A*7	A	-	-	-
B6 SEF (128 x 182)	-	A	-	-	-
DLT SEF (11" x 17")	A*6	A	A	A	A
Legal SEF (8 1/2" x 14")	A*6	A	A	A	A
Foolscap SEF (8 1/2" x 13")	-	A	-	-	-
LT SEF (8 1/2" x 11")	A*6	A	A	A	A
LT LEF (11" x 8 1/2")	A*7	A	-	-	-
Gov. LG SEF (8 1/4" x 14")	-	A	-	-	-
Folio SEF (8 1/4" x 13")	-	A	-	-	-
F/GL SEF (8" x 13")	-	A	-	-	-
Eng Quatro SEF (8" x 10")	-	A	-	-	-
Executive SEF (7 1/4" x 10 1/2")	-	A	-	-	-
Executive LEF (10 1/2" x 7 1/4")	-	A	-	-	-
HLT SEF (5 1/2" x 8 1/2")	-	A	-	-	-
Com10 SEF (104.8 x 241.3)	B*1,3,4	-	-	-	-
Com10 LEF (241.3 x 104.8)	B*1,3,4	-	-	-	-

1.Specifications

Size (W x L) [mm]	Paper exit		Fold-supporting paper size (for folding one sheet)		
	Fold tray	Finisher	Z-fold	Half fold	Letter fold in/Letter fold out
Monarch SEF (98.4 x 190.5)	B*1,3,4	-	-	-	-
Monarch LEF (190.5 x 98.4)	B*1,3,4	-	-	-	-
C5 SEF (162 x 229)	B*1,3,4	-	-	-	-
C5 LEF (229 x 162)	B*1,3,4	-	-	-	-
C6 SEF (114 x 162)	B*1,3,4	-	-	-	-
C6LEF (162 x 114)	B*1,3,4	-	-	-	-
DL Env SEF (110 x 220)	B*1,3,4	-	-	-	-
DL Env LEF (220 x 110)	B*1,3,4	-	-	-	-
8K SEF (267 x 390)	A*6	A	A	A	-
16K SEF (195 x 267)	-	A	-	-	-
16K LEF (267 x 195)	A*7	A	-	-	-
12" x 18" SEF	A*8	A	-	A	-
11" x 15" SEF	-	A	-	-	-
10" x 14" SEF	-	A	-	-	-
8.5” x 13.4” SEF	A*6	A	A	A	A

Remarks:

A	Paper through, paper exit available.
B	Will not guarantee, but paper can go through or exit.
-	Not available.

*1	Out of the true up precision guarantee.
*2	Multi folding can be done up to 5 sheets.
*3	Envelopes can only go through each at a time.
*4	Except envelopes with triangle flap.
*5	Only one sheet can be half folded with saddle stitch mode. Therefore, multi sheets/sets must be paginated and exit one at a time.
*6	Paper exit is available when using a folding option. If not using a folding option, paper exit is not available.
*7	Plain paper can be delivered to the tray only when Z-fold or half fold is partially specified in the job.
*8	Paper exit is not available even when using a folding option.

Option Specifications

ARDF DF3090 (D779-17, -21)

Mode:	Batch mode, SADF mode, Mixed Sizes mode, Original Orientation mode, and Custom Size originals mode
Original Size:	EU/AA • One-sided originals: A3 SEF-B6 JIS SEF/LEF, 11 x 17 SEF-8 1/2 x 11 SEF/LEF • Two-sided originals: A3 SEF-A5 SEF/LEF, 11 x 17 SEF-8 1/2 x 11 SEF/LEF NA • One-sided originals: 11 x 17 SEF-5 1/2 x 8 1/2 SEF/LEF, A3 SEF-A4 SEF/LEF • Two-sided originals: 11 x 17 SEF-5 1/2 x 8 1/2 SEF/LEF, A3 SEF-A4 SEF/LEF
Original weight:	• One-sided originals: 40-128 g/m2 (11-34 lb. Bond) • Two-sided originals: 52-128 g/m2 (14-34 lb. Bond)
Number of originals to be set (81 g/m2, 20 lb. Bond):	100 sheets
Maximum power consumption:	42 W or less (Power is supplied from the main unit.)
Dimensions (W x D x H):	565 x 500 x 125 mm (22.3 x 19.7 x 5.0 inches)
Weight:	Approx. 9 kg (19.9 lb.)

SPDF DF3100 (D3B0-17, -21)

Configuration	Automatic document feed duplex scanner (one pass two-side scanning)
Mode:	Batch mode, SADF mode, Mixed Sizes mode, Original Orientation mode, and Custom Size originals mode
Original size	EU/AA • One-sided originals: A3 SEF-B6 JIS SEF/LEF, 11 x 17 SEF-8 1/2 x 11 SEF/LEF • Two-sided originals: A3 SEF-A5 SEF/LEF, 11 x 17 SEF-8 1/2 x 11 SEF/LEF NA • One-sided originals: 11 x 17 SEF-5 1/2 x 8 1/2 SEF/LEF, A3 SEF-A4 SEF/LEF • Two-sided originals: 11 x 17 SEF-5 1/2 x 8 1/2 SEF/LEF, A3 SEF-A4 SEF/LEF
Scanning origin point	Origin at rear upper left corner

Original setting	Face-up on original tray
Original feed	Feeds from top of stack on original tray
Original separation	Feed belt and reverse roller separation by friction
Original scanning method	Through-sheet method (Front: White platen plate, Back: Color CIS and white roller)
Original tray capacity	220 sheets (80 g/m^2, 20 lb. Bond)
Dimensions (w x d x h)	587 x 520 x 175 mm (23.2 x 20.5 x 6.9 in.)
Weight	Approx. 14 kg (30.9 lb.)
Maximum power consumption:	55 W or less (Power is supplied from the main unit.)

Internal Finisher SR3130 (D690)

Paper size:	A3 SEF, A4 SEF/LEF, A5 SEF/LEF, A6 SEF, B4 JIS SEF, B5 JIS SEF/LEF, B6 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 7 1/4 x 10 1/2 SEF/LEF, 5 1/2 x 8 1/2 SEF, 4 1/8 x 9 1/2 SEF/LEF, 3 7/8 x 7 1/2 SEF/LEF, C5 Env SEF/LEF, C6 Env SEF/LEF, DL Env SEF/LEF, 8K SEF, 16K SEF/LEF, 12 x 18 SEF, 11 x 15 SEF, 10 x 14 SEF, SRA3 SEF, SRA4 SEF/LEF, custom size
Paper weight:	60–300 g/m^2 (16 lb. Bond–110 lb. Cover)
Paper sizes that can be shifted:	A3 SEF, A4 SEF/LEF, A5 SEF/LEF, B4 JIS SEF, B5 JIS SEF/LEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 7 1/4 x 10 1/2 SEF/LEF, C5 Env SEF/LEF, 8K SEF, 16K SEF/LEF, 11 x 15 SEF, 10 x 14 SEF, SRA4 LEF, custom size
Paper weight that can be shifted:	64–105 g/m^2 (17–28 lb. Bond)
Stack capacity (80 g/m^2, 20 lb. Bond):	• 500 sheets: A4, 81/2 x 11 or smaller • 250 sheets: B4 JIS, 81/2 x 14 or larger
Staple paper size:	A3 SEF, A4 SEF/LEF, B4 JIS SEF, B5 JIS SEF/LEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 7 1/4 x 10 1/2 SEF/LEF, 8K SEF, 16K SEF/LEF
Staple paper weight:	64–105 g/m^2 (17–28 lb. Bond)
Staple capacity (80 g/m^2, 20 lb. Bond):	• Without Mixed Size: **30 sheets:** A3 SEF, B4 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8K SEF **50 sheets:** A4 SEF/LEF, B5 JIS SEF/LEF, 8 1/2 x 11 SEF/LEF, 7 1/4 x 10 1/2 SEF/LEF, 16K SEF/LEF

	• With Mixed Size: **30 sheets:** A3 SEF/ A4 LEF, B4 JIS SEF/ B5 JIS SEF, 11 x 17 SEF/8 1/2 x 11 SEF
Stack capacity after stapling (80 g/m^2, 20 lb. Bond):	• 2–9 sheets: 55–46 sets (A4 LEF, B5 JIS LEF, 8 1/2 x 11 LEF) • 10–50 sheets: 45–10 sets (A4 LEF, B5 JIS LEF, 8 1/2 x 11LEF) • 2–9 sheets: 55–27 sets (A4 SEF, B5 JIS SEF, 8 1/2 x 11 SEF) • 10– 50 sheets: 25–8 sets (A4 SEF, B5 JIS SEF, 8 1/2 x 11 SEF) • 2–9 sheets: 55–27 sets (A3 SEF, B4 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF) • 10–30 sheets: 25–8 sets (A3 SEF, B4 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF)
Staple position:	Top 1, Bottom 1, Left 2, Top 2
Power consumption:	• 50 W or less (without punch unit) (Power is supplied from the main unit.) • 60 W or less (with punch unit) (Power is supplied from the main unit.)
Dimensions (W x D x H):	546 x 523 x 170 mm (21.5 x 20.6 x 6.7 inches)
Weight:	Approx. 13 kg (28.7 lb.) (without punch unit) Approx. 17 kg (37.5 lb.) (with punch unit)

Finisher part specifications

Item	Specification
Type	Case system
Shift tray	Yes
No. of sheets which can be accommodated	A4, 8$^1/_2$×11 or smaller: 500 / height: lower than 57mm B4, 8$^1/_2$×14 or larger: 250 / height: lower than 28.5mm
Paper thicknesses which can be handled	52g/m^2-300g/m^2
Up/down shift function	No
Left/right shift function	Yes
Stapling function	Yes
Punching function	Option
Remainder detection	No
Full-load detection	Yes
Paper detection	No
Power consumption	Less than 47W (24V DC /2A)
Power source	24V DC (supplied from main printer), 5V SC (generated by FIN board),

1.Specifications

Item	Specification
	SELV (super-low voltage secondary power supply)
Dimensions (width×depth×height)	546×523×170 mm
Mass	12.8kg or less

Stapler unit specifications

Item	Specification
No. of sheets which can be stitched	A3 SEF, B4 SEF, 11"×17" SEF, 8 1/2”×14” SEF, 8 1/2”×13” SEF, 8 1/4”×14” SEF, 8 1/4”×13” SEF: 30 A4 LEF / SEF, B5 LEF / SEF, 8 1/2"×11" LEF / SEF, 7 1/4"×10 1/2" LEF / SEF: 50 When loading mixed widths: 30
Sizes which can be stitched	A3 SEF, B4 SEF, 11"×17" SEF, 8 1/2”×14” SEF, 8 1/2”×13” SEF, 8 1/4”×14” SEF, 8 1/4”×13” SEF A4 LEF / SEF, B5 LEF / SEF, 8 1/2"×11" LEF / SEF, 7 1/4"×10 1/2" LEF / SEF
Thicknesses which can be stitched	52g/m^2 -105g/m^2 The quality for sheets of paper which are thinner than 64g/m^2 is not guaranteed. No. of sheets to be stitched decreases when sheets of paper are thicker than 64g/m^2, depending on the weight.
Stitching position	Top, bottom, 2 positions on the left, 2 positions on the top
Staple supply	Refill charge to dedicated staple cartridge
Stitching capacity	5000 / cartridge

Finisher SR3210 (D3B8)

Paper size for the finisher upper tray:	A3 SEF B4 JIS SEF, A4 SEF/LEF, B5 JIS SEF/LEF, A5 SEF/LEF, B6 JIS SEF, A6 SEF, 12 x 18 SEF, 11 x 17 SEF, 11 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 5 1/2 x 8 1/2 SEF, 7 1/4 x 10 1/2 SEF/LEF, 8K SEF, 16K SEF/LEF, SRA3 SEF, SRA4 SEF/LEF, 8 1/2 x 13 2/5 LEF, custom size
Paper weight for the finisher upper tray:	52–169 g/m^2 (14 lb. Bond–90 lb. Index)
Stack capacity for the finisher upper tray (80 g/m^2, 20 lb. Bond):	250 sheets: A4, 81/2 x 11 or smaller 50 sheets: B4 JIS, 81/2 x 14 or larger
Paper size for the finisher shift tray:	A3 SEF, B4 JIS SEF, A4 SEF/LEF, B5 JIS SEF, /LEF, A5 SEF/LEF, B6 JIS SEF, A6 SEF, 12 x 18 SEF, 11 x 17 SEF, 11 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 7 1/4 x 10 1/2 SEF/LEF, 5 1/2 x 8 1/2 SEF, 8K SEF, 16K SEF/LEF, SRA3

	SEF, SRA4 SEF/LEF, 8 1/2 x 13 2/5 LEF, custom size
Paper weight for the finisher shift tray:	52–300 g/m^2 (14 lb. Bond–110 lb. Cover)
Paper sizes that can be shifted when delivered to the finisher shift tray:	A3 SEF, A4 SEF/LEF, A5 SEF/LEF, B4 JIS SEF, B5 JIS SEF/LEF, B6 JIS SEF, 12 x 18 SEF, 11 x 17 SEF, 11 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SLF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 7 1/4 x 10 1/2 SEF/LEF, 5 1/2 x 8 1/2 SEF, 8K SEF, 16K SEF/LEF, SRA4 LEF, 8 1/2 x 13 2/5 LEF, custom size
Paper weight that can be shifted when delivered to the finisher shift tray:	52–300 g/m^2 (14 lb. Bond–110 lb. Cover)
Stack capacity for the finisher shift tray (80 g/m^2, 20 lb. Bond):	1,000 sheets: A4, 81/2 x 11 or smaller 500 sheets: B4 JIS, 81/2 x 14 or larger
Staple paper size:	A3 SEF, B4 JIS SEF, A4 SEF/LEF, B5 JIS SEF/LEF, 11 x 17 SEF, 11 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 11 SEF/LEF, 7 1/4 x 10 1/2 SEF/LEF, 8 x 13 SEF, 8 1/2 x 13 LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 10 SEF, 12 x 18 SEF, 8K SEF, 16K SEF/LEF, 8 1/2 x 13 2/5 LEF, custom size
Staple paper weight:	• Stapling with staples: 52–105 g/m^2 (14–28 lb. Bond) • Staple-free stapling: 64–80 g/m^2 (17–20 lb. Bond) You can use two sheets of paper weighing up to 216 g/m^2 (80 lb. Cover) per set as cover sheets.
Staple capacity (80 g/m^2, 20 lb. Bond):	• Without Mixed Size: **30 sheets:** A3 SEF, B4 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 x 13 SEF, 8 1/2 x 13 LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 11 x 15 SEF, 10 x 14 SEF, 8K SEF, 12 x 18 SEF, 8 1/2 x 13 2/5 LEF **50 sheets:** A4 SEF/LEF, B5 JIS SEF/LEF, 8 1/2 x 11 SEF/LEF, 8 x 10 SEF, 7 1/4 x 10 1/2 SEF/LEF, 16K SEF/LEF • With Mixed Size: **22 sheets:** A3 SEF/A4 LEF, B4 JIS SEF/B5 JIS SEF, 11 x 17 SEF/8 1/2 x 11SEF

Stack capacity after stapling (80 g/m^2, 20 lb. Bond):	• Stapling with staples:
	  • 2–9 sheets: 100 sets (A4 LEF, B5 JIS LEF, 8 1/2 x 11 LEF)
	  • 10–50 sheets: 100–20 sets (A4 LEF, B5 JIS LEF, 8 1/2 x 11LEF)
	  • 10–50 sheets: 50–10 sets (A4 SEF, B5 JIS SEF, 8 1/2 x 11SEF)

	• 2–9 sheets: 50 sets (A3 SEF, A4 SEF, B4 JIS SEF, B5 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 11 SEF) • 10–30 sheets: 50–10 sets (A3 SEF, B4 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF) • Staple-free stapling: • 2–5 sheets: 100 sets (A4 SEF, B5 JIS SEF, 8 1/2 x 11 SEF) • 2–5 sheets: 50 sets (A3 SEF, A4 LEF, B4 JIS SEF, B5 JIS LEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 11 LEF)
Staple position:	3 positions (Top, Bottom, 2 Staples)
Power consumption:	35.4 W (Power is supplied from the main unit.)
Dimensions (W x D x H):	• Tray is folded: 575 x 620 x 960 mm (22.6 x 24.5 x 37.8 inches) • Tray is extended: 658 x 620 x 960 mm (25.9 x 24.5 x 37.8 inches)
Weight:	Approx. 34 kg (75.0 lb.)

Booklet Finisher SR3220 (D3B9)

Paper size for the finisher upper tray	A3 SEF, B4 JIS SEF, A4 SEF/LEF B5 JIS SEF/LEF, A5 SEF/LEF, B6 JIS SEF, A6 SEF, 12 x 18 SEF, 11 x 17 SEF, 11 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 5 1/2 x 8 1/2 SEF, 7 1/4 x 10 1/2 SEF/LEF, 8K SEF, 16K SEF/LEF, SRA3 SEF, SRA4 SEF/LEF, 8 1/2 x 13 2/5 LEF, custom size
Paper weight for the finisher upper tray:	52–169 g/m^2 (14 lb. Bond–90 lb. Index)
Stack capacity for the finisher upper tray (80 g/m^2, 20 lb. Bond):	250 sheets: A4, 81/2 x 11 or smaller 50 sheets: B4 JIS, 81/2 x 14 or larger
Paper size for the finisher shift tray:	A3 SEF, B4 JIS SEF, A4 SEF/LEF, B5 JIS/LEF, A5 SEF/LEF, B6 JIS SEF, A6 SEF, 12 x 18 SEF, 11 x 17 SEF, 11 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 7 1/4 x 10 1/2 SEF/LEF, 5 1/2 x 8 1/2 SEF, 8K SEF, 16K SEF/LEF, SRA3 SEF, SRA4 SEF/LEF, 8 1/2 x 13 2/5 LEF, custom size
Paper weight for the finisher shift tray:	52–300 g/m^2 (14 lb. Bond–110 lb. Cover)
Paper sizes that can be shifted when delivered to the finisher shift tray:	A3 SEF, A4 SEF/LEF, A5 SEF, B4 JIS SEF, B5 JIS SEF, B6 JIS SEF, 12 x 18 SEF, 11 x 17 SEF, 11 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 7 1/4 x 10 1/2 SEF/LEF, 5 1/2 x 8 1/2 SEF, 8K SEF, 16K SEF/LEF SRA4 LEF, 8 1/2 x 13 2/5 LEF

Paper weight that can be shifted when delivered to the finisher shift tray:	52–300 g/m^2 (14 lb. Bond–110 lb. Cover)
Stack capacity for the finisher shift tray (80 g/m^2, 20 lb. Bond):	1,000 sheets: A4, 81/2 x 14 or smaller 500 sheets: B4 JIS, 81/2 x 14 or larger
Staple paper size:	A3 SEF, B4 JIS SEF, A4 SEF/LEF, B5 JIS SEF/LEF, 11 x 17 SEF, 11 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 11 SEF/LEF, 7 1/4 x 10 1/2 SEF/LEF, 8 x 13 SEF, 8B 1/2 x 13 LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 10 SEF, 12 x 18 SEF, 8K SEF, 16K SEF/LEF, 8 1/2 x 13 2/5 LEF, custom size
Staple paper weight:	52–105 g/m^2 (14-28 lb. Bond) You can use two sheets of paper weighing up to 216 g/m^2 (80 lb. Cover) per set as cover sheets.
Staple capacity (80 g/m^2, 20 lb. Bond):	• Without Mixed Size: **30 sheets:** A3 SEF, B4 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 x 13 SEF, 8 1/2 x 13 LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 11 x 15 SEF, 10 x 14 SEF, 8K SEF, 12 x 18 SEF, 8 1/2 x 13 2/5 LEF **50 sheets:** A4 SEF/LEF, B5 JIS SEF/LEF, 8 1/2 x 11 SEF/LEF, 8 x 10 SEF, 7 1/4 x 10 1/2 SEF/LEF, 16K SEF/LEF • With Mixed Size: **22 sheets:** A3 SEF/A4 LEF, B4 JIS SEF/B5 JIS SEF, 11 x 17 SEF/8 1/2 x 11 SEF

Stack capacity after stapling (80 g/m^2, 20 lb. Bond):	• Without Mixed Size:
	  • 2–9 sheets: 100 sets (A4 LEF, B5 JIS LEF, 8 1/2 x 11 LEF)
	  • 10–50 sheets: 100–20 sets (A4 LEF, B5 JIS LEF, 8 1/2 x 11 LEF)
	  • 10–50 sheets: 50–10 sets (A4 SEF, B5 JIS SEF, 8 1/2 x 11 SEF)
	  • 2–9 sheets: 50 sets (A3 SEF, A4 SEF, B4 JIS SEF, B5 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 11 SEF)
	  • 10–30 sheets: 50–10 sets (A3 SEF, B4 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF)
	• With Mixed Size:
	  • 2–22 sheets: 22 sets (A3 SEF/ A4 LEF, B4 JIS SEF/B5 JIS SEF, 11 x 17 SEF/8 1/2 x 11 SEF)

Staple position:	3 positions (Top, Bottom, 2 Staples)
Saddle stitch paper size:	A3 SEF, A4 LEF, B4 JIS SEF, B5 JIS LEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 11 LEF, 12 x 18 SEF
Saddle stitch paper	52–105 g/m^2 (14–28 lb. Bond)

weight:	
Saddle stitch capacity (80 g/m^2, 20 lb. Bond):	1 set (15 sheets)
Stack capacity after saddle stitching (80 g/m^2, 20 lb. Bond):	2–5 sheets: approx. 20 sets 6–10 sheets: approx. 10 sets 11–15 sheets: approx. 7 sets
Saddle stitch position:	Center 2 positions
Types of folds:	Half Fold
Half fold paper size:	A3 SEF, A4 LEF, B4 JIS SEF, B5 JIS LEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 11 LEF, 12 x 18 SEF, 8 1/2 x 13 2/5 LEF
Half fold paper weight:	52–105 g/m2 (14–28 lb.Bond)
Power consumption:	35.4 W (Power is supplied from the main unit.)
Dimensions (W x D x H):	• Tray is folded: 575 x 620 x 960 mm (22.6 x 24.5 x 37.8 inches) • Tray is extended: 658 x 620 x 960 mm (25.9 x 24.5 x 37.8 inches)
Weight:	Approx. 42 kg (92.6 lb.)

Finisher SR3230 (D3BA)

Paper size for the finisher upper tray:	A3 SEF, B4 JIS SEF, A4 SEF/LEF, B5 JIS SEF/LEF, A5 SEF/LEF, B6 JIS SEF, A6 SEF, 12 x 18 SEF, 11 x 17 SEF, 11 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 5 1/2 x 8 1/2 SEF, 7 1/4 x 10 1/2 SEF/LEF, 8K SEF, 16K SEF/LEF, SRA3 SEF, SRA4 SEF/LEF, 8 1/2 x 13 2/5 LEF, custom size
Paper weight for the finisher upper tray:	52–220 g/m^2 (14 lb. Bond–80 lb. Cover)
Stack capacity for the finisher upper tray (80 g/m^2, 20 lb. Bond):	250 sheets: A4, 81/2 x 11 or smaller 50 sheets: B4 JIS, 81/2 x 14 or larger
Paper size for the finisher shift tray:	A3 SEF, B4 JIS SEF, A4 SEF/LEF, B5 JIS SEF/LEF, A5 SEF/LEF, B6 JIS SEF, A6 SEF, 12 x 18 SEF, 11 x 17 SEF, 11 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 5 1/2 x 8 1/2 SEF, 7 1/4 x 10 1/2 SEF/LEF, 8K SEF, 16K SEF/LEF, SRA3 SEF, SRA4 SEF/LEF, 8 1/2 x 13 2/5 LEF, custom size
Paper weight for the finisher shift tray:	52–300 g/m^2 (14 lb. Bond–110 lb. Cover)
Paper sizes that can be shifted when delivered	A3 SEF, A4 SEF/LEF, A5 SEF/LEF, B4 JIS SEF, B5 JIS SEF/LEF, B6 JIS SEF, 12 x 18 SEF, 11 x 17 SEF, 11 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8

to the finisher shift tray:	1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 5 1/2 x 8 1/2 SEF, 7 1/4 x 10 1/2 SEF/LEF, 8K SEF, 16K SEF/LEF, SRA4 LEF, 8 1/2 x 13 2/5 LEF, custom size
Paper weight that can be shifted when delivered to the finisher shift tray:	52–300 g/m^2 (14 lb. Bond–110 lb. Cover)
Stack capacity for the finisher shift tray (80 g/m^2, 20 lb. Bond):	• 3,000 sheets: A4 SEF, 8 1/2 x 11 SEF • 1,500 sheets: A3 SEF, B4 JIS SEF, A4 LEF, B5 JIS SEF/LEF, 12 x 18 SEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 11 LEF, SRA3LEF • 500 sheets: A5 SEF • 100 sheets: A5 LEF, B6 JIS SEF, A6 SEF, 5 1/2 x 8 1/2 SEF
Staple paper size:	A3 SEF, B4 JIS SEF, A4 SEF/LEF, B5 JIS SEF/LEF, 11 x 17 SEF, 11 x 15 SEF, 10 x 14LEF, 8 1/2 x 14 SEF, 8 1/2 x 11 SEF/LEF, 7 1/4 x 10 1/2 SEF/LEF, 8 x 13 SEF, 8 1/2 x 13 LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 10 SEF, 8K SEF, 16K SEF/LEF, 8 1/2 x 13 2/5 LEF, custom size
Staple paper weight:	52–105 g/m^2 (14–28 lb. Bond) You can use two sheets of paper weighing up to 256 g/m^2 (140 lb. Index) per set as cover sheets.
Staple capacity (80 g/m^2, 20 lb. Bond):	• Without Mixed Size: **50 sheets:** A3 SEF, A4 SEF/LEF, B4 JIS SEF, B5 JIS SEF/LEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 x 13 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 x 10 SEF, 7 1/4 x 10 1/2 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 11 x 15 SEF, 10 x 14 SEF, 8K SEF, 16K SEF/LEF, 8 1/2 x 13 2/5 LEF • With Mixed Size: **50 sheets:** A3 SEF/A4 LEF, B4 JIS SEF/B5 JIS SEF, 11 x 17 SEF/8 1/2 x 11 SEF
Stack capacity after stapling (80 g/m^2, 20 lb. Bond):	**Without Mixed Size:** • 2–19 sheets: 150 sets (A4 LEF, 8 1/2 x 11 LEF) • 20–50 sheets: 150–46 sets (A4 LEF, 8 1/2 x 11 LEF) • 2–14 sheets: 100 sets (A4 SEF, B5 JIS SEF/SEF, 8 1/2 x 11 SEF) • 15–50 sheets: 100–23 sets (A4 SEF, B5 JIS SEF/SEF, 8 1/2 x 11 ;SEF) • 2–14 sheets: 100 sets (other size paper) • 15–50 sheets: 100–23 sets (other size paper) **With Mixed Size:** • 2–50 sheets: 23 sets (A3 SEF/A4 LEF, B4 JIS SEF/B5 JIS SEF, 11 x 17 SEF/8 1/2 x 11 SEF)
Staple position:	4 positions (Top, Top Slant, Bottom, 2 Staples)

Power consumption:	64 W (Power is supplied from the main unit.)
Dimensions (W x D x H):	657 x 613 x 960 mm (25.9 x 24.2 x 37.8 inches)
Weight:	• Approx. 34 kg (75.0 lb.) (without punch unit) • Approx. 39 kg (86.0 lb.) (with punch unit)

Booklet Finisher SR3240 (D3BB)

Paper size for the finisher upper tray:	A3 SEF, B4 JIS SEF, A4 SEF/LEF, B5 JIS SEF/LEF, A5 SEF/LEF, B6 JIS SEF, A6 SEF, 12 x 18 SEF, 11 x 17 SEF, 11 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 5 1/2 x 8 1/2 SEF, 7 1/4 x 10 1/2 SEF/LEF, 8K SEF, 16K SEF/LEF, SRA3 SEF, SRA4 SEF/LEF, 8 1/2 x 13 2/5 LEF, custom size
Paper weight for the finisher upper tray:	52–220 g/m^2 (14 lb. Bond–80 lb. Cover)
Stack capacity for the finisher upper tray (80 g/m^2, 20 lb. Bond):	• 250 sheets: A4, 81/2 x 11 or smaller • 50 sheets: B4 JIS, 81/2 x 14 or larger
Paper size for the finisher shift tray:	A3 SEF 1, B4 JIS SEF, A4 SEF/LEF, B5 JIS SEF/LEF, A5, B6 JIS SEF, A6, 12 x 18 SEF, 11 x 17 SEF, 11 x 15 SEF, 10 x 14 SEF, 81/2 x 14 SEF, 81/2 x 13 SEF, 81/2 x 11 SEF/LEF, 81/4 x 14 SEF, 81/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 51/2 x 81/2 SEF, 71/4 x 101/2 SEF/LEF, 8K SEF, 16K SEF/LEF, SRA3 SEF, SRA4 SEF/LEF, 8 1/2 x 13 2/5 LEF, custom size
Paper weight for the finisher shift tray:	52–300 g/m^2 (14 lb. Bond–110 lb. Cover)
Paper sizes that can be shifted when delivered to the finisher shift tray:	A3 SEF, A4 SEF/LEF, A5 SEF/LEF, B4 JIS SEF, B5 JIS SEF/LEF, B6 JIS SEF, 12 x 18 SEF, 11 x 17 SEF, 11 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 5 1/2 x 8 1/2 SEF, 7 1/4 x 10 1/2 SEF/LEF, 8K SEF, 16K SEF/LEF SRA4 LEF, 8 1/2 x 13 2/5 LEF, custom size
Paper weight that can be shifted when delivered to the finisher shift tray:	52–300 g/m^2 (14 lb. Bond–110 lb. Cover)
Stack capacity for the finisher shift tray (80 g/m^2, 20 lb. Bond):	• 2,000 sheets: A4 LEF, 8 1/2 x 11 LEF • 1,000 sheets: A3 SEF, B4 JIS SEF, A4 SEF, B5 JIS SEF/LEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 11 SEF, 12 x 18 SEF, SRA3 SEF • 500 sheets: A5 LEF • 100 sheets: A5 SEF, B6 JIS SEF, A6 SEF, 5 1/2 x 8 1/2 SEF
Staple paper size:	A3 SEF, B4 JIS SEF, A4 SEF/LEF B5 JIS SEF/LEF, 11 x 17 SEF, 11 x 15 SEF, 10 x

	14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 11 SEF/LEF, 7 1/4 x 10 1/2 SEF/LEF, 8 x 13 SEF, 8 1/2 x 13 LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 10 SEF, 8K SEF, 16K SEF/LEF, 8 1/2 x 13 2/5 LEF, custom size
Staple paper weight:	52–105 g/m^2 (14–28 lb. Bond) You can use two sheets of paper weighing up to 256 g/m^2 (140 lb. Index) per set as cover sheets.
Staple capacity (80 g/m^2, 20 lb. Bond):	• Without Mixed Size: **50 sheets:** A3 SEF, A4 SEF/LEF, B4 JIS SEF, B5 JIS SEF/LEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 x 13 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 x 10 SEF, 7 1/4 x 10 1/2 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 11 x 15v, 10 x 14 SEF, 8K SEF, 16K SEF/LEF, 8 1/2 x 13 2/5 LEF • With Mixed Size: **50 sheets:** A3 SEF /A4 LEF, B4 JIS SEF /B5 JIS SEF, 11 x 17 SEF /81/2 x 11 SEF
Stack capacity after stapling (80 g/m^2, 20 lb. Bond):	**Without Mixed Size:** • 2–12 sheets: 150 sets (A4 LEF, 81/2 x 11 LEF) • 13–50 sheets: 150–30 sets (A4 LEF, 8 1/2 x 11 LEF) • 2–9 sheets: 100 sets (A4 SEF, B5 JIS SEF/LEF, 8 1/2 x 11 SEF) • 10–50 sheets: 100–15 sets (A4 SEF, B5 JIS SEF/LEF, 8 1/2 x 11 SEF) • 2–9 sheets: 100 sets (other size paper) • 10–50 sheets: 100–15 sets (other size paper) **With Mixed Size:** • 2–50 sheets: 23 sets (A3 SEF /A4 LEF, B4 JIS SEF /B5 JIS SEF, 11 x 17 SEF /8 1/2 x 11 SEF)
Staple position:	4 positions (Top, Top Slant, Bottom, 2 Staples)
Saddle stitch paper size:	A3 SEF, B4 JIS SEF, A4 LEF, B5 JIS LEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 11 LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 12 x 18 SEF, 11 x 15 SEF, 10 x 14 SEF, 8 1/2 x 13 2/5 LEF, custom size
Saddle stitch paper weight:	64–105 g/m^2 (17–28 lb. Bond) You can use a sheet of paper weighing up to 216 g/m2 (80 lb. Cover) per set as a cover sheet.
Saddle stitch capacity (80 g/m^2, 20 lb. Bond):	1 set (20 sheets)
Stack capacity after saddle stitching (80 g/m^2, 20 lb. Bond):	• 2–5 sheets: approx. 30 sets • 6–10 sheets: approx. 15 sets • 11–15 sheets: approx. 10 sets • 16–20 sheets: approx. 6 sets

Saddle stitch position:	Center 2 positions
Types of folds:	Half Fold
Half fold paper size:	A3 SEF, A4 LEF, B4 JIS SEF, B5 JIS LEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 11, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 12 x 18 SEF, 11 x 15 SEF, 10 x 14 SEF, 8 1/2 x 13 2/5 LEF
Half fold paper weight:	• 1 sheet: 64–216 g/m2 (17 lb. Bond–80 lb. Cover) • 2-5 sheets: 64–90 g/m2 (17–24 lb. Bond)
Power consumption:	64 W (Power is supplied from the main unit.)
Dimensions (W x D x H):	657 x 613 x 960 mm (25.9 x 24.2 x 37.8 inches)
Weight:	• Approx. 53 kg (116.9 lb.) (without punch unit) • Approx. 57 kg (125.7 lb.) (with punch unit)

Side Tray Type M3 (D725)

Paper size:	A3 SEF, A4 SEF/LEF, A5 SEF/LEF, A6 SEF, B4 JIS SEF, B5 JIS SEF/LEF, B6 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 7 1/4 x 10 1/2 SEF/LEF, 5 1/2 x 8 1/2 SEF, 4 1/8 x 9 1/2 SEF/LEF, 3 7/8 x 7 1/2 SEF/LEF, C5 Env SEF/LEF, C6 Env SEF/LEF, DL Env SEF/LEF, 8K SEF, 16K SEF/LEF, 12 x 18 SEF, 11 x 15 SEF, 10 x 14 SEF, SRA3 SEF, SRA4 SEF/LEF, custom size
Paper weight:	52–300 g/m^2 (14 lb. Bond–110 lb. Cover)
Paper capacity (80 g/m^2, 20 lb. Bond):	• Internal tray 1: 250 sheets: A4, 81/2 x 11 or smaller 125 sheets: B4 JIS, 81/2 x 14 or larger • External tray: 125 sheets
Power consumption:	12 W (Power is supplied from the main unit.)
Dimensions (W x D x H):	800 x 549 x 156 mm (31.5 x 21.7 x 6.2 inches)
Weight:	Approx. 4 kg (8.9 lb.)

Item	Specification
Linear velocity	73-450 mm/sec
Sizes which can be handled	Upper paper output: Paper width 90-320 mm, Paper feed direction length 148-600 mm

Item	Specification
	Left paper output: Paper width 90-320 mm, Paper feed direction length 148-457.2 mm
Paper thicknesses	Upper paper output and left paper output are 52-300g/m^2.
Upper paper output capacity	250 sheets (A4, 8$^1/_2$"×11" or smaller), 80g/m^2 125 sheets (B4, 8$^1/_2$"×14" or larger), 80g/m^2
Left paper output capacity	125 sheets, 80g/m^2
Power source	Supplied from main printer (24V DC±10%, 5V DC ±5%).
Maximum power consumption	Less than 12W
Dimensions (width×depth×height)	Smaller than 800×549×156 mm
Weight	Less than 3.8 kg (not including paper, packaging materials, and other items in package)

Internal Finisher SR3180 (D766)

Finisher part specifications

Item	Specification
Type	Case system
Shift tray	Yes
No. of sheets which can be accommodated	A4, 8$^1/_2$×11 or smaller: 250 B4, 8$^1/_2$×14 or larger: 125
Paper thicknesses which can be handled	52g/m^2-300g/m^2
Up/down shift function	No
Left/right shift function	Yes
Stapling function	Yes
Punching function	No
Remainder detection	No
Full-load detection	Yes
Paper detection	No
Power consumption	Less than 30W
Power source	24V DC (supplied from main frame), 5V SC (generated by FIN board), SELV (super-low voltage secondary power supply)
Dimensions (width×depth×height)	435×515×150 mm
Mass	Less than 9.8 kg

Stapler unit specifications

Item	Specification
No. of sheets which can be stitched	2 to 5 sheets
Sizes which can be stitched	A3 SEF - B5 SEF / DLT SEF - LT SEF
Thicknesses which can be stitched	54g/m2-80g/m2
Stitching position	1 position (Top Slant)
Staple supply	No
Stitching capacity	No

Internal Shift Tray SH3070 (D691)

Paper size:	A3 SEF, A4 SEF/LEF, A5 SEF/LEF, A6 SEF, B4 JIS SEF, B5 JIS SEF/LEF, B6 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 7 1/4 x 10 1/2 SEF/LEF, 5 1/2 x 8 1/2 SEF, 4 1/8 x 9 1/2 SEF/LEF, 3 7/8 x 7 1/2 SEF/LEF, C5 Env SEF/LEF, C6 Env SEF/LEF, DL Env SEF/LEF, 8K SEF, 16K SEF/LEF, 12 x 18 SEF, 11 x 15 SEF, 10 x 14 SEF, SRA3 SEF, SRA4 SEF/LEF, custom size
Paper weight:	60–300 g/m^2 (16 lb. Bond–110 lb. Cover)
Paper sizes that can be shifted:	A3 SEF, A4 SEF/LEF, A5 SEF/LEF, A6 SEF, B4 JIS SEF, B5 JIS SEF/LEF, B6 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 7 1/4 x 10 1/2 SEF/LEF, 5 1/2 x 8 1/2 SEF, 4 1/8 x 9 1/2 SEF/LEF, 3 7/8 x 7 1/2 SEF/LEF, C5 Env SEF/LEF, C6 Env SEF/LEF, DL Env SEF/LEF, 8K SEF, 16K SEF/LEF, 12 x 18 SEF, 11 x 15 SEF, 10 x 14 SEF, SRA3 SEF, SRA4 SEF/LEF, custom size
Paper weight that can be shifted:	60–300 g/m^2 (16 lb. Bond–110 lb. Cover)
Stack capacity (80 g/m^2, 20 lb. Bond):	• 250 sheets: A4, 81/2 x 11 or smaller • 125 sheets: B4 JIS, 81/2 x 14 or larger
Power consumption:	4.3 W (Power is supplied from the main unit.)
Dimensions (W x D x H):	420 x 489 x 107 mm (16.6 x 19.3 x 4.3 inches)
Weight:	Approx. 2 kg (4.5 lb.)

Item	Specification
Type	Case installation, paper ejection tray displacement system
Linear velocity	73-450 mm/sec
Sizes which can be	A3 SEF, A4 SEF, A4 LEF, A5 SEF, A5 LEF, A6 SEF, B4 SEF, B5 SEF, B5

Item	Specification
accommodated	LEF, B6 SEF, 11"×17" SEF, 8 1/2"×14" SEF, 8 1/2"×11" SEF, 8 1/2"×11" LEF, 5 1/2"×8 1/2" SEF, 12"×18" SEF, undefined size
	Width: 90-320 mm, length*2:148-600 mm (stack quality is guaranteed to 432 mm)
Paper thicknesses which can be accommodated	52-300g/m^2
Sizes which can be shifted	A3 SEF, A4 LEF, A4 SEF, A5 LEF, A5 SEF, A6 SEF, B4 SEF, B5 LEF, B5 SEF, B6 SEF, 11"×17" SEF, 8 1/2"×14" SEF, 8 1/2"×11" LEF, 8 1/2"×11" SEF, 5 1/2"×8 1/2" SEF, 12"×18" SEF
	Width: 90-320 mm, length*2:148-600 mm (stack quality is guaranteed to 432 mm)
No. of bins	1 bin (can be shifted)
No. of sheets which can be accommodated*1	A4, 8 1/2"×11" or smaller: 250 B4, 8 1/2"×14" or larger: 125
Power source	Supplied from main printer (24V DC±10%, 5V DC ±5%).
Maximum power consumption	4.3W
Dimensions (width×depth×height)	420×489×107 mm (except for projecting parts)
Weight	Less than 1.4 kg (not including packaging materials and other items in package)
Service life	1200k sheets or 5 years

*1 80g/m^2 or less (paper exceeding 80g/m^2 is calculated by weight)

*2 Up to 1280 mm in SP mode.

1 Bin Tray BN3110 (D3CQ)

Number of bins:	1
Paper size:	A3 SEF A4 SEF/LEF, A5 SEF/LEF, B4 JIS SEF B5 JIS SEF/LEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 7 1/4 x 10 1/2 SEF/LEF, 51/2 x 8 1/2 SEF, 8K SEF, 16K SEF/LEF, 11 x 15 SEF, 10 x 14 SEF, SRA3 SEF, SRA4 SEF/LEF, custom size
Paper weight:	52–300 g/m^2 (14 lb. Bond–110 lb. Cover)
Paper capacity (80 g/m^2, 20 lb. Bond):	125 sheets
Power consumption:	1 W or less (Power is supplied from the main unit.)
Dimensions (W x D x H):	444 x 450 x 150 mm (17.5 x 17.8 x 6.0 inches)

Weight:	Approx. 2 kg (4.5 lb.)

Item	Specification
Type	Cabinet installation, paper received from right
Linear velocity	73-512 mm/sec
Sizes which can be accommodated	SRA3 SEF, A3 SEF, A4 SEF, A4 LEF, A5 SEF, A5 LEF, A6 SEF, B4 SEF, B5 SEF, B5 LEF, B6 SEF, 12"×18" SEF, 11"×17" SEF, $8^1/_2$"×14" SEF, $8^1/_2$"×11" SEF, $8^1/_2$"×11" LEF, $5^1/_2$"×$8^1/_2$" SEF, undefined size
Paper thicknesses which can be accommodated	52-300g/m^2
No. of bins	1 bin
No. of sheets which can be accommodated	125 (up to 80g/m^2)
Power source	Supplied from main machine (DC5V±5%).
Maximum power consumption	For copy: 0.15W
Dimensions (width x depth x height)	444×450×150 mm (except for projecting parts)
Weight	Less than 1.4 kg (not including decals, paper, packaging materials and other items in package)
Service life	3000k sheets or 5 years

Bridge Unit BU3070 (D685)

Stack capacity (80 g/m^2, 20 lb. Bond):	• 250 sheets: A4, 81/2 x 11 or smaller • 125 sheets: B4 JIS, 81/2 x 14 or larger
Power consumption:	15 W (Power is supplied from the main unit.)
Dimensions (W x D x H):	412 x 466 x 143 mm (16.3 x 18.4 x 5.7 inches)
Weight:	Approx. 4 kg (8.9 lb.)

Punch Unit PU3040 NA/EU/SC (D716)

Paper size:	Punch unit type	Paper size
	2 & 4 holes type: 2 holes	SEF: A3, A4, B4 JIS, B5 JIS, 11 x 17, 8 1/2 x 14, 8 1/2 x 13, 8 1/2 x 11, 7 1/4 x 10 1/2, 8K, 16K
	2 & 4 holes type: 2 holes	LEF: A4, B5 JIS, 8 1/2 x 11, 16K
	2 & 4 holes type: 4	SEF: A3, 11 x 17

	holes	
	2 & 4 holes type: 4 holes	LEF: A4, 8 1/2 x 11
	4 holes type: 4 holes	SEF: A3, A4, B4 JIS, B5 JIS, 11 x 17, 8 1/2 x 14, 8 1/2 x 13, 8 1/2 x 11, 7 1/4 x 10 1/2
	4 holes type: 4 holes	LEF: A4, B5 JIS, 8 1/2 x 11
	2 & 3 holes type: 2 holes	SEF: A3, 11 x 17, 8 1/2 x 14, 8 1/2 x 13, 8 1/2 x 11, 7 1/4 x 10 1/2
	2 & 3 holes type: 2 holes	LEF: A4, 8 1/2 x 11
	2 & 3 holes type: 3 holes	SEF: A3, 11 x 17
	2 & 3 holes type: 3 holes	LEF: A4, 8 1/2 x 11

Paper weight:	60–169 g/m^2 (16 lb. Bond –90 lb. Index)

Punch Unit PU3050 NA/EU/SC (D717)

Paper size:	Punch unit type	Paper size
	2 & 4 holes type: 2 holes	SEF: A3, B4 JIS, A4, B5 JIS, A5, 11 x 17, 8 1/2 x 14, 8 1/2 x 11, 5 1/2 x 8 1/2, 7 1/4 x 10 1/2, 8 x 13, 8 1/2 x 13, 8 1/4 x 13, 8K, 16K, 8 1/4 x 14, 8 x 10, 11 x 15, 10 x 14
	2 & 4 holes type: 2 holes	LEF: A4, B5 JIS, A5, 8 1/2 x 11, 7 1/4 x 10 1/2, 16K
	2 & 4 holes type: 4 holes	SEF: A3, B4 JIS, 11 x 17, 11 x 15, 8K
	2 & 4 holes type: 4 holes	LEF: A4, B5 JIS, 8 1/2 x 11, 7 1/4 x 10 1/2, 16K
	4 holes type: 4 holes	SEF: A3, B4 JIS, A4, B5 JIS, A5, 11 x 17, 8 1/2 x 14, 8 1/2 x 11, 5 1/2 x 8 1/2, 7 1/4 x 10 1/2, 8 x 13, 8 1/2 x 13, 8 1/4 x 13, 8K, 16K, 8 1/4 x 14, 8 x 10, 11 x 15, 10 x 14
	4 holes type: 4 holes	LEF: A4, B5 JIS, A5, 8 1/2 x 11, 7 1/4 x 10 1/2, 16K
	2 & 3 holes type: 2 holes	SEF: A3, B4 JIS, B5 JIS, A5, 11 x 17, 8 1/2 x 14, 8 1/2 x 11, 5 1/2 x 8 1/2, 7 1/4 x 10 1/2, 8 x 13, 8 1/2 x 13, 8 1/4 x 13, 8K, 16K, 8 1/4 x 14, 8 x 10, 11 x 15, 10 x 14
	2 & 3 holes type: 2 holes	LEF: A4, B5 JIS, 8 1/2 x 11, 7 1/4 x 10 1/2, 16K

	2 & 3 holes type: 3 holes	SEF: A3, B4 JIS, 11 x 17, 11 x 15, 10 x 14, 8K
	2 & 3 holes type: 3 holes	LEF: A4, B5 JIS, 8 1/2 x 11, 7 1/4 x 10 1/2, 16K

Paper weight:	52–256 g/m^2 (14 lb. Bond–140 lb. Index)

Punch Unit PU3060 NA/EU/SC (D706)

Paper size:	Punch unit type	Paper size
	2 & 4 holes type: 2 holes	SEF: A3, B4 JIS, A4, B5 JIS, A5, 11 x 17, 8^1/$_2$ x 14, 8^1/$_2$ x 11, 5^1/$_2$ x 8^1/$_2$, 7^1/$_4$ x 10^1/$_2$, 8 x 13, 8^1/$_2$ x 13, 8^1/$_4$ x 13, 8K, 16K, 8^1/$_4$ x 14, 8 x 10, 11 x 15, 10 x 14, custom size
	2 & 4 holes type: 2 holes	LEF: A4, B5 JIS, A5, 8^1/$_2$ x 11, 7^1/$_4$ x 10^1/$_2$, 16K, custom size
	2 & 4 holes type: 4 holes	SEF: A3, B4 JIS, 11 x 17, 11 x 15, 8K, custom size
	2 & 4 holes type: 4 holes	LEF: A4, B5 JIS, 8^1/$_2$ x 11, 7^1/$_4$ x 10^1/$_2$, 16K, custom size
	4 holes type: 4 holes	SEF: A3, B4 JIS, A4, B5 JIS, A5, 11 x 17, 8^1/$_2$ x 14, 8^1/$_2$ x 11, 5^1/$_2$ x 8^1/$_2$, 7^1/$_4$ x 10^1/$_2$, 8 x 13, 8^1/$_2$ x 13, 8^1/$_4$ x 13, 8K, 16K, 8^1/$_4$ x 14, 8 x 10, 11 x 15, 10 x 14, custom size
	4 holes type: 4 holes	LEF: A4, B5 JIS, A5, 8^1/$_2$ x 11, 7^1/$_4$ x 10^1/$_2$, 16K, custom size
	2 & 3 holes type: 2 holes	SEF: A3, B4 JIS, B5 JIS, A5, 11 x 17, 8^1/$_2$ x 14, 8^1/$_2$ x 11, 5^1/$_2$ x 8^1/$_2$, 7^1/$_4$ x 10^1/$_2$, 8 x 13, 8^1/$_2$ x 13, 8^1/$_4$ x 13, 8K, 16K, 8^1/$_4$ x 14, 8 x 10, 11 x 15, 10 x 14, custom size
	2 & 3 holes type: 2 holes	LEF: A4, B5 JIS, 8^1/$_2$ x 11, 7^1/$_4$ x 10^1/$_2$, 16K, custom size
	2 & 3 holes type: 3 holes	SEF: A3, B4 JIS, 11 x 17, 11 x 15, 10 x 14, 8K, custom size
	2 & 3 holes type: 3 holes	LEF: A4, B5 JIS, 8^1/$_2$ x 11, 7^1/$_4$ x 10^1/$_2$, 16K, custom size

Paper weight:	52–256 g/m^2 (14 lb. Bond–140 lb. Index)

Internal Multi-fold Unit FD3000 (M482)

Item	Specification
Fold type	Half Fold, Letter Fold-out, Letter Fold-in, Z-fold

Item	Specification
Paper size:	• With Z-fold: A3 SEF, A4 SEF, B4 SEF, 11 × 17 SEF, $8^1/_2$ × 14 SEF, $8^1/_2$ × 11 SEF, 8K SEF, $8^1/_2$ × $13^2/_5$ SEF • With Half Fold: A3 SEF, A4 SEF, B4 SEF, 11 × 17 SEF, $8^1/_2$ × 14 SEF, $8^1/_2$ × 11 SEF, 8K SEF, 12 × 18 SEF*, SRA3 SEF*, $8^1/_2$ × $13^2/_5$SEF *12×18 SEF and SRA3 SEF papers can be delivered only if the finisher is connected beyond the internal multi-fold unit. • With Letter Fold-out, and Letter Fold-in: A3 SEF, A4 SEF, 11 × 17 SEF, $8^1/_2$ × 14 SEF, $8^1/_2$ × 11 SEF, 81/2 × $13^2/_5$ SEF
Paper weight:	64 - 105 g/m2 (17 - 28 lb. Bond)
Power requirements:	Power is supplied from the main unit.
Power consumption:	40 W
Dimensions (W × D × H):	• Without Finisher: • When the tray is stowed: 612 × 555 × 184 mm (9.5 × 21.9 × 7.3 inches) • When the tray is extended: 714 × 555 × 242 mm (28.2 × 21.9 × 9.6 inches) • With Finisher: 420 × 555 × 152 mm (16.6 × 21.9 × 6.0 inches)
Weight:	Approx. 15 kg (33.1 lb.)

Paper Feed Unit PB3150 (D694)

Paper size:	A3 SEF, A4 SEF/LEF, A5 SEF, B4 JIS SEF, B5 JIS SEF/LEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 7 1/4 x 10 1/2 SEF/LEF, 8K SEF, 16K SEF/LEF, 12 x 18 SEF, 11 x 15 SEF, 10 x 14 SEF, 4 1/8 x 9 1/2 SEF, C5 Env SEF, SRA3 SEF, custom size
Paper weight:	52–300 g/m^2 (14 lb. Bond–110 lb. Cover)
Paper capacity (80 g/m^2, 20 lb. Bond):	550 sheets x 1 tray
Power consumption:	19 W or less (Power is supplied from the main unit.)
Dimensions (W x D x H):	587 x 685 x 120 mm (23.2 x 27.0 x 4.8 inches)
Weight:	Approx. 11 kg (24.3 lb.)

Paper Feed Unit PB3220/PB3210 (D787-17, -18)

Paper size:	A3 SEF, A4 SEF/LEF, A5 SEF, B4 JIS SEF, B5 JIS SEF/LEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 LEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 7 1/4 x 10 1/2 SEF/LEF, 8K SEF, 16K SEF/LEF, 12 x 18 SEF, 11 x 15 SEF, 10 x 14 SEF, 4 1/8 x 9 1/2 SEF, C5 Env SEF, SRA3 SEF, custom size
Paper weight:	60–300 g/m^2 (16 lb. Bond–110 lb. Cover)
Paper capacity (80 g/m^2, 20 lb. Bond):	550 sheets x 2 trays
Power consumption:	21 W or less (Power is supplied from the main unit.)
Dimensions (W x D x H):	587 x 685 x 247 mm (23.2 x 27.0 x 9.8 inches)
Weight:	Approx. 22.0 kg (48.5 lb.)

LCIT PB 3170 (D695)

Paper size:	A4 LEF, 8 1/2 x 11 LEF,
Paper weight:	52–300 g/m^2 (14 lb. Bond–110 lb. Cover)
Paper capacity (80 g/m^2, 20 lb. Bond):	1,000 sheets x 2 trays
Power consumption:	15 W or less (Power is supplied from the main unit.)
Dimensions (W x D x H):	587 x 685 x 247 mm (23.2 x 27.0 x 9.8 inches)
Weight:	Approx. 20 kg (44.1 lb.)

LCIT RT 3030 (D696)

Paper size:	A4 LEF, B5 JIS LEF, 8 1/2 x 11 LEF
Paper weight:	52–300 g/m^2 (14 lb. Bond–110 lb. Cover)
Paper capacity (80 g/m^2, 20 lb. Bond):	1,500 sheets
Power consumption:	13 W or less (Power is supplied from the main unit.)
Dimensions (W x D x H):	340 x 540 x 290 mm (13.4 x 21.3 x 11.5 inches)
Weight:	Approx. 10 kg (22.1 lb.)

2. Preventive Maintenance

Preventive Maintenance

Preventive Maintenance Items

Note

- The amounts mentioned as the PM interval indicate the number of prints.

Chart: A4/LT (LEF) / 6%

Mode:

MP 2555/3055: 3 copies/original (prints/job)

MP 3555/4055/5055/6055: 5 copies/original (prints/job)

Environment: Normal temperature and humidity

Yield may change depending on circumstances and print conditions.

Symbol keys: C: Clean, R: Replace, L: Lubricate, I: Inspect

Mainframe: MP 3555/3055/2555

Item	120K	240K	360K	EM	Life	Note
Scanner						
Exposure Glass	-	C/I/L	-	C/I/L -	-	Clean with a cleaning cloth. Do not clean with alcohol. Doing so may leave a whitish trace that affects image scanning.
Sheet-through Exposure Glass	-	C/I/L	-	C/I/L	-	
Shield Glass	-	-	-	C/I/L		Clean with an optics cloth.
PCU						
Developer	R	-	-	-	-	Clear the PM counter.
Development Roller	C/I/L	-	-	-	-	Clean
Development Filter	R	-	-	-	-	Clear the PM counter.
Development Case	C/I/L	-	-	-	-	Clean the guide plate and remove spots where toner adheres.
Development Entrance Seal	C/I/L	-	-	C/I/L	-	Remove dust.
Development Side Seal	R	-	-	-	-	
Doctor Blade	C/I/L	-	-	-	-	Remove adhering developer.
Development Bearing	-	R	-	-	-	

2.Preventive Maintenance

Item	120K	240K	360K	EM	Life	Note
Charge Roller	R	-	-	-	-	Clear the PM counter.
Charge Roller Cleaner	R	-	-	-	-	
Cleaning Blade	R	-	-	-	-	
Cleaning Blade Side Seal	C/I/L	-	-	-	-	
Cleaning Entrance Seal	C/I/L	-	-	-	-	
OPC Drum	R	-	-	-	-	Clear the PM counter.
Pick-off Pawl	R	-	-	-	-	
Waste Toner Bottle	R	-	-		-	Replace when waste toner bottle full is detected. Clear the PM counter.
Quenching Lamp	C/I/L	-	-	-	-	
Transfer						
Transfer Unit	R	-	-	-	-	Clear the PM counter.
Fusing Exit Guide	C/I/L	-	-	-	-	
ID Sensor	C/I/L	-	-	C/I/L	-	Use a blower brush. Initialize the ID sensor after cleaning.
Fusing						
Heating Sleeve Belt Unit	-	R	-	-	260k	Clear the PM counter.
Fusing Entrance Guide Plate	-	-	-	C/I/L	-	Remove adhering toner.
Fusing Exit Guide Plate	-	-	-	C/I/L	-	
Stripper Plate	-	-	-	C/I/L	-	
Pressure Roller	-	R	-		260k	Clear the PM counter.
Pressure Roller Bearing	-	R	-		260k	Lubricate (FLUOTRIBO MG GREASE) after replacing the bearing.
Thermopile	-	C/I/L	-	C/I/L	-	Clean with a dry cloth.
Pressure Roller Gear	-	-	-	C/I/L	-	Replace when the gear is worn out.
Idler Gear	-	-	-	C/I/L	-	
Fusing Entrance Sensor	C/I/L	-	-	C/I/L	-	Clean the sensor part with a blower brush.
Fusing Exit Sensor	C/I/L	-	-	C/I/L	-	

Mainframe: MP 6055/5055/4055

Item	160K	320K	480K	EM	Life	Note
Scanner						
Exposure Glass	-	C/I/L	-	C/I/L	-	Clean with a cleaning cloth. Do not clean with alcohol. Doing so may leave a whitish trace that affects image scanning.
Sheet-through Exposure Glass	-	C/I/L	-	C/I/L	-	
Shield Glass	-	-	-	C/I/L	-	Clean with an optics cloth.
PCU						
Developer	R	-	-	-	-	Clear the PM counter.
Development Roller	C/I/L	-	-	-	-	Clean
Development Filter	R	-	-	-	-	Clear the PM counter.
Development Case	C/I/L	-	-	-	-	Clean guide plate and spots where toner adheres.
Development Entrance Seal	C/I/L	-	-	C/I/L	-	Remove dust.
Development Side Seal	R	-	-	-	-	
Doctor Blade	C/I/L	-	-	-	-	Remove adhering developer.
Development Bearing	-	R	-	-	-	Clear the PM counter.
Charge Roller	R	-	-	-	-	
Charge Roller Cleaner	R	-	-	-	-	
Cleaning Blade	R	-	-	-	-	
Cleaning Blade Side Seal	C/I/L	-	-	-	-	
Cleaning Entrance Seal	C/I/L	-	-	-	-	
OPC Drum	R	-	-	-	-	Clear the PM counter.
Pick-off Pawl	R	-	-	-	-	
Waste Toner Bottle	R	-	-	-	-	Replace when waste toner full is detected. Clear the PM counter.
Quenching Lamp	C/I/L	-	-	-	-	
Transfer						
Transfer Unit	R	-	-	-	-	Clear the PM counter.
Fusing Exit Guide	C/I/L	-	-	-	-	
ID Sensor	C/I/L	-	-	C/I/L	-	Use a blower brush. Initialize the ID sensor after Cleaning.

2.Preventive Maintenance

Item	160K	320K	480K	EM	Life	Note
Fusing						
Heating Sleeve Belt Unit	-	R	-	-	350k	Clear the PM counter.
Fusing Entrance Guide Plate	-	-	-	C/I/L	-	Remove adhering toner.
Fusing Exit Guide Plate	-	-	-	C/I/L	-	
Stripper Plate	-		-	C/I/L	-	
Pressure Roller	-	R	-	-	350k	Clear the PM counter.
Pressure Roller Bearing	-	R	-	-	350k	Lubricate (FLUOTRIBO MG GREASE) after replacing the bearing.
Thermopile	-	C/I/L	-	C/I/L	-	Clean with a dry cloth.
Pressure Roller Gear	-	-	-	C/I/L	-	Replace if the gear is worn out.
Idler Gear	-	-	-	C/I/L	-	
Fusing Entrance Sensor	C/I/L	-	-	C/I/L	-	Clean the sensor part with a blower brush.
Fusing Exit Sensor	C/I/L	-	-	C/I/L	-	

Optional Peripheral Devices

ARDF DF3090

Item	**EM**	**120K**	**240K**	**360K**	**Note**
Pick-up Roller	C	R	R	R	Wipe with a cloth dampened with ethyl alcohol.
Feed Belt	C	R	R	R	Wipe with a cloth dampened with ethyl alcohol.
Separation Roller	C	R	R	R	Wipe with a cloth dampened with ethyl alcohol.
Sensors	C	-	-	-	Clean with a blower brush.
Gears	L	-	-	-	Lubricate, if necessary.
Platen Sheet	C	-	-	-	Wipe with a cloth dampened with ethyl alcohol.
Other Rollers	C	-	-	-	
Scanner Guide Plate	C	-	-	-	

SPDF DF3100

Item	EM	120K	Note
Pick-up roller	C	R	Wipe with a cloth dampened with ethyl alcohol.
Feed belt	C	R	Wipe with a cloth dampened with ethyl alcohol or water.
Separation roller	C	R	Wipe with a cloth dampened with ethyl alcohol.
CIS (Glass area)	C	-	Clean with the RICOH’s glass cleaner.
Sensors	C	-	Clean with a blower brush.

Item	EM	120K	Note
Gears	L	-	Lubricate, if necessary.
Platen sheet	C	-	Wipe with a cloth dampened with ethyl alcohol.
Other rollers	C	-	
Scanner guide plate	C	-	

Paper Feed Unit PB3150/PB3210/PB3220

Item	**EM**	**Note**
Paper Feed Roller	C	Wipe with a cloth dampened with ethyl alcohol.
Pick-up Roller	C	
Separation Roller	C	
Relay Rollers	C	
Bottom Plate Pad	C	Remove dust with dry cloth.
Sensors	C	

LCIT PB3170/PB3230/RT3030

Item	**EM**	**Note**
Paper Feed Roller	C	Wipe with a cloth dampened with ethyl alcohol.
Pick-up Roller	C	
Separation Roller	C	
Relay Rollers	C	
Bottom Plate Pad	C	Remove dust with dry cloth.
Sensors	C	

1 Bin Tray BN3110

Item	**EM**	**Note**
Rollers	C	Wipe with a cloth dampened with ethyl alcohol.
Copy Tray	C	Clean with a damp cloth, and then wipe with a dry cloth.
Sensors	C	Clean with a blower brush.
Bearings	C	Lubricate with silicone oils when noise occurred.

Bridge Unit BU3070

Item	**EM**	**Note**
Rollers	C	Wipe with a cloth dampened with ethyl alcohol.

Internal Shift Tray SH3070

Item	**EM**	**Note**
Exit Tray	C	Clean with a damp cloth, and then wipe with a dry cloth.

Side Tray Type M3

Item	**EM**	**Note**
Rollers	C	Wipe with a cloth dampened with ethyl alcohol.
Sensors	C	Remove dusts with dry cloth.

Internal Multi-Fold Unit FD3000

Item	EM	Note
Bearings	C	Lubricate with Silicone Grease G-501 when noise occurs.
Driven rollers	C	Wipe with a damp cloth, then a dry cloth.
Fold rollers	C	
Paper exit rollers	C	
Paper sensor	C	Remove paper dust with a blower brush or the corner of a triangular-folded cloth.
Paper transport rollers	C	Wipe with a damp cloth, then a dry cloth.
Trays	C	

Booklet Finisher SR3220 / Finisher SR3210

Item	EM	500K	Note
Drive rollers	C	-	Wipe with a cloth dampened with ethyl alcohol.
Driven rollers	C	-	
Quenching brush	C	-	
Bearings	C	-	Lubricate with Silicone Grease G-501 when noise occurs.
Sensors	C	-	Clean with a blower brush.
Jogger fences	C	-	Lubricate with Silicone Grease G-501 when abnormal noise is generated or abnormal operation occurs.
Stapler	-	R	Replace when the staple counter in the logging data reached 500k.

Booklet Finisher SR3230 / Finisher SR3240

Item	EM	Note
Drive rollers	C	Wipe with a cloth dampened with ethyl alcohol.
Driven rollers	C	
Quenching brush	C	
Bearings	C	Lubricate with Silicone Grease G-501 when noise occurs.
Sensors	C	Clean with a blower brush.
Stapler (Corner)	R	Replace when the staple counter in the logging data reached 500k. Staple a few times to test after replacement.

Item	EM	Note
Punch	R	Replace the unit when the punch reaches the end of life, i.e., when the number of punched sheets exceeds one million.
Punch dust	C	Discard paper dust when the hopper is detected to be full.

Punch Unit Type PU3060 (D706)

This Punch Unit is for the Booklet Finisher SR3240 (D3BB)/Finisher SR3230 (D3BA)

	2400K	3000K	4000K	EM	Note
Punch Waste Hopper	I	I	I	I	Remove and empty
Punch Unit				C	Replace after 1000k punches.

Internal Finisher SR3130

Item	EM	Notes
Rollers	C	Wipe with a cloth dampened with ethyl alcohol.
Sensors	C	Clean with a blower brush.
Stapler	R	Replace when staple counter on logging data reached 200 thousand times.
Bearings	C	Lubricate with silicone oils when noise occurred.

Internal Finisher SR3180

Item	EM	Notes
Rollers	C	Wipe with a cloth dampened with ethyl alcohol.
Sensors	C	Clean with a blower brush.
Stapler	R	Replace when staple counter on logging data reached 200 thousand times.

Related SP Codes

This is a list of the PM related SP codes.

SP7803	PM Counter Display	Displays the PM count since the last PM.
SP7804	PM Counter Reset	Resets the PM count.

Others Yield Parts

Some of the parts mentioned in these tables have a target yield. However, the total copy/print volume made by the machine will not reach the target yield within the machine's targeted lifetime if the machine is used under the target usage conditions (ACV, color ratio, P/J, and C/O). So, these parts are categorized not as PM parts but as yield parts (EM parts). The parts with “(R)” in this table are yield parts.

Chart: A4 (LT)/5%

Mode: 4 copies / original (prints/job)

Ratio 30%

Environment: Normal temperature and humidity

Yield may change depending on circumstances and print conditions.

Note

Symbol keys: C: Clean, R: Replace, L: Lubricant, I: Inspect, U: Unique for this model,

Mainframe:

Description	Q'ty/Unit	Expected Yield (Pages)	Unique or Common
Development Unit	1	MP2555/MP3055/MP3555: 420k MP4055/MP5055/MP6055: 900k	U

ARDF DF3090/SPDF DF3100:

Description	Q'ty/Unit	Expected Yield (Pages)	Unique or Common
Paper Feed Belt	1	120k	C
Pick-up Roller	1		
Reverse Roller	1		

3. SP Mode Tables

SP Group 1000

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
1-001-001	Leading Edge Registration	Tray1: Thin	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-002	Leading Edge Registration	Tray1: Plain	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-003	Leading Edge Registration	Tray1: Mid-thick	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-004	Leading Edge Registration	Tray1: Thick 1	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-005	Leading Edge Registration	Tray1: Thick 2	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-006	Leading Edge Registration	Tray1: Thick 3	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-007	Leading Edge Registration	Tray1: Thick 4	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-008	Leading Edge Registration	Tray2: Thin	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-009	Leading Edge Registration	Tray2: Plain	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-010	Leading Edge Registration	Tray2: Mid-thick	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-011	Leading Edge Registration	Tray2: Thick 1	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-012	Leading Edge Registration	Tray2: Thick 2	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-013	Leading Edge Registration	Tray2: Thick 3	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-014	Leading Edge Registration	Tray2: Thick 4	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-015	Leading Edge Registration	By-pass: Thin	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-016	Leading Edge Registration	By-pass: Plain	ENG	[-9 to 9 / 0 / 0.1mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
1-001-017	Leading Edge Registration	By-pass: Mid-thick	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-018	Leading Edge Registration	By-pass: Thick 1	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-019	Leading Edge Registration	By-pass: Thick 2	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-020	Leading Edge Registration	By-pass: Thick 3	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-021	Leading Edge Registration	By-pass: Thick 4	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-022	Leading Edge Registration	Duplex: Thin	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-023	Leading Edge Registration	Duplex: Plain	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-024	Leading Edge Registration	Duplex: Mid-thick	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-025	Leading Edge Registration	Duplex: Thick 1	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-026	Leading Edge Registration	Duplex: Thick 2	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-027	Leading Edge Registration	Duplex: Thick 3	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-028	Leading Edge Registration	Tray1: Thin:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-029	Leading Edge Registration	Tray1: Plain:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-030	Leading Edge Registration	Tray1: Mid-thick:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-031	Leading Edge Registration	Tray1: Thick 1:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-032	Leading Edge Registration	Tray1: Thick 2:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-033	Leading Edge Registration	Tray1: Thick 3:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-034	Leading Edge Registration	Tray1: Thick 4:1200	ENG	[-9 to 9 / 0 / 0.1mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
1-001-035	Leading Edge Registration	Tray2: Thin:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-036	Leading Edge Registration	Tray2: Plain:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-037	Leading Edge Registration	Tray2: Mid-thick:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-038	Leading Edge Registration	Tray2: Thick 1:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-039	Leading Edge Registration	Tray2: Thick 2:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-040	Leading Edge Registration	Tray2: Thick 3:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-041	Leading Edge Registration	Tray2: Thick 4:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-042	Leading Edge Registration	By-pass: Thin:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-043	Leading Edge Registration	By-pass: Plain:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-044	Leading Edge Registration	By-pass: Mid-thick:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-045	Leading Edge Registration	By-pass: Thick 1:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-046	Leading Edge Registration	By-pass: Thick 2:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-047	Leading Edge Registration	By-pass: Thick 3:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-048	Leading Edge Registration	By-pass: Thick 4:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-049	Leading Edge Registration	Duplex: Thin:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-050	Leading Edge Registration	Duplex: Plain:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-051	Leading Edge Registration	Duplex: Mid-thick:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-052	Leading Edge Registration	Duplex: Thick 1:1200	ENG	[-9 to 9 / 0 / 0.1mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
1-001-053	Leading Edge Registration	Duplex: Thick 2:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-054	Leading Edge Registration	Duplex: Thick 3:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-055	Leading Edge Registration	Tray3: Thin	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-056	Leading Edge Registration	Tray3: Plain	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-057	Leading Edge Registration	Tray3: Mid-thick	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-058	Leading Edge Registration	Tray3: Thick 1	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-059	Leading Edge Registration	Tray3: Thick 2	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-060	Leading Edge Registration	Tray3: Thick 3	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-061	Leading Edge Registration	Tray3: Thick 4	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-062	Leading Edge Registration	Tray3: Thin:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-063	Leading Edge Registration	Tray3: Plain:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-064	Leading Edge Registration	Tray3: Mid-thick:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-065	Leading Edge Registration	Tray3: Thick 1:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-066	Leading Edge Registration	Tray3: Thick 2:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-067	Leading Edge Registration	Tray3: Thick 3:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-068	Leading Edge Registration	Tray3: Thick 4:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-069	Leading Edge Registration	Tray4: Thin	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-070	Leading Edge Registration	Tray4: Plain	ENG	[-9 to 9 / 0 / 0.1mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
1-001-071	Leading Edge Registration	Tray4: Mid-thick	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-072	Leading Edge Registration	Tray4: Thick 1	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-073	Leading Edge Registration	Tray4: Thick 2	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-074	Leading Edge Registration	Tray4: Thick 3	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-075	Leading Edge Registration	Tray4: Thick 4	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-076	Leading Edge Registration	Tray4: Thin:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-077	Leading Edge Registration	Tray4: Plain:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-078	Leading Edge Registration	Tray4: Mid-thick:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-079	Leading Edge Registration	Tray4: Thick 1:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-080	Leading Edge Registration	Tray4: Thick 2:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-081	Leading Edge Registration	Tray4: Thick 3:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-082	Leading Edge Registration	Tray4: Thick 4:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-083	Leading Edge Registration	Tray5(LCT): Thin	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-084	Leading Edge Registration	Tray5(LCT): Plain	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-085	Leading Edge Registration	Tray5(LCT): Mid-thick	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-086	Leading Edge Registration	Tray5(LCT): Thick 1	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-087	Leading Edge Registration	Tray5(LCT): Thick 2	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-088	Leading Edge Registration	Tray5(LCT): Thick 3	ENG	[-9 to 9 / 0 / 0.1mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
1-001-089	Leading Edge Registration	Tray5(LCT): Thick 4	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-090	Leading Edge Registration	Tray5(LCT): Thin:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-091	Leading Edge Registration	Tray5(LCT): Plain:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-092	Leading Edge Registration	Tray5(LCT): Mid-thick:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-093	Leading Edge Registration	Tray5(LCT): Thick 1:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-094	Leading Edge Registration	Tray5(LCT): Thick 2:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-095	Leading Edge Registration	Tray5(LCT): Thick 3:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-001-096	Leading Edge Registration	Tray5(LCT): Thick 4:1200	ENG	[-9 to 9 / 0 / 0.1mm]
1-002-001	Side-to-Side Registration	By-pass Tray	ENG*	[-4 to 4 / 0 / 0.1mm]
1-002-002	Side-to-Side Registration	Paper Tray 1	ENG*	[-4 to 4 / 0 / 0.1mm]
1-002-003	Side-to-Side Registration	Paper Tray 2	ENG*	[-4 to 4 / 0 / 0.1mm]
1-002-004	Side-to-Side Registration	Paper Tray 3	ENG*	[-4 to 4 / 0 / 0.1mm]
1-002-005	Side-to-Side Registration	Paper Tray 4	ENG*	[-4 to 4 / 0 / 0.1mm]
1-002-006	Side-to-Side Registration	Duplex	ENG*	[-4 to 4 / 0 / 0.1mm]
1-002-007	Side-to-Side Registration	Large Capacity Tray	ENG*	[-4 to 4 / 0 / 0.1mm]
1-003-001	Paper Buckle	Paper Tray1: Thin	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-002	Paper Buckle	Paper Tray1: Plain	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-003	Paper Buckle	Paper Tray 1: Mid-thick	ENG	[-4 to 5 / 0 / 0.1mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
1-003-004	Paper Buckle	Paper Tray1: Thick1	ENG	[-4 to 5 / -2 / 0.1mm]
1-003-005	Paper Buckle	Tray2/3/4/5/LCT: Thin	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-006	Paper Buckle	Tray2/3/4/5/LCT: Plain	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-007	Paper Buckle	Tray 2/3/4/5/LCT: Mid-thick	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-008	Paper Buckle	Tray2/3/4/5/LCT: Thick 1	ENG	[-4 to 5 / -2 / 0.1mm]
1-003-009	Paper Buckle	By-pass: Thin	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-010	Paper Buckle	By-pass: Plain	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-011	Paper Buckle	By-pass: Mid-thick	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-012	Paper Buckle	By-pass:Thick1	ENG	[-4 to 5 / -1 / 0.1mm]
1-003-013	Paper Buckle	Duplex:Thin	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-014	Paper Buckle	Duplex:Plain	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-015	Paper Buckle	Duplex: Mid-thick	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-016	Paper Buckle	Duplex:Thick1	ENG	[-4 to 5 / -1 / 0.1mm]
1-003-017	Paper Buckle	Paper Tray1: Thin:1200	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-018	Paper Buckle	Paper Tray1: Plain:1200	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-019	Paper Buckle	Paper Tray 1: Mid-thick:1200	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-020	Paper Buckle	Paper Tray1: Thick1:1200	ENG	[-4 to 5 / -2 / 0.1mm]
1-003-021	Paper Buckle	Tray2/3/4/5/LCT: Thin:1200	ENG	[-4 to 5 / 0 / 0.1mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
1-003-022	Paper Buckle	Tray2/3/4/5/LCT: Plain:1200	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-023	Paper Buckle	Tray2/3/4/5/LCT: Mid:1200	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-024	Paper Buckle	Tray2/3/4/5/LCT: Thick 1:1200	ENG	[-4 to 5 / -2 / 0.1mm]
1-003-025	Paper Buckle	By-pass: Thin:1200	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-026	Paper Buckle	By-pass: Plain:1200	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-027	Paper Buckle	By-pass: Mid-thick:1200	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-028	Paper Buckle	By-pass:Thick1:1200	ENG	[-4 to 5 / -1 / 0.1mm]
1-003-029	Paper Buckle	Duplex:Thin:1200	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-030	Paper Buckle	Duplex:Plain:1200	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-031	Paper Buckle	Duplex: Mid-thick:1200	ENG	[-4 to 5 / 0 / 0.1mm]
1-003-032	Paper Buckle	Duplex:Thick1:1200	ENG	[-4 to 5 / -1 / 0.1mm]
1-007-001	By-Pass Size Detection	Switch LT SEF/LG SEF	ENG*	[0 to 1 / 0 / 1] 0: 8.5x11SEF 1: 8.5x14SEF
1-007-002	By-Pass Size Detection	By-Pass Jam Detection Set	ENG*	[0 to 1 / 0 / 1] 0: Normal 1: Simple Detect
1-009-001	Initial Operation Setting	Registration Gear Backlash Cut	ENG*	[0 to 1 / 0 / 1] 0: OFF 1: ON
1-010-001	Feed Pickup SOL Initial Movement	Control ON/OFF 0:OFF/1:ON	ENG*	[0 to 1 / 0 / 1] 0: OFF 1: ON
1-011-001	Pickup SOL Separate Setting	Paper Tray1: Thin	ENG	[0 to 1 / 0 / 1] 0: OFF

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				1: ON
1-011-002	Pickup SOL Separate Setting	Paper Tray1: Plain	ENG	[0 to 1 / 0 / 1] 0: OFF 1: ON
1-011-003	Pickup SOL Separate Setting	Paper Tray1: Thick	ENG	[0 to 1 / 0 / 1] 0: OFF 1: ON
1-011-004	Pickup SOL Separate Setting	Paper Tray2: Thin	ENG	[0 to 1 / 0 / 1] 0: OFF 1: ON
1-011-005	Pickup SOL Separate Setting	Paper Tray2: Plain	ENG	[0 to 1 / 0 / 1] 0: OFF 1: ON
1-011-006	Pickup SOL Separate Setting	Paper Tray2: Thick	ENG	[0 to 1 / 0 / 1] 0: OFF 1: ON
1-011-007	Pickup SOL Separate Setting	Paper Tray3: Thin	ENG	[0 to 1 / 0 / 1] 0: OFF 1: ON
1-011-008	Pickup SOL Separate Setting	Paper Tray3: Plain	ENG	[0 to 1 / 0 / 1] 0: OFF 1: ON
1-011-009	Pickup SOL Separate Setting	Paper Tray3: Thick	ENG	[0 to 1 / 0 / 1] 0: OFF 1: ON
1-011-010	Pickup SOL Separate Setting	Paper Tray4: Thin	ENG	[0 to 1 / 0 / 1] 0: OFF 1: ON
1-011-011	Pickup SOL Separate Setting	Paper Tray4: Plain	ENG	[0 to 1 / 0 / 1] 0: OFF 1: ON
1-011-012	Pickup SOL Separate Setting	Paper Tray4: Thick	ENG	[0 to 1 / 0 / 1] 0: OFF 1: ON
1-011-013	Pickup SOL Separate Setting	Paper LCT: Thin	ENG	[0 to 1 / 0 / 1] 0: OFF

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				1: ON
1-011-014	Pickup SOL Separate Setting	Paper LCT: Plain	ENG	[0 to 1 / 0 / 1] 0: OFF 1: ON
1-011-015	Pickup SOL Separate Setting	Paper LCT: Thick	ENG	[0 to 1 / 0 / 1] 0: OFF 1: ON
1-012-001	Operation Setting	Paper Exit Speed	ENG	[0 to 1 / 1 / 1] 0: OFF 1: ON
1-012-002	Operation Setting	ExitLineSpdSetting: AfterSpdDown	ENG	[0 to 3 / 1 / 1] 0: Standard Speed 1: 150mm/s 2: 128mm/s 3: 75mm/s
1-101-030	Flicker Control	Flicker Control	ENG*	[0 to 0 / 0 / 1]
1-105-003	Print Target Temp.	Plain1:BW:Center	ENG*	[100 to 180 / * / 1deg] *MP 2555: 123 *MP 3055: 123 *MP 3555: 130 *MP 4055: 130 *MP 5055: 147 *MP 6055: 147
1-105-007	Print Target Temp.	Plain2:BW:Center	ENG*	[100 to 180 / * / 1deg] *MP 2555: 128 *MP 3055: 128 *MP 3555: 135 *MP 4055: 135 *MP 5055: 157 *MP 6055: 157
1-105-011	Print Target Temp.	Thin:BW:Center	ENG*	[100 to 180 / * / 1deg] *MP 2555: 119 *MP 3055: 119 *MP 3555: 120 *MP 4055: 120 *MP 5055: 132

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				*MP 6055: 132
1-105-015	Print Target Temp.	M-thick:BW:Center	ENG*	[100 to 180 / * / 1deg] *MP 2555: 140 *MP 3055: 140 *MP 3555: 143 *MP 4055: 143 *MP 5055: 157 *MP 6055: 157
1-105-019	Print Target Temp.	Thick1:BW:Center	ENG*	[100 to 180 / 145 / 1deg]
1-105-023	Print Target Temp.	Thick2:BW:Center	ENG*	[100 to 180 / 140 / 1deg]
1-105-027	Print Target Temp.	Thick3:BW:Center	ENG*	[100 to 180 / 140 / 1deg]
1-105-031	Print Target Temp.	Special1:BW:Center	ENG*	[100 to 180 / * / 1deg] *MP 2555: 123 *MP 3055: 123 *MP 3555: 130 *MP 4055: 130 *MP 5055: 152 *MP 6055: 152
1-105-035	Print Target Temp.	Special2:BW:Center	ENG*	[100 to 180 / 145 / 1deg]
1-105-039	Print Target Temp.	Special3:BW:Center	ENG*	[100 to 180 / 130 / 1deg]
1-105-041	Print Target Temp.	Envelop:Center	ENG*	[100 to 180 / 135 / 1deg]
1-105-053	Print Target Temp.	Special1:BW:Center:Middle Speed	ENG*	[100 to 180 / 140 / 1deg]
1-105-057	Print Target Temp.	Special2:BW:Center:Middle Speed	ENG*	[100 to 180 / 145 / 1deg]
1-105-061	Print Target Temp.	Special3:BW:Center:Middle Speed	ENG*	[100 to 180 / 150 / 1deg]
1-105-103	Print Target Temp.	Plain1:BW:Center:Low Speed	ENG*	[100 to 180 / 110 / 1deg]
1-105-	Print Target Temp.	Plain2:BW:Center:Low Speed	ENG*	[100 to 180 / 110 /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
107				1deg]
1-105-111	Print Target Temp.	M-thick:BW:Center:Low Speed	ENG*	[100 to 180 / 115 / 1deg]
1-105-115	Print Target Temp.	Thick1:BW:Center:Low Speed	ENG*	[100 to 180 / 120 / 1deg]
1-105-119	Print Target Temp.	Special1:BW:Center:Low Speed	ENG*	[100 to 180 / 110 / 1deg]
1-105-123	Print Target Temp.	Special2:BW:Center:Low Speed	ENG*	[100 to 180 / 120 / 1deg]
1-105-125	Print Target Temp.	Plain1:Glossy:Center	ENG*	[100 to 180 / 110 / 1deg]
1-105-127	Print Target Temp.	Plain2:Glossy:Center	ENG*	[100 to 180 / 110 / 1deg]
1-105-129	Print Target Temp.	M-thick:Glossy:Center	ENG*	[100 to 180 / 115 / 1deg]
1-105-131	Print Target Temp.	OHP:Center	ENG*	[100 to 180 / 160 / 1deg]
1-105-133	Print Target Temp.	Envelop:Center:Low Speed	ENG*	[100 to 180 / 135 / 1deg]
1-105-137	Print Target Temp.	Thin:BW:Center:Low Speed	ENG*	[100 to 180 / 110 / 1deg]
1-105-141	Print Target Temp.	Thick4:BW:Center	ENG*	[100 to 180 / 140 / 1deg]
1-105-143	Print Target Temp.	Postcard:Center	ENG*	[100 to 180 / 130 / 1deg]
1-105-147	Print Target Temp.	Special3:BW:Center:Middle Speed	ENG*	[100 to 180 / 130 / 1deg]
1-106-001	Fusing Temp. Display	Heat Center	ENG	[-10 to 250 / 0 / 1deg]
1-106-002	Fusing Temp. Display	Heat End	ENG	[-10 to 250 / 0 / 1deg]
1-106-003	Fusing Temp. Display	Press Center	ENG	[-10 to 250 / 0 / 1deg]
1-106-004	Fusing Temp. Display	Press End	ENG	[-10 to 250 / 0 / 1deg]
1-113-	Curl Correction	Execute Pattern	ENG*	[0 to 2 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				0: OFF 1: ON(No Decurl) 2: ON
1-133-001	Voltage Detection	Voltage Detection	ENG*	[0 to 350 / 97 / 0.1V]
1-133-002	Voltage Detection	Max	ENG*	[0 to 350 / 0 / 0.1V]
1-133-003	Voltage Detection	Min	ENG*	[0 to 350 / 350 / 0.1V]
1-133-004	Voltage Detection	Last	ENG*	[0 to 350 / 0 / 0.1V]
1-133-005	Voltage Detection	SC	ENG*	[0 to 350 / 0 / 0.1V]
1-133-006	Voltage Detection	Threshold Voltage	ENG*	[0 to 255 / 80 / 1V]
1-135-001	Inrush Control	Inrush Control	ENG*	[0 to 1 / 0 / 1]
1-141-001	Fusing SC Error Time Info	SC Number	ENG*	[0 to 99999 / 0 / 1]
1-141-101	Fusing SC Error Time Info	Htg Roller:Ctr Det1	ENG*	[-5 to 300 / 0 / 1deg]
1-141-102	Fusing SC Error Time Info	Htg Roller:End Det1	ENG*	[-5 to 300 / 0 / 1deg]
1-141-103	Fusing SC Error Time Info	Press Roller:Ctr Det1	ENG*	[-5 to 300 / 0 / 1deg]
1-141-104	Fusing SC Error Time Info	Press Roller:End Det1	ENG*	[-5 to 300 / 0 / 1deg]
1-141-151	Fusing SC Error Time Info	Htg Roller:Ctr Det2	ENG*	[-5 to 300 / 0 / 1deg]
1-141-152	Fusing SC Error Time Info	Htg Roller:End Det2	ENG*	[-5 to 300 / 0 / 1deg]
1-141-153	Fusing SC Error Time Info	Press Roller:Ctr Det2	ENG*	[-5 to 300 / 0 / 1deg]
1-141-154	Fusing SC Error Time Info	Press Roller:End Det2	ENG*	[-5 to 300 / 0 / 1deg]
1-141-	Fusing SC Error Time	Htg Roller:Ctr Det3	ENG*	[-5 to 300 / 0 / 1deg]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
201	Info			
1-141-202	Fusing SC Error Time Info	Htg Roller:End Det3	ENG*	[-5 to 300 / 0 / 1deg]
1-141-203	Fusing SC Error Time Info	Press Roller:Ctr Det3	ENG*	[-5 to 300 / 0 / 1deg]
1-141-204	Fusing SC Error Time Info	Press Roller:End Det3	ENG*	[-5 to 300 / 0 / 1deg]
1-142-001	Fusing Jam Detection	SC Display	ENG*	[0 to 1 / 0 / 1] 0: OFF 1: ON
1-152-001	Fusing Nip Band Check	Execute	ENG	[0 to 1 / 0 / 1]
1-153-001	Abnormal Noise Confirmation	Unit: Execute	ENG	[0 to 1 / 0 / 1]
1-153-002	Abnormal Noise Confirmation	No Unit: Execute	ENG	[0 to 1 / 0 / 1]
1-153-003	Abnormal Noise Confirmation	Operation Line Speed	ENG	[0 to 2 / 0 / 1] 0: Std Speed 1: Middle Speed 2: Low Speed
1-153-004	Abnormal Noise Confirmation	Operation Time	ENG	[0 to 240 / 60 / 1sec]
1-154-006	Switch:Rotation Start/Stop	Overshoot Prevent Temp.:SC	ENG*	[0 to 250 / * / 1deg] *MP 2555: 185 *MP 3055: 185 *MP 3555: 185 *MP 4055: 195 *MP 5055: 200 *MP 6055: 200
1-301-001	Paper Thick Error Detect	Tray1 (0:Off 1:On)	ENG*	[0 to 1 / 0 / 1]
1-301-002	Paper Thick Error Detect	Tray2 (0:Off 1:On)	ENG*	[0 to 1 / 0 / 1]
1-301-003	Paper Thick Error Detect	Tray3 (0:Off 1:On)	ENG*	[0 to 1 / 0 / 1]
1-301-	Paper Thick Error	Tray4 (0:Off 1:On)	ENG*	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
004	Detect			
1-301-005	Paper Thick Error Detect	LCT (0:Off 1:On)	ENG*	[0 to 1 / 0 / 1]
1-301-006	Paper Thick Error Detect	Bypass Tray (0:Off 1:On)	ENG*	[0 to 1 / 0 / 1]
1-303-001	Paper Thick Error Rank	Tray1	ENG*	[1 to 8 / 3 / 1]
1-303-002	Paper Thick Error Rank	Tray2	ENG*	[1 to 8 / 3 / 1]
1-303-003	Paper Thick Error Rank	Tray3	ENG*	[1 to 8 / 3 / 1]
1-303-004	Paper Thick Error Rank	Tray4	ENG*	[1 to 8 / 3 / 1]
1-303-005	Paper Thick Error Rank	LCT	ENG*	[1 to 8 / 3 / 1]
1-303-006	Paper Thick Error Rank	Bypass Tray	ENG*	[1 to 8 / 3 / 1]
1-306-001	Num. of Sheets to Shift to Err	Num. of Sheets to Shift to Err	ENG*	[1 to 999 / 1 / 1]
1-307-003	Paper Thick Standard Value	Middle Thick	ENG*	[0 to 999 / 82 / 1]
1-307-004	Paper Thick Standard Value	Thick1	ENG*	[0 to 999 / 106 / 1]
1-307-005	Paper Thick Standard Value	Thick2	ENG*	[0 to 999 / 170 / 1]
1-307-006	Paper Thick Standard Value	Thick3	ENG*	[0 to 999 / 221 / 1]
1-307-007	Paper Thick Standard Value	Thick4	ENG*	[0 to 999 / 257 / 1]
1-308-001	Paper Thikness Error Times	Tray1	ENG*	[0 to 999 / 0 / 1]
1-308-002	Paper Thikness Error Times	Tray2	ENG*	[0 to 999 / 0 / 1]
1-308-003	Paper Thikness Error Times	Tray3	ENG*	[0 to 999 / 0 / 1]
1-308-	Paper Thikness Error	Tray4	ENG*	[0 to 999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
004	Times			
1-308-005	Paper Thikness Error Times	LCT	ENG*	[0 to 999 / 0 / 1]
1-308-006	Paper Thikness Error Times	Bypass Tray	ENG*	[0 to 999 / 0 / 1]
1-314-001	Paper Size	Tray1	ENG*	[0 to 10 / 0 / 1]
1-314-002	Paper Size	Tray2	ENG*	[0 to 10 / 0 / 1]
1-314-003	Paper Size	Tray3	ENG*	[0 to 10 / 0 / 1]
1-314-004	Paper Size	Tray4	ENG*	[0 to 10 / 0 / 1]
1-314-005	Paper Size	LCT	ENG*	[0 to 10 / 0 / 1]
1-314-006	Paper Size	Bypass Tray	ENG*	[0 to 10 / 0 / 1]
1-316-001	Paper Thick Start Time	Tray1	ENG*	[-50 to 50 / 0 / 1msec]
1-316-002	Paper Thick Start Time	Tray2	ENG*	[-50 to 50 / 0 / 1msec]
1-316-003	Paper Thick Start Time	Tray3	ENG*	[-50 to 50 / -20 / 1msec]
1-316-004	Paper Thick Start Time	Tray4	ENG*	[-50 to 50 / -20 / 1msec]
1-316-005	Paper Thick Start Time	LCT	ENG*	[-50 to 50 / -20 / 1msec]
1-316-006	Paper Thick Start Time	Bypass Tray	ENG*	[-50 to 50 / -20 / 1msec]
1-907-029	Paper Feed Timing Adj.	By-pass Size Decision Timing	ENG*	[1 to 3 / 3 / 1]
1-907-030	Paper Feed Timing Adj.	ExitLineSpdUp EndPos:StdSpd	ENG	[-30 to 15 / 0 / 1mm]
1-907-031	Paper Feed Timing Adj.	ExitLineSpdUp EndPos:MidSpd	ENG	[-30 to 15 / 0 / 1mm]
1-907-	Paper Feed Timing Adj.	ExitLineSpdUp EndPos:LowSpd	ENG	[-30 to 15 / 0 / 1mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
032				
1-907-033	Paper Feed Timing Adj.	ExitLineSpdUp EndPos:LowSpd:1200:Plain	ENG	[-30 to 15 / 0 / 1mm]
1-907-109	Paper Feed Timing Adj.	Bypass Emvlp. Regist. Stop Timing	ENG	[0 to 40 / 0 / 1mm]
1-955-008	Fan Control	Fusing Exit Fan High Temp Op Sw Temp	ENG*	[0 to 100 / 40 / 0.1deg]
1-955-021	Fan Control	Front Development Cooling Fan	ENG*	[0 to 1 / 0 / 1]
1-955-022	Fan ON/OFF Switch Set	Toner Bottle Cooling Fan	ENG*	[0 to 1 / 0 / 1]
1-955-031	Fan Control	Fusing Exit Fan Low Speed Op DUTY	ENG*	[0 to 100 / 30 / 1%]
1-955-032	Fan Control	Fusing Exit Fan Middle Speed Op DUTY	ENG*	[0 to 100 / * / 1%] *MP 2555: 60 *MP 3055: 60 *MP 3555: 60 *MP 4055 (NA/TWN/KOR): 60 *MP 4055 (EU/AP/CHN): 65 *MP 5055 (NA/TWN/KOR): 60 *MP 5055 (EU/AP/CHN): 65 *MP 6055 (NA/TWN/KOR): 60 *MP 6055 (EU/AP/CHN): 65
1-955-033	Fan Control	Fusing Exit Fan Full Speed Op DUTY	ENG*	[0 to 100 / * / 1%] *MP 2555: 60 *MP 3055: 60 *MP 3555: 60 *MP 4055 (NA/TWN/KOR): 60 *MP 4055 (EU/AP/CHN): 80

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				*MP 5055 (NA/TWN/KOR): 60 *MP 5055 (EU/AP/CHN): 80 *MP 6055 (NA/TWN/KOR): 60 *MP 6055 (EU/AP/CHN): 80
1-955-041	Fan Control	Extra Fan Op Decision time	ENG*	[0 to 10000 / 480 / 1sec]
1-955-042	Fan Control	Fusing Exit Fan Extra Cooling Time Set	ENG*	[0 to 900 / * / 1sec] *MP 2555: 0 *MP 3055: 0 *MP 3555: 0 *MP 4055 (NA/TWN/KOR): 0 *MP 4055 (EU/AP/CHN): 120 *MP 5055 (NA/TWN/KOR): 0 *MP 5055 (EU/AP/CHN): 120 *MP 055 (NA/TWN/KOR): 0 *MP 055 (EU/AP/CHN): 120
1-955-043	Fan Control	Paper Exit Cooling Extra Cooling Time Set	ENG*	[0 to 900 / * / 1sec] *MP 2555: 0 *MP 3055: 0 *MP 3555: 0 *MP 4055 (NA/TWN/KOR): 0 *MP 4055 (EU/AP/CHN): 120 *MP 5055 (NA/TWN/KOR): 0 *MP 5055

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				(EU/AP/CHN): 120 *MP 055 (NA/TWN/KOR): 0 *MP 055 (EU/AP/CHN): 120
1-955-051	Fan Control	AntiCondens.Fan Op Execution Temp	ENG*	[0 to 1 / 0 / 1]
1-955-052	Fan Control	AntiCondens.Fan Op ON/OFF Setting	ENG*	[0 to 30 / 3 / 0.1deg]

SP Group 2000

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
2-101-001	Reistration Correction	Main Dot	ENG*	[-512 to 511 / 0 / 1dot]
2-102-001	LSU Adjustment	Main Mag.	ENG*	[-1 to 1 / 0 / 0.1%]
2-103-001	Erase Margin Adjustment	Lead Edge Width	ENG	[0 to 9.9 / 4.2 / 0.1mm]
2-103-002	Erase Margin Adjustment	Trail. Edge Width	ENG	[0 to 9.9 / 4.2 / 0.1mm]
2-103-003	Erase Margin Adjustment	Left	ENG	[0 to 9.9 / 2 / 0.1mm]
2-103-004	Erase Margin Adjustment	Right	ENG	[0 to 9.9 / 2 / 0.1mm]
2-103-006	Erase Margin Adjustment	Duplex Trail. L Size	ENG	[-4 to 4 / 1 / 0.1mm]
2-103-007	Erase Margin Adjustment	Duplex Trail. M Size	ENG	[-4 to 4 / 0.8 / 0.1mm]
2-103-008	Erase Margin Adjustment	Duplex Trail. S Size	ENG	[-4 to 4 / 0.6 / 0.1mm]
2-103-009	Erase Margin Adjustment	Duplex Left Edge	ENG	[0 to 1.5 / 0.3 / 0.1mm]
2-103-010	Erase Margin Adjustment	Duplex Right Edge	ENG	[0 to 1.5 / 0.3 / 0.1mm]
2-103-011	Erase Margin Adjustment	Duplex Trail. L Size:Thick	ENG	[-4 to 4 / 1 / 0.1mm]
2-103-012	Erase Margin Adjustment	Duplex Trail. M Size:Thick	ENG	[-4 to 4 / 0.8 / 0.1mm]
2-103-013	Erase Margin Adjustment	Duplex Trail. S Size:Thick	ENG	[-4 to 4 / 0.6 / 0.1mm]
2-103-014	Erase Margin Adjustment	Duplex Left Edge:Thick	ENG	[0 to 1.5 / 0.3 / 0.1mm]
2-103-015	Erase Margin Adjustment	Duplex Right Edge:Thick	ENG	[0 to 1.5 / 0.3 / 0.1mm]
2-103-016	Erase Margin Adjustment	Duplex Trail. L Size:Thin	ENG	[-4 to 4 / 1 / 0.1mm]
2-103-	Erase Margin	Duplex Trail. M Size:Thin	ENG	[-4 to 4 / 0.8 / 0.1mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
017	Adjustment			
2-103-018	Erase Margin Adjustment	Duplex Trail. S Size:Thin	ENG	[-4 to 4 / 0.6 / 0.1mm]
2-103-019	Erase Margin Adjustment	Lead Edge Width:Thin	ENG	[0 to 9.9 / 4.2 / 0.1mm]
2-103-020	Erase Margin Adjustment	Trail. Edge Width:Thin	ENG	[0 to 9.9 / 4.2 / 0.1mm]
2-109-003	Test Pattern	Pattern Selection	ENG	[0 to 24 / 0 / 1] 0: None 1: 1dot Vertical 2: 2dot Vertical 3: 1dot Horizontal Line 4: 2dot Horizontal Line 5: Grid Vert 6: Grid Horizontal 7: Grid Pattern Small 8: Grid Pattern Large 9: Argyle Pattern Small 10: Argyle P:L 11: 1dot Ind. Pttrn 12: 2dot Ind. Pttrn 13: 4dot Ind. Pttrn 14: Trimming Area 15: HoundstoothH 16: Houndstooth V 17: Black Band H 18: Black Band V 19: Checker Flag Pattern 20: Grayscale V 21: Grayscale H 22: 2 Beam Density Pttrn 23: Full Dot Pattern 24: All White Pattern
2-109-006	Test Pattern	Density	ENG	[0 to 15 / 15 / 1]
2-110-001	LD Driver	Error	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
2-110-005	LD Driver	Memory Transfer	ENG	[0 to 1 / 0 / 1]
2-152-001	Shad. Correct Setting	Strandard Speed	ENG*	[50 to 150 / 100 / 0.1%]
2-152-005	Shad. Correct Setting	Middle Speed	ENG*	[50 to 150 / 100 / 0.1%]
2-152-009	Shad. Correct Setting	Low Speed	ENG*	[50 to 150 / 100 / 0.1%]
2-160-001	Vertical Line Width	600dpi:Indet	ENG*	[10 to 15 / 15 / 1]
2-160-002	Vertical Line Width	1200dpi:Indet	ENG*	[10 to 15 / 15 / 1]
2-242-100	TS Operation Env. Log	Log Clear	ENG	[0 to 1 / 0 / 1]
2-250-001	Interval DownMode	ON/OFF	ENG*	[0 to 1 / 0 / 1] 0: OFF 1: ON
2-400-002	Paper Transfer Roller Settings	Detatch timing in waiting	ENG*	[0 to 600 / 240 / 1min]
2-906-004	Tailing Control	Shift Range	ENG*	[0 to 1 / 0 / 0.1mm]
2-906-005	Tailing Control	Number of Sheets	ENG*	[0 to 10 / 0 / 1sheet]
2-970-004	Interrupt Transfer CL	Low-temperature, low-humidity	ENG	[0 to 1 / 0 / 1]
2-970-005	Interrupt Transfer CL	Moderate temperature and humidity	ENG	[0 to 1 / 0 / 1]
2-970-006	Interrupt Transfer CL	High-temperature, high-humidity	ENG	[0 to 1 / 0 / 1]
2-980-001	Drum Idling	Idle Time: Low-temperature, low-humidity	ENG*	[0 to 60 / 0 / 1sec]
2-980-002	Drum Idling	Idle Time: Moderate temperature and humidity	ENG*	[0 to 60 / 0 / 1sec]
2-980-003	Drum Idling	Idle Time: High-temperature, high-humidity	ENG*	[0 to 60 / 0 / 1sec]
2-990-	Print Duty Control	Forced CPM Down Thresh: No	ENG*	[0 to 5000 / 0 / 1page]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
004		Duty Control:MM		
2-990-007	Print Duty Control	Forced CPM Down Thresh: Duty Control	ENG*	[0 to 5000 / 16 / 1page]
2-990-008	Print Duty Control	Down-time_BW: Duty Control	ENG*	[0 to 240000 / 25000 / 10msec]
2-990-011	Print Duty Control	Execution Temp. Threshold	ENG*	[20 to 70 / 45.5 / 0.1deg]
2-990-101	Print Duty Control	Forced CPM Down Thresh: No Duty Control: LL	ENG*	[0 to 5000 / 0 / 1page]
2-990-102	Print Duty Control	Forced CPM Down Thresh: No Duty Control: ML	ENG*	[0 to 5000 / 0 / 1page]
2-990-103	Print Duty Control	Forced CPM Down Thresh: No Duty Control: HH	ENG*	[0 to 5000 / 0 / 1page]

SP Group 3000

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
3-011-001	Manual ProCon :Exe	Normal ProCon	ENG	[0 to 1 / 0 / 1]
3-012-001	ProCon OK?	History:Last	ENG*	[0 to 99 / 0 / 1]
3-012-002	ProCon OK?	History:Last 2	ENG*	[0 to 99 / 0 / 1]
3-012-003	ProCon OK?	History:Last 3	ENG*	[0 to 99 / 0 / 1]
3-012-004	ProCon OK?	History:Last 4	ENG*	[0 to 99 / 0 / 1]
3-012-005	ProCon OK?	History:Last 5	ENG*	[0 to 99 / 0 / 1]
3-012-006	ProCon OK?	History:Last 6	ENG*	[0 to 99 / 0 / 1]
3-012-007	ProCon OK?	History:Last 7	ENG*	[0 to 99 / 0 / 1]
3-012-008	ProCon OK?	History:Last 8	ENG*	[0 to 99 / 0 / 1]
3-012-009	ProCon OK?	History:Last 9	ENG*	[0 to 99 / 0 / 1]
3-012-010	ProCon OK?	History:Last 10	ENG*	[0 to 99 / 0 / 1]
3-030-001	Init TD Sensor :Exe	Execute	ENG	[0 to 1 / 0 / 1]
3-030-071	InitTDSensor :Exe	Init Temp: K	ENG*	[-100 to 100 / 23 / 0.1deg]
3-030-081	InitTDSensor :Exe	Init Rel Hum: K	ENG*	[0 to 100 / 50 / 0.1%RH]
3-030-091	InitTDSensor :Exe	Init Abs Hum: K	ENG*	[0 to 100 / 10.3 / 0.01g/m3]
3-030-101	InitTDSensor :Exe	Init Coverage: K	ENG*	[0 to 2147483647 / 0 / 1%]
3-030-111	InitTDSensor :Exe	Total DC: Dev: K	ENG*	[0 to 2147483647 / 0 / 1%]
3-031-	TD Sens Init OK?	K	ENG*	[0 to 9 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
3-050-001	Force Tnr Supply :Exe	Execute	ENG	[0 to 1 / 0 / 1]
3-050-021	Force Tnr Supply :Exe	Supply Quantity	ENG*	[0 to 5 / 0.5 / 0.1wt%]
3-072-001	T Sensor: Check	Execute Check	ENG	[0 to 1 / 0 / 1]
3-073-001	T Sensor Measurement Value:	mu count	ENG*	[0 to 65535 / 0 / 1]
3-074-001	ID.Sens Check	Execute	ENG	[0 to 1 / 0 / 1]
3-075-001	ID.Sens Measurement Value:	Vsg reg	ENG*	[0 to 5.5 / 0 / 0.01V]
3-075-011	ID.Sens Measurement Value:	Voffset	ENG*	[0 to 5.5 / 0 / 0.01V]
3-100-001	Tonner End Detection: Set	ON/OFF	ENG*	[0 to 1 / 0 / 1] 0: Enable 1: Disable
3-100-003	Tonner End Detection: Set	TE Detection	ENG*	[0 to 2 / 1 / 1] 0: Page & Vt 1: Vt Only 2: Page Counter Only
3-101-001	Toner Status :Disp	K	ENG*	[0 to 2 / 2 / 1]
3-133-001	TE Detect :Set	Set Sheets	ENG*	[0 to 5000 / 90 / 1sheets]
3-133-011	TE Detect :Set	Page Cnt:K	ENG*	[0 to 5000 / 0 / 1sheets]
3-200-001	TnrDensity	K	ENG*	[0 to 25.5 / 0 / 0.1wt%]
3-201-001	TnrDensity	Upper TC	ENG*	[1 to 15 / 5.5 / 0.1wt%]
3-201-002	TnrDensity	Lower TC	ENG*	[1 to 15 / 2.7 / 0.1wt%]
3-210-001	TD.Sens:Vt :Disp	Current	ENG*	[0 to 5.5 / 0 / 0.01V]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
3-230-001	Vtref :Disp/Set	Current	ENG*	[0 to 5 / 2.5 / 0.01V]
3-250-001	ImgArea :Disp	ImgArea	ENG*	[0 to 9999 / 0 / 1cm2]
3-251-001	DotCoverage :Disp	DotCoverage	ENG*	[0 to 100 / 0 / 0.01%]
3-252-001	AccumImgArea :Disp	ImgArea	ENG*	[0 to 65535 / 0 / 1cm^2]
3-260-001	Temperature/Humidity: Display	Temperature	ENG	[-5 to 45 / 0 / 0.1deg]
3-260-002	Temperature/Humidity: Display	Relative Humidity	ENG	[0 to 100 / 0 / 0.1%RH]
3-260-003	Temperature/Humidity: Display	Absolute Humidity	ENG	[0 to 100 / 0 / 0.01g/m3]
3-310-001	ID.Sens :Voffset	Voffset reg	ENG*	[0 to 5.5 / 0 / 0.01V]
3-310-021	ID.Sens :Voffset	Voffset TM(Front)	ENG*	[0 to 5.5 / 0 / 0.01V]
3-320-001	Vsg Adj: Execute	P Sensor	ENG	[0 to 1 / 0 / 1]
3-320-011	Vsg Adj: Execute	Vsg Error Counter	ENG*	[0 to 99 / 0 / 1times]
3-321-001	Adjusted Vsg	Vsg reg	ENG*	[0 to 5.5 / 0 / 0.01V]
3-322-001	Adjusted Ifsg	Ifsg	ENG*	[0 to 50 / 10 / 0.001mA]
3-322-011	Adjusted Ifsg	Ifsg Min	ENG*	[0 to 50 / 27 / 0.001mA]
3-323-001	Vsg Adj OK?	Latest	ENG*	[0 to 9 / 0 / 1]
3-323-002	Vsg Adj OK?	Latest 2	ENG*	[0 to 9 / 0 / 1]
3-323-003	Vsg Adj OK?	Latest 3	ENG*	[0 to 9 / 0 / 1]
3-323-004	Vsg Adj OK?	Latest 4	ENG*	[0 to 9 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
3-323-005	Vsg Adj OK?	Latest 5	ENG*	[0 to 9 / 0 / 1]
3-323-006	Vsg Adj OK?	Latest 6	ENG*	[0 to 9 / 0 / 1]
3-323-007	Vsg Adj OK?	Latest 7	ENG*	[0 to 9 / 0 / 1]
3-323-008	Vsg Adj OK?	Latest 8	ENG*	[0 to 9 / 0 / 1]
3-323-009	Vsg Adj OK?	Latest 9	ENG*	[0 to 9 / 0 / 1]
3-323-010	Vsg Adj OK?	Latest 10	ENG*	[0 to 9 / 0 / 1]
3-331-061	ID.Sens Coef :Set	Vsp Coef	ENG*	[0.5 to 1.5 / 1 / 0.001]
3-331-071	ID.Sens Coef :Set	Vsdp Coef	ENG*	[0.5 to 1.5 / 1 / 0.001]
3-400-001	Toner Supply Type	K	ENG*	[0 to 2 / 2 / 1] 0: FIXED 2: PID
3-411-001	Toner Supply Qty	K	ENG	[0 to 40000 / 0 / 0.1mg]
3-440-001	Fixed Supply Mode	Fixed Rate	ENG*	[0 to 100 / 10 / 1%]
3-500-002	ImgQltyAdj :ON/OFF	ProCon	ENG*	[0 to 1 / 1 / 1] 0: OFF 1: ON
3-510-031	ImgQltyAdj :ExeFlag	Init Toner Replenish: K	ENG*	[0 to 1 / 0 / 1]
3-520-001	ImgQltyAdj :Interval	During Job	ENG*	[0 to 100 / 30 / 1pages]
3-520-002	ImgQltyAdj :Interval	During Stand-by	ENG*	[0 to 100 / 5 / 1minute]
3-529-006	ProCon Interval Control :Set	Page Cnt:BW	ENG*	[0 to 5000 / 0 / 1sheets]
3-530-001	PowerON ProCon :Set	Non-use Time Setting	ENG*	[0 to 1440 / 360 / 1minute]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
3-530-002	PowerON ProCon :Set	Temperature Range	ENG*	[0 to 99 / 10 / 1deg]
3-530-003	PowerON ProCon :Set	Relative Humidity Range	ENG*	[0 to 99 / 50 / 1%RH]
3-530-004	PowerON ProCon :Set	Absolute Humidity Range	ENG*	[0 to 99 / 6 / 1g/m3]
3-530-005	PowerON ProCon :Set	Interval:BW	ENG*	[0 to 5000 / 100 / 1sheets]
3-530-007	PowerON ProCon :Set	Page Cnt:BW	ENG*	[0 to 5000 / 0 / 1sheets]
3-531-001	Non-useTime Procon :Set	Non-use Time Setting	ENG*	[0 to 1440 / 360 / 1minute]
3-531-002	Non-useTime Procon :Set	Temperature Range	ENG*	[0 to 99 / 10 / 1deg]
3-531-003	Non-useTime Procon :Set	Relative Humidity Range	ENG*	[0 to 99 / 50 / 1%RH]
3-531-004	Non-useTime Procon :Set	Absolute Humidity Range	ENG*	[0 to 99 / 6 / 1g/m3]
3-531-005	Non-useTime Procon :Set	Maximum Execution Number	ENG*	[0 to 99 / 10 / 1times]
3-533-001	Interrupt ProCon :Set	Interval:Set:BW	ENG*	[0 to 5000 / 100 / 1sheets]
3-533-002	Interrupt ProCon :Set	Interval:Disp:BW	ENG*	[0 to 5000 / 100 / 1sheets]
3-533-003	Interrupt ProCon :Set	Corr(Short):BW	ENG*	[0 to 1 / 0.5 / 0.01]
3-533-004	Interrupt ProCon :Set	Corr(Mid):BW	ENG*	[0 to 1 / 1 / 0.01]
3-534-001	JobEnd ProCon :Set	Interval:Set:BW	ENG*	[0 to 5000 / 100 / 1sheets]
3-534-002	JobEnd ProCon :Set	Interval:Disp:BW	ENG*	[0 to 5000 / 100 / 1sheets]
3-534-003	JobEnd ProCon :Set	Corr(Short):BW	ENG*	[0 to 1 / 0.5 / 0.01]
3-534-004	JobEnd ProCon :Set	Corr(Mid):BW	ENG*	[0 to 1 / 1 / 0.01]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
3-551-010	Select Recycle/Waste	Select Status	ENG*	[0 to 1 / 0 / 1]
3-600-001	Select ProCon	Potential Control	ENG*	[0 to 1 / 1 / 1] 0: OFF 1: ON
3-611-001	Chrg DC Control	Std Speed	ENG*	[300 to 2000 / 790 / 1-V]
3-612-001	Dev DC Control	Std Speed	ENG*	[200 to 800 / 590 / 1-V]
3-613-101	LD Power Control	PrcsCntrlCorrect	ENG*	[0 to 200 / 130 / 1%]
3-623-101	LD Power :Set	UpperLimit	ENG*	[100 to 200 / 132 / 1%]
3-623-111	LD Power :Set	LowerLimit	ENG*	[0 to 100 / 67 / 1%]
3-630-001	Vsp :Disp/Set	Current	ENG*	[0 to 5.5 / 0 / 0.01V]
3-630-011	Dev gamma :Disp/Set	Target:K	ENG*	[0.5 to 2.55 / 0.95 / 0.01mg/cm2/-kV]
3-630-061	Dev gamma :Disp/Set	TnrDensity	ENG*	[0 to 25.5 / 0 / 0.1wt%]
3-631-001	Vsdp :Disp	Current	ENG*	[0 to 5.5 / 0 / 0.01V]
3-700-001	New Unit Detection	ON/OFF Setting	ENG*	[0 to 1 / 1 / 1]
3-701-002	Manual New Unit Set	#PCU	ENG*	[0 to 1 / 0 / 1]
3-701-009	Manual New Unit Set	Cleaning Blade	ENG*	[0 to 1 / 0 / 1]
3-701-018	Manual New Unit Set	Charge Roller	ENG*	[0 to 1 / 0 / 1]
3-701-019	Manual New Unit Set	Cleaner:Charge Roller	ENG*	[0 to 1 / 0 / 1]
3-701-021	Manual New Unit Set	OPC	ENG*	[0 to 1 / 0 / 1]
3-701-	Manual New Unit Set	Separation Pawl	ENG*	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
022				
3-701-023	Manual New Unit Set	#Development Unit	ENG*	[0 to 1 / 0 / 1]
3-701-024	Manual New Unit Set	Development	ENG*	[0 to 1 / 0 / 1]
3-701-025	Manual New Unit Set	Development Filter	ENG*	[0 to 1 / 0 / 1]
3-701-028	Manual New Unit Set	Bearing:Development Screw	ENG*	[0 to 1 / 0 / 1]
3-701-108	Manual New Unit Set	#PTR Unit	ENG*	[0 to 1 / 0 / 1]
3-701-115	Manual New Unit Set	#Fusing Unit	ENG*	[0 to 1 / 0 / 1]
3-701-116	Manual New Unit Set	Fusing Belt	ENG*	[0 to 1 / 0 / 1]
3-701-118	Manual New Unit Set	Pressure Roller	ENG*	[0 to 1 / 0 / 1]
3-701-119	Manual New Unit Set	Pressure Roller Bearings	ENG*	[0 to 1 / 0 / 1]
3-701-142	Manual New Unit Set	Waste Toner bottle	ENG*	[0 to 1 / 0 / 1]
3-701-206	Manual New Unit Set	ADF:Pick-up Roller	ENG*	[0 to 1 / 0 / 1]
3-701-207	Manual New Unit Set	ADF:Feeding Belt	ENG*	[0 to 1 / 0 / 1]
3-701-208	Manual New Unit Set	ADF:Reverse Roller	ENG*	[0 to 1 / 0 / 1]
3-710-011	mu Concentration Control: Set	mu sensor resolution	ENG*	[0 to 3 / 1 / 1]
3-710-012	mu Concentration Control: Set	Ini mu count offset	ENG*	[0 to 10000 / 5912 / 1]
3-800-014	Waste Toner Full Detection	Threshold : Remainder days	ENG*	[1 to 255 / 15 / 1day]
3-903-001	Adjust Toner Remains	Bottle Motor Time	ENG*	[0 to 99999999 / 0 / 1msec]
3-903-	Adjust Toner Remains	Toner Level	ENG*	[0 to 100 / 100 / 1%]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
002				
3-903-004	Adjust Toner Remains	Reset-Bottle Motor Time	ENG	[0 to 1 / 0 / 0]
3-903-005	Adjust Toner Remains	0:OFF 1:ON	ENG*	[0 to 1 / 0 / 1]

SP Group 4000

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
4-008-001	Sub Scan Magnification Adj		ENG*	[-1 to 1 / 0 / 0.1%]
4-010-001	Sub Scan Registration Adj		ENG*	[-2 to 2 / 0 / 0.1mm]
4-011-001	Main Scan Reg		ENG*	[-2.5 to 2.5 / 0 / 0.1mm]
4-012-001	Set Scale Mask	Book:Sub LEdge	ENG	[0 to 3 / 1 / 0.1mm]
4-012-002	Set Scale Mask	Book:Sub TEdge	ENG	[0 to 3 / 0 / 0.1mm]
4-012-003	Set Scale Mask	Book:Main:LEdge	ENG	[0 to 3 / 1 / 0.1mm]
4-012-004	Set Scale Mask	Book:Main:TEdge	ENG	[0 to 3 / 0 / 0.1mm]
4-012-005	Scanner Erase Margin: Scale	ADF: Leading Edge	ENG*	[0 to 3 / 0 / 0.1mm]
4-012-007	Scanner Erase Margin: Scale	ADF: Right	ENG*	[0 to 3 / 0 / 0.1mm]
4-012-008	Scanner Erase Margin: Scale	ADF: left	ENG*	[0 to 3 / 0 / 0.1mm]
4-013-001	Scanner Free run	Book mode :Lamp Off	ENG	[0 to 1 / 0 / 1]
4-013-002	Scanner Free run	Book mode :Lamp On	ENG	[0 to 1 / 0 / 1]
4-020-001	DF Dust Check	Dust Detect:On/Off	ENG	[0 to 1 / 0 / 1]
4-020-002	DF Dust Check	Dust Detect:Lvl	ENG	[0 to 8 / 4 / 1]
4-020-003	DF Dust Check	Dust Reject:Lvl	ENG	[0 to 4 / 0 / 1]
4-020-011	DF Dust Check	Dust Detect Level:Rear	ENG	[0 to 1 / 0 / 1]
4-020-012	DF Dust Check	Correction Level:Rear	ENG	[0 to 8 / 4 / 1]
4-201-	LoCPP edge level:K	600dpi 1bit edge1	ENG*	[0 to 15 / 11 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
005				
4-201-006	LoCPP edge level:K	600dpi 1bit edge23	ENG*	[0 to 15 / 11 / 1]
4-201-011	LoCPP edge lv:K	1200dpi1bit edge12	ENG*	[0 to 15 / 12 / 1]
4-201-012	LoCPP edge lv:K	1200dpi1bit edge34	ENG*	[0 to 15 / 12 / 1]
4-301-001	Operation Check APS Sensor		ENG	[0 to 255 / 0 / 1]
4-303-001	Min Size for APS		ENG*	[0 to 1 / 0 / 1] 0: No Original 1: A5-Lengthwise
4-305-001	8K/16K Detection		ENG*	[0 to 3 / 0 / 1] 0: Normal Dtct 1: A4-LEF LT-SEF 2: LT-LEF A4-SEF 3: 8K 16K
4-308-001	Scan Size Detection	Detection ON/OFF	ENG*	[0 to 2 / 1 / 1] 0: OFF 1: ON 2: APS
4-309-001	Scan Size Detect:Setting	Original Density Thresh	ENG*	[0 to 255 / 26 / 1digit]
4-309-002	Scan Size Detect:Setting	Detection Time	ENG*	[20 to 100 / 60 / 20msec]
4-309-003	Scan Size Detect:Setting	Lamp ON:Delay Time	ENG*	[40 to 200 / 40 / 10msec]
4-309-004	Scan Size Detect:Setting	LED PWM Duty	ENG*	[0 to 100 / 45 / 1]
4-310-001	Scan Size Detect Value	S1:R	ENG	[0 to 255 / 0 / 1digit]
4-310-002	Scan Size Detect Value	S1:G	ENG	[0 to 255 / 0 / 1digit]
4-310-003	Scan Size Detect Value	S1:B	ENG	[0 to 255 / 0 / 1digit]
4-310-	Scan Size Detect Value	S2:R	ENG	[0 to 255 / 0 / 1digit]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
004				
4-310-005	Scan Size Detect Value	S2:G	ENG	[0 to 255 / 0 / 1digit]
4-310-006	Scan Size Detect Value	S2:B	ENG	[0 to 255 / 0 / 1digit]
4-310-007	Scan Size Detect Value	S3:R	ENG	[0 to 255 / 0 / 1digit]
4-310-008	Scan Size Detect Value	S3:G	ENG	[0 to 255 / 0 / 1digit]
4-310-009	Scan Size Detect Value	S3:B	ENG	[0 to 255 / 0 / 1digit]
4-400-001	Org Edge Mask	Book:Sub:LEdge(Left)	ENG	[0 to 3 / 0 / 0.1mm]
4-400-002	Org Edge Mask	Book:Sub:TEdge(Right)	ENG	[0 to 3 / 0 / 0.1mm]
4-400-003	Org Edge Mask	Book:Main:LEdge(Rear)	ENG	[0 to 3 / 0 / 0.1mm]
4-400-004	Org Edge Mask	Book:Main:Tedge(Front)	ENG	[0 to 3 / 0 / 0.1mm]
4-400-005	Scanner Erase Margin	ADF:Sub:LEdge(Left)	ENG*	[0 to 3 / 0 / 0.1mm]
4-400-007	Scanner Erase Margin	ADF:Main:LEdge(Rear)	ENG*	[0 to 3 / 0 / 0.1mm]
4-400-008	Scanner Erase Margin	ADF:Main:TEdge(Front)	ENG*	[0 to 3 / 0 / 0.1mm]
4-417-001	IPU Test Pattern	Test Pattern	ENG	[0 to 8 / 0 / 1] 0: Scan Image 1: Gradation:Main A 2: Patch 16C 3: Grid pattern A 4: Slant grid pattern B 5: Argyle P:C 6: Argyle P:D 7: Scanned+Argyle P:C 8: Scanned+Argyle P:D
4-429-	Select Copy Data Security	Copying	ENG	[0 to 3 / 3 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
4-429-002	Select Copy Data Security	Scanning	ENG	[0 to 3 / 3 / 1]
4-429-003	Select Copy Data Security	Fax Operation	ENG	[0 to 3 / 3 / 1]
4-600-001	SBU Version Display	SBU ID	ENG	[0x00 to 0xFF / 0 / 1]
4-609-001	Gray Balance Set: R	Book Scan	ENG*	[-384 to 255 / -100 / 1digit]
4-609-002	Gray Balance Set: R	DF Scan	ENG*	[-384 to 255 / -100 / 1digit]
4-610-001	Gray Balance Set: G	Book Scan	ENG*	[-384 to 255 / -100 / 1digit]
4-610-002	Gray Balance Set: G	DF Scan	ENG*	[-384 to 255 / -100 / 1digit]
4-611-001	Gray Balance Set: B	Book Scan	ENG*	[-384 to 255 / -100 / 1digit]
4-611-002	Gray Balance Set: B	DF Scan	ENG*	[-384 to 255 / -100 / 1digit]
4-635-001	SSCG Correction Set	Mode Selection	ENG*	[0 to 3 / 1 / 1]
4-646-001	Scan Adjust Error	White level	ENG*	[0 to 65535 / 0 / 1]
4-646-002	Scan Adjust Error	Black level	ENG*	[0 to 65535 / 0 / 1]
4-646-003	Scan Adjust Error	SSCG Correction	ENG*	[0 to 65535 / 0 / 1]
4-647-001	Scanner Hard Error	Power-ON	ENG	[0 to 65535 / 0 / 1]
4-688-001	DF Density Adjustment	ARDF	ENG*	[80 to 120 / 106 / 1%]
4-688-002	Scan Image Density Adjustment	1-pass DF	ENG*	[80 to 120 / 101 / 1%]
4-699-001	SBU Test Pattern Change		ENG	[0 to 255 / 0 / 1]
4-700-	CIS ID Display		ENG	[0x00 to 0xFF / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
4-712-001	CIS GB Adj. Value: R		ENG*	[0 to 2048 / 1023 / 1digit]
4-713-001	CIS GB Adj. Value: G		ENG*	[0 to 2048 / 1023 / 1digit]
4-714-001	CIS GB Adj. Value: B		ENG*	[0 to 2048 / 1023 / 1digit]
4-730-001	FROM ADF Factory Setting	CIS Parameter	ENG	[0 to 1 / 0 / 0]
4-730-002	FROM Main Factory Setting	Execution ON/OFF	ENG	[0 to 1 / 0 / 0]
4-730-003	FROM Main Factory Setting	Execution Flag	ENG*	[0 to 1 / 0 / 1]
4-730-004	FROM Data Update		ENG	[0 to 1 / 0 / 0]
4-745-001	CIS Image Level Error Flag		ENG	[0 to 65535 / 0 / 1]
4-746-001	CIS GB Adj Error Flag		ENG	[0 to 7 / 0 / 1]
4-747-001	CIS Hard Error Flag		ENG	[0 to 15 / 0 / 1]
4-796-001	Low Density Color Correction	Front Side	ENG*	[0 to 3 / 0 / 1] 0: OFF 1: WEAK 2: MEDIUM 3: STRONG
4-796-002	Low Density Color Correction	Rear Side	ENG*	[0 to 3 / 0 / 1] 0: OFF 1: WEAK 2: MEDIUM 3: STRONG
4-797-002	Rear Side: Digital AE	Background Erase Level	ENG*	[512 to 1535 / 932 / 1]
4-799-001	CIS TEST Pattern	select	ENG	[0 to 5 / 0 / 1] 0: Normal Scan 1: Fix Value Output

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				2: EO Fix Value Output 3: Main Scan Gradation 4: Sub Scan Gradation 5: Grid Pattern
4-799-002	CIS TEST Pattern	Even Output Level Setting	ENG	[0 to 1023 / 0 / 1digit]
4-799-003	CIS TEST Pattern	Odd Output Level Setting	ENG	[0 to 1023 / 0 / 1digit]
4-803-001	Home Position Adj Value		ENG*	[-2 to 2 / 0 / 0.1mm]
4-853-001	Partial LED ON	ON/OFF(Scan)	ENG*	[0 to 1 / 1 / 1]
4-853-002	Partial LED ON	ON/OFF(Size Detection)	ENG*	[0 to 1 / 1 / 1]
4-860-001	Scan Size Detect:Setting	Shading Data	ENG*	[512 to 1023 / 800 / 1digit]
4-871-001	Distortion Correction	Distortion Correction ON/OFF	ENG	[0 to 1 / 1 / 1]
4-871-002	Distortion Correction	Distortion Initialization	ENG	[0 to 21 / 0 / 1]
4-871-003	Distortion Correction	Magnification Adjust(DF)	ENG*	[-0.35 to 0.35 / 0.11 / 0.01%]
4-871-004	Distortion Correction	Magnification Adjust(FB)	ENG*	[-0.35 to 0.35 / 0 / 0.01%]
4-903-001	Filter Setting	Ind Dot Erase: Text	ENG*	[0 to 7 / 0 / 1]
4-903-002	Filter Setting	Ind Dot Erase: Generation Copy	ENG*	[0 to 7 / 0 / 1]
4-907-001	Gamma Correction	Stamp Entry	ENG	[0 to 2 / 1 / 1]
4-938-005	ACS:Edge Mask	Scan:Sub LEdge	ENG*	[0 to 31 / 15 / 1]
4-938-006	ACS:Edge Mask	Scan:Sub TEdge	ENG*	[0 to 31 / 15 / 1]
4-938-007	ACS:Edge Mask	Scan:Main LEdge	ENG*	[0 to 31 / 15 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
4-938-008	ACS:Edge Mask	Scan:Main TEdge	ENG*	[0 to 31 / 15 / 1]
4-939-001	ACS:Color Range		ENG*	[-2 to 2 / 0 / 1]
4-954-005	Restore Test Chart	Chromaticity Rank	ENG*	[0 to 255 / 0 / 1]
4-958-005	Restore Test Chart: Rear	Chromaticity Rank	ENG*	[0 to 255 / 0 / 1]
4-994-001	Adj Txt/Photo Recog Level	High Compression PDF	ENG	[0 to 2 / 1 / 1]
4-996-001	White Paper Detection Level		ENG	[0 to 6 / 3 / 1]

SP Group 5000

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-009-201	Add display language	1-8	CTL*	[0 to 255 / 0 / 1]
5-009-202	Add display language	9-16	CTL*	[0 to 255 / 0 / 1]
5-009-203	Add display language	17-24	CTL*	[0 to 255 / 0 / 1]
5-009-204	Add display language	25-32	CTL*	[0 to 255 / 0 / 1]
5-009-205	Add display language	33-40	CTL*	[0 to 255 / 0 / 1]
5-009-206	Add display language	41-48	CTL*	[0 to 255 / 0 / 1]
5-009-207	Add display language	49-56	CTL*	[0 to 255 / 0 / 1]
5-024-001	mm/inch Display Selection	0:mm 1:inch	CTL*	[0 to 1 / * / 1] *NA: 1 *EU/AP/CHN/TWN/KOR: 0 0: mm 1: inch
5-045-001	Accounting counter	Counter Method	CTL*	[0 to 7 / 0 / 1] 0: Developments 1: Prints 2: Coverage 7: Coverage (YMC)
5-047-001	Paper Display	Backing Paper	CTL*	[0 to 1 / 0 / 1] 0: OFF 1: ON

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-055-001	Display IP address		CTL*	[0 to 1 / 0 / 1] 0: OFF 1: ON
5-061-001	Toner Remaining Icon Display Change		CTL*	[0 to 1 / 0 / 1] 0: Not display 1: Display
5-061-101	Toner Remaining Window Display Change		CTL*	[0 to 255 / 3 / 1]
5-062-002	Part Replacement Alert Display	#PCU	CTL*	[0 to 1 / 0 / 1]
5-062-009	Part Replacement Alert Display	Cleaning Blade	CTL*	[0 to 1 / 0 / 1]
5-062-018	Part Replacement Alert Display	Charge Roller	CTL*	[0 to 1 / 0 / 1]
5-062-019	Part Replacement Alert Display	Cleaner:Charge Roller	CTL*	[0 to 1 / 0 / 1]
5-062-021	Part Replacement Alert Display	OPC	CTL*	[0 to 1 / 0 / 1]
5-062-022	Part Replacement Alert Display	Stripper	CTL*	[0 to 1 / 0 / 1]
5-062-023	Part Replacement Alert Display	#Dev Unit	CTL*	[0 to 1 / 0 / 1]
5-062-024	Part Replacement Alert Display	Developer	CTL*	[0 to 1 / 0 / 1]
5-062-025	Part Replacement Alert Display	Development Filter	CTL*	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-062-028	Part Replacement Alert Display	Bearing:Development Screw	CTL*	[0 to 1 / 0 / 1]
5-062-108	Part Replacement Alert Display	#Paper Transfer Roller Unit	CTL*	[0 to 1 / 0 / 1]
5-062-115	Part Replacement Alert Display	#Fusing Unit	CTL*	[0 to 1 / 0 / 1] 0: Not display 1: Display
5-062-116	Part Replacement Alert Display	Fusing Belt	CTL*	[0 to 1 / 0 / 1] 0: Not display 1: Display
5-062-118	Part Replacement Alert Display	Pressure Roller	CTL*	[0 to 1 / 0 / 1] 0: Not display 1: Display
5-062-119	Part Replacement Alert Display	Bearing:Pressure Roller	CTL*	[0 to 1 / 0 / 1]
5-062-142	Part Replacement Alert Display	#Waste Toner Bottle	CTL*	[0 to 1 / 0 / 1] 0: Not display 1: Display
5-062-206	Part Replacement Alert Display	#ADF Pick-up Roller	CTL*	[0 to 1 / 0 / 1] 0: Not display 1: Display
5-062-207	Part Replacement Alert Display	#ADF Paper Supply Belt	CTL*	[0 to 1 / 0 / 1] 0: Not display 1: Display
5-062-208	Part Replacement Alert Display	#ADF Reverse Roller	CTL*	[0 to 1 / 0 / 1] 0: Not display 1: Display
5-066-001	PM Parts Display		CTL*	[0 to 1 / 0 / 1] 0: Not display 1: Display
5-067-002	Part Replacement Operation Type	#PCU	CTL*	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-067-009	Part Replacement Operation Type	Cleaning Blade	CTL*	[0 to 1 / 0 / 1]
5-067-018	Part Replacement Operation Type	Charge Roller	CTL*	[0 to 1 / 0 / 1]
5-067-019	Part Replacement Operation Type	Cleaner:Charge Roller	CTL*	[0 to 1 / 0 / 1]
5-067-021	Part Replacement Operation Type	OPC	CTL*	[0 to 1 / 0 / 1]
5-067-022	Part Replacement Operation Type	Stripper	CTL*	[0 to 1 / 0 / 1]
5-067-023	Part Replacement Operation Type	#Dev Unit	CTL*	[0 to 1 / 0 / 1]
5-067-024	Part Replacement Operation Type	Developer	CTL*	[0 to 1 / 0 / 1]
5-067-025	Part Replacement Operation Type	Development Filter	CTL*	[0 to 1 / 0 / 1]
5-067-028	Part Replacement Operation Type	Bearing:Development Screw	CTL*	[0 to 1 / 0 / 1]
5-067-108	Part Replacement Operation Type	#Paper Transfer Roller Unit	CTL*	[0 to 1 / 0 / 1]
5-067-115	Part Replacement Operation Type	#Fusing Unit	CTL*	[0 to 1 / 0 / 1] 0: Service 1: User
5-067-116	Part Replacement Operation Type	Fusing Belt	CTL*	[0 to 1 / 0 / 1] 0: Service 1: User

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-067-118	Part Replacement Operation Type	Pressure Roller	CTL*	[0 to 1 / 0 / 1] 0: Service 1: User
5-067-119	Part Replacement Operation Type	Bearing:Pressure Roller	CTL*	[0 to 1 / 0 / 1]
5-067-142	Part Replacement Operation Type	#Waste Toner Bottle	CTL*	[0 to 1 / 0 / 1] 0: Service 1: User
5-067-206	Part Replacement Operation Type	#ADF Pick-up Roller	CTL*	[0 to 1 / 0 / 1] 0: Service 1: User
5-067-207	Part Replacement Operation Type	#ADF Paper Supply Belt	CTL*	[0 to 1 / 0 / 1] 0: Service 1: User
5-067-208	Part Replacement Operation Type	#ADF Reverse Roller	CTL*	[0 to 1 / 0 / 1] 0: Service 1: User
5-071-001	Set Bypass Paper Size Display		CTL	[0 to 1 / 0 / 1] 0: Off 1: On
5-073-001	Supply Part Replacement Operation Type	Waste Tonner Bottle	CTL*	[0 to 1 / 0 / 1] 0:No Display 1:Display
5-074-002	Home Key Customization	Login Setting	CTL*	[0 to 255 / 0 / 1]
5-074-050	Home Key Customization	Show Home Edit Menu	CTL*	[0 to 2 / 0 / 1]
5-074-091	Home Key Customization	Function Setting	CTL*	[0 to 2 / 0 / 1] 0: Function disable 1: SDK application 2: Legacy application (reserved)
5-	Home Key Customization	Product ID	CTL*	[0 to 0xffffffff / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
074-092				
5-074-093	Home Key Customization	Application Screen ID	CTL*	[0 to 255 / 0 / 1]
5-075-003	USB Keyboard	Display setting	CTL*	[0 to 1 / 0 / 1] 0: Disable 1: Enable
5-081-001	ServiceSP Entry Code Setting		CTL*	[0 to 0 / 0 / 0]
5-083-001	LED Light Switch Setting	Toner Near End	CTL*	[0 to 1 / 0 / 1] 0: OFF 1: ON
5-083-002	LED Light Switch Setting	Waste Toner Near End	CTL*	[0 to 1 / 0 / 1]
5-101-202	Copy Auto Clear Setting	Auto Clear Timer Setting (0:ON 1:OFF)	CTL*	[0 to 1 / 0 / 1]
5-113-001	Optional Counter Type	Default Optional Counter Type	CTL*	[0 to 12 / 0 / 1]
5-113-002	Optional Counter Type	External Optional Counter Type	CTL*	[0 to 3 / 0 / 1]
5-114-001	Optional Counter I/F	MF Key Card Extension	CTL*	[0 to 1 / 0 / 1] 0: Not installed 1: Installed (scanning accounting)
5-118-001	Disable Copying		CTL*	[0 to 1 / 0 / 1] 0: Not disabled 1: Disabled
5-120-001	Mode Clear Opt. Counter Removal	0:Yes 1:StandBy 2:No	CTL*	[0 to 2 / 0 / 1] 0: Yes (removed) 1: Standby (installed but not

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				used) 2: No (not removed)
5-121-001	Counter Up Timing	0:Feed 1:Exit	CTL*	[0 to 1 / 0 / 1] 0: Feed 1: Exit
5-126-001	Set F-size Document		ENG	[0 to 2 / 0 / 1] 0: 8 1/2x13 1: 8 1/4x13 2: 8x13
5-127-001	APS OFF Mode		CTL*	[0 to 1 / 0 / 1] 0: Not disabled 1: Disabled
5-131-001	Paper Size Type Selection		ENG*	[0 to 2 / 0 / 1] 0: JP 1: NA 2: EU
5-135-001	LG_Oficio Change		ENG*	[0 to 1 / 0 / 1]
5-150-001	Length Setting	Bypass(0:OFF 1:Long)	CTL	[0 to 1 / 0 / 1] 0: OFF 1: ON
5-167-001	Fax Printing Mode at Optional Counter Off		CTL*	[0 to 1 / 0 / 1] 0: Automatic printing 1: No automatic printing
5-169-001	CE Login		CTL*	[0 to 1 / 0 / 1] 0: Disabled 1: Enabled
5-181-001	Size Adjust	TRAY 1: 1	ENG*	[0 to 1 / 0 / 1] 0: A4 LEF 1: 8 1/2x11 LEF
5-181-002	Size Adjust	TRAY 1: 2	ENG*	[0 to 1 / 0 / 1] 0: A3 1: 11x17
5-181-	Size Adjust	TRAY 1: 3	ENG*	[0 to 1 / 0 / 1] 0: B4

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
003				1: 8 1/2x14 SEF
5-181-004	Size Adjust	TRAY 1: 4	ENG*	[0 to 1 / 0 / 1] 0: B5 LEF 1: 7 1/4x10 1/2 LEF
5-181-005	Size Adjust	TRAY 2: 1	ENG*	[0 to 1 / 0 / 1] 0: A4 LEF 1: 8 1/2x11 LEF
5-181-006	Size Adjust	TRAY 2: 2	ENG*	[0 to 1 / 0 / 1] 0: A3 1: 11x17
5-181-007	Size Adjust	TRAY 2: 3	ENG*	[0 to 1 / 0 / 1] 0: B4 1: 8 1/2x14 SEF
5-181-008	Size Adjust	TRAY 2: 4	ENG*	[0 to 1 / 0 / 1] 0: B5 LEF 1: 7 1/4x10 1/2 LEF
5-181-009	Size Adjust	TRAY 3/T-LCT: 1	ENG*	[0 to 1 / 0 / 1] 0: A4LEF 1: LTLEF
5-181-010	Size Adjust	TRAY 3: 2	ENG*	[0 to 1 / 0 / 1] 0: A3 1: DLT
5-181-011	Size Adjust	TRAY 3: 3	ENG*	[0 to 1 / 0 / 1] 0: B4 1: LG
5-181-012	Size Adjust	TRAY 3: 4	ENG*	[0 to 1 / 0 / 1] 0: B5LEF 1: ExeLEF
5-181-013	Size Adjust	TRAY 3: 5	ENG*	[0 to 1 / 0 / 1] 0: 12.6x17.7 1: 12x18
5-181-014	Size Adjust	TRAY 4: 1	ENG*	[0 to 1 / 0 / 1] 0: A4LEF 1: LTLEF
5-	Size Adjust	TRAY 4: 2	ENG*	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
181-015				0: A3 1: DLT
5-181-016	Size Adjust	TRAY 4: 3	ENG*	[0 to 1 / 0 / 1] 0: B4 1: LG
5-181-017	Size Adjust	TRAY 4: 4	ENG*	[0 to 1 / 0 / 1] 0: B5LEF 1: ExeLEF
5-181-018	Size Adjust	TRAY 4: 5	ENG*	[0 to 1 / 0 / 1] 0: 12.6x17.7 1: 12x18
5-181-019	Size Adjust	TRAY 5: 1	ENG*	[0 to 1 / 0 / 1] 0: A4LEF 1: LTLEF
5-181-020	Size Adjust	TRAY 5: 2	ENG*	[0 to 1 / 0 / 1] 0: A3 1: DLT
5-181-021	Size Adjust	TRAY 5: 3	ENG*	[0 to 1 / 0 / 1] 0: B4 1: LG
5-181-022	Size Adjust	TRAY 5: 4	ENG*	[0 to 1 / 0 / 1] 0: B5LEF 1: ExeLEF
5-181-023	Size Adjust	TRAY 5: 5	ENG*	[0 to 1 / 0 / 1] 0: 12.6x17.7 1: 12x18
5-181-024	Size Adjust	LCT	ENG*	[0 to 2 / 0 / 1] 0: A4LEF 1: LTLEF 2: B5LEF
5-186-001	RK4		ENG*	[0 to 1 / 0 / 1]
5-188-001	Copy Nv Version		CTL*	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-191-001	Mode Set	Power Str Set	CTL*	[0 to 1 / 1 / 1] 0: OFF 1: ON
5-195-001	Limitless SW		CTL*	[0 to 1 / 0 / 1] 0: Productivity Precede 1: Use paper up
5-199-001	Paper Exit After Staple End	Staple(1:Without 2:After 0:Auto)	CTL	[0 to 2 / 0 / 1]
5-199-002	Paper Exit After Staple End	Saddle(1:Without 2:After 0:Auto)	CTL	[0 to 2 / 0 / 1]
5-199-003	Paper Exit After Staple End	Stapless(1:Without 2:After 0:Auto)	CTL	[0 to 2 / 0 / 1]
5-212-003	Page Numbering	Duplex Printout Left/Right Position of Left/Right Facing	CTL*	[-1000 to 1000 / 0 / 0.01mm]
5-212-004	Page Numbering	Duplex Printout Top/Bottom Position of Left/Right Facing	CTL*	[-1000 to 1000 / 0 / 0.01mm]
5-212-018	Page Numbering	Duplex Printout Left/Right Position of Top/Bottom Facing	CTL*	[-1000 to 1000 / 0 / 0.01mm]
5-212-019	Page Numbering	Duplex Printout Top/Bottom Position of Top/Bottom Facing	CTL*	[-1000 to 1000 / 0 / 0.01mm]
5-227-201	Page Numbering	Allow Page No. Entry	CTL*	[2 to 9 / 9 / 1]
5-227-202	Page Numbering	Zero Surplus Setting	CTL*	[0 to 1 / 0 / 1] 0:OFF 1:ON
5-302-002	Set Time	Time Difference	CTL*	[-1440 to 1440 / * / 1] *NA: -300 *EU: 60

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				*AP/CHN/TWN: 480 *KOR: 540
5-305-101	Auto Off Set	Auto Off Limit Set	CTL*	[0 to 1 / 0 / 1]
5-307-001	Daylight Saving Time	Setting	CTL*	[0 to 1 / * / 1] *NA/EU: 1 *AP/CHN/TWN/KOR: 0 0: Disabled 1: Enabled
5-307-003	Daylight Saving Time	Rule Set(Start)	CTL*	[0 to 0xffffffff / * / 1] *NA: 0x03200210 *EU: 0x03500010 *AP: 0x10500010 *CHN/TWN/KOR: 0
5-307-004	Daylight Saving Time	Rule Set(End)	CTL*	[0 to 0xffffffff / * / 1] *NA: 0x11100200 *EU: 0x10500100 *AP: 0x03100000 *CHN/TWN/KOR: 0
5-401-103	Access Control	Default Document ACL	CTL*	[0 to 3 / 0 / 1]
5-401-104	Access Control	Authentication Time	CTL*	[0 to 255 / 0 / 1sec]
5-401-162	Access Control	Extend Certification Detail	CTL*	[0 to 0xff / 0 / 1]
5-401-200	Access Control	SDK1 UniqueID	CTL*	[0 to 0xFFFFFFFF / 0 / 1]
5-401-201	Access Control	SDK1 Certification Method	CTL*	[0 to 0xFF / 0 / 1]
5-	Access Control	SDK2 UniqueID	CTL*	[0 to 0xFFFFFFFF / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
401-210				
5-401-211	Access Control	SDK2 Certification Method	CTL*	[0 to 0xFF / 0 / 1]
5-401-220	Access Control	SDK3 UniqueID	CTL*	[0 to 0xFFFFFFFF / 0 / 1]
5-401-221	Access Control	SDK3 Certification Method	CTL*	[0 to 0xFF / 0 / 1]
5-401-230	Access Control	SDK Certification Device	CTL*	[0 to 0xff / 0 / 1] 0-1: SDK authentication available 0-0: Disable all functions 1-1: SKB Display 1-0: Disable 2-1: Administrator login 2-0: Disable 3 to 7-0: Reserved (set “0” only)
5-401-240	Access Control	Detail Option	CTL*	[0 to 0xff / 0 / 1] 0: Logout confirm option -1: ON, 0: OFF 2 to 1: Auto-logout timer(retry timer) -11: 30sec, 10: 20sec, 01: 10sec, 00: 60sec 3: personal authority / Group authority and operation -1: ON, 0: OFF 4: Skip password entry -1: ON, 0: OFF 5: Set the display of the remaining Frequence -1: ON, 0: OFF

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				6 to 7: Set the display time -1: ON, 0: OFF
5-402-101	Access Control	SDKJ1 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-102	Access Control	SDKJ2 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-103	Access Control	SDKJ3 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-104	Access Control	SDKJ4 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-105	Access Control	SDKJ5 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-106	Access Control	SDKJ6 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-107	Access Control	SDKJ7 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-108	Access Control	SDKJ8 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-109	Access Control	SDKJ9 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-110	Access Control	SDKJ10 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-111	Access Control	SDKJ11 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-402-112	Access Control	SDKJ12 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-113	Access Control	SDKJ13 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-114	Access Control	SDKJ14 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-115	Access Control	SDKJ15 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-116	Access Control	SDKJ16 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-117	Access Control	SDKJ17 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-118	Access Control	SDKJ18 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-119	Access Control	SDKJ19 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-120	Access Control	SDKJ20 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-121	Access Control	SDKJ21 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-122	Access Control	SDKJ22 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-123	Access Control	SDKJ23 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-402-124	Access Control	SDKJ24 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-125	Access Control	SDKJ25 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-126	Access Control	SDKJ26 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-127	Access Control	SDKJ27 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-128	Access Control	SDKJ28 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-129	Access Control	SDKJ29 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-130	Access Control	SDKJ30 Limit Setting	CTL*	[0 to 0xFF / 0 / 1]
5-402-141	Access Control	SDKJ1 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-142	Access Control	SDKJ2 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-143	Access Control	SDKJ3 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-144	Access Control	SDKJ4 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-145	Access Control	SDKJ5 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-402-146	Access Control	SDKJ6 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-147	Access Control	SDKJ7 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-148	Access Control	SDKJ8 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-149	Access Control	SDKJ9 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-150	Access Control	SDKJ10 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-151	Access Control	SDKJ11 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-152	Access Control	SDKJ12 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-153	Access Control	SDKJ13 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-154	Access Control	SDKJ14 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-155	Access Control	SDKJ15 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-156	Access Control	SDKJ16 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-157	Access Control	SDKJ17 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-402-158	Access Control	SDKJ18 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-159	Access Control	SDKJ19 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-160	Access Control	SDKJ20 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-161	Access Control	SDKJ21 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-162	Access Control	SDKJ22 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-163	Access Control	SDKJ23 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-164	Access Control	SDKJ24 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-165	Access Control	SDKJ25 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-166	Access Control	SDKJ26 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-167	Access Control	SDKJ27 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-168	Access Control	SDKJ28 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-402-169	Access Control	SDKJ29 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-402-170	Access Control	SDKJ30 ProductID	CTL*	[0 to 0xffffffff / 0 / 1]
5-404-001	User Code Count Clear	User Code Count Clear	CTL	[0 to 0 / 0 / 0]
5-404-101	User Code Count Clear	User Code Count Clear Permit Setting	CTL	[0 to 1 / 0 / 1]
5-411-004	LDAP-Certification	Simplified Authentication	CTL*	[0 to 1 / 1 / 1] 1: On 0: Off
5-411-005	LDAP-Certification	Password Null Not Permit	CTL*	[0 to 1 / 1 / 1] 0: Password NULL not permitted. 1: Password NULL permitted.
5-411-006	LDAP-Certification	Detail Option	CTL*	[0 to 0xff / 0 / 1] 0: OFF 1: ON
5-412-100	Krb-Certification	Encrypt Mode	CTL*	[0 to 0xFF / 0x1F / 1]
5-413-001	Lockout Setting	Lockout On/Off	CTL*	[0 to 1 / 0 / 1] 0: Off 1: On
5-413-002	Lockout Setting	Lockout Threshold	CTL*	[1 to 10 / 5 / 1]
5-413-003	Lockout Setting	Cancelation On/Off	CTL*	[0 to 1 / 0 / 1] 0: Off (no wait time, lockout not cancelled) 1: On (system waits, cancels lockout if correct user ID and password are entered)
5-413-	Lockout Setting	Cancelation Time	CTL*	[1 to 9999 / 60 / 1min]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
004				
5-414-001	Access Mitigation	Mitigation On/Off	CTL*	[0 to 1 / 0 / 1] 0: OFF 1: ON
5-414-002	Access Mitigation	Mitigation Time	CTL*	[0 to 60 / 15 / 1min]
5-415-001	Password Attack	Permissible Number	CTL*	[0 to 100 / 30 / 1]
5-415-002	Password Attack	Detect Time	CTL*	[1 to 10 / 5 / 1]
5-416-001	Access Information	Access User Max Num	CTL*	[50 to 200 / 200 / 1]
5-416-002	Access Information	Access Password Max Num	CTL*	[50 to 200 / 200 / 1]
5-416-003	Access Information	Monitor Interval	CTL*	[1 to 10 / 3 / 1]
5-417-001	Access Attack	Access Permissible Number	CTL*	[0 to 500 / 100 / 1]
5-417-002	Access Attack	Attack Detect Time	CTL*	[10 to 30 / 10 / 1sec]
5-417-003	Access Attack	Productivity Fall Waite	CTL*	[0 to 9 / 3 / 1sec]
5-417-004	Access Attack	Attack Max Num	CTL*	[50 to 200 / 200 / 1]
5-	User Authentication	Copy	CTL*	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
420-001				0: On 1: Off
5-420-011	User Authentication	DocumentServer	CTL*	[0 to 1 / 0 / 1] 0: On 1: Off
5-420-021	User Authentication	Fax	CTL*	[0 to 1 / 0 / 1] 0: On 1: Off
5-420-031	User Authentication	Scanner	CTL*	[0 to 1 / 0 / 1] 0: On 1: Off
5-420-041	User Authentication	Printer	CTL*	[0 to 1 / 0 / 1] 0: On 1: Off
5-420-051	User Authentication	SDK1	CTL*	[0 to 1 / 0 / 1] 0: ON 1: OFF
5-420-061	User Authentication	SDK2	CTL*	[0 to 1 / 0 / 1] 0: ON 1: OFF
5-420-071	User Authentication	SDK3	CTL*	[0 to 1 / 0 / 1] 0: ON 1: OFF
5-420-081	User Authentication	Browser	CTL*	[0 to 1 / 0 / 1] 0: ON 1: OFF
5-430-001	Auth Dialog Message Change	Message Change On/Off	CTL*	[0 to 1 / 0 / 1]
5-430-002	Auth Dialog Message Change	Message Text Download	CTL	[0 to 0 / 0 / 0]
5-430-003	Auth Dialog Message Change	Message Text ID	CTL	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-431-010	External Auth User Preset	Tag	CTL*	[0 to 1 / 1 / 1]
5-431-011	External Auth User Preset	Entry	CTL*	[0 to 1 / 1 / 1]
5-431-012	External Auth User Preset	Group	CTL*	[0 to 1 / 1 / 1]
5-431-020	External Auth User Preset	Mail	CTL*	[0 to 1 / 1 / 1]
5-431-030	External Auth User Preset	Fax	CTL*	[0 to 1 / 1 / 1]
5-431-031	External Auth User Preset	FaxSub	CTL*	[0 to 1 / 1 / 1]
5-431-032	External Auth User Preset	Folder	CTL*	[0 to 1 / 1 / 1]
5-431-033	External Auth User Preset	ProtectCode	CTL*	[0 to 1 / 1 / 1]
5-431-034	External Auth User Preset	SmtpAuth	CTL*	[0 to 1 / 1 / 1]
5-431-035	External Auth User Preset	LdapAuth	CTL*	[0 to 1 / 1 / 1]
5-431-036	External Auth User Preset	Smb Ftp Fldr Auth	CTL*	[0 to 1 / 1 / 1]
5-431-037	External Auth User Preset	AcntAcl	CTL*	[0 to 1 / 1 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-431-038	External Auth User Preset	DocumentAcl	CTL*	[0 to 1 / 1 / 1]
5-431-040	External Auth User Preset	CertCrypt	CTL*	[0 to 1 / 0 / 1]
5-431-050	External Auth User Preset	UserLimitCount	CTL*	[0 to 1 / 1 / 1]
5-481-001	Authentication Error Code	System Log Disp	CTL*	[0 to 1 / 0 / 1] 0: Off 1: On
5-481-002	Authentication Error Code	Panel Disp	CTL*	[0 to 1 / 1 / 1] 1: On 0: Off
5-490-001	MF KeyCard	Job Permit Setting	CTL*	[0 to 1 / 0 / 1] 0: Disabled. Cancels operation without a user code. 1: Enabled. Allows operation without a user code.
5-491-001	Optional Counter	Detail Option	CTL*	[0 to 0xff / 0 / 1]
5-501-001	PM Alarm	PM Alarm Level	CTL*	[0 to 9999 / 0 / 1] 0: Alarm off 1 to 9999: Alarm goes off when Value (1 to 9999) x 1000 > PM counter
5-504-001	Jam Alarm		CTL*	[0 to 3 / 3 / 1] 0: Z 1: L 2: M 3: H
5-504-002	Jam Alarm	Threshold	CTL	[1 to 99 / 10 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-505-001	Error Alarm		CTL*	[0 to 255 / * / 1] *MP 2555: 20 *MP 3055: 25 *MP 3555: 35 *MP 4055: 45 *MP 5055: 60 *MP 6055: 75 0: Alarm Off
5-505-002	Error Alarm	Threshold	CTL	[1 to 99 / 5 / 1]
5-507-001	Supply/CC Alarm	Paper Supply Alarm	CTL*	[0 to 1 / 0 / 1] 0: OFF 1: ON
5-507-002	Supply/CC Alarm	Staple Supply Alarm	CTL*	[0 to 1 / 1 / 1] 0: OFF 1: ON
5-507-003	Supply/CC Alarm	Toner Supply Alarm	CTL*	[0 to 1 / 1 / 1] 0: OFF 1: ON
5-507-080	Supply/CC Alarm	Toner Call Timing	CTL*	[0 to 1 / 0 / 1] 0: Toner bottle replacement 1: Less than toner threshold
5-507-081	Supply/CC Alarm	Toner Call Threshold	CTL*	[10 / 10 / Fixed value] This program enables only if SP5-507-080 is “1”. The threshold for triggering a Toner Call is fixed at 10%, and cannot be changed. Therefore, the timing of the toner auto-delivery service and alerts on the operation panel also cannot be changed.
5-507-128	Supply/CC Alarm	Interval: Others	CTL*	[250 to 10000 / 1000 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-507-132	Supply/CC Alarm	Interval: A3	CTL*	[250 to 10000 / 1000 / 1]
5-507-133	Supply/CC Alarm	Interval: A4	CTL*	[250 to 10000 / 1000 / 1]
5-507-134	Supply/CC Alarm	Interval: A5	CTL*	[250 to 10000 / 1000 / 1]
5-507-141	Supply/CC Alarm	Interval: B4	CTL*	[250 to 10000 / 1000 / 1]
5-507-142	Supply/CC Alarm	Interval: B5	CTL*	[250 to 10000 / 1000 / 1]
5-507-160	Supply/CC Alarm	Interval: DLT	CTL*	[250 to 10000 / 1000 / 1]
5-507-164	Supply/CC Alarm	Interval: LG	CTL*	[250 to 10000 / 1000 / 1]
5-507-166	Supply/CC Alarm	Interval: LT	CTL*	[250 to 10000 / 1000 / 1]
5-507-172	Supply/CC Alarm	Interval: HLT	CTL*	[250 to 10000 / 1000 / 1]
5-508-001	CC Call	Jam Remains	CTL*	[0 to 1 / 1 / 1] 0: Disable 1: Enable
5-508-002	CC Call	Continuous Jams	CTL*	[0 to 1 / 1 / 1] 0: Disable 1: Enable
5-508-003	CC Call	Continuous Door Open	CTL*	[0 to 1 / 1 / 1] 0: Disable 1: Enable

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-508-011	CC Call	Jam Detection: Time Length	CTL*	[3 to 30 / 10 / 1]
5-508-012	CC Call	Jam Detection: Continuous Count	CTL*	[2 to 10 / 5 / 1]
5-508-013	CC Call	Door Open: Time Length	CTL*	[3 to 30 / 10 / 1]
5-513-001	PartsAlermlevelCount	Normal	CTL	[1 to 9999 / 300 / 1]
5-513-002	PartsAlermlevelCount	Df	CTL	[1 to 9999 / 300 / 1]
5-514-001	PartsAlermlev	Normal	CTL	[0 to 1 / 1 / 1]
5-514-002	PartsAlermlev	Df	CTL	[0 to 1 / 0 / 1]
5-515-001	SC/Alarm Setting	SC Call	CTL*	[0 to 1 / 1 / 1] 0: OFF 1: ON
5-515-002	SC/Alarm Setting	Service Parts Near End Call	CTL*	[0 to 1 / 1 / 1] 0: OFF 1: ON
5-515-003	SC/Alarm Setting	Service Parts End Call	CTL*	[0 to 1 / 1 / 1] 0: OFF 1: ON
5-515-004	SC/Alarm Setting	User Call	CTL*	[0 to 1 / 1 / 1] 0: OFF 1: ON
5-515-006	SC/Alarm Setting	Communication Test Call	CTL*	[0 to 1 / 1 / 1] 0: OFF 1: ON

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-515-007	SC/Alarm Setting	Machine Information Notice	CTL*	[0 to 1 / 1 / 1] 0: OFF 1: ON
5-515-008	SC/Alarm Setting	Alarm Notice	CTL*	[0 to 1 / 1 / 1] 0: OFF 1: ON
5-515-010	SC/Alarm Setting	Supply Automatic Ordering Call	CTL*	[0 to 1 / 1 / 1] 0: OFF 1: ON
5-515-011	SC/Alarm Setting	Supply Management Report Call	CTL*	[0 to 1 / 1 / 1] 0: OFF 1: ON
5-515-012	SC/Alarm Setting	Jam/Door Open Call	CTL*	[0 to 1 / 1 / 1] 0: OFF 1: ON
5-515-050	SC/Alarm Setting	Timeout:Manual Call	CTL*	[1 to 255 / 5 / 1min]
5-515-051	SC/Alarm Setting	Timeout:Other Call	CTL	[1 to 255 / 10 / 1min]
5-517-061	Get Machine Information	AutoDiscovery Execution Setting	CTL	[0 to 1 / 0 / 1]
5-517-062	Get Machine Information	AutoDiscovery Execution Interval	CTL	[0 to 1 / 0 / 1]
5-517-063	Get Machine Information	AutoDiscovery Execution Weekday	CTL	[0 to 6 / 0 / 1]
5-517-064	Get Machine Information	AutoDiscovery Execution Hour	CTL	[0 to 23 / 0 / 1]
5-517-065	Get Machine Information	AutoDiscovery Execution Minute	CTL	[0 to 59 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-517-066	Get Machine Information	AutoDiscovery SNMP Community Name	CTL	[0 to 0 / 0 / 0]
5-728-001	Network Setting	NAT Machine Port1	CTL*	[1 to 65535 / 49101 / 1]
5-728-002	Network Setting	NAT UI Port1	CTL*	[1 to 65535 / 55101 / 1]
5-728-003	Network Setting	NAT Machine Port2	CTL*	[1 to 65535 / 49102 / 1]
5-728-004	Network Setting	NAT UI Port2	CTL*	[1 to 65535 / 55102 / 1]
5-728-005	Network Setting	NAT Machine Port3	CTL*	[1 to 65535 / 49103 / 1]
5-728-006	Network Setting	NAT UI Port3	CTL*	[1 to 65535 / 55103 / 1]
5-728-007	Network Setting	NAT Machine Port4	CTL*	[1 to 65535 / 49104 / 1]
5-728-008	Network Setting	NAT UI Port4	CTL*	[1 to 65535 / 55104 / 1]
5-728-009	Network Setting	NAT Machine Port5	CTL*	[1 to 65535 / 49105 / 1]
5-728-010	Network Setting	NAT UI Port5	CTL*	[1 to 65535 / 55105 / 1]
5-728-011	Network Setting	NAT Machine Port6	CTL*	[1 to 65535 / 49106 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-728-012	Network Setting	NAT UI Port6	CTL*	[1 to 65535 / 55106 / 1]
5-728-013	Network Setting	NAT Machine Port7	CTL*	[1 to 65535 / 49107 / 1]
5-728-014	Network Setting	NAT UI Port7	CTL*	[1 to 65535 / 55107 / 1]
5-728-015	Network Setting	NAT Machine Port8	CTL*	[1 to 65535 / 49108 / 1]
5-728-016	Network Setting	NAT UI Port8	CTL*	[1 to 65535 / 55108 / 1]
5-728-017	Network Setting	NAT Machine Port9	CTL*	[1 to 65535 / 49109 / 1]
5-728-018	Network Setting	NAT UI Port9	CTL*	[1 to 65535 / 55109 / 1]
5-728-019	Network Setting	NAT Machine Port10	CTL*	[1 to 65535 / 49110 / 1]
5-728-020	Network Setting	NAT UI Port10	CTL*	[1 to 65535 / 55110 / 1]
5-728-101	Network Setting	PacketCapture	CTL	[0 to 1 / 0 / 1]
5-728-102	Network Setting	PacketCapture:mode	CTL	[0 to 1 / 0 / 1]
5-728-103	Network Setting	PacketCapture:interface	CTL	[0 to 3 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-728-104	Network Setting	PacketCapture:length	CTL	[54 to 65535 / 128 / 1]
5-728-105	Network Setting	PacketCapture:broadcast	CTL	[0 to 1 / 0 / 1]
5-728-106	Network Setting	PacketCapture:specify port	CTL	[0 to 1 / 0 / 1]
5-728-107	Network Setting	PacketCapture:portnumber	CTL	[0 to 65535 / 0 / 1]
5-728-108	Network Setting	PacketCapture:time	CTL	[0 to 0xffffffff / 0 / 1]
5-730-001	Extended Function Setting	JavaTM Platform setting	CTL*	[0 to 1 / 1 / 1] 0: Disable, 1: Enable
5-730-010	Extended Function Setting	Expiration Prior Alarm Set	CTL*	[0 to 999 / 20 / 1days]
5-731-001	Counter Effect	Change Mk1 Cnt(Paper->Combine)	CTL*	[0 to 1 / 0 / 1]
5-734-001	PDF Setting	PDF/A Fixed	CTL*	[0 to 1 / 0 / 1]
5-741-001	Node Authentication Timuout		CTL*	[1 to 255 / 60 / 1sec]
5-745-211	DeemedPowerConsumption	Controller Standby	CTL*	[0 to 9999 / 0 / 1]
5-745-212	DeemedPowerConsumption	STR	CTL*	[0 to 9999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-745-213	DeemedPowerConsumption	Main Power Off	CTL*	[0 to 9999 / 0 / 1]
5-745-214	DeemedPowerConsumption	Scanning and Printing	CTL*	[0 to 9999 / 0 / 1]
5-745-215	DeemedPowerConsumption	Printing	CTL*	[0 to 9999 / 0 / 1]
5-745-216	DeemedPowerConsumption	Scanning	CTL*	[0 to 9999 / 0 / 1]
5-745-217	DeemedPowerConsumption	Engine Standby	CTL*	[0 to 9999 / 0 / 1]
5-745-218	DeemedPowerConsumption	Low Power Consumption	CTL*	[0 to 9999 / 0 / 1]
5-745-219	DeemedPowerConsumption	Silent condition	CTL*	[0 to 9999 / 0 / 1]
5-745-220	DeemedPowerConsumption	Heater Off	CTL*	[0 to 9999 / 0 / 1]
5-748-101	OpePanel Setting	Op Type Action Setting	CTL	[0 to 255 / 0 / 1] 0: Normal operation panel (1: Reconnect, 0: Not recconect) 1: Smart operation panel (1: Job stop, 0: Job duration) 2: Smart Operation Panel mode settings (1: Secure boot, 0: Normal boot)
5-748-201	OpePanel Setting	Cheetah Panel Connect Setting	CTL	[0 to 1 / 0 / 1] 0: OFF 1: ON
5-	Import/Export	Export	CTL	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
749-001				Target: System, Printer, Fax, Scanner Option: Unique, Secret Copy config: Encryption, Encryption key (if selected)
5-749-101	Import/Export	Import	CTL	[0 to 0 / 0 / 0] Option: Unique Copy config: Encryption, Encryption key (if selected)
5-751-001	Key Event Encryption Setting	Password	CTL	[0 to 255 / 0 / 1]
5-752-001	Copy:FlairAPI Setting	0x00 - 0xff	CTL*	[0 to 255 / 0 / 1] bit 0: Start of FlairAPI Server (0: Off, 1: On) bit 1: Access Perrmission of FlairAPI from outside of the machine (0: Disabled, 1: Enabled) bit 2: Reserved bit 3: Reserved bit 4: Simple UI Function (0: Disabled, 1: Enabled) bit 5: Accessing permission of Simple UI from outside of the machine (0: Disabled, 1: Enabled) bit 6: Reserved bit 7: Reserved
5-755-001	Display Setting	Disp Administrator Password Change Scrn	CTL	[0 to 0 / 0 / 0]
5-755-002	Display Setting	Hide Administrator Password Change Scrn	CTL	[0 to 0 / 0 / 0]
5-	RemoteUI Setting	Authentication	CTL	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
758-001				
5-759-001	Machine Limit Count	Machine Limit Count Setting	CTL	[0 to 1 / 0 / 1]
5-759-051	Machine Limit Count	Limit Count	CTL	[0 to 99999999 / 0 / 1]
5-761-001	SmartOperationPanel Setting	Restore the default Home screen	CTL	[0 to 255 / 0 / 1]
5-801-001	Memory Clear	All Clear	CTL	[0 to 0 / 0 / 0]
5-801-002	Memory Clear	Engine	ENG	[0 to 1 / 0 / 1]
5-801-003	Memory Clear	SCS	CTL	[0 to 0 / 0 / 0]
5-801-004	Memory Clear	IMH Memory Clr	CTL	[0 to 0 / 0 / 0]
5-801-005	Memory Clear	MCS	CTL	[0 to 0 / 0 / 0]
5-801-006	Memory Clear	Copier application	CTL	[0 to 0 / 0 / 0]
5-801-007	Memory Clear	Fax Application	CTL	[0 to 0 / 0 / 0]
5-801-008	Memory Clear	Printer Application	CTL	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-801-009	Memory Clear	Scanner Application	CTL	[0 to 0 / 0 / 0]
5-801-010	Memory Clear	Web Service	CTL	[0 to 0 / 0 / 0]
5-801-011	Memory Clear	NCS	CTL	[0 to 0 / 0 / 0]
5-801-012	Memory Clear	R-FAX	CTL	[0 to 0 / 0 / 0]
5-801-014	Memory Clear	Clear DCS Setting	CTL	[0 to 0 / 0 / 0]
5-801-015	Memory Clear	Clear UCS Setting	CTL	[0 to 0 / 0 / 0]
5-801-016	Memory Clear	MIRS Setting	CTL	[0 to 0 / 0 / 0]
5-801-017	Memory Clear	CCS	CTL	[0 to 0 / 0 / 0]
5-801-018	Memory Clear	SRM Memory Clr	CTL	[0 to 0 / 0 / 0]
5-801-019	Memory Clear	LCS	CTL	[0 to 0 / 0 / 0]
5-801-020	Cleae Memory	Web Uapli	CTL	[0 to 0 / 0 / 0]
5-801-021	Memory Clear	ECS	CTL	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-801-023	Memory Clear	AICS	CTL	[0 to 0 / 0 / 0]
5-801-025	Cleae Memory	websys	CTL	[0 to 0 / 0 / 0]
5-801-026	Memory Clear	PLN	CTL	[0 to 0 / 0 / 0]
5-801-027	Memory Clear	SAS	CTL	[0 to 0 / 0 / 0]
5-801-028	Memory Clear	Rest WebService	CTL	[0 to 0 / 0 / 0]
5-805-001	Anti-Condensation Heater	0:OFF / 1:ON	ENG*	[0 to 1 / 0 / 1]
5-810-001	SC Reset	Fusing SC Reset	ENG	[0 to 1 / 0 / 1]
5-810-002	SC Reset	Hard High Temp. Detection	ENG	[0 to 1 / 0 / 1]
5-811-002	MachineSerial	Display	ENG*	[0 to 255 / 0 / 1]
5-811-004	MachineSerial Set	BCU	ENG	[0 to 255 / 0 / 1]
5-811-021	Machine Serial Update Date	Latest	ENG*	[0 to 1 / 0 / 1]
5-811-022	Machine Serial Update Date	Previous	ENG*	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-811-023	Machine Serial	Previous	ENG*	[0 to 255 / 0 / 1]
5-811-024	Machine Serial Update Date	Latest(BCU)	ENG*	[0 to 1 / 0 / 1]
5-811-025	Machine Serial Update Date	Previous(BCU)	ENG*	[0 to 1 / 0 / 1]
5-811-026	Machine Serial	Previous(BCU)	ENG*	[0 to 255 / 0 / 1]
5-812-001	Service Tel. No. Setting	Service	CTL*	[0 to 0 / 0 / 0]
5-812-002	Service Tel. No. Setting	Facsimile	CTL*	[0 to 0 / 0 / 0]
5-812-003	Service Tel. No. Setting	Supply	CTL*	[0 to 0 / 0 / 0]
5-812-004	Service Tel. No. Setting	Operation	CTL*	[0 to 0 / 0 / 0]
5-816-001	Remote Service	I/F Setting	CTL*	[0 to 2 / 2 / 1] 0: Remote service off 1: CSS remote service on 2: NRS remote service on
5-816-002	Remote Service	CE Call	CTL*	[0 to 1 / 0 / 1] 0: Start of the service 1: End of the service
5-816-003	Remote Service	Function Flag	CTL*	[0 to 1 / 0 / 1] 0: Disabled 1: Enabled
5-816-	Remote Service	SSL Disable	CTL*	[0 to 1 / 0 / 1] 0: Yes. SSL not used.

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
007				1: No. SSL used.
5-816-008	Remote Service	RCG Connect Timeout	CTL*	[1 to 90 / 30 / 1sec]
5-816-009	Remote Service	RCG Write Timeout	CTL*	[0 to 100 / 60 / 1sec]
5-816-010	Remote Service	RCG Read Timeout	CTL*	[0 to 100 / 60 / 1sec]
5-816-011	Remote Service	Port 80 Enable	CTL*	[0 to 1 / 0 / 1] 0: No. Access denied 1: Yes. Access granted.
5-816-013	Remote Service	RFU Timing	CTL*	[0 to 1 / 1 / 1] 0: Any status of a target machine 1: Sleep or panel off mode only
5-816-014	Remote Service	RCG Error Cause	CTL	[0 to 2 / 0 / 1] 0: Initial state, normal condition 1: Error
5-816-021	Remote Service	RCG-C Registed	CTL*	[0 to 1 / 0 / 1] 0: Installation not completed 1: Installation completed
5-816-023	Remote Service	Connect Type(N/M/3G)	CTL*	[0 to 2 / 0 / 1] 0: internet connection 1: Dial-up connection
5-816-061	Remote Service	Cert Expire Timing	CTL*	[0 to 0 / 0 / 1] 0: Not use 1: Use
5-816-062	Remote Service	Use Proxy	CTL*	[0 to 1 / 0 / 1] 0: Not use 1: Use
5-816-063	Remote Service	Proxy Host	CTL*	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-816-064	Remote Service	Proxy PortNumber	CTL*	[0 to 0xffff / 0 / 1]
5-816-065	Remote Service	Proxy User Name	CTL*	[0 to 0 / 0 / 0]
5-816-066	Remote Service	Proxy Password	CTL*	[0 to 0 / 0 / 0]
5-816-067	Remote Service	CERT:Up State	CTL*	[0 to 255 / 0 / 1]
5-816-068	Remote Service	CERT:Error	CTL*	[0 to 255 / 0 / 1]
5-816-069	Remote Service	CERT:Up ID	CTL*	[0 to 0 / 0 / 0]
5-816-083	Remote Service	Firm Up Status	CTL*	[0 to 1 / 0 / 1] 0: Waiting for accepting firm update 1: Waiting for firm update start schedule 2: Waiting for user confirmation 3: In preparation for the machine firm update 4: processing the machine firm update 5: processing the closing operation of the machine firm update
5-816-085	Remote Service	Firm Up User Check	CTL*	[0 to 1 / 0 / 1]
5-816-	Remote Service	Firmware Size	CTL*	[0 to 0xffffffff / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
086				
5-816-087	Remote Service	CERT:Macro Ver.	CTL	[0 to 0 / 0 / 0]
5-816-088	Remote Service	CERT:PAC Ver.	CTL	[0 to 0 / 0 / 0]
5-816-089	Remote Service	CERT:ID2Code	CTL	[0 to 0 / 0 / 0]
5-816-090	Remote Service	CERT:Subject	CTL	[0 to 0 / 0 / 0]
5-816-091	Remote Service	CERT:SerialNo.	CTL	[0 to 0 / 0 / 0]
5-816-092	Remote Service	CERT:Issuer	CTL	[0 to 0 / 0 / 0]
5-816-093	Remote Service	CERT:Valid Start	CTL	[0 to 0 / 0 / 0]
5-816-094	Remote Service	CERT:Valid End	CTL	[0 to 0 / 0 / 0]
5-816-102	Remote Service	CERT:Encrypt Level	CTL*	[1 to 2 / 1 / 1]
5-816-103	Remote Service	Client Communication Method	CTL*	[0 to 3 / 0 / 1]
5-816-104	Remote Service	Client Communication Limit	CTL*	[1 to 7 / 7 / 1]
5-	Remote Service	Network Information	CTL*	[5 to 255 / 5 / 1sec]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
816-115		Waiting timer		
5-816-150	Remote Service	Selection Country	CTL*	[0 to 10 / * / 1] *NA: 1 *EU: 3 *AP/CHN/TWN/KOR: 0 0: Japan 1: USA 2: Canada 3: UK 4: Germany 5: France 6: Italy 7: Netherlands 8: Belgium 9: Luxembourg 10: Spain
5-816-151	Remote Service	Line Type Automatic Judgement	CTL*	[0 to 1 / 0 / 1]
5-816-152	Remote Service	Line Type Judgement Result	CTL	[0 to 255 / 0 / 0]
5-816-153	Remote Service	Selection Dial / Push	CTL*	[0 to 2 / * / 0] *NA/EU: 1 *AP/CHN/TWN/KOR: 2 0: Tone Dialing Phone 1: Pulse Dialing Phone
5-816-154	Remote Service	Outside Line Outgoing Number	CTL	[0 to 0 / 0 / 0]
5-816-156	Remote Service	Dial Up User Name	CTL*	[0 to 0 / 0 / 0]
5-816-	Remote Service	Dial Up Password	CTL*	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
157				
5-816-161	Remote Service	Local Phone Number	CTL*	[0 to 0 / 0 / 0]
5-816-162	Remote Service	Connection Timing Adjustment Incoming	CTL*	[0 to 24 / 1 / 1]
5-816-163	Remote Service	Access Point	CTL*	[0 to 0 / 0 / 0]
5-816-164	Remote Service	Line Connecting	CTL*	[0 to 1 / 0 / 1] 0: Sharing Fax 1: No Sharing Fax
5-816-173	Remote Service	Modem Serial No.	CTL*	[0 to 0 / 0 / 0]
5-816-174	Remote Service	Retransmission Limit	CTL	[0 to 1 / 0 / 1]
5-816-187	Remote Service	FAX TX Priority	CTL*	[0 to 1 / 0 / 1] 0: Disable 1: Enable
5-816-190	Remote Service	3G DongleID	CTL	[0 to 0 / 0 / 0]
5-816-199	Remote Service	ppp Connect Timer	CTL	[15 to 30 / 15 / 1min]
5-816-200	Remote Service	Manual Polling	CTL	[0 to 1 / 0 / 1]
5-816-201	Remote Service	Regist Status	CTL	[0 to 255 / 0 / 1]
5-	Remote Service	Letter Number	CTL*	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
816-202				
5-816-203	Remote Service	Confirm Execute	CTL	[0 to 1 / 0 / 1]
5-816-204	Remote Service	Confirm Result	CTL	[0 to 255 / 0 / 1] 0: Success Inquiry 1: Request number error 3: Communication error (Enabled Proxy) 4: Communication error (Disabled Proxy) 5: Proxy error (failed auth.) 6: Communication error 8: Other error (See SP5-816-208 for detail) 9: Processing inquiry 20: Failed Dial-up auth. 21: Failed answer tone detection 22: Failed career detection 23: Invalid modem value 24: Shortage of electrical current 25: Cable disconnected 26: Line occupied
5-816-205	Remote Service	Confirm Place	CTL	[0 to 1 / 0 / 1] 0: Success registration 1: Request number error 3: Communication error (Enabled Proxy) 4: Communication error (Disabled Proxy) 5: Proxy error (failed auth.) 6: Communication error 8: Other error (See SP5-816-

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				208 for detail) 9: Processing registration 20: Failed Dial-up auth. 21: Failed answer tone detection 22: Failed career detection 23: Invalid modem value 24: Shortage of electrical current 25: Cable disconnected 26: Line occupied
5-816-206	Remote Service	Register Execute	CTL	[0 to 1 / 0 / 1]
5-816-207	Remote Service	Register Result	CTL	[0 to 255 / 0 / 1]
5-816-208	Remote Service	Error Code	CTL	[-2147483647 to 2147483647 / 0 / 0]
5-816-209	Remote Service	Instl Clear	CTL	[0 to 1 / 0 / 1]
5-816-240	Remote Service	CommErrorTime	CTL	[0 to 0 / 0 / 1]
5-816-241	Remote Service	CommErrorCode 1	CTL*	[0 to 0xffffffff / 0x00000000 / 1]
5-816-242	Remote Service	CommErrorCode 2	CTL*	[0 to 0xffffffff / 0x00000000 / 1]
5-816-243	Remote Service	CommErrorCode 3	CTL*	[0 to 0xffffffff / 0x00000000 / 1]
5-	Remote Service	CommErrorState 1	CTL*	[0 to 0xffff / 0x0000 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
816-244				
5-816-245	Remote Service	CommErrorState 2	CTL*	[0 to 0xffff / 0x0000 / 1]
5-816-246	Remote Service	CommErrorState 3	CTL*	[0 to 0xffff / 0x0000 / 1]
5-816-247	Remote Service	SSL Error Count	CTL*	[0 to 255 / 0 / 1]
5-816-248	Remote Service	Other Err Count	CTL*	[0 to 255 / 0 / 1]
5-816-250	Remote Service	CommLog Print	CTL	[0 to 255 / 0 / 0]
5-821-002	Remote Service RCG Setting	RCG IPv4 Address	CTL*	[0 to 0xffffffff / 0 / 1]
5-821-003	Remote Service RCG Setting	RCG Port	CTL*	[0 to 65535 / 443 / 1]
5-821-004	Remote Service RCG Setting	RCG IPv4 URL Path	CTL*	[0 to 0 / 0 / 0]
5-821-005	Remote Service RCG Setting	RCG IPv6 Address	CTL*	[0 to 0 / 0 / 0]
5-821-006	Remote Service RCG Setting	RCG IPv6 URL Path	CTL*	[0 to 0 / 0 / 0]
5-821-007	Remote Service RCG Setting	RCG Host Name	CTL*	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-821-008	Remote Service RCG Setting	RCG Host URL Path	CTL*	[0 to 0 / 0 / 0]
5-824-001	NV-RAM Data Upload		CTL	[0 to 0 / 0 / 0]
5-825-001	NV-RAM Data Download		CTL	[0 to 0 / 0 / 0]
5-828-039	Network Setting	User Class	CTL*	[0 to 0 / 0 / 0]
5-828-040	Network Setting	Class Id	CTL*	[0 to 0 / 0 / 0]
5-828-050	Network Setting	1284 Compatiblity (Centro)	CTL*	[0 to 1 / 1 / 1] 0: Disabled 1: Enabled
5-828-052	Network Setting	ECP (Centro)	CTL*	[0 to 1 / 1 / 1] 0: Disabled 1: Enabled
5-828-065	Network Setting	Job Spooling	CTL*	[0 to 1 / 0 / 1] 0: Disabled 1: Enabled
5-828-066	Network Setting	Job Spooling Clear: Start Time	CTL*	[0 to 1 / 1 / 1] 0: ON (Data is cleared) 1: OFF (Automatically printed)
5-828-069	Network Setting	Job Spooling (Protocol)	CTL*	[0x00 to 0xff / 0x7f / 0] 0: Validates 1: Invalidates bit0: LPR bit1: FTP bit2: IPP bit3: SMB bit4: BMLinkS bit5: DIPRINT

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				bit6: sftp bit7: (Reserved)
5-828-087	Network Setting	Protocol usage	CTL*	[0x00000000 to 0xffffffff / 0x00000000 / 1] 0: Off (Not used the network with the protocol.) 1: On (Used the network with the protocol once or more.) bit0: IPsec, bit1: IPv6, bit2: IEEE 802. 1X, bit3:Wireless LAN, bit4: Security mode level setting, bit5:Appletalk, bit6: DHCP, bit7: DHCPv6, bit8: telnet, bit9: SSL, bit10: HTTPS, bit11: BMLinkS printing, bit12: diprint printing, bit13: LPR printing, bit14: ftp printing, bit15: rsh printing, bit16: SMB printing, bit17: WSD-Printer, bit18: WSD-Scanner, bit19: Scan to SMB, bit20: Scan to NCP, bit21: Reserve, bit22: Bluetooth, bit23: IEEE 1284, bit24: USB printing, bit25: Dynamic DNS, bit26: Netware printing, bit27: LLTD, bit28: IPP printing, bit29: IPP printing (SSL), bit30: ssh, bit31: sftp
5-828-090	Network Setting	TELNET(0:OFF 1:ON)	CTL*	[0 to 1 / 1 / 1] 0: Disable 1: Enable
5-	Network Setting	Web(0:OFF 1:ON)	CTL*	[0 to 1 / 1 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
828-091				0: Disable 1: Enable
5-828-145	Network Setting	Active IPv6 Link Local Address	CTL	[0 to 0 / 0 / 0]
5-828-147	Network Setting	Active IPv6 Stateless Address 1	CTL	[0 to 0 / 0 / 0]
5-828-149	Network Setting	Active IPv6 Stateless Address 2	CTL	[0 to 0 / 0 / 0]
5-828-151	Network Setting	Active IPv6 Stateless Address 3	CTL	[0 to 0 / 0 / 0]
5-828-153	Network Setting	Active IPv6 Stateless Address 4	CTL	[0 to 0 / 0 / 0]
5-828-155	Network Setting	Active IPv6 Stateless Address 5	CTL	[0 to 0 / 0 / 0]
5-828-156	Network Setting	IPv6 Manual Address	CTL*	[0 to 0 / 0 / 0]
5-828-158	Network Setting	IPv6 Gateway Address	CTL*	[0 to 0 / 0 / 0]
5-828-161	Network Setting	IPv6 Stateless Auto Setting	CTL*	[0 to 1 / 1 / 1] 0: Disable 1: Enable
5-828-219	Network Setting	IPsec Aggressive Mode Setting	CTL	[0 to 1 / 0 / 1]
5-828-236	Network Setting	Web Item visible	CTL*	[0x0000 to 0xffff / 0xffff / 1] bit0: Net RICOH bit1: Consumable Supplier bit2-15: Reserved (all)

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-828-237	Network Setting	Web shopping link visible	CTL*	[0 to 1 / 1 / 1] 0: Not display 1:Display
5-828-238	Network Setting	Web Supplies Link visible	CTL*	[0 to 1 / 1 / 1] 0: Not display 1: Display
5-828-239	Network Setting	Web Link1 Name	CTL*	[0 to 0 / 0 / 0]
5-828-240	Network Setting	Web Link1 URL	CTL*	[0 to 0 / 0 / 0]
5-828-241	Network Setting	Web Link1 visible	CTL*	[0 to 1 / 1 / 1] 0: Not display 1: Display
5-828-242	Network Setting	Web Link2 Name	CTL*	[0 to 0 / 0 / 0]
5-828-243	Network Setting	Web Link2 URL	CTL*	[0 to 0 / 0 / 0]
5-828-244	Network Setting	Web Link2 visible	CTL*	[0 to 1 / 1 / 1]
5-828-249	Network Setting	DHCPv6 DUID	CTL*	[0 to 0 / 0 / 0]
5-832-001	HDD	HDD Formatting (ALL)	CTL	[0 to 0 / 0 / 0]
5-832-002	HDD	HDD Formatting (IMH)	CTL	[0 to 0 / 0 / 0]
5-832-003	HDD	HDD Formatting (Thumbnail/OCR)	CTL	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-832-004	HDD	HDD Formatting (Job Log)	CTL	[0 to 0 / 0 / 0]
5-832-005	HDD	HDD Formatting (Printer Fonts)	CTL	[0 to 0 / 0 / 0]
5-832-006	HDD	HDD Formatting (User Info)	CTL	[0 to 0 / 0 / 0]
5-832-007	HDD	Mail RX Data	CTL	[0 to 0 / 0 / 0]
5-832-008	HDD	Mail TX Data	CTL	[0 to 0 / 0 / 0]
5-832-009	HDD	HDD Formatting (Data for a Design)	CTL	[0 to 0 / 0 / 0]
5-832-010	HDD	HDD Formatting (Log)	CTL	[0 to 0 / 0 / 0]
5-832-011	HDD	HDD Formatting (Ridoc I/F)	CTL	[0 to 0 / 0 / 0]
5-832-012	HDD	HDD Formatting (Thumbnail)	CTL	[0 to 0 / 0 / 0]
5-836-001	Capture Setting	Capture Function (0:Off 1:On)	CTL*	[0 to 1 / 0 / 1] 0: Disable 1: Enable
5-836-003	Capture Setting	Print Back Up Function (0:Off 1:On)	CTL*	[0 to 1 / 0 / 1]
5-836-011	Capture Setting	Capture Setting: Copy	CTL*	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-836-012	Capture Setting	Capture Setting: Doc. Svr.	CTL*	[0 to 1 / 0 / 1]
5-836-013	Capture Setting	Capture Setting: Fax RX Printer	CTL*	[0 to 1 / 0 / 1]
5-836-014	Capture Setting	Capture Setting: Fax TX	CTL*	[0 to 1 / 0 / 1]
5-836-015	Capture Setting	Capture Setting: Printer	CTL*	[0 to 1 / 0 / 1]
5-836-016	Capture Setting	Capture Setting: Scanner	CTL*	[0 to 1 / 0 / 1]
5-836-017	Capture Setting	Capture Setting: SDK	CTL*	[0 to 1 / 0 / 1]
5-836-061	Capture Setting	Captured File Resend (0:Off 1:On)	CTL*	[0 to 1 / 1 / 1]
5-836-071	Capture Setting	Reduction for Copy Color	CTL*	[0 to 3 / 2 / 1] 0: 1to-1 1: 1/2 2: 1/3 3: 1/4
5-836-072	Capture Setting	Reduction for Copy B&W Text	CTL*	[0 to 6 / 0 / 1] 0: 1to-1 1: 1/2 2: 1/3 3: 1/4 6: 2/3
5-836-073	Capture Setting	Reduction for Copy B&W Other	CTL*	[0 to 6 / 0 / 1] 0: 1to-1 1: 1/2 2: 1/3

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				3: 1/4 6: 2/3
5-836-074	Capture Setting	Reduction for Printer Color	CTL*	[0 to 3 / 2 / 1] 0: 1to-1 1: 1/2 2: 1/3 3: 1/4
5-836-075	Capture Setting	Reduction for Printer B&W	CTL*	[0 to 6 / 0 / 1] 0: 1to-1 1: 1/2 2: 1/3 3: 1/4 6: 2/3
5-836-081	Capture Setting	Format for Copy Color	CTL*	[0 to 0 / 0 / 1] 0: JFIF/JPEG 1: TIFF/MMR 2: TIFF/MH 3: TIFF/MR
5-836-082	Capture Setting	Format for Copy B&W Text	CTL*	[0 to 3 / 1 / 1] 0: JFIF/JPEG 1: TIFF/MMR 2: TIFF/MH 3: TIFF/MR
5-836-083	Capture Setting	Format for Copy B&W Other	CTL*	[0 to 3 / 1 / 1]
5-836-084	Capture Setting	Format for Printer Color	CTL*	[0 to 0 / 0 / 1]
5-836-085	Capture Setting	Format for Printer B&W	CTL*	[0 to 3 / 1 / 1] 0: JFIF/JPEG 1: TIFF/MMR 2: TIFF/MH 3: TIFF/MR
5-836-	Capture Setting	Default for JPEG	CTL*	[5 to 95 / 50 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
091				
5-836-101	Capture Setting	Primary srv IP address	CTL*	[0 to 0xffffffff / 0x00 / 0]
5-836-102	Capture Setting	Primary srv scheme	CTL*	[0 to 0 / 0 / 0]
5-836-103	Capture Setting	Primary srv port number	CTL*	[1 to 65535 / 80 / 1]
5-836-104	Capture Setting	Primary srv URL path	CTL*	[0 to 0 / 0 / 0]
5-836-111	Capture Setting	Secondary srv IP address	CTL*	[0 to 0xffffffff / 0x00 / 0]
5-836-112	Capture Setting	Secondary srv scheme	CTL*	[0 to 0 / 0 / 0]
5-836-113	Capture Setting	Secondary srv port number	CTL*	[1 to 65535 / 80 / 1]
5-836-114	Capture Setting	Secondary srv URL path	CTL*	[0 to 0 / 0 / 0]
5-836-120	Capture Setting	Default Reso Rate Switch	CTL*	[0 to 1 / 0 / 1]
5-836-122	Capture Setting	Reso: Copy(Mono)	CTL*	[0 to 255 / 3 / 1] 0: 600dpi/ 1: 400dpi/ 2: 300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi/ 6: 75dpi

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-836-124	Capture Setting	Reso: Print(Mono)	CTL*	[0 to 255 / 3 / 1] 0:600DPi 1:400DPi 2:300DPi 3:200DPi 4:150DPi 5:100DPi 6:75DPi
5-836-125	Capture Setting	Reso: Fax(Color)	CTL*	[0 to 255 / 4 / 1] 0:600DPi 1:400DPi 2:300DPi 3:200DPi 4:150DPi 5:100DPi 6:75DPi
5-836-126	Capture Setting	Reso: Fax(Mono)	CTL*	[0 to 255 / 3 / 1] 0:600DPi 1:400DPi 2:300DPi 3:200DPi 4:150DPi 5:100DPi 6:75DPi
5-836-127	Capture Setting	Reso: Scan(Color)	CTL*	[0 to 255 / 4 / 1] 0:600DPi 1:400DPi 2:300DPi 3:200DPi 4:150DPi 5:100DPi 6:75DPi
5-836-128	Capture Setting	Reso: Scan(Mono)	CTL*	[0 to 255 / 3 / 1] 0:600DPi 1:400DPi 2:300DPi

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				3:200DPi 4:150DPi 5:100DPi 6:75DPi
5-836-129	Capture Setting	Reso: SDK(Color)	CTL*	[0 to 255 / 4 / 1]
5-836-130	Capture Setting	Reso: SDK(Mono)	CTL*	[0 to 255 / 3 / 1]
5-836-141	Capture Setting	All Addr Info Switch	CTL*	[0 to 1 / 1 / 1]
5-836-142	Capture Setting	Stand-by Doc Max Number	CTL*	[10 to 10000 / 2000 / 1]
5-836-143	Capture Setting	ClearLightPDF Switch	CTL*	[0 to 1 / 0 / 1]
5-840-006	IEEE 802.11	Channel MAX	CTL*	[1 to 14 / 14 / 1] Europe/Asia: 1 to 13 NA/ Asia: 1 to 11
5-840-007	IEEE 802.11	Channel MIN	CTL*	[1 to 14 / 1 / 1] Europe: 1 to 13 NA/ Asia: 1 to 11
5-840-011	IEEE 802.11	WEP Key Select	CTL*	[0x00 to 0x11 / 0x00 / 0] 00: Key #1 01: Key #2 (Reserved) 10: Key #3 (Reserved) 11: Key #4 (Reserved)
5-840-045	IEEE 802.11	WPA Debug Lvl	CTL*	[1 to 3 / 3 / 1] 1: Info 2: wArning 3: error
5-840-	IEEE 802.11	11w	CTL*	[0 to 2 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
046				
5-840-047	IEEE 802.11	PSK Set Type	CTL*	[0 to 1 / 0 / 1]
5-841-001	Supply Name Setting	Toner Name Setting: Black	CTL*	[0 to 0 / 0 / 0]
5-841-007	Supply Name Setting	OrgStamp	CTL*	[0 to 0 / 0 / 0]
5-841-011	Supply Name Setting	StapleStd1	CTL*	[0 to 0 / 0 / 0]
5-841-012	Supply Name Setting	StapleStd2	CTL*	[0 to 0 / 0 / 0]
5-841-013	Supply Name Setting	StapleStd3	CTL*	[0 to 0 / 0 / 0]
5-841-014	Supply Name Setting	StapleStd4	CTL*	[0 to 0 / 0 / 0]
5-841-021	Supply Name Setting	StapleBind1	CTL*	[0 to 0 / 0 / 0]
5-841-022	Supply Name Setting	StapleBind2	CTL*	[0 to 0 / 0 / 0]
5-841-023	Supply Name Setting	StapleBind3	CTL*	[0 to 0 / 0 / 0]
5-842-001	GWWS Analysis	Setting 1	CTL*	[0x00 to 0xFF / 0 / 1] 0bit[LSB]: system, other group 1bit: capture related group 2bit: authentication related group

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				3bit: address book related group 4bit: device management related group 5bit: output related(print, FAX, and delivery) group 6bit: repository, F0,etc. document related group 7bit: debug log level suppression
5-842-002	GWWS Analysis	Setting 2	CTL*	[0x00 to 0xFF / 0 / 1] 0~6bit: unused 7bit: time stamp setting for 5682mmesg log. (1: min./sec/msec, 0: day/hour/min./sec)
5-844-001	USB	Transfer Rate	CTL*	[1 to 4 / 4 / 0] 0x01: Full speed 0x04: Auto Change
5-844-002	USB	Vendor ID	CTL*	[0x0000 to 0xffff / 0x05ca / 0]
5-844-003	USB	Product ID	CTL*	[0x0000 to 0xffff / 0x0403 / 0]
5-844-004	USB	Device Release Number	CTL*	[0 to 9999 / 100 / 1]
5-844-005	USB	Fixed USB Port	CTL*	[0 to 2 / 0 / 1]
5-844-006	USB	PnP Model Name	CTL*	[0 to 0 / 0 / 0]
5-844-007	USB	PnP Serial Number	CTL*	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-844-008	USB	Mac Supply Level	CTL*	[0 to 1 / 1 / 1]
5-844-009	USB	USB Toggle Clear Mode	CTL*	[0 to 1 / 0 / 1]
5-844-100	USB	Notify Unsupport	CTL*	[0 to 1 / 1 / 1]
5-845-001	Delivery Server Setting	FTP Port No.	CTL*	[1 to 65535 / 3670 / 1]
5-845-002	Delivery Server Setting	IP Address (Primary)	CTL*	[0 to 0xffffffff / 0x00 /]
5-845-006	Delivery Server Setting	Delivery Error Display Time	CTL*	[0 to 999 / 300 / 1sec]
5-845-008	Delivery Server Setting	IP Address (Secondary)	CTL*	[0 to 0xffffffff / 0x00 /]
5-845-009	Delivery Server Setting	Delivery Server Model	CTL*	[0 to 4 / 0 / 1] 0: Unknown 1: SG1 Provided 2: SG1 Package 3: SG2 Provided 4: SG2 Package
5-845-010	Delivery Server Setting	Delivery Svr. Capability	CTL*	[0 to 255 / 0 / 1] Bit7=1: Comment information exits Bit6=1: Direct specification of mail address possible Bit5=1: Mail RX confirmation setting possible Bit4=1: Address book automatic update function

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				exists Bit3=1: Fax RX delivery function exists Bit2=1: Sender password function exists Bit1=1: Function to link MK-1 user and Sender exists Bit0=1: Sender specification required (if set to 1, Bit6 is set to "0")
5-845-011	Delivery Server Setting	Delivery Svr. Capability (Ext)	CTL*	[0 to 255 / 0 / 1] Bit7=1: Address book usage limitation (Limitation for each authorized user) Bit6=1: RDH authorization link Bit5 to 0: Not used
5-845-013	Delivery Server Setting	Server Scheme(Primary)	CTL*	[0 to 0 / 0 / 0]
5-845-014	Delivery Server Setting	Server Port Number(Primary)	CTL*	[1 to 65535 / 80 / 1]
5-845-015	Delivery Server Setting	Server URL Path(Primary)	CTL*	[0 to 0 / 0 / 0]
5-845-016	Delivery Server Setting	Server Scheme(Secondary)	CTL*	[0 to 0 / 0 / 0]
5-845-017	Delivery Server Setting	Server Port Number(Secondary)	CTL*	[1 to 65535 / 80 / 1]
5-845-018	Delivery Server Setting	Server URL Path(Secondary)	CTL*	[0 to 0 / 0 / 0]
5-845-	Delivery Server Setting	Rapid Sending Control	CTL*	[0 to 1 / 1 / 1] 0: Control disabled

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
022				1: Control enabled
5-846-001	UCS Setting	Machine ID (for Delivery Server)	CTL*	[0 to 0 / 0 / 0]
5-846-002	UCS Setting	Machine ID Clear (for Delivery Server)	CTL*	[0 to 0 / 0 / 0]
5-846-003	UCS Setting	Maximum Entries	CTL*	[2000 to 20000 / 2000 / 1]
5-846-006	UCS Setting	Delivery Server Retry Timer	CTL*	[0 to 255 / 0 / 1]
5-846-007	UCS Setting	Delivery Server Retry Times	CTL*	[0 to 255 / 0 / 1]
5-846-008	UCS Setting	Delivery Server Maximum Entries	CTL*	[2000 to 20000 / 2000 / 1]
5-846-010	UCS Setting	LDAP Search Timeout	CTL*	[1 to 255 / 60 / 1]
5-846-020	UCS Setting	WSD Maximum Entries	CTL*	[50 to 250 / 250 / 1]
5-846-021	UCS Setting	Folder Auth Change	CTL*	[0 to 1 / 0 / 1] 0: Login User, 1: Destination
5-846-040	UCS Setting	Addr Book Migration(USB->HDD)	CTL	[0 to 0 / 0 / 0]
5-846-041	UCS Setting	Fill Addr Acl Info	CTL	[0 to 0 / 0 / 0]
5-	UCS Setting	Addr Book Media	CTL*	[0 to 30 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
846-043				0: Unconfirmed 1: SD Slot 1 2: SD Slot 2 3: SD Slot 3 4: USB Flash ROM 10: SD Slot 10 20: HDD 30: Nothing
5-846-047	UCS Setting	Initialize Local Addr Book	CTL	[0 to 0 / 0 / 0]
5-846-048	UCS Setting	Initialize Delivery Addr Book	CTL	[0 to 0 / 0 / 0]
5-846-049	UCS Setting	Initialize LDAP Addr Book	CTL	[0 to 0 / 0 / 0]
5-846-050	UCS Setting	Initialize All Addr Book	CTL	[0 to 0 / 0 / 0]
5-846-051	UCS Setting	Backup All Addr Book	CTL	[0 to 0 / 0 / 0]
5-846-052	UCS Setting	Restore All Addr Book	CTL	[0 to 0 / 0 / 0]
5-846-053	UCS Setting	Clear Backup Info	CTL	[0 to 0 / 0 / 0]
5-846-060	UCS Setting	Search option	CTL*	[0x00 to 0xff / 0x0f / 1] Bit 0: Checks both upper/lower case characters Bit 1: Japan Only Bit 2: Japan Only Bit 3: Japan Only Bit 4 to 7: Not Used

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-846-062	UCS Setting	Complexity option 1	CTL*	[0 to 32 / 0 / 1]
5-846-063	UCS Setting	Complexity option 2	CTL*	[0 to 32 / 0 / 1]
5-846-064	UCS Setting	Complexity option 3	CTL*	[0 to 32 / 0 / 1]
5-846-065	UCS Setting	Complexity option 4	CTL*	[0 to 32 / 0 / 1]
5-846-091	UCS Setting	FTP Auth Port Setting	CTL*	[0 to 65535 / 3671 / 1]
5-846-094	UCS Setting	Encryption Stat	CTL*	[0 to 255 / 0 / 0]
5-847-002	Rep Resolution Reduction	Rate for Copy B&W Text	CTL*	[0 to 6 / 0 / 1] 0: 1x 1: 1/2x 2: 1/3x 3: 1/4x 4: 1/6x 5: 1/8x 6: 2/3x
5-847-003	Rep Resolution Reduction	Rate for Copy B&W Other	CTL*	[0 to 6 / 0 / 1] 0: 1x 1: 1/2x 2: 1/3x 3: 1/4x 4: 1/6x 5: 1/8x 6: 2/3x
5-847-	Rep Resolution Reduction	Rate for Printer B&W	CTL*	[0 to 6 / 0 / 1] 0: 1x

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
005				1: 1/2x 2: 1/3x 3: 1/4x 4: 1/6x 5: 1/8x 6: 2/3x
5-847-007	Rep Resolution Reduction	Rate for Printer B&W 1200dpi	CTL*	[0 to 6 / 1 / 1] 0: 1x 1: 1/2x 2: 1/3x 3: 1/4x 4: 1/6x 5: 1/8x 6: 2/3x
5-847-021	Rep Resolution Reduction	Network Quality Default for JPEG	CTL*	[5 to 95 / 50 / 1]
5-848-002	Web Service	Access Ctrl: Repository(onlyLower4bits)	CTL*	[0x00 to 0xFF / 0x02 / 0] 0000: No access control 0001: Denies access to DeskTop Binder. 0010: No writing control
5-848-003	Web Service	Access Ctrl: Doc.Svr.Print (Lower 4bits)	CTL*	[0x00 to 0xFF / 0x00 / 0] 0000: No access control 0001: Denies access to DeskTop Binder.
5-848-004	Web Service	Access Ctrl: udirectory (Lower 4bits)	CTL*	[0x00 to 0xFF / 0x00 / 0] 0000: No access control 0001: Denies access to DeskTop Binder.
5-848-007	Web Service	Access Ctrl: Comm. Log Fax(Lower 4bits)	CTL*	[0x00 to 0xFF / 0x00 / 0] 0000: No access control 0001: Denies access to DeskTop Binder.
5-848-	Web Service	Access Ctrl: Job Ctrl (Lower 4bits)	CTL*	[0x00 to 0xFF / 0x00 / 0] 0000: No access control

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
009				0001: Denies access to DeskTop Binder.
5-848-011	Web Service	Access Ctrl: Devicemanagement(Lower 4bits)	CTL*	[0x00 to 0xFF / 0x00 / 0] 0000: No access control 0001: Denies access to DeskTop Binder.
5-848-021	Web Service	Access Ctrl: Delivery (Lower 4bits)	CTL*	[0x00 to 0xFF / 0x00 / 0] 0000: No access control 0001: Denies access to DeskTop Binder.
5-848-022	Web Service	Access Ctrl: uadministration (Lower 4bits)	CTL*	[0x00 to 0xFF / 0x00 / 0] 0000: No access control 0001: Denies access to DeskTop Binder.
5-848-024	Web Service	Access Ctrl: Log Service (Lower 4bits)	CTL*	[0x00 to 0xFF / 0x00 / 0] 0000: No access control 0001: Denies access to DeskTop Binder.
5-848-025	Web Service	Access Ctrl: Rest WebService (Lower 4bits)	CTL*	[0x00 to 0xFF / 0x00 / 0] 0000: No access control 0001: Denies access to DeskTop Binder.
5-848-099	Web Service	Repository: Download Image Setting	CTL*	[0x00 to 0xFF / 0x00 / 1]
5-848-100	Web Service	Repository: Download Image Max. Size	CTL*	[1 to 2048 / 2048 / 1]
5-848-150	Web Service	Log Operation Mode	CTL*	[0 to 9 / 0 / 1]
5-848-217	LogTrans	Setting: Timing	CTL*	[0 to 2 / 0 / 1]
5-849-	Installation Date	Display	CTL*	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
5-849-002	Installation Date	Switch to Print	CTL*	[0 to 1 / 1 / 1] 0: OFF (No Print) 1: ON (Print)
5-849-003	Installation Date	Total Counter	CTL*	[0 to 99999999 / 0 / 1] 1: G3 2: EXT 3: G3-1 4: G3-1- EXT 5: G3-2 6: G3-2- EXT 7: G3-3 8: G3-3-EXT 9: G3-idle-EXT 10: idle-EXT 11: I-G3 12: I-G3-EXT 13: G4
5-850-003	Address Book Function	Replacement of Circuit Classifications	CTL	[0 to 0 / 0 / 0]
5-851-001	Bluetooth	Mode	CTL*	[0x00 to 0x01 / 0x00 / 1]
5-853-001	Stamp Data Download		CTL	[0 to 0 / 0 / 0]
5-856-002	Remote ROM Update	Local Port	CTL*	[0 to 1 / 0 / 1] 0: Disable 1: Enable
5-858-001	Collect Machine Info	0:OFF 1:ON	CTL*	[0 to 1 / 1 / 1]
5-858-002	Collect Machine Info	Save To (0:HDD 1:SD)	CTL*	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-858-003	Collect Machine Info	Make Log Trace Dir	CTL*	[0 to 1 / 0 / 0]
5-858-101	Collect Machine Info	Failure Occuring Date	CTL*	[0 to 20371212 / 0 / 1]
5-858-102	Collect Machine Info	Tracing Days	CTL*	[1 to 180 / 2 / 1day]
5-858-103	Collect Machine Info	Acquire Fax Address(0:OFF 1:ON)	CTL*	[0 to 1 / 0 / 1]
5-858-111	Collect Machine Info	Acquire All Info & Logs	CTL*	[0 to 1 / 0 / 0]
5-858-121	Collect Machine Info	Acquire Configuration Page	CTL*	[0 to 1 / 0 / 0]
5-858-122	Collect Machine Info	Acquire Font Page	CTL*	[0 to 1 / 0 / 0]
5-858-123	Collect Machine Info	Acquire Print Setting List	CTL*	[0 to 1 / 0 / 0]
5-858-124	Collect Machine Info	Acquire Error Log	CTL*	[0 to 1 / 0 / 0]
5-858-131	Collect Machine Info	Acquire Fax Info	CTL*	[0 to 1 / 0 / 0]
5-858-141	Collect Machine Info	Acquire All Debug Logs	CTL*	[0 to 1 / 0 / 0]
5-858-142	Collect Machine Info	Acquire Controller Debug Logs Only	CTL*	[0 to 1 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-858-143	Collect Machine Info	Acquire Engine Debug Logs Only	CTL*	[0 to 1 / 0 / 0]
5-858-144	Collect Machine Info	Acquire Opepanel Debug Logs Only	CTL*	[0 to 1 / 0 / 0]
5-858-145	Collect Machine Info	Acquire FCU Debug Logs Only	CTL*	[0 to 1 / 0 / 0]
5-858-146	Collect Machine Info	Acquire Only Network Packets	CTL*	[0 to 1 / 0 / 0]
5-860-020	SMTP/POP3/IMAP4	Partial Mail Receive Timeout	CTL*	[1 to 168 / 72 / 1hour]
5-860-021	SMTP/POP3/IMAP4	MDN Response RFC2298 Compliance	CTL*	[0 to 1 / 1 / 1] 0: No 1: Yes
5-860-022	SMTP/POP3/IMAP4	SMTP Auth. From Field Replacement	CTL*	[0 to 1 / 0 / 1] 0: No. “From” item not switched. 1: Yes. “From item switched.
5-860-025	SMTP/POP3/IMAP4	SMTP Auth. Direct Setting	CTL*	[0 to 0xff / 0x0 / 1] Bit 0: LOGIN Bit 1: PLAIN Bit 2: CRAM MD5 Bit 3: DIGEST MD5 Bit 4 to 7: Not used
5-860-026	SMTP/POP3/IMAP4	S/MIME:MIME Header Setting	CTL*	[0 to 2 / 0 / 1] 0: Microsoft Outlook Express standard 1: Internet Draft standard 2: RFC standard
5-860-028	SMTP/POP3/IMAP4	S/MIME: Authentication Check	CTL*	[0 to 1 / 0 / 1] 0: No (not check) 1: Yes (check)

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-860-029	SMTP/POP3/IMAP4	SMTP Server 3G Line IP Address	CTL	[0 to 0xffffffff / 0x00 /]
5-866-001	E-Mail Report	Report Validity	CTL	[0 to 1 / 0 / 1] 0: Enabled 1: Disabled
5-866-005	E-Mail Report	Add Date Field	CTL*	[0 to 1 / 0 / 1] 0: Enabled 1: Disabled
5-866-109	E-Mail Report	CounterE-Mail:3G Line Validity	CTL*	[0 to 1 / 0 / 1]
5-866-110	E-Mail Report	CounterE-Mail:Validity	CTL*	[0 to 1 / 0 / 1]
5-866-111	E-Mail Report	CounterE-Mail:Destination Registration	CTL*	[0 to 0 / 0 / 0]
5-866-112	E-Mail Report	CounterE-Mail:Send Test	CTL*	[0 to 0 / 0 / 0]
5-866-113	E-Mail Report	CounterE-Mail:Next Send Date	CTL*	[0 to 0 / 0 / 0]
5-866-114	E-Mail Report	CounterE-Mail:Send Date Setting	CTL*	[0 to 31 / 0 / 1]
5-866-115	E-Mail Report	CounterE-Mail:Send Time Setting	CTL*	[0 to 2359 / 0 / 1]
5-866-121	E-Mail Report	CounterE-Mail:Destination1	CTL*	[0 to 0 / 0 / 0]
5-866-122	E-Mail Report	CounterE-Mail:Destination2	CTL*	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-866-123	E-Mail Report	CounterE-Mail:Destination3	CTL*	[0 to 0 / 0 / 0]
5-870-001	Common KeyInfo Writing	Writing	CTL	[0 to 1 / 0 / 1]
5-870-003	Common KeyInfo Writing	Initialize	CTL	[0 to 1 / 0 / 1]
5-870-004	Common Key Info Writing	Writing: 2048bit	CTL	[0 to 1 / 0 / 1]
5-873-001	SDCardAppliMove	MoveExec	CTL	[0 to 0 / 0 / 1]
5-873-002	SDCardAppliMove	UndoExec	CTL	[0 to 0 / 0 / 1]
5-875-001	SC Auto Reboot	Reboot Setting	CTL*	[0 to 1 / 0 / 1]
5-875-002	SC Auto Reboot	Reboot Type	CTL*	[0 to 1 / 0 / 1] 0: Manual reboot 1: Automatic reboot
5-878-001	Option Setup	Data Overwrite Security	CTL	[0 to 0 / 0 / 0]
5-878-002	Option Setup	HDD Encryption	CTL	[0 to 0 / 0 / 0]
5-878-004	Option Setup	OCR Dictionary	CTL	[0 to 0 / 0 / 0]
5-881-001	Fixed Phrase Block Erasing		CTL	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-885-020	Set WIM Function	DocSvr Acc Ctrl	CTL*	[0x00 to 0xFF / 0x00 / 0] 0: OFF 1: ON Bit 0: Forbid all document server access (1) Bit 1: Forbid user mode access (1) Bit 2: Forbid print function (1) Bit 3: Forbid fax TX (1) Bit 4: Forbid scan sending (1) Bit 5: Forbid downloading (1) Bit 6: Forbid delete (1) Bit 7: Reserved
5-885-050	Set WIM Function	DocSvr Format	CTL*	[0 to 2 / 0 / 1] 0: Thumbnail, 1: Icon, 2: Details
5-885-051	Set WIM Function	DocSvr Trans	CTL*	[5 to 20 / 10 / 1]
5-885-100	Set WIM Function	Set Signature	CTL*	[0 to 2 / 0 / 1] 0: Setting for each e-mail 1: Signature for all 2: No signature
5-885-101	Set WIM Function	Set Encrypsion	CTL*	[0 to 1 / 0 / 1] 0: Not encrypted 1: Encryption
5-885-200	Set WIM Function	Detect Mem Leak	CTL*	[0x00 to 0xFF / 0x00 / 0]
5-886-100	Farm Update Setting	Skip Version Check	CTL	[0 to 1 / 0 / 1]
5-886-101	Farm Update Setting	Skip LR Check	CTL*	[0 to 1 / 0 / 1]
5-	Farm Update Setting	Auto Update Setting	CTL*	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
886-111				
5-886-112	Farm Update Setting	Auto Update Prohibit Term Setting	CTL*	[0 to 1 / 1 / 1]
5-886-113	Farm Update Setting	Auto Update Prohibit Start hour	CTL*	[0 to 23 / 9 / 1hour]
5-886-114	Farm Update Setting	Auto Update Prohibit End hour	CTL*	[0 to 23 / 17 / 1hour]
5-886-115	Farm Update Setting	SFU Auto Download Setting	CTL*	[0 to 1 / 0 / 1]
5-886-116	Farm Update Setting	Auto Update Next Date	CTL*	[0 to 0 / 0 / 0]
5-886-117	Farm Update Setting	Auto Update Retry Interval Hour	CTL*	[1 to 24 / 1 / 1hour]
5-886-119	Farm Update Setting	Auto Update @Remote Using Setting	CTL*	[0 to 1 / 0 / 1]
5-886-120	Farm Update Setting	Auto Update Prohibit Day of Week Setting	CTL*	[0 to 255 / 0 / 1]
5-886-201	Farm Update Setting	Restore Date	CTL*	[0 to 0 / 0 / 0]
5-886-202	Farm Update Setting	Save Old Version List	CTL	[0 to 0 / 0 / 0]
5-887-001	SD GetCounter		CTL	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-888-001	Personal Information Protect		CTL*	[0 to 1 / 0 / 1] 0: No authentication, No protection for logs 1: No authentication, Protected logs (only an administrator can see the logs)
5-893-001	SDK Application Counter	SDK-1	CTL	[0 to 0 / 0 / 0]
5-893-002	SDK Application Counter	SDK-2	CTL	[0 to 0 / 0 / 0]
5-893-003	SDK Application Counter	SDK-3	CTL	[0 to 0 / 0 / 0]
5-893-004	SDK Application Counter	SDK-4	CTL	[0 to 0 / 0 / 0]
5-893-005	SDK Application Counter	SDK-5	CTL	[0 to 0 / 0 / 0]
5-893-006	SDK Application Counter	SDK-6	CTL	[0 to 0 / 0 / 0]
5-893-007	SDK Application Counter	SDK-7	CTL	[0 to 0 / 0 / 0]
5-893-008	SDK Application Counter	SDK-8	CTL	[0 to 0 / 0 / 0]
5-893-009	SDK Application Counter	SDK-9	CTL	[0 to 0 / 0 / 0]
5-893-010	SDK Application Counter	SDK-10	CTL	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-893-011	SDK Application Counter	SDK-11	CTL	[0 to 0 / 0 / 0]
5-893-012	SDK Application Counter	SDK-12	CTL	[0 to 0 / 0 / 0]
5-894-001	External Mech Count Setting	Mech Counter Switch Setting	ENG*	[0 to 2 / 0 / 1]
5-895-001	Application invalidation	Printer	CTL	[0 to 1 / 0 / 0]
5-895-002	Application invalidation	Scanner	CTL	[0 to 1 / 0 / 0]
5-900-001	Engine Log Upload	Pattern	ENG*	[0 to 4 / 0 / 1]
5-900-002	Engine Log Upload	Trigger	ENG*	[0 to 3 / 0 / 1]
5-907-001	Plug & Play Maker/Model Name		CTL*	[0 to 255 / 0 / 1]
5-913-002	Switchover Permission Time	Print Application Timer	CTL*	[0 to 30 / 3 / 1]
5-967-001	Copy Server : Set Function	(0:ON 1:OFF)	CTL*	[0 to 1 / 0 / 1] 0: ON 1: OFF
5-973-101	User Stamp Registration	Frame deletion setting	CTL*	[0 to 3 / 0 / 1]
5-985-001	Device Setting	On Board NIC	CTL	[0 to 2 / 0 / 1] 0: Disable 1: Enable

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				2: Function limitation
5-985-002	Device Setting	On Board USB	CTL	[0 to 1 / 0 / 1]
5-990-001	SP Print Mode	All (Data List)	CTL	[0 to 255 / 0 / 0]
5-990-002	SP Print Mode	SP (Mode Data List)	CTL	[0 to 255 / 0 / 0]
5-990-003	SP Print Mode	User Program	CTL	[0 to 255 / 0 / 0]
5-990-004	SP Print Mode	Logging Data	CTL	[0 to 255 / 0 / 0]
5-990-005	SP Print Mode	Diagnostic Report	CTL	[0 to 255 / 0 / 0]
5-990-006	SP Print Mode	Non-Default	CTL	[0 to 255 / 0 / 0]
5-990-007	SP Print Mode	NIB Summary	CTL	[0 to 0 / 0 / 0]
5-990-008	SP Print Mode	Capture Log	CTL	[0 to 255 / 0 / 1]
5-990-021	SMC Print	Copier User Program	CTL	[0 to 0 / 0 / 0]
5-990-022	SP Print Mode	Scanner SP	CTL	[0 to 255 / 0 / 0]
5-	SP Print Mode	Scanner User Program	CTL	[0 to 255 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
990-023				
5-990-024	SP Print Mode	SDK/J Summary	CTL	[0 to 0 / 0 / 0]
5-990-025	SP Print Mode	SDK/J Application Info	CTL	[0 to 0 / 0 / 0]
5-990-026	SP Print Mode	Printer SP	CTL	[0 to 255 / 0 / 0]
5-990-027	SP Print Mode	SmartOperationPanel SP	CTL	[0 to 255 / 0 / 0]
5-990-028	SP Print Mode	SmartOperationPanel UP	CTL	[0 to 255 / 0 / 0]
5-992-001	SP Text Mode	All (Data List)	CTL	[0 to 255 / 0 / 0]
5-992-002	SP Text Mode	SP (Mode Data List)	CTL	[0 to 255 / 0 / 0]
5-992-003	SP Text Mode	User Program	CTL	[0 to 255 / 0 / 0]
5-992-004	SP Text Mode	Logging Data	CTL	[0 to 255 / 0 / 0]
5-992-005	SP Text Mode	Diagnostic Report	CTL	[0 to 255 / 0 / 0]
5-992-006	SP Text Mode	Non-Default	CTL	[0 to 255 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-992-007	SP Text Mode	NIB Summary	CTL	[0 to 0 / 0 / 0]
5-992-008	SP Text Mode	Capture Log	CTL	[0 to 255 / 0 / 1]
5-992-021	SP Text Mode	Copier User Program	CTL	[0 to 0 / 0 / 0]
5-992-022	SP Text Mode	Scanner SP	CTL	[0 to 255 / 0 / 0]
5-992-023	SP Text Mode	Scanner User Program	CTL	[0 to 255 / 0 / 0]
5-992-024	SP Text Mode	SDK/J Summary	CTL	[0 to 0 / 0 / 0]
5-992-025	SP Text Mode	SDK/J Application Info	CTL	[0 to 0 / 0 / 0]
5-992-026	SP Text Mode	Printer SP	CTL	[0 to 255 / 0 / 0]
5-992-027	SP Text Mode	SmartOperationPanel SP	CTL	[0 to 255 / 0 / 0]
5-992-028	SP Text Mode	SmartOperationPanel UP	CTL	[0 to 255 / 0 / 0]

SP Group 6000

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
6-006-001	ADF Adjustment	Side-to-Side Regist: Front	ENG*	[-3 to 3 / 0 / 0.1mm]
6-006-002	ADF Adjustment	Side-to-Side Regist: Rear	ENG*	[-3 to 3 / 0 / 0.1mm]
6-006-003	ADF Adjustment	Leading Edge Registration: Front	ENG*	[-5 to 5 / 0 / 0.1mm]
6-006-004	ADF Adjustment	Leading Edge Registration: Rear	ENG*	[-5 to 5 / 0 / 0.1mm]
6-006-005	ADF Adjustment	Buckle: Duplex Front	ENG*	[-5 to 5 / 0 / 0.1mm]
6-006-006	ADF Adjustment	Buckle: Duplex Rear	ENG*	[-5 to 5 / 0 / 0.1mm]
6-006-007	ADF Adjustment	Rear Edge Erase Front	ENG*	[-10 to 10 / -2.3 / 0.1mm]
6-006-008	ADF Adjustment	Rear Edge Erase Rear	ENG*	[-10 to 10 / -2.3 / 0.1mm]
6-006-010	ADF Adjustment	L-Edge Regist (1-Pass): Front	ENG*	[-5 to 5 / 0 / 0.1mm]
6-006-011	ADF Adjustment	L-Edge Regist (1-Pass): Rear	ENG*	[-5 to 5 / 0 / 0.1mm]
6-006-012	ADF Adjustment	1st Buckle (1-Pass)	ENG*	[-3 to 3 / 0 / 0.1mm]
6-006-	ADF Adjustment	2nd Buckle (1-Pass)	ENG*	[-2 to 3 / 0 / 0.1mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
013				
6-006-014	ADF Adjustment	T-Edge Erase (1-Pass): Front	ENG*	[-5 to 5 / -3 / 0.1mm]
6-006-015	ADF Adjustment	T-Edge Erase (1-Pass): Rear	ENG*	[-5 to 5 / -2.5 / 0.1mm]
6-009-001	ADF Free Run	Free Run Simplex Motion	ENG	[OFF or ON / - / 1/step]
6-009-002	ADF Free Run	Free Run Duplex Motion	ENG	[OFF or ON / - / 1/step]
6-009-003	ADF Free Run	Free Run Stamp Motion	ENG	[OFF or ON / - / 1/step]
6-009-004	ADF Free Run	Free Run Simplex Motion(low speed)	ENG	[OFF or ON / - / 1/step]
6-009-005	ADF Free Run	Free Run Simplex Motion(high speed)	ENG	[OFF or ON / - / 1/step]
6-009-006	ADF Free Run	Free Run Duplex Motion(low speed)	ENG	[OFF or ON / - / 1/step]
6-009-007	ADF Free Run	Free Run Duplex Motion(high speed)	ENG	[OFF or ON / - / 1/step]
6-010-001	Stamp Position Adj.		ENG*	[-5 to 5 / 0 / 0.1mm]
6-016-001	Original Size Detect Setting		ENG*	[0 to 255 / 0 / 1]
6-017-	DF Magnification Adj.		ENG*	[-5 to 5 / 0 / 0.1%]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
6-020-001	Skew Correction Moving Setting		ENG*	[0 to 1 / 0 / 1]
6-100-001	Sub-scanPunchPosAdj:2K/3K FIN	JPN/EU: 2-Hole	ENG	[-7.5 to 7.5 / 0 / 0.5mm]
6-100-002	Sub-scanPunchPosAdj:2K/3K FIN	NA: 3-Hole	ENG	[-7.5 to 7.5 / 0 / 0.5mm]
6-100-003	Sub-scanPunchPosAdj:2K/3K FIN	Europe: 4-Hole	ENG	[-7.5 to 7.5 / 0 / 0.5mm]
6-100-004	Sub-scanPunchPosAdj:2K/3K FIN	NEU: 4-Hole	ENG	[-7.5 to 7.5 / 0 / 0.5mm]
6-100-005	Sub-scanPunchPosAdj:2K/3K FIN	NA: 2-Hole	ENG	[-7.5 to 7.5 / 0 / 0.5mm]
6-100-006	Sub-scanPunchPosAdj:2K/3K FIN	JPN: 1-Hole	ENG	[-7.5 to 7.5 / 0 / 0.5mm]
6-101-001	Main-scanPunchPosAdj:2K/3K FIN	JPN/EU: 2-Hole	ENG	[-2 to 2 / 0 / 0.4mm]
6-101-002	Main-scanPunchPosAdj:2K/3K FIN	NA: 3-Hole	ENG	[-2 to 2 / 0 / 0.4mm]
6-101-003	Main-scanPunchPosAdj:2K/3K FIN	Europe: 4-Hole	ENG	[-2 to 2 / 0 / 0.4mm]
6-101-004	Main-scanPunchPosAdj:2K/3K FIN	NEU: 4-Hole	ENG	[-2 to 2 / 0 / 0.4mm]
6-101-	Main-scanPunchPosAdj:2K/3K FIN	NA: 2-Hole	ENG	[-2 to 2 / 0 / 0.4mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
005				
6-101-006	Main-scanPunchPosAdj:2K/3K FIN	JPN:1-1Hole	ENG	[-2 to 2 / 0 / 0.4mm]
6-102-001	SkewCorrectBuckleAdj:2K/3K FIN	A3 SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-102-002	SkewCorrectBuckleAdj:2K/3K FIN	B4 SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-102-003	SkewCorrectBuckleAdj:2K/3K FIN	A4 SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-102-004	SkewCorrectBuckleAdj:2K/3K FIN	A4 LEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-102-005	SkewCorrectBuckleAdj:2K/3K FIN	B5 SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-102-006	SkewCorrectBuckleAdj:2K/3K FIN	B5 LEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-102-007	SkewCorrectBuckleAdj:2K/3K FIN	A5 LEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-102-008	SkewCorrectBuckleAdj:2K/3K FIN	DLT SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-102-009	SkewCorrectBuckleAdj:2K/3K FIN	LG SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-102-010	SkewCorrectBuckleAdj:2K/3K FIN	Oficio SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-102-	SkewCorrectBuckleAdj:2K/3K FIN	LT SEF	ENG	[-5 to 5 / 0 / 0.2mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
011				
6-102-012	SkewCorrectBuckleAdj:2K/3K FIN	LT LEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-102-013	SkewCorrectBuckleAdj:2K/3K FIN	HLT LEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-102-014	SkewCorrectBuckleAdj:2K/3K FIN	12"x18"	ENG	[-5 to 5 / 0 / 0.2mm]
6-102-015	SkewCorrectBuckleAdj:2K/3K FIN	8K SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-102-016	SkewCorrectBuckleAdj:2K/3K FIN	16K SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-102-017	SkewCorrectBuckleAdj:2K/3K FIN	16K LEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-102-018	SkewCorrectBuckleAdj:2K/3K FIN	Other	ENG	[-5 to 5 / 0 / 0.2mm]
6-103-001	SkewCorrectCtrlSW:2K/3K FIN	A3 SEF	ENG	[0 to 1 / 0 / 1] 0: BuckleAdj On 1: BuckleAdj Off
6-103-002	SkewCorrectCtrlSW:2K/3K FIN	B4 SEF	ENG	[0 to 1 / 0 / 1] 0: BuckleAdj On 1: BuckleAdj Off
6-103-003	SkewCorrectCtrlSW:2K/3K FIN	A4 SEF	ENG	[0 to 1 / 0 / 1] 0: BuckleAdj On 1: BuckleAdj Off
6-103-004	SkewCorrectCtrlSW:2K/3K FIN	A4 LEF	ENG	[0 to 1 / 0 / 1] 0: BuckleAdj On 1: BuckleAdj Off
6-103-	SkewCorrectCtrlSW:2K/3K FIN	B5 SEF	ENG	[0 to 1 / 0 / 1] 0: BuckleAdj On

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
005				1: BuckleAdj Off
6-103-006	SkewCorrectCtrlSW:2K/3K FIN	B5 LEF	ENG	[0 to 1 / 0 / 1] 0: BuckleAdj On 1: BuckleAdj Off
6-103-007	SkewCorrectCtrlSW:2K/3K FIN	A5 LEF	ENG	[0 to 1 / 0 / 1] 0: BuckleAdj On 1: BuckleAdj Off
6-103-008	SkewCorrectCtrlSW:2K/3K FIN	DLT SEF	ENG	[0 to 1 / 0 / 1] 0: BuckleAdj On 1: BuckleAdj Off
6-103-009	SkewCorrectCtrlSW:2K/3K FIN	LG SEF	ENG	[0 to 1 / 0 / 1] 0: BuckleAdj On 1: BuckleAdj Off
6-103-010	SkewCorrectCtrlSW:2K/3K FIN	Oficio SEF	ENG	[0 to 1 / 0 / 1] 0: BuckleAdj On 1: BuckleAdj Off
6-103-011	SkewCorrectCtrlSW:2K/3K FIN	LT SEF	ENG	[0 to 1 / 0 / 1] 0: BuckleAdj On 1: BuckleAdj Off
6-103-012	SkewCorrectCtrlSW:2K/3K FIN	LT LEF	ENG	[0 to 1 / 0 / 1] 0: BuckleAdj On 1: BuckleAdj Off
6-103-013	SkewCorrectCtrlSW:2K/3K FIN	HLT LEF	ENG	[0 to 1 / 0 / 1] 0: BuckleAdj On 1: BuckleAdj Off
6-103-014	SkewCorrectCtrlSW:2K/3K FIN	12"x18"	ENG	[0 to 1 / 0 / 1] 0: BuckleAdj On 1: BuckleAdj Off
6-103-015	SkewCorrectCtrlSW:2K/3K FIN	8K SEF	ENG	[0 to 1 / 0 / 1] 0: BuckleAdj On 1: BuckleAdj Off
6-103-016	SkewCorrectCtrlSW:2K/3K FIN	16K SEF	ENG	[0 to 1 / 0 / 1] 0: BuckleAdj On 1: BuckleAdj Off
6-103-	SkewCorrectCtrlSW:2K/3K FIN	16K LEF	ENG	[0 to 1 / 0 / 1] 0: BuckleAdj On

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
017				1: BuckleAdj Off
6-103-018	SkewCorrectCtrlSW:2K/3K FIN	Other	ENG	[0 to 1 / 0 / 1] 0: BuckleAdj On 1: BuckleAdj Off
6-104-001	ShiftTrayJogPosAdj:2K/3K FIN	A3 SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-104-002	ShiftTrayJogPosAdj:2K/3K FIN	B4 SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-104-003	ShiftTrayJogPosAdj:2K/3K FIN	A4 SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-104-004	ShiftTrayJogPosAdj:2K/3K FIN	A4 LEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-104-005	ShiftTrayJogPosAdj:2K/3K FIN	B5 LEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-104-006	ShiftTrayJogPosAdj:2K/3K FIN	A5 LEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-104-007	ShiftTrayJogPosAdj:2K/3K FIN	DLT SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-104-008	ShiftTrayJogPosAdj:2K/3K FIN	LG SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-104-009	ShiftTrayJogPosAdj:2K/3K FIN	Oficio SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-104-010	ShiftTrayJogPosAdj:2K/3K FIN	LT SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-104-	ShiftTrayJogPosAdj:2K/3K FIN	LT LEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
011				
6-104-012	ShiftTrayJogPosAdj:2K/3K FIN	HLT LEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-104-013	ShiftTrayJogPosAdj:2K/3K FIN	8K SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-104-014	ShiftTrayJogPosAdj:2K/3K FIN	16K LEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-104-015	ShiftTrayJogPosAdj:2K/3K FIN	Other	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-105-001	ShftTJogRtrctAngAdj:2K/3K FIN	A3 SEF	ENG	[-10 to 10 / 0 / 5deg]
6-105-002	ShftTJogRtrctAngAdj:2K/3K FIN	B4 SEF	ENG	[-10 to 10 / 0 / 5deg]
6-105-003	ShftTJogRtrctAngAdj:2K/3K FIN	A4 SEF	ENG	[-10 to 10 / 0 / 5deg]
6-105-004	ShftTJogRtrctAngAdj:2K/3K FIN	DLT SEF	ENG	[-10 to 10 / 0 / 5deg]
6-105-005	ShftTJogRtrctAngAdj:2K/3K FIN	LG SEF	ENG	[-10 to 10 / 0 / 5deg]
6-105-006	ShftTJogRtrctAngAdj:2K/3K FIN	Oficio SEF	ENG	[-10 to 10 / 0 / 5deg]
6-105-007	ShftTJogRtrctAngAdj:2K/3K FIN	LT SEF	ENG	[-10 to 10 / 0 / 5deg]
6-105-	ShftTJogRtrctAngAdj:2K/3K FIN	8K SEF	ENG	[-10 to 10 / 0 / 5deg]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
008				
6-105-009	ShftTJogRtrctAngAdj:2K/3K FIN	Other	ENG	[-10 to 10 / 0 / 5deg]
6-106-001	Use Paper Jogger: 2K/3K FIN	A3 SEF	ENG	[0 to 1 / 0 / 1] 0: Jogging On 1: Jogging Off
6-106-002	Use Paper Jogger: 2K/3K FIN	B4 SEF	ENG	[0 to 1 / 0 / 1] 0: Jogging On 1: Jogging Off
6-106-003	Use Paper Jogger: 2K/3K FIN	A4 SEF	ENG	[0 to 1 / 0 / 1] 0: Jogging On 1: Jogging Off
6-106-004	Use Paper Jogger: 2K/3K FIN	A4 LEF	ENG	[0 to 1 / 0 / 1] 0: Jogging On 1: Jogging Off
6-106-005	Use Paper Jogger: 2K/3K FIN	B5 LEF	ENG	[0 to 1 / 0 / 1] 0: Jogging On 1: Jogging Off
6-106-006	Use Paper Jogger: 2K/3K FIN	A5 LEF	ENG	[0 to 1 / 0 / 1] 0: Jogging On 1: Jogging Off
6-106-007	Use Paper Jogger: 2K/3K FIN	DLT SEF	ENG	[0 to 1 / 0 / 1] 0: Jogging On 1: Jogging Off
6-106-008	Use Paper Jogger: 2K/3K FIN	LG SEF	ENG	[0 to 1 / 0 / 1] 0: Jogging On 1: Jogging Off
6-106-009	Use Paper Jogger: 2K/3K FIN	Oficio SEF	ENG	[0 to 1 / 0 / 1] 0: Jogging On 1: Jogging Off
6-106-010	Use Paper Jogger: 2K/3K FIN	LT SEF	ENG	[0 to 1 / 0 / 1] 0: Jogging On 1: Jogging Off
6-106-	Use Paper Jogger: 2K/3K FIN	LT LEF	ENG	[0 to 1 / 0 / 1] 0: Jogging On

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
011				1: Jogging Off
6-106-012	Use Paper Jogger: 2K/3K FIN	HLT LEF	ENG	[0 to 1 / 0 / 1] 0: Jogging On 1: Jogging Off
6-106-013	Use Paper Jogger: 2K/3K FIN	8K SEF	ENG	[0 to 1 / 0 / 1] 0: Jogging On 1: Jogging Off
6-106-014	Use Paper Jogger: 2K/3K FIN	16K LEF	ENG	[0 to 1 / 0 / 1] 0: Jogging On 1: Jogging Off
6-106-015	Use Paper Jogger: 2K/3K FIN	Other	ENG	[0 to 1 / 0 / 1] 0: Jogging On 1: Jogging Off
6-107-001	JogPosAdj(CrnrStplr):2K/3K FIN	A3 SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-107-002	JogPosAdj(CrnrStplr):2K/3K FIN	B4 SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-107-003	JogPosAdj(CrnrStplr):2K/3K FIN	A4 SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-107-004	JogPosAdj(CrnrStplr):2K/3K FIN	A4 LEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-107-005	JogPosAdj(CrnrStplr):2K/3K FIN	B5 SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-107-006	JogPosAdj(CrnrStplr):2K/3K FIN	B5 LEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-107-007	JogPosAdj(CrnrStplr):2K/3K FIN	DLT SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-107-	JogPosAdj(CrnrStplr):2K/3K FIN	LG SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
008				
6-107-009	JogPosAdj(CrnrStplr):2K/3K FIN	Oficio SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-107-010	JogPosAdj(CrnrStplr):2K/3K FIN	LT SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-107-011	JogPosAdj(CrnrStplr):2K/3K FIN	LT LEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-107-012	JogPosAdj(CrnrStplr):2K/3K FIN	8K SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-107-013	JogPosAdj(CrnrStplr):2K/3K FIN	16K SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-107-014	JogPosAdj(CrnrStplr):2K/3K FIN	16K LEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-107-015	JogPosAdj(CrnrStplr):2K/3K FIN	Other	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-108-001	JogPosAdj(BookStplr):2K/3K FIN	A3 SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-108-002	JogPosAdj(BookStplr):2K/3K FIN	B4 SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-108-003	JogPosAdj(BookStplr):2K/3K FIN	A4 SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-108-004	JogPosAdj(BookStplr):2K/3K FIN	B5 SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-108-	JogPosAdj(BookStplr):2K/3K FIN	DLT SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
005				
6-108-006	JogPosAdj(BookStplr):2K/3K FIN	LG SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-108-007	JogPosAdj(BookStplr):2K/3K FIN	Oficio SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-108-008	JogPosAdj(BookStplr):2K/3K FIN	LT SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-108-009	JogPosAdj(BookStplr):2K/3K FIN	12"x18"	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-108-010	JogPosAdj(BookStplr):2K/3K FIN	8K SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-108-011	JogPosAdj(BookStplr):2K/3K FIN	Other	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-109-001	CrnrStplrJogTimeAdj:2K/3K FIN	A3 SEF	ENG	[0 to 2 / 0 / 1times]
6-109-002	CrnrStplrJogTimeAdj:2K/3K FIN	B4 SEF	ENG	[0 to 2 / 0 / 1times]
6-109-003	CrnrStplrJogTimeAdj:2K/3K FIN	A4 SEF	ENG	[0 to 2 / 0 / 1times]
6-109-004	CrnrStplrJogTimeAdj:2K/3K FIN	A4 LEF	ENG	[0 to 2 / 0 / 1times]
6-109-005	CrnrStplrJogTimeAdj:2K/3K FIN	B5 SEF	ENG	[0 to 2 / 0 / 1times]
6-109-	CrnrStplrJogTimeAdj:2K/3K FIN	B5 LEF	ENG	[0 to 2 / 0 / 1times]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
006				
6-109-007	CrnrStplrJogTimeAdj:2K/3K FIN	DLT SEF	ENG	[0 to 2 / 0 / 1times]
6-109-008	CrnrStplrJogTimeAdj:2K/3K FIN	LG SEF	ENG	[0 to 2 / 0 / 1times]
6-109-009	CrnrStplrJogTimeAdj:2K/3K FIN	Oficio SEF	ENG	[0 to 2 / 0 / 1times]
6-109-010	CrnrStplrJogTimeAdj:2K/3K FIN	LT SEF	ENG	[0 to 2 / 0 / 1times]
6-109-011	CrnrStplrJogTimeAdj:2K/3K FIN	LT LEF	ENG	[0 to 2 / 0 / 1times]
6-109-012	CrnrStplrJogTimeAdj:2K/3K FIN	8K SEF	ENG	[0 to 2 / 0 / 1times]
6-109-013	CrnrStplrJogTimeAdj:2K/3K FIN	16K SEF	ENG	[0 to 2 / 0 / 1times]
6-109-014	CrnrStplrJogTimeAdj:2K/3K FIN	16K LEF	ENG	[0 to 2 / 0 / 1times]
6-109-015	CrnrStplrJogTimeAdj:2K/3K FIN	Other	ENG	[0 to 2 / 0 / 1times]
6-110-001	BookStplrJogTimeAdj:2K/3K FIN	A3 SEF	ENG	[0 to 2 / 0 / 1times]
6-110-002	BookStplrJogTimeAdj:2K/3K FIN	B4 SEF	ENG	[0 to 2 / 0 / 1times]
6-110-	BookStplrJogTimeAdj:2K/3K FIN	A4 SEF	ENG	[0 to 2 / 0 / 1times]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
003				
6-110-004	BookStplrJogTimeAdj:2K/3K FIN	B5 SEF	ENG	[0 to 2 / 0 / 1times]
6-110-005	BookStplrJogTimeAdj:2K/3K FIN	DLT SEF	ENG	[0 to 2 / 0 / 1times]
6-110-006	BookStplrJogTimeAdj:2K/3K FIN	LG SEF	ENG	[0 to 2 / 0 / 1times]
6-110-007	BookStplrJogTimeAdj:2K/3K FIN	Oficio SEF	ENG	[0 to 2 / 0 / 1times]
6-110-008	BookStplrJogTimeAdj:2K/3K FIN	LT SEF	ENG	[0 to 2 / 0 / 1times]
6-110-009	BookStplrJogTimeAdj:2K/3K FIN	12"x18"	ENG	[0 to 2 / 0 / 1times]
6-110-010	BookStplrJogTimeAdj:2K/3K FIN	8K SEF	ENG	[0 to 2 / 0 / 1times]
6-110-011	BookStplrJogTimeAdj:2K/3K FIN	Other	ENG	[0 to 2 / 0 / 1times]
6-111-001	Staple Position Adj: 2K/3K FIN	A3 SEF	ENG	[-3.5 to 3.5 / 0 / 0.5mm]
6-111-002	Staple Position Adj: 2K/3K FIN	B4 SEF	ENG	[-3.5 to 3.5 / 0 / 0.5mm]
6-111-003	Staple Position Adj: 2K/3K FIN	A4 SEF	ENG	[-3.5 to 3.5 / 0 / 0.5mm]
6-111-	Staple Position Adj: 2K/3K FIN	A4 LEF	ENG	[-3.5 to 3.5 / 0 / 0.5mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
004				
6-111-005	Staple Position Adj: 2K/3K FIN	B5 SEF	ENG	[-3.5 to 3.5 / 0 / 0.5mm]
6-111-006	Staple Position Adj: 2K/3K FIN	B5 LEF	ENG	[-3.5 to 3.5 / 0 / 0.5mm]
6-111-007	Staple Position Adj: 2K/3K FIN	DLT SEF	ENG	[-3.5 to 3.5 / 0 / 0.5mm]
6-111-008	Staple Position Adj: 2K/3K FIN	LG SEF	ENG	[-3.5 to 3.5 / 0 / 0.5mm]
6-111-009	Staple Position Adj: 2K/3K FIN	Oficio SEF	ENG	[-3.5 to 3.5 / 0 / 0.5mm]
6-111-010	Staple Position Adj: 2K/3K FIN	LT SEF	ENG	[-3.5 to 3.5 / 0 / 0.5mm]
6-111-011	Staple Position Adj: 2K/3K FIN	LT LEF	ENG	[-3.5 to 3.5 / 0 / 0.5mm]
6-111-012	Staple Position Adj: 2K/3K FIN	8K SEF	ENG	[-3.5 to 3.5 / 0 / 0.5mm]
6-111-013	Staple Position Adj: 2K/3K FIN	16K SEF	ENG	[-3.5 to 3.5 / 0 / 0.5mm]
6-111-014	Staple Position Adj: 2K/3K FIN	16K LEF	ENG	[-3.5 to 3.5 / 0 / 0.5mm]
6-111-015	Staple Position Adj: 2K/3K FIN	Other	ENG	[-3.5 to 3.5 / 0 / 0.5mm]
6-112-	BookletStaplerPosAdj:2K/3K FIN	A3 SEF	ENG	[-3 to 3 / 0 / 0.2mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
6-112-002	BookletStaplerPosAdj:2K/3K FIN	B4 SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-112-003	BookletStaplerPosAdj:2K/3K FIN	A4 SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-112-004	BookletStaplerPosAdj:2K/3K FIN	B5 SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-112-005	BookletStaplerPosAdj:2K/3K FIN	DLT SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-112-006	BookletStaplerPosAdj:2K/3K FIN	LG SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-112-007	BookletStaplerPosAdj:2K/3K FIN	Oficio SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-112-008	BookletStaplerPosAdj:2K/3K FIN	LT SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-112-009	BookletStaplerPosAdj:2K/3K FIN	12"x18"	ENG	[-1.8 to 1.8 / 0 / 0.2mm]
6-112-010	BookletStaplerPosAdj:2K/3K FIN	8K SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-112-011	BookletStaplerPosAdj:2K/3K FIN	Other	ENG	[-1.8 to 1.8 / 0 / 0.2mm]
6-113-001	BookletFolderPosAdj:2K/3K FIN	A3 SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-	BookletFolderPosAdj:2K/3K FIN	B4 SEF	ENG	[-3 to 3 / 0 / 0.2mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
002				
6-113-003	BookletFolderPosAdj:2K/3K FIN	A4 SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-004	BookletFolderPosAdj:2K/3K FIN	B5 SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-005	BookletFolderPosAdj:2K/3K FIN	DLT SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-006	BookletFolderPosAdj:2K/3K FIN	LG SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-007	BookletFolderPosAdj:2K/3K FIN	Oficio SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-008	BookletFolderPosAdj:2K/3K FIN	LT SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-009	BookletFolderPosAdj:2K/3K FIN	12"x18"	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-010	BookletFolderPosAdj:2K/3K FIN	8K SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-011	BookletFolderPosAdj:2K/3K FIN	Other	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-012	BookletFolderPosAdj:2K/3K FIN	A3 SEF(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-013	BookletFolderPosAdj:2K/3K FIN	A3 SEF(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-	BookletFolderPosAdj:2K/3K FIN	A3 SEF(11-15)	ENG	[-3 to 3 / 0 / 0.2mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
014				
6-113-015	BookletFolderPosAdj:2K/3K FIN	A3 SEF(16-over)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-016	BookletFolderPosAdj:2K/3K FIN	B4 SEF(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-017	BookletFolderPosAdj:2K/3K FIN	B4 SEF(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-018	BookletFolderPosAdj:2K/3K FIN	B4 SEF(11-15)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-019	BookletFolderPosAdj:2K/3K FIN	B4 SEF(16-over)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-020	BookletFolderPosAdj:2K/3K FIN	A4 SEF(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-021	BookletFolderPosAdj:2K/3K FIN	A4 SEF(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-022	BookletFolderPosAdj:2K/3K FIN	A4 SEF(11-15)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-023	BookletFolderPosAdj:2K/3K FIN	A4 SEF(16-over)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-024	BookletFolderPosAdj:2K/3K FIN	B5 SEF(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-025	BookletFolderPosAdj:2K/3K FIN	B5 SEF(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-	BookletFolderPosAdj:2K/3K FIN	B5 SEF(11-15)	ENG	[-3 to 3 / 0 / 0.2mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
026				
6-113-027	BookletFolderPosAdj:2K/3K FIN	B5 SEF(16-over)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-028	BookletFolderPosAdj:2K/3K FIN	DLT SEF(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-029	BookletFolderPosAdj:2K/3K FIN	DLT SEF(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-030	BookletFolderPosAdj:2K/3K FIN	DLT SEF(11-15)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-031	BookletFolderPosAdj:2K/3K FIN	DLT SEF(16-over)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-032	BookletFolderPosAdj:2K/3K FIN	LG SEF(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-033	BookletFolderPosAdj:2K/3K FIN	LG SEF(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-034	BookletFolderPosAdj:2K/3K FIN	LG SEF(11-15)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-035	BookletFolderPosAdj:2K/3K FIN	LG SEF(16-over)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-036	BookletFolderPosAdj:2K/3K FIN	Oficio SEF(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-037	BookletFolderPosAdj:2K/3K FIN	Oficio SEF(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-	BookletFolderPosAdj:2K/3K FIN	Oficio SEF(11-15)	ENG	[-3 to 3 / 0 / 0.2mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
038				
6-113-039	BookletFolderPosAdj:2K/3K FIN	Oficio SEF(16-over)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-040	BookletFolderPosAdj:2K/3K FIN	LT SEF(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-041	BookletFolderPosAdj:2K/3K FIN	LT SEF(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-042	BookletFolderPosAdj:2K/3K FIN	LT SEF(11-15)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-043	BookletFolderPosAdj:2K/3K FIN	LT SEF(16-over)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-044	BookletFolderPosAdj:2K/3K FIN	12"x18"(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-045	BookletFolderPosAdj:2K/3K FIN	12"x18"(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-046	BookletFolderPosAdj:2K/3K FIN	12"x18"(11-15)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-047	BookletFolderPosAdj:2K/3K FIN	12"x18"(16-over)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-048	BookletFolderPosAdj:2K/3K FIN	8K SEF(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-049	BookletFolderPosAdj:2K/3K FIN	8K SEF(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-	BookletFolderPosAdj:2K/3K FIN	8K SEF(11-15)	ENG	[-3 to 3 / 0 / 0.2mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
050				
6-113-051	BookletFolderPosAdj:2K/3K FIN	8K SEF(16-over)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-052	BookletFolderPosAdj:2K/3K FIN	Other(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-053	BookletFolderPosAdj:2K/3K FIN	Other(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-054	BookletFolderPosAdj:2K/3K FIN	Other(11-15)	ENG	[-3 to 3 / 0 / 0.2mm]
6-113-055	BookletFolderPosAdj:2K/3K FIN	Other(16-over)	ENG	[-3 to 3 / 0 / 0.2mm]
6-114-001	Fold Speed Adj.: 2K/3K FIN	A3 SEF	ENG	[0 to 2 / 0 / 1] 0: Std Speed 1: Middle Speed 2: Low Speed
6-114-002	Fold Speed Adj.: 2K/3K FIN	B4 SEF	ENG	[0 to 2 / 0 / 1] 0: Std Speed 1: Middle Speed 2: Low Speed
6-114-003	Fold Speed Adj.: 2K/3K FIN	A4 SEF	ENG	[0 to 2 / 0 / 1] 0: Std Speed 1: Middle Speed 2: Low Speed
6-114-004	Fold Speed Adj.: 2K/3K FIN	B5 SEF	ENG	[0 to 2 / 0 / 1] 0: Std Speed 1: Middle Speed 2: Low Speed
6-114-005	Fold Speed Adj.: 2K/3K FIN	DLT SEF	ENG	[0 to 2 / 0 / 1] 0: Std Speed 1: Middle Speed 2: Low Speed
6-	Fold Speed Adj.: 2K/3K FIN	LG SEF	ENG	[0 to 2 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
114-006				0: Std Speed 1: Middle Speed 2: Low Speed
6-114-007	Fold Speed Adj.: 2K/3K FIN	Oficio SEF	ENG	[0 to 2 / 0 / 1] 0: Std Speed 1: Middle Speed 2: Low Speed
6-114-008	Fold Speed Adj.: 2K/3K FIN	LT SEF	ENG	[0 to 2 / 0 / 1] 0: Std Speed 1: Middle Speed 2: Low Speed
6-114-009	Fold Speed Adj.: 2K/3K FIN	12"x18"	ENG	[0 to 2 / 0 / 1] 0: Std Speed 1: Middle Speed 2: Low Speed
6-114-010	Fold Speed Adj.: 2K/3K FIN	8K SEF	ENG	[0 to 2 / 0 / 1] 0: Std Speed 1: Middle Speed 2: Low Speed
6-114-011	Fold Speed Adj.: 2K/3K FIN	Other	ENG	[0 to 2 / 0 / 1] 0: Std Speed 1: Middle Speed 2: Low Speed
6-115-005	Finisher Free Run: 2K/3K FIN	Free Run 5	ENG	[0 to 1 / 0 / 1]
6-116-001	CrnrStplrMxPrstkShAdj:2K/3KFIN	A3 SEF	ENG	[-1 to 0 / 0 / 1sheets]
6-116-002	CrnrStplrMxPrstkShAdj:2K/3KFIN	B4 SEF	ENG	[-1 to 0 / 0 / 1sheets]
6-116-003	CrnrStplrMxPrstkShAdj:2K/3KFIN	A4 SEF	ENG	[-1 to 0 / 0 / 1sheets]
6-116-	CrnrStplrMxPrstkShAdj:2K/3KFIN	A4 LEF	ENG	[-1 to 0 / 0 / 1sheets]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
004				
6-116-005	CrnrStplrMxPrstkShAdj:2K/3KFIN	B5 SEF	ENG	[-1 to 0 / 0 / 1sheets]
6-116-006	CrnrStplrMxPrstkShAdj:2K/3KFIN	B5 LEF	ENG	[-1 to 0 / 0 / 1sheets]
6-116-007	CrnrStplrMxPrstkShAdj:2K/3KFIN	DLT SEF	ENG	[-1 to 0 / 0 / 1sheets]
6-116-008	CrnrStplrMxPrstkShAdj:2K/3KFIN	LG SEF	ENG	[-1 to 0 / 0 / 1sheets]
6-116-009	CrnrStplrMxPrstkShAdj:2K/3KFIN	Oficio SEF	ENG	[-1 to 0 / 0 / 1sheets]
6-116-010	CrnrStplrMxPrstkShAdj:2K/3KFIN	LT SEF	ENG	[-1 to 0 / 0 / 1sheets]
6-116-011	CrnrStplrMxPrstkShAdj:2K/3KFIN	LT LEF	ENG	[-1 to 0 / 0 / 1sheets]
6-116-012	CrnrStplrMxPrstkShAdj:2K/3KFIN	8K SEF	ENG	[-1 to 0 / 0 / 1sheets]
6-116-013	CrnrStplrMxPrstkShAdj:2K/3KFIN	16K SEF	ENG	[-1 to 0 / 0 / 1sheets]
6-116-014	CrnrStplrMxPrstkShAdj:2K/3KFIN	16K LEF	ENG	[-1 to 0 / 0 / 1sheets]
6-116-015	CrnrStplrMxPrstkShAdj:2K/3KFIN	Other	ENG	[-1 to 0 / 0 / 1sheets]
6-117-	BookStplrMxPrstkShAdj:2K/3KFIN	A3 SEF	ENG	[-7 to 0 / 0 / 1sheets]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
6-117-002	BookStplrMxPrstkShAdj:2K/3KFIN	B4 SEF	ENG	[-7 to 0 / 0 / 1sheets]
6-117-003	BookStplrMxPrstkShAdj:2K/3KFIN	A4 SEF	ENG	[-7 to 0 / 0 / 1sheets]
6-117-004	BookStplrMxPrstkShAdj:2K/3KFIN	B5 SEF	ENG	[-7 to 0 / 0 / 1sheets]
6-117-005	BookStplrMxPrstkShAdj:2K/3KFIN	DLT SEF	ENG	[-7 to 0 / 0 / 1sheets]
6-117-006	BookStplrMxPrstkShAdj:2K/3KFIN	LG SEF	ENG	[-7 to 0 / 0 / 1sheets]
6-117-007	BookStplrMxPrstkShAdj:2K/3KFIN	Oficio SEF	ENG	[-7 to 0 / 0 / 1sheets]
6-117-008	BookStplrMxPrstkShAdj:2K/3KFIN	LT SEF	ENG	[-7 to 0 / 0 / 1sheets]
6-117-009	BookStplrMxPrstkShAdj:2K/3KFIN	12"x18"	ENG	[-7 to 0 / 0 / 1sheets]
6-117-010	BookStplrMxPrstkShAdj:2K/3KFIN	8K SEF	ENG	[-7 to 0 / 0 / 1sheets]
6-117-011	BookStplrMxPrstkShAdj:2K/3KFIN	Other	ENG	[-2 to 0 / 0 / 1sheets]
6-118-001	CrnrStplrPrstkOffsAdj:2K/3KFIN	A3 SEF	ENG	[-16 to 16 / 0 / 2mm]
6-118-	CrnrStplrPrstkOffsAdj:2K/3KFIN	B4 SEF	ENG	[-16 to 16 / 0 / 2mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
002				
6-118-003	CrnrStplrPrstkOffsAdj:2K/3KFIN	A4 SEF	ENG	[-16 to 16 / 0 / 2mm]
6-118-004	CrnrStplrPrstkOffsAdj:2K/3KFIN	A4 LEF	ENG	[-16 to 16 / 0 / 2mm]
6-118-005	CrnrStplrPrstkOffsAdj:2K/3KFIN	B5 SEF	ENG	[-16 to 16 / 0 / 2mm]
6-118-006	CrnrStplrPrstkOffsAdj:2K/3KFIN	B5 LEF	ENG	[-16 to 16 / 0 / 2mm]
6-118-007	CrnrStplrPrstkOffsAdj:2K/3KFIN	DLT SEF	ENG	[-16 to 16 / 0 / 2mm]
6-118-008	CrnrStplrPrstkOffsAdj:2K/3KFIN	LG SEF	ENG	[-16 to 16 / 0 / 2mm]
6-118-009	CrnrStplrPrstkOffsAdj:2K/3KFIN	Oficio SEF	ENG	[-16 to 16 / 0 / 2mm]
6-118-010	CrnrStplrPrstkOffsAdj:2K/3KFIN	LT SEF	ENG	[-16 to 16 / 0 / 2mm]
6-118-011	CrnrStplrPrstkOffsAdj:2K/3KFIN	LT LEF	ENG	[-16 to 16 / 0 / 2mm]
6-118-012	CrnrStplrPrstkOffsAdj:2K/3KFIN	8K SEF	ENG	[-16 to 16 / 0 / 2mm]
6-118-013	CrnrStplrPrstkOffsAdj:2K/3KFIN	16K SEF	ENG	[-16 to 16 / 0 / 2mm]
6-118-	CrnrStplrPrstkOffsAdj:2K/3KFIN	16K LEF	ENG	[-16 to 16 / 0 / 2mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
014				
6-118-015	CrnrStplrPrstkOffsAdj:2K/3KFIN	Other	ENG	[-16 to 16 / 0 / 2mm]
6-119-001	BookStplrPrstkOffsAdj:2K/3KFIN	A3 SEF	ENG	[-30 to 30 / 0 / 2mm]
6-119-002	BookStplrPrstkOffsAdj:2K/3KFIN	B4 SEF	ENG	[-30 to 30 / 0 / 2mm]
6-119-003	BookStplrPrstkOffsAdj:2K/3KFIN	A4 SEF	ENG	[-30 to 30 / 0 / 2mm]
6-119-004	BookStplrPrstkOffsAdj:2K/3KFIN	B5 SEF	ENG	[-30 to 30 / 0 / 2mm]
6-119-005	BookStplrPrstkOffsAdj:2K/3KFIN	DLT SEF	ENG	[-30 to 30 / 0 / 2mm]
6-119-006	BookStplrPrstkOffsAdj:2K/3KFIN	LG SEF	ENG	[-30 to 30 / 0 / 2mm]
6-119-007	BookStplrPrstkOffsAdj:2K/3KFIN	Oficio SEF	ENG	[-30 to 30 / 0 / 2mm]
6-119-008	BookStplrPrstkOffsAdj:2K/3KFIN	LT SEF	ENG	[-30 to 30 / 0 / 2mm]
6-119-009	BookStplrPrstkOffsAdj:2K/3KFIN	12"x18"	ENG	[-30 to 30 / 0 / 2mm]
6-119-010	BookStplrPrstkOffsAdj:2K/3KFIN	8K SEF	ENG	[-30 to 30 / 0 / 2mm]
6-119-	BookStplrPrstkOffsAdj:2K/3KFIN	Other	ENG	[-30 to 30 / 0 / 2mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
011				
6-120-001	CrnStpPosExFeedAmtAdj:2K/3KFIN	A3 SEF	ENG	[0 to 30 / 0 / 10mm]
6-120-002	CrnStpPosExFeedAmtAdj:2K/3KFIN	B4 SEF	ENG	[0 to 30 / 0 / 10mm]
6-120-003	CrnStpPosExFeedAmtAdj:2K/3KFIN	A4 SEF	ENG	[0 to 30 / 0 / 10mm]
6-120-004	CrnStpPosExFeedAmtAdj:2K/3KFIN	A4 LEF	ENG	[0 to 30 / 0 / 10mm]
6-120-005	CrnStpPosExFeedAmtAdj:2K/3KFIN	B5 SEF	ENG	[0 to 30 / 0 / 10mm]
6-120-006	CrnStpPosExFeedAmtAdj:2K/3KFIN	B5 LEF	ENG	[0 to 30 / 0 / 10mm]
6-120-007	CrnStpPosExFeedAmtAdj:2K/3KFIN	DLT SEF	ENG	[0 to 30 / 0 / 10mm]
6-120-008	CrnStpPosExFeedAmtAdj:2K/3KFIN	LG SEF	ENG	[0 to 30 / 0 / 10mm]
6-120-009	CrnStpPosExFeedAmtAdj:2K/3KFIN	Oficio SEF	ENG	[0 to 30 / 0 / 10mm]
6-120-010	CrnStpPosExFeedAmtAdj:2K/3KFIN	LT SEF	ENG	[0 to 30 / 0 / 10mm]
6-120-011	CrnStpPosExFeedAmtAdj:2K/3KFIN	LT LEF	ENG	[0 to 30 / 0 / 10mm]
6-120-	CrnStpPosExFeedAmtAdj:2K/3KFIN	8K SEF	ENG	[0 to 30 / 0 / 10mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
012				
6-120-013	CrnStpPosExFeedAmtAdj:2K/3KFIN	16K SEF	ENG	[0 to 30 / 0 / 10mm]
6-120-014	CrnStpPosExFeedAmtAdj:2K/3KFIN	16K LEF	ENG	[0 to 30 / 0 / 10mm]
6-120-015	CrnStpPosExFeedAmtAdj:2K/3KFIN	Other	ENG	[0 to 30 / 0 / 10mm]
6-121-001	NV Adj. Data Mod.	Jogger Pos. Factory Adj.	ENG	[-3 to 3 / 0 / 0.5mm]
6-121-002	NV Adj. Data Mod.	Folding Pos. Factory Adj.	ENG	[-1.4 to 1.4 / 0 / 0.2mm]
6-122-001	BkFoldJogSolMovAmtAdj:2K/3KFIN	A3 SEF	ENG	[-5 to 5 / 0 / 1mm]
6-122-002	BkFoldJogSolMovAmtAdj:2K/3KFIN	B4 SEF	ENG	[-5 to 5 / 0 / 1mm]
6-122-003	BkFoldJogSolMovAmtAdj:2K/3KFIN	A4 SEF	ENG	[-5 to 5 / 0 / 1mm]
6-122-004	BkFoldJogSolMovAmtAdj:2K/3KFIN	B5 SEF	ENG	[-5 to 5 / 0 / 1mm]
6-122-005	BkFoldJogSolMovAmtAdj:2K/3KFIN	DLT SEF	ENG	[-5 to 5 / 0 / 1mm]
6-122-006	BkFoldJogSolMovAmtAdj:2K/3KFIN	LG SEF	ENG	[-5 to 5 / 0 / 1mm]
6-122-	BkFoldJogSolMovAmtAdj:2K/3KFIN	Oficio SEF	ENG	[-5 to 5 / 0 / 1mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
007				
6-122-008	BkFoldJogSolMovAmtAdj:2K/3KFIN	LT SEF	ENG	[-5 to 5 / 0 / 1mm]
6-122-009	BkFoldJogSolMovAmtAdj:2K/3KFIN	12"x18"	ENG	[-5 to 5 / 0 / 1mm]
6-122-010	BkFoldJogSolMovAmtAdj:2K/3KFIN	8K SEF	ENG	[-5 to 5 / 0 / 1mm]
6-122-011	BkFoldJogSolMovAmtAdj:2K/3KFIN	Other	ENG	[-5 to 5 / 0 / 1mm]
6-125-001	Use Paper Guide(Large Size)	All Sizes	ENG	[0 to 1 / 0 / 1] 0: Guide On 1: Guide Off
6-126-001	Use Paper Guide(Small Size)	All Sizes	ENG	[0 to 1 / 0 / 1] 0: Guide On 1: Guide Off
6-127-001	Paper Guide PossAdj:2K/3K FIN	All Sizes	ENG	[-10 to 10 / 0 / 1mm]
6-128-001	Paper Guide RetraAdj:2K/3K FIN	All Sizes	ENG	[-50 to 50 / 0 / 5mm]
6-129-001	Paper Guide AceptAdj:2K/3K FIN	All Sizes	ENG	[-50 to 50 / 0 / 5msec]
6-130-001	Sub-scan PunchPosAdj:FrontFIN	Domestic 2Hole(Europe 2Hole)	ENG	[-7.5 to 7.5 / 0 / 0.5mm]
6-130-002	Sub-scan PunchPosAdj:FrontFIN	North America 3Hole	ENG	[-7.5 to 7.5 / 0 / 0.5mm]
6-130-	Sub-scan PunchPosAdj:FrontFIN	Europe 4Hole	ENG	[-7.5 to 7.5 / 0 / 0.5mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
003				
6-130-004	Sub-scan PunchPosAdj:FrontFIN	North Europe 4Hole	ENG	[-7.5 to 7.5 / 0 / 0.5mm]
6-130-005	Sub-scan PunchPosAdj:FrontFIN	North America 2Hole	ENG	[-7.5 to 7.5 / 0 / 0.5mm]
6-131-001	Main-scan PunchPosAdj:FrontFIN	Domestic 2Hole(Europe 2Hole)	ENG	[-2 to 2 / 0 / 0.4mm]
6-131-002	Main-scan PunchPosAdj:FrontFIN	North America 3Hole	ENG	[-2 to 2 / 0 / 0.4mm]
6-131-003	Main-scan PunchPosAdj:FrontFIN	Europe 4Hole	ENG	[-2 to 2 / 0 / 0.4mm]
6-131-004	Main-scan PunchPosAdj:FrontFIN	North Europe 4Hole	ENG	[-2 to 2 / 0 / 0.4mm]
6-131-005	Main-scan PunchPosAdj:FrontFIN	North America 2Hole	ENG	[-2 to 2 / 0 / 0.4mm]
6-132-001	Jogger Fence Fine Adj:FrontFIN	A3T	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-132-002	Jogger Fence Fine Adj:FrontFIN	B4T	ENG	[-3 to 3 / 0 / 0.5mm]
6-132-003	Jogger Fence Fine Adj:FrontFIN	A4T	ENG	[-3 to 3 / 0 / 0.5mm]
6-132-004	Jogger Fence Fine Adj:FrontFIN	A4Y	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-132-	Jogger Fence Fine Adj:FrontFIN	B5T	ENG	[-3 to 3 / 0 / 0.5mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
005				
6-132-006	Jogger Fence Fine Adj:FrontFIN	B5Y	ENG	[-3 to 3 / 0 / 0.5mm]
6-132-007	Jogger Fence Fine Adj:FrontFIN	DLT-T	ENG	[-3 to 3 / 0 / 0.5mm]
6-132-008	Jogger Fence Fine Adj:FrontFIN	LG-T	ENG	[-3 to 3 / 0 / 0.5mm]
6-132-009	Jogger Fence Fine Adj:FrontFIN	Oficio-T	ENG	[-3 to 3 / 0 / 0.5mm]
6-132-010	Jogger Fence Fine Adj:FrontFIN	LT-T	ENG	[-3 to 3 / 0 / 0.5mm]
6-132-011	Jogger Fence Fine Adj:FrontFIN	LT-Y	ENG	[-3 to 3 / 0 / 0.5mm]
6-132-012	Jogger Fence Fine Adj:FrontFIN	8K-T	ENG	[-3 to 3 / 0 / 0.5mm]
6-132-013	Jogger Fence Fine Adj:FrontFIN	16K-T	ENG	[-3 to 3 / 0 / 0.5mm]
6-132-014	Jogger Fence Fine Adj:FrontFIN	16K-Y	ENG	[-3 to 3 / 0 / 0.5mm]
6-132-015	Jogger Fence Fine Adj:FrontFIN	Other	ENG	[-3 to 3 / 0 / 0.5mm]
6-133-001	Staple Position Adj: FrontFIN	Finisher1	ENG	[-2 to 2 / 0 / 0.5mm]
6-140-	Staple Position Adj: 1K FIN		ENG	[-3.5 to 3.5 / 0 / 0.5mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
6-140-002	Staple Position Adj: 1K FIN	Without Staples	ENG	[-3 to 3 / 0 / 0.3mm]
6-141-001	Booklet Stapler Pos Adj:1K FIN	A3 SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-141-002	Booklet Stapler Pos Adj:1K FIN	B4 SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-141-003	Booklet Stapler Pos Adj:1K FIN	A4 SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-141-004	Booklet Stapler Pos Adj:1K FIN	B5 SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-141-005	Booklet Stapler Pos Adj:1K FIN	DLT SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-141-006	Booklet Stapler Pos Adj:1K FIN	LG SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-141-007	Booklet Stapler Pos Adj:1K FIN	Oficio SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-141-008	Booklet Stapler Pos Adj:1K FIN	LT SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-141-009	Booklet Stapler Pos Adj:1K FIN	12"x18"	ENG	[-3 to 3 / 0 / 0.2mm]
6-142-001	Sub-scan Punch Pos Adj:1K FIN	JPN/EU: 2-Hole	ENG	[-7.5 to 7.5 / 0 / 0.5mm]
6-142-	Sub-scan Punch Pos Adj:1K FIN	NA: 3-Hole	ENG	[-7.5 to 7.5 / 0 / 0.5mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
002				
6-142-003	Sub-scan Punch Pos Adj:1K FIN	Europe: 4-Hole	ENG	[-7.5 to 7.5 / 0 / 0.5mm]
6-142-004	Sub-scan Punch Pos Adj:1K FIN	NEU: 4-Hole	ENG	[-7.5 to 7.5 / 0 / 0.5mm]
6-142-005	Sub-scan Punch Pos Adj:1K FIN	NA: 2-Hole	ENG	[-7.5 to 7.5 / 0 / 0.5mm]
6-143-001	Jogger Pos Adj:1K FIN	A3 SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-143-002	Jogger Pos Adj:1K FIN	B4 SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-143-003	Jogger Pos Adj:1K FIN	A4 SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-143-004	Jogger Pos Adj:1K FIN	A4 LEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-143-005	Jogger Pos Adj:1K FIN	B5 SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-143-006	Jogger Pos Adj:1K FIN	B5 LEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-143-007	Jogger Pos Adj:1K FIN	DLT SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-143-008	Jogger Pos Adj:1K FIN	LG SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-143-	Jogger Pos Adj:1K FIN	Oficio SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
009				
6-143-010	Jogger Pos Adj:1K FIN	LT SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-143-011	Jogger Pos Adj:1K FIN	LT LEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-143-012	Jogger Pos Adj:1K FIN	12"x18"	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-143-013	Jogger Pos Adj:1K FIN	8K SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-143-014	Jogger Pos Adj:1K FIN	16K SEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-143-015	Jogger Pos Adj:1K FIN	16K LEF	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-143-016	Jogger Pos Adj:1K FIN	Other	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-144-001	Main-scan Punch Pos Adj:1K FIN	JPN/EU: 2-Hole	ENG	[-2 to 2 / 0 / 0.4mm]
6-144-002	Main-scan Punch Pos Adj:1K FIN	NA: 3-Hole	ENG	[-2 to 2 / 0 / 0.4mm]
6-144-003	Main-scan Punch Pos Adj:1K FIN	Europe: 4-Hole	ENG	[-2 to 2 / 0 / 0.4mm]
6-144-004	Main-scan Punch Pos Adj:1K FIN	NEU: 4-Hole	ENG	[-2 to 2 / 0 / 0.4mm]
6-144-	Main-scan Punch Pos Adj:1K FIN	NA: 2-Hole	ENG	[-2 to 2 / 0 / 0.4mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
005				
6-145-001	Skew Correct Buckle Adj:1K FIN	A3 SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-145-002	Skew Correct Buckle Adj:1K FIN	B4 SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-145-003	Skew Correct Buckle Adj:1K FIN	A4 SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-145-004	Skew Correct Buckle Adj:1K FIN	A4 LEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-145-005	Skew Correct Buckle Adj:1K FIN	B5 SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-145-006	Skew Correct Buckle Adj:1K FIN	B5 LEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-145-007	Skew Correct Buckle Adj:1K FIN	A5 LEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-145-008	Skew Correct Buckle Adj:1K FIN	DLT SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-145-009	Skew Correct Buckle Adj:1K FIN	LG SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-145-010	Skew Correct Buckle Adj:1K FIN	Oficio SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-145-011	Skew Correct Buckle Adj:1K FIN	LT SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-145-	Skew Correct Buckle Adj:1K FIN	LT LEF	ENG	[-5 to 5 / 0 / 0.2mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
012				
6-145-013	Skew Correct Buckle Adj:1K FIN	HLT LEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-145-014	Skew Correct Buckle Adj:1K FIN	12"x18"	ENG	[-5 to 5 / 0 / 0.2mm]
6-145-015	Skew Correct Buckle Adj:1K FIN	8K SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-145-016	Skew Correct Buckle Adj:1K FIN	16K SEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-145-017	Skew Correct Buckle Adj:1K FIN	16K LEF	ENG	[-5 to 5 / 0 / 0.2mm]
6-145-018	Skew Correct Buckle Adj:1K FIN	Other	ENG	[-5 to 5 / 0 / 0.2mm]
6-146-001	Skew Correct Ctrl SW:1K FIN	A3 SEF	ENG	[0 to 1 / 0 / 1]
6-146-002	Skew Correct Ctrl SW:1K FIN	B4 SEF	ENG	[0 to 1 / 0 / 1]
6-146-003	Skew Correct Ctrl SW:1K FIN	A4 SEF	ENG	[0 to 1 / 0 / 1]
6-146-004	Skew Correct Ctrl SW:1K FIN	A4 LEF	ENG	[0 to 1 / 0 / 1]
6-146-005	Skew Correct Ctrl SW:1K FIN	B5 SEF	ENG	[0 to 1 / 0 / 1]
6-146-	Skew Correct Ctrl SW:1K FIN	B5 LEF	ENG	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
006				
6-146-007	Skew Correct Ctrl SW:1K FIN	A5 LEF	ENG	[0 to 1 / 0 / 1]
6-146-008	Skew Correct Ctrl SW:1K FIN	DLT SEF	ENG	[0 to 1 / 0 / 1]
6-146-009	Skew Correct Ctrl SW:1K FIN	LG SEF	ENG	[0 to 1 / 0 / 1]
6-146-010	Skew Correct Ctrl SW:1K FIN	Oficio SEF	ENG	[0 to 1 / 0 / 1]
6-146-011	Skew Correct Ctrl SW:1K FIN	LT SEF	ENG	[0 to 1 / 0 / 1]
6-146-012	Skew Correct Ctrl SW:1K FIN	LT LEF	ENG	[0 to 1 / 0 / 1]
6-146-013	Skew Correct Ctrl SW:1K FIN	HLT LEF	ENG	[0 to 1 / 0 / 1]
6-146-014	Skew Correct Ctrl SW:1K FIN	12"x18"	ENG	[0 to 1 / 0 / 1]
6-146-015	Skew Correct Ctrl SW:1K FIN	8K SEF	ENG	[0 to 1 / 0 / 1]
6-146-016	Skew Correct Ctrl SW:1K FIN	16K SEF	ENG	[0 to 1 / 0 / 1]
6-146-017	Skew Correct Ctrl SW:1K FIN	16K LEF	ENG	[0 to 1 / 0 / 1]
6-146-	Skew Correct Ctrl SW:1K FIN	Other	ENG	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
018				
6-147-001	Booklet Folder Pos Adj:1K FIN	A3 SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-002	Booklet Folder Pos Adj:1K FIN	B4 SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-003	Booklet Folder Pos Adj:1K FIN	A4 SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-004	Booklet Folder Pos Adj:1K FIN	B5 SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-005	Booklet Folder Pos Adj:1K FIN	DLT SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-006	Booklet Folder Pos Adj:1K FIN	LG SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-007	Booklet Folder Pos Adj:1K FIN	Oficio SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-008	Booklet Folder Pos Adj:1K FIN	LT SEF	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-009	Booklet Folder Pos Adj:1K FIN	12"x18"	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-010	Booklet Folder Pos Adj:1K FIN	A3 SEF(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-011	Booklet Folder Pos Adj:1K FIN	A3 SEF(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-	Booklet Folder Pos Adj:1K FIN	A3 SEF(11-over)	ENG	[-3 to 3 / 0 / 0.2mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
012				
6-147-013	Booklet Folder Pos Adj:1K FIN	B4 SEF(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-014	Booklet Folder Pos Adj:1K FIN	B4 SEF(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-015	Booklet Folder Pos Adj:1K FIN	B4 SEF(11-over)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-016	Booklet Folder Pos Adj:1K FIN	A4 SEF(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-017	Booklet Folder Pos Adj:1K FIN	A4 SEF(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-018	Booklet Folder Pos Adj:1K FIN	A4 SEF(11-over)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-019	Booklet Folder Pos Adj:1K FIN	B5 SEF(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-020	Booklet Folder Pos Adj:1K FIN	B5 SEF(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-021	Booklet Folder Pos Adj:1K FIN	B5 SEF(11-over)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-022	Booklet Folder Pos Adj:1K FIN	DLT SEF(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-023	Booklet Folder Pos Adj:1K FIN	DLT SEF(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-	Booklet Folder Pos Adj:1K FIN	DLT SEF(11-over)	ENG	[-3 to 3 / 0 / 0.2mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
024				
6-147-025	Booklet Folder Pos Adj:1K FIN	LG SEF(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-026	Booklet Folder Pos Adj:1K FIN	LG SEF(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-027	Booklet Folder Pos Adj:1K FIN	LG SEF(11-over)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-028	Booklet Folder Pos Adj:1K FIN	Oficio SEF(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-029	Booklet Folder Pos Adj:1K FIN	Oficio SEF(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-030	Booklet Folder Pos Adj:1K FIN	Oficio SEF(11-over)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-031	Booklet Folder Pos Adj:1K FIN	LT SEF(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-032	Booklet Folder Pos Adj:1K FIN	LT SEF(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-033	Booklet Folder Pos Adj:1K FIN	LT SEF(11-over)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-034	Booklet Folder Pos Adj:1K FIN	12"x18"(1-5)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-035	Booklet Folder Pos Adj:1K FIN	12"x18"(6-10)	ENG	[-3 to 3 / 0 / 0.2mm]
6-147-	Booklet Folder Pos Adj:1K FIN	12"x18"(11-over)	ENG	[-3 to 3 / 0 / 0.2mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
036				
6-148-001	Fold Times Adj: 1K FIN		ENG	[0 to 29 / 0 / 1sec]
6-149-001	Last Paper Pos Time Adj:1K FIN		ENG	[0 to 1 / 0 / 1times]
6-150-001	PositioningStrtTimingAdj:1KFIN	A3 SEF	ENG	[-100 to 100 / 0 / 10msec]
6-150-002	PositioningStrtTimingAdj:1KFIN	B4 SEF	ENG	[-100 to 100 / 0 / 10msec]
6-150-003	PositioningStrtTimingAdj:1KFIN	A4 SEF	ENG	[-100 to 100 / 0 / 10msec]
6-150-004	PositioningStrtTimingAdj:1KFIN	A4 LEF	ENG	[-100 to 100 / 0 / 10msec]
6-150-005	PositioningStrtTimingAdj:1KFIN	B5 SEF	ENG	[-100 to 100 / 0 / 10msec]
6-150-006	PositioningStrtTimingAdj:1KFIN	B5 LEF	ENG	[-100 to 100 / 0 / 10msec]
6-150-007	PositioningStrtTimingAdj:1KFIN	DLT SEF	ENG	[-100 to 100 / 0 / 10msec]
6-150-008	PositioningStrtTimingAdj:1KFIN	LG SEF	ENG	[-100 to 100 / 0 / 10msec]
6-150-009	PositioningStrtTimingAdj:1KFIN	Oficio SEF	ENG	[-100 to 100 / 0 / 10msec]
6-150-	PositioningStrtTimingAdj:1KFIN	LT SEF	ENG	[-100 to 100 / 0 / 10msec]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
010				
6-150-011	PositioningStrtTimingAdj:1KFIN	LT LEF	ENG	[-100 to 100 / 0 / 10msec]
6-150-012	PositioningStrtTimingAdj:1KFIN	12"x18"	ENG	[-100 to 100 / 0 / 10msec]
6-150-013	PositioningStrtTimingAdj:1KFIN	8K SEF	ENG	[-100 to 100 / 0 / 10msec]
6-150-014	PositioningStrtTimingAdj:1KFIN	16K SEF	ENG	[-100 to 100 / 0 / 10msec]
6-150-015	PositioningStrtTimingAdj:1KFIN	16K LEF	ENG	[-100 to 100 / 0 / 10msec]
6-150-016	PositioningStrtTimingAdj:1KFIN	Other	ENG	[-100 to 100 / 0 / 10msec]
6-151-001	PosTimeAdj(LstPr2ndTime):1KFIN		ENG	[-100 to 100 / 0 / 10msec]
6-152-001	PosTiAdj(ExcLstPr3rdTi):1KFIN	A3 SEF	ENG	[-100 to 100 / 0 / 10msec]
6-152-002	PosTiAdj(ExcLstPr3rdTi):1KFIN	B4 SEF	ENG	[-100 to 100 / 0 / 10msec]
6-152-003	PosTiAdj(ExcLstPr3rdTi):1KFIN	A4 SEF	ENG	[-100 to 100 / 0 / 10msec]
6-152-004	PosTiAdj(ExcLstPr3rdTi):1KFIN	A4 LEF	ENG	[-100 to 100 / 0 / 10msec]
6-152-	PosTiAdj(ExcLstPr3rdTi):1KFIN	B5 SEF	ENG	[-100 to 100 / 0 / 10msec]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
005				
6-152-006	PosTiAdj(ExcLstPr3rdTi):1KFIN	B5 LEF	ENG	[-100 to 100 / 0 / 10msec]
6-152-007	PosTiAdj(ExcLstPr3rdTi):1KFIN	DLT SEF	ENG	[-100 to 100 / 0 / 10msec]
6-152-008	PosTiAdj(ExcLstPr3rdTi):1KFIN	LG SEF	ENG	[-100 to 100 / 0 / 10msec]
6-152-009	PosTiAdj(ExcLstPr3rdTi):1KFIN	Oficio SEF	ENG	[-100 to 100 / 0 / 10msec]
6-152-010	PosTiAdj(ExcLstPr3rdTi):1KFIN	LT SEF	ENG	[-100 to 100 / 0 / 10msec]
6-152-011	PosTiAdj(ExcLstPr3rdTi):1KFIN	LT LEF	ENG	[-100 to 100 / 0 / 10msec]
6-152-012	PosTiAdj(ExcLstPr3rdTi):1KFIN	12"x18"	ENG	[-100 to 100 / 0 / 10msec]
6-152-013	PosTiAdj(ExcLstPr3rdTi):1KFIN	8K SEF	ENG	[-100 to 100 / 0 / 10msec]
6-152-014	PosTiAdj(ExcLstPr3rdTi):1KFIN	16K SEF	ENG	[-100 to 100 / 0 / 10msec]
6-152-015	PosTiAdj(ExcLstPr3rdTi):1KFIN	16K LEF	ENG	[-100 to 100 / 0 / 10msec]
6-152-016	PosTiAdj(ExcLstPr3rdTi):1KFIN	Other	ENG	[-100 to 100 / 0 / 10msec]
6-154-	Pos Time Adj By Sheet: 1K FIN	1 - 10 Sheets	ENG	[-100 to 100 / 0 / 10msec]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
6-154-002	Pos Time Adj By Sheet: 1K FIN	11 - 20 Sheets	ENG	[-100 to 100 / 0 / 10msec]
6-154-003	Pos Time Adj By Sheet: 1K FIN	21 - 30 Sheets	ENG	[-100 to 100 / 0 / 10msec]
6-154-004	Pos Time Adj By Sheet: 1K FIN	31 - 40 Sheets	ENG	[-100 to 100 / 0 / 10msec]
6-154-005	Pos Time Adj By Sheet: 1K FIN	41 - 50 Sheets	ENG	[-100 to 100 / 0 / 10msec]
6-155-001	Paper Guide Position Adj: 1K FIN		ENG	[-10 to 10 / 0 / 1mm]
6-156-001	Paper Guide Rtrct. Timming: 1K FIN		ENG	[-50 to 50 / 0 / 5mm]
6-157-001	Paper Guide Move Timming: 1K FIN		ENG	[-50 to 50 / 0 / 5msec]
6-158-001	Bind Speed Setting: 1K FIN_HY		ENG	[1 to 3 / 3 / 2] 1: Bind Speed 1(Low) 3: Bind Speed 3(High)
6-159-001	Bind Times: 1K FIN_HY		ENG*	[1 to 2 / 2 / 1] 1: Once 2: Twice
6-160-004	Finisher Free Run: 1K FIN	Free Run 4	ENG	[0 to 1 / 0 / 1]
6-163-001	Use Paper Guide 1KShtFIN	Large Size	ENG	[0 to 1 / 1 / 1] 0: Guide On 1: Guide Off

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
6-163-002	Use Paper Guide 1KShtFIN	Small Size	ENG	[0 to 1 / 0 / 1] 0: Guide On 1: Guide Off
6-164-001	NV Adj. Data Mod. 1KShtFIN	Jogger Pos. Factory Adj.	ENG	[-1.5 to 1.5 / 0 / 0.5mm]
6-164-002	NV Adj. Data Mod. 1KShtFIN	Stapling Pos. Factory Adj.	ENG	[-2 to 2 / 0 / 0.5mm]
6-164-003	NV Adj. Data Mod. 1KShtFIN HY	Stapling Pos. Factory Adj. (HY)	ENG	[-2.1 to 2.1 / 0 / 0.3mm]
6-164-004	NV Adj. Data Mod. 1KShtFIN HY	Stapleless Stapling Pos. Factory Adj.	ENG	[-2.1 to 2.1 / 0 / 0.3mm]
6-164-005	NV Adj. Data Mod. 1KShtFIN	Folding Pos. Factory Adj.	ENG	[-2 to 2 / 0 / 0.1mm]
6-180-001	M-ScanBindPosAdj:NoStplBindFIN		ENG	[-1 to 1 / 0 / 0.5mm]
6-181-001	BindSpeedSetting:NoStplBindFIN		ENG	[1 to 3 / 3 / 2] 1: Bind Spd1(L) 3: Bind Speed 3
6-182-001	ExitSpeedSwitch:NoStplBindFIN	PaperLength:297.0-457.2mm,Thick(106-300g/m2)	ENG	[1 to 5 / 2 / 1] 1: Exit Spd1(L) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-182-002	ExitSpeedSwitch:NoStplBindFIN	PaperLength:297.0-457.2mm,Plain(60-105g/m2)	ENG	[1 to 5 / 2 / 1] 1: Exit Spd1(L) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				5(High)
6-182-003	ExitSpeedSwitch:NoStplBindFIN	PaperLength:297.0-457.2mm,Thin(52-59g/m2)	ENG	[1 to 5 / 4 / 1] 1: Exit Spd1(L) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-182-004	ExitSpeedSwitch:NoStplBindFIN	PaperLength:210.0-296.9mm,Thick(106-300g/m2)	ENG	[1 to 5 / 2 / 1] 1: Exit Spd1(L) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-182-005	ExitSpeedSwitch:NoStplBindFIN	PaperLength:210.0-296.9mm,Plain(60-105g/m2)	ENG	[1 to 5 / 2 / 1] 1: Exit Spd1(L) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-182-006	ExitSpeedSwitch:NoStplBindFIN	PaperLength:210.0-296.9mm,Thin(52-59g/m2)	ENG	[1 to 5 / 4 / 1] 1: Exit Spd1(L) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-182-007	ExitSpeedSwitch:NoStplBindFIN	PaperLength:148.0-209.9mm,Thick(106-300g/m2)	ENG	[1 to 5 / 2 / 1] 1: Exit Spd1(L) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-	ExitSpeedSwitch:NoStplBindFIN	PaperLength:148.0-	ENG	[1 to 5 / 2 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
182-008		209.9mm,Plain(60-105g/m2)		1: Exit Spd1(L) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-182-009	ExitSpeedSwitch:NoStplBindFIN	PaperLength:148.0-209.9mm,Thin(52-59g/m2)	ENG	[1 to 5 / 4 / 1] 1: Exit Spd1(L) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-186-001	BindTimes NoStplBindFIN		ENG*	[1 to 2 / 2 / 1] 1: Once 2: Twice
6-301-001	Z-Fold:FineAdj 1st	A3 SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-301-002	Z-Fold:FineAdj 1st	B4 SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-301-003	Z-Fold:FineAdj 1st	A4 SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-301-004	Z-Fold:FineAdj 1st	DLT SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-301-005	Z-Fold:FineAdj 1st	LG SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-301-006	Z-Fold:FineAdj 1st	LT SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-301-007	Z-Fold:FineAdj 1st	8K SEF	ENG	[-4 to 4 / 0 / 0.1mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
6-301-008	Z-Fold:FineAdj 1st	Oficio SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-301-009	Z-Fold:FineAdj 1st	Other	ENG	[-4 to 4 / 0 / 0.1mm]
6-302-001	Z-Fold:FineAdj 2nd	A3 SEF	ENG	[-4 to 4 / 0 / 0.2mm]
6-302-002	Z-Fold:FineAdj 2nd	B4 SEF	ENG	[-4 to 4 / 0 / 0.2mm]
6-302-003	Z-Fold:FineAdj 2nd	A4 SEF	ENG	[-4 to 4 / 0 / 0.2mm]
6-302-004	Z-Fold:FineAdj 2nd	DLT SEF	ENG	[-4 to 4 / 0 / 0.2mm]
6-302-005	Z-Fold:FineAdj 2nd	LG SEF	ENG	[-4 to 4 / 0 / 0.2mm]
6-302-006	Z-Fold:FineAdj 2nd	LT SEF	ENG	[-4 to 4 / 0 / 0.2mm]
6-302-007	Z-Fold:FineAdj 2nd	8K SEF	ENG	[-4 to 4 / 0 / 0.2mm]
6-302-008	Z-Fold:FineAdj 2nd	Oficio SEF	ENG	[-4 to 4 / 0 / 0.2mm]
6-302-009	Z-Fold:FineAdj 2nd	Other	ENG	[-4 to 4 / 0 / 0.2mm]
6-304-001	Equal 1/2:FineAdjFld	A3 SEF	ENG	[-4 to 4 / 0 / 0.1mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
6-304-002	Equal 1/2:FineAdjFld	B4 SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-304-003	Equal 1/2:FineAdjFld	A4 SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-304-004	Equal 1/2:FineAdjFld	DLT SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-304-005	Equal 1/2:FineAdjFld	LG SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-304-006	Equal 1/2:FineAdjFld	LT SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-304-007	Equal 1/2:FineAdjFld	8K SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-304-008	Equal 1/2:FineAdjFld	"12x18"	ENG	[-4 to 4 / 0 / 0.1mm]
6-304-009	Equal 1/2:FineAdjFld	Oficio SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-304-010	Equal 1/2:FineAdjFld	Other	ENG	[-4 to 4 / 0 / 0.1mm]
6-307-001	Equal 3rds:Fine Adj 1st	A3 SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-307-002	Equal 3rds:Fine Adj 1st	DLT SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-307-003	Equal 3rds:Fine Adj 1st	A4 SEF	ENG	[-4 to 4 / 0 / 0.1mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
6-307-004	Equal 3rds:Fine Adj 1st	LG SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-307-005	Equal 3rds:Fine Adj 1st	LT SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-307-006	Equal 3rds:Fine Adj 1st	Oficio SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-307-007	Equal 3rds:Fine Adj 1st	Other	ENG	[-4 to 4 / 0 / 0.1mm]
6-308-001	Equal 3rds:Fine Adj 2nd	A3 SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-308-002	Equal 3rds:Fine Adj 2nd	DLT SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-308-003	Equal 3rds:Fine Adj 2nd	A4 SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-308-004	Equal 3rds:Fine Adj 2nd	LG SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-308-005	Equal 3rds:Fine Adj 2nd	LT SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-308-006	Equal 3rds:Fine Adj 2nd	Oficio SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-308-007	Equal 3rds:Fine Adj 2nd	Other	ENG	[-4 to 4 / 0 / 0.1mm]
6-311-001	3rds 1 Flap:Fine Adj 1st	A3 SEF	ENG	[-4 to 4 / 0 / 0.1mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
6-311-002	3rds 1 Flap:Fine Adj 1st	DLT SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-311-003	3rds 1 Flap:Fine Adj 1st	A4 SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-311-004	3rds 1 Flap:Fine Adj 1st	LG SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-311-005	3rds 1 Flap:Fine Adj 1st	LT SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-311-006	3rds 1 Flap:Fine Adj 1st	Oficio SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-311-007	3rds 1 Flap:Fine Adj 1st	Other	ENG	[-4 to 4 / 0 / 0.1mm]
6-312-001	3rds 1 Flap:Fine Adj 2nd	A3 SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-312-002	3rds 1 Flap:Fine Adj 2nd	DLT SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-312-003	3rds 1 Flap:Fine Adj 2nd	A4 SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-312-004	3rds 1 Flap:Fine Adj 2nd	LG SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-312-005	3rds 1 Flap:Fine Adj 2nd	LT SEF	ENG	[-4 to 4 / 0 / 0.1mm]
6-312-006	3rds 1 Flap:Fine Adj 2nd	Oficio-T	ENG	[-4 to 4 / 0 / 0.1mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
6-312-007	3rds 1 Flap:Fine Adj 2nd	Other	ENG	[-4 to 4 / 0 / 0.1mm]
6-313-001	Registration Buckle Adjust	A3 SEF	ENG	[0 to 5 / 2 / 0.5mm]
6-313-002	Registration Buckle Adjust	B4 SEF	ENG	[0 to 5 / 2 / 0.5mm]
6-313-003	Registration Buckle Adjust	A4 SEF	ENG	[0 to 5 / 2 / 0.5mm]
6-313-004	Registration Buckle Adjust	DLT SEF	ENG	[0 to 5 / 2 / 0.5mm]
6-313-005	Registration Buckle Adjust	LG SEF	ENG	[0 to 5 / 2 / 0.5mm]
6-313-006	Registration Buckle Adjust	LT SEF	ENG	[0 to 5 / 2 / 0.5mm]
6-313-007	Registration Buckle Adjust	8K SEF	ENG	[0 to 5 / 2 / 0.5mm]
6-313-008	Registration Buckle Adjust	"12x18"	ENG	[0 to 5 / 2 / 0.5mm]
6-313-009	Registration Buckle Adjust	Oficio SEF	ENG	[0 to 5 / 2 / 0.5mm]
6-313-010	Registration Buckle Adjust	Other	ENG	[0 to 5 / 2 / 0.5mm]
6-314-001	Registration Buckle Select		ENG	[0 to 1 / 0 / 1] 0: Mode1 1: Mode2

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
6-315-001	Set Number of Creasing		ENG	[0 to 4 / 1 / 1times] 0: -1 1: 0 2: 1 3: 2 4: 3
6-316-001	Silent Mode Select		ENG	[0 to 1 / 0 / 1] 0: OFF 1: ON
6-317-001	Not Fold Exit Speed	Plain: Large-Size	ENG	[1 to 5 / 2 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-317-002	Not Fold Exit Speed	Plain: Middle-Size	ENG	[1 to 5 / 2 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-317-003	Not Fold Exit Speed	Plain: Small-Size	ENG	[1 to 5 / 1 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-317-004	Not Fold Exit Speed	Thick: Large-Size	ENG	[1 to 5 / 3 / 1] 1: Exit Speed 1(Low)

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-317-005	Not Fold Exit Speed	Thick: Middle-Size	ENG	[1 to 5 / 3 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-317-006	Not Fold Exit Speed	Thick: Small-Size	ENG	[1 to 5 / 1 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-317-007	Not Fold Exit Speed	Thin: Large-Size	ENG	[1 to 5 / 4 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-317-008	Not Fold Exit Speed	Thin: Middle-Size	ENG	[1 to 5 / 4 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
6-317-009	Not Fold Exit Speed	Thin: Small-Size	ENG	[1 to 5 / 1 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-318-001	Z-Fold Exit Speed	Plain: Large-Size	ENG	[1 to 5 / 3 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-318-002	Z-Fold Exit Speed	Plain: Middle-Size	ENG	[1 to 5 / 3 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-318-003	Z-Fold Exit Speed	Plain: Small-Size	ENG	[1 to 5 / 3 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-319-001	Equal 1/2 Exit Speed	Plain: Large-Size	ENG	[1 to 5 / 3 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				4: Exit Speed 4 5: Exit Speed 5(High)
6-319-002	Equal 1/2 Exit Speed	Plain: Middle-Size	ENG	[1 to 5 / 3 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-319-003	Equal 1/2 Exit Speed	Plain: Small-Size	ENG	[1 to 5 / 3 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-320-001	Equal 3rds Exit Speed	Plain: Large-Size	ENG	[1 to 5 / 3 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-320-002	Equal 3rds Exit Speed	Plain: Middle-Size	ENG	[1 to 5 / 3 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-320-	Equal 3rds Exit Speed	Plain: Small-Size	ENG	[1 to 5 / 3 / 1] 1: Exit Speed

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
003				1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-321-001	3rds 1 Flap Exit Fold	Plain: Large-Size	ENG	[1 to 5 / 3 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-321-002	3rds 1 Flap Exit Fold	Plain: Middle-Size	ENG	[1 to 5 / 3 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-321-003	3rds 1 Flap Exit Fold	Plain: Small-Size	ENG	[1 to 5 / 3 / 1] 1: Exit Speed 1(Low) 2: Exit Speed 2 3: Exit Speed 3 4: Exit Speed 4 5: Exit Speed 5(High)
6-324-001	NV Adj. Data Mod.	1st Fold Pos. Factory Setting	ENG	[-3 to 3 / 0 / 0.1mm]
6-324-002	NV Adj. Data Mod.	2nd Fold Pos. Factory Setting	ENG	[-3 to 3 / 0 / 0.1mm]
6-	NV Adj. Data Mod.	Crease Pos. Factory Setting	ENG	[-3 to 3 / 0 /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
324-003				0.1mm]
6-325-001	Folder. Free Run	Free Run1(Not Fold)	ENG	[0 to 1 / 0 / 1]
6-325-002	Folder. Free Run	Free Run2(Z-Fold)	ENG	[0 to 1 / 0 / 1]
6-325-003	Folder. Free Run	Free Run3(Equal 1/2)	ENG	[0 to 1 / 0 / 1]
6-325-004	Folder. Free Run	Free Run4(Equal 3rds)	ENG	[0 to 1 / 0 / 1]
6-325-005	Folder. Free Run	Free Run5(3rds 1 Flap)	ENG	[0 to 1 / 0 / 1]
6-326-001	Z-Fold Full Detact Adjust	Large Size	ENG	[-1 to 1 / 0 / 0.2v]
6-326-002	Z-Fold Full Detact Adjust	Middle Size	ENG	[-1 to 1 / 0 / 0.2v]
6-326-003	Z-Fold Full Detact Adjust	Small Size	ENG	[-1 to 1 / 0 / 0.2v]
6-327-001	Equal 1/2 Full Detact Adjust	Large Size	ENG	[-1 to 1 / 0 / 0.2v]
6-327-002	Equal 1/2 Full Detact Adjust	Middle Size	ENG	[-1 to 1 / 0 / 0.2v]
6-327-003	Equal 1/2 Full Detact Adjust	Small Size	ENG	[-1 to 1 / 0 / 0.2v]
6-	1-pass Stamp Unit		ENG*	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
801-001				0: NO 1: YES
6-830-001	Extra	Staples 0 to 50 (Initial:0)	CTL*	[0 to 50 / 0 / 1]
6-830-002	Extra	Saddles 0 to 50 (Initial:0)	CTL*	[0 to 50 / 0 / 1]
6-830-003	Extra	Half-Fold 0 to 50 (Initial:0)	CTL*	[0 to 50 / 0 / 1]
6-830-005	Extra	StaplessStaples 0 to 50 (Initial:0)	CTL*	[0 to 50 / 0 / 1]
6-890-001	Function Enabled	Z-Fold 0:No Punch 1:Punching OK	CTL	[0 to 1 / 0 / 1]
6-901-001	ADF Move Setting		ENG	[0 to 1 / 0 / 1]
6-901-002	ADF Move Setting	Stacking Priority Adjustment	ENG	[0 to 1 / 0 / 1]

SP Group 7000

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
7-401-001	Total SC	SC Counter	CTL*	[0 to 65535 / 0 / 0]
7-401-002	Total SC	Total SC Counter	CTL*	[0 to 65535 / 0 / 0]
7-403-001	SC History	Latest	CTL*	[0 to 0 / 0 / 0]
7-403-002	SC History	Latest 1	CTL*	[0 to 0 / 0 / 0]
7-403-003	SC History	Latest 2	CTL*	[0 to 0 / 0 / 0]
7-403-004	SC History	Latest 3	CTL*	[0 to 0 / 0 / 0]
7-403-005	SC History	Latest 4	CTL*	[0 to 0 / 0 / 0]
7-403-006	SC History	Latest 5	CTL*	[0 to 0 / 0 / 0]
7-403-007	SC History	Latest 6	CTL*	[0 to 0 / 0 / 0]
7-403-008	SC History	Latest 7	CTL*	[0 to 0 / 0 / 0]
7-403-009	SC History	Latest 8	CTL*	[0 to 0 / 0 / 0]
7-403-010	SC History	Latest 9	CTL*	[0 to 0 / 0 / 0]
7-404-001	Software Error History	Latest	CTL*	[0 to 0 / 0 / 0]
7-404-002	Software Error History	Latest 1	CTL*	[0 to 0 / 0 / 0]
7-404-003	Software Error History	Latest 2	CTL*	[0 to 0 / 0 / 0]
7-404-004	Software Error History	Latest 3	CTL*	[0 to 0 / 0 / 0]
7-404-005	Software Error History	Latest 4	CTL*	[0 to 0 / 0 / 0]
7-404-	Software Error History	Latest 5	CTL*	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
006				
7-404-007	Software Error History	Latest 6	CTL*	[0 to 0 / 0 / 0]
7-404-008	Software Error History	Latest 7	CTL*	[0 to 0 / 0 / 0]
7-404-009	Software Error History	Latest 8	CTL*	[0 to 0 / 0 / 0]
7-404-010	Software Error History	Latest 9	CTL*	[0 to 0 / 0 / 0]
7-502-001	Total Paper Jam	Jam Counter	CTL*	[0 to 65535 / 0 / 0]
7-502-002	Total Paper Jam	Total Jam Counter	CTL*	[0 to 65535 / 0 / 0]
7-503-001	Total Original Jam	Original Jam Counter	CTL*	[0 to 65535 / 0 / 0]
7-503-002	Total Original Jam	Total Original Jam Counter	CTL*	[0 to 65535 / 0 / 0]
7-504-001	Paper Jam Location	At Power On	CTL*	[0 to 65535 / 0 / 0]
7-504-003	Paper Jam Location	Tray1: On	CTL*	[0 to 65535 / 0 / 0]
7-504-004	Paper Jam Location	Tray2: On	CTL*	[0 to 65535 / 0 / 0]
7-504-005	Paper Jam Location	Tray3: On	CTL*	[0 to 65535 / 0 / 0]
7-504-006	Paper Jam Location	Tray4: On	CTL*	[0 to 65535 / 0 / 0]
7-504-007	Paper Jam Location	LCT: On	CTL*	[0 to 65535 / 0 / 0]
7-504-008	Paper Jam Location	Bypass: On	CTL*	[0 to 65535 / 0 / 0]
7-504-009	Paper Jam Location	Duplex: On	CTL*	[0 to 65535 / 0 / 0]
7-504-010	Paper Jam Location	Timing: On	CTL*	[0 to 65535 / 0 / 0]
7-504-	Paper Jam Location	Transport Sn1: On	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
011				
7-504-012	Paper Jam Location	Transport Sn2: On	CTL*	[0 to 65535 / 0 / 0]
7-504-013	Paper Jam Location	Vertical Trans. Sn3: On	CTL*	[0 to 65535 / 0 / 0]
7-504-014	Paper Jam Location	Vertical Trans. Sn4: On	CTL*	[0 to 65535 / 0 / 0]
7-504-015	Paper Jam Location	LCT Transport Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-504-017	Paper Jam Location	Registration Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-504-018	Paper Jam Location	Fusing Ent Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-504-019	Paper Jam Location	Fusing Ext Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-504-020	Paper Jam Location	Paper Ext Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-504-021	Paper Jam Location	Bridge Tray Exit Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-504-022	Paper Jam Location	Bridge Relay Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-504-024	Paper Jam Location	Inverter Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-504-025	Paper Jam Location	Duplex Exit Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-504-027	Paper Jam Location	Duplex Entrance Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-504-051	Paper Jam Location	Tray1: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-052	Paper Jam Location	Tray2: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-053	Paper Jam Location	Tray3: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-054	Paper Jam Location	Tray4: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-	Paper Jam Location	LCT Transport Sn: Off	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
055				
7-504-057	Paper Jam Location	Registratin Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-060	Paper Jam Location	Paper Ext Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-061	Paper Jam Location	Bridge Tray Ext Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-062	Paper Jam Location	Bridge Relay Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-064	Paper Jam Location	Inverter Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-065	Paper Jam Location	Duplex Ext Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-067	Paper Jam Location	Duplex Ent Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-100	Paper Jam Location	Entrance Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-504-101	Paper Jam Location	Entrance Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-102	Paper Jam Location	Transport Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-504-103	Paper Jam Location	Transport Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-104	Paper Jam Location	Paper Exit	CTL*	[0 to 65535 / 0 / 0]
7-504-105	Paper Jam Location	Front Jogger Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-106	Paper Jam Location	Rear Jogger Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-107	Paper Jam Location	Shift Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-108	Paper Jam Location	Positioning Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-109	Paper Jam Location	Exit Guide Plate Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-	Paper Jam Location	Stapler Shift Motor	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
110				
7-504-111	Paper Jam Location	Tray Lift Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-112	Paper Jam Location	Staple Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-113	Paper Jam Location	Stack Height Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-114	Paper Jam Location	Punch Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-115	Paper Jam Location	Punch Move Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-116	Paper Jam Location	S-to-S Registration Move Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-148	Paper Jam Location	No Exit Response	CTL*	[0 to 65535 / 0 / 0]
7-504-149	Paper Jam Location	Main Machine Setting Incorrect	CTL*	[0 to 65535 / 0 / 0]
7-504-150	Paper Jam Location	Entrance Sensor: On	CTL*	[0 to 65535 / 0 / 0]
7-504-151	Paper Jam Location	Entrance Sensor: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-152	Paper Jam Location	Horizontal Transport Sensor: On	CTL*	[0 to 65535 / 0 / 0]
7-504-153	Paper Jam Location	Horizontal Transport Sensor: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-154	Paper Jam Location	Switchback Transport Sensor: On	CTL*	[0 to 65535 / 0 / 0]
7-504-155	Paper Jam Location	Switchback Transport Sensor: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-156	Paper Jam Location	Proof Tray Exit: On	CTL*	[0 to 65535 / 0 / 0]
7-504-157	Paper Jam Location	Proof Tray Exit: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-158	Paper Jam Location	Shift Tray Exit: On	CTL*	[0 to 65535 / 0 / 0]
7-504-	Paper Jam Location	Shift Tray Exit: Off	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
159				
7-504-160	Paper Jam Location	Booklet Stapler Exit: On	CTL*	[0 to 65535 / 0 / 0]
7-504-161	Paper Jam Location	Booklet Stapler Exit: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-162	Paper Jam Location	Enrance Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-163	Paper Jam Location	Horizontal Transport Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-164	Paper Jam Location	Pre-Stack Transport Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-165	Paper Jam Location	ITB Transport Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-166	Paper Jam Location	Exit Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-167	Paper Jam Location	TE Press Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-168	Paper Jam Location	Ext Plate Guide Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-169	Paper Jam Location	Punching Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-170	Paper Jam Location	Punch Move Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-171	Paper Jam Location	S-to-S Registration Move Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-172	Paper Jam Location	Lower Junction Solenoid Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-173	Paper Jam Location	Jogger Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-174	Paper Jam Location	Positioning Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-175	Paper Jam Location	Feed Out Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-176	Paper Jam Location	Corner Stapler Move Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-	Paper Jam Location	Corner Stapler Motor	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
177				
7-504-178	Paper Jam Location	Saddle Stitch Stapler Jogger Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-179	Paper Jam Location	Saddle Stitch Stapler Jog SOL Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-180	Paper Jam Location	Saddle Stitch Stapler Standard Fence Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-181	Paper Jam Location	Saddle Stitch Stapler Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-182	Paper Jam Location	Dynamic Roller Transport Mt	CTL*	[0 to 65535 / 0 / 0]
7-504-183	Paper Jam Location	Folder Transport Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-184	Paper Jam Location	Flat Fold Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-185	Paper Jam Location	Output Tray Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-186	Paper Jam Location	Shift Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-187	Paper Jam Location	Shift Tray Jogger Front Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-188	Paper Jam Location	Shift Tray Jogger Rear Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-189	Paper Jam Location	Shift Tray Jogger Retraction Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-190	Paper Jam Location	Stack Roller Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-191	Paper Jam Location	Leading Edge Guide Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-192	Paper Jam Location	Positioning Roller Transport Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-193	Paper Jam Location	Paper Guide Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-194	Paper Jam Location	Main Machine Setting Incorrect	CTL*	[0 to 65535 / 0 / 0]
7-504-	Paper Jam Location	Entrance: On	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
200				
7-504-201	Paper Jam Location	Entrance: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-202	Paper Jam Location	Proof Tray Exit: On	CTL*	[0 to 65535 / 0 / 0]
7-504-203	Paper Jam Location	Proof Tray Exit: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-204	Paper Jam Location	Right Relay: On	CTL*	[0 to 65535 / 0 / 0]
7-504-205	Paper Jam Location	Left Relay: On	CTL*	[0 to 65535 / 0 / 0]
7-504-206	Paper Jam Location	Left Relay: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-207	Paper Jam Location	Shift Tray Exit: On	CTL*	[0 to 65535 / 0 / 0]
7-504-208	Paper Jam Location	Shift Tray Exit: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-209	Paper Jam Location	Stack: On	CTL*	[0 to 65535 / 0 / 0]
7-504-210	Paper Jam Location	TE Stopper: On	CTL*	[0 to 65535 / 0 / 0]
7-504-211	Paper Jam Location	TE Stopper: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-212	Paper Jam Location	Booklet Folder Exit: On	CTL*	[0 to 65535 / 0 / 0]
7-504-213	Paper Jam Location	Booklet Folder Exit: Off	CTL*	[0 to 65535 / 0 / 0]
7-504-220	Paper Jam Location	Entrance Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-221	Paper Jam Location	Proof Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-222	Paper Jam Location	Exit Transport/ Positioning Roller Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-223	Paper Jam Location	Shift Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-	Paper Jam Location	Jogger Motor	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
224				
7-504-225	Paper Jam Location	Exit Guide Plate Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-226	Paper Jam Location	Feed Out Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-227	Paper Jam Location	Output Tray Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-228	Paper Jam Location	Positioning Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-229	Paper Jam Location	Stapler Shift Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-230	Paper Jam Location	Stapler Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-231	Paper Jam Location	Punch Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-232	Paper Jam Location	Stack Transport Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-233	Paper Jam Location	LE Stopper Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-234	Paper Jam Location	Folder Blade Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-235	Paper Jam Location	Paper Guide Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-236	Paper Jam Location	Stapler Shift Motor(without staples)	CTL*	[0 to 65535 / 0 / 0]
7-504-237	Paper Jam Location	Stapler Motor(without staples)	CTL*	[0 to 65535 / 0 / 0]
7-504-238	Paper Jam Location	Movable Guide Motor	CTL*	[0 to 65535 / 0 / 0]
7-504-248	Paper Jam Location	No Exit Response	CTL*	[0 to 65535 / 0 / 0]
7-504-249	Paper Jam Location	Main Machine Setting Incorrect	CTL*	[0 to 65535 / 0 / 0]
7-505-001	Original Jam Detection	At Power On	CTL*	[0 to 65535 / 0 / 0]
7-505-	Original Jam Detection	Separation Sensor: On	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
013				
7-505-014	Original Jam Detection	Skew Correction Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-505-015	Original Jam Detection	Scanning Entrance Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-505-016	Original Jam Detection	Registration Sensor: On	CTL*	[0 to 65535 / 0 / 0]
7-505-017	Original Jam Detection	Original Exit Sensor: On	CTL*	[0 to 65535 / 0 / 0]
7-505-063	Original Jam Detection	Separation Sensor: Off	CTL*	[0 to 65535 / 0 / 0]
7-505-064	Original Jam Detection	Skew Correction Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-505-065	Original Jam Detection	Scanning Entrance Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-505-066	Original Jam Detection	Registration Sensor: Off	CTL*	[0 to 65535 / 0 / 0]
7-505-067	Original Jam Detection	Original Exit Sensor: Off	CTL*	[0 to 65535 / 0 / 0]
7-505-239	Original Jam Detection	Original Pull	CTL*	[0 to 65535 / 0 / 0]
7-506-005	Jam Count by Paper Size	A4 LEF	CTL*	[0 to 65535 / 0 / 0]
7-506-006	Jam Count by Paper Size	A5 LEF	CTL*	[0 to 65535 / 0 / 0]
7-506-014	Jam Count by Paper Size	B5 LEF	CTL*	[0 to 65535 / 0 / 0]
7-506-038	Jam Count by Paper Size	LT LEF	CTL*	[0 to 65535 / 0 / 0]
7-506-044	Jam Count by Paper Size	HLT LEF	CTL*	[0 to 65535 / 0 / 0]
7-506-132	Jam Count by Paper Size	A3 SEF	CTL*	[0 to 65535 / 0 / 0]
7-506-133	Jam Count by Paper Size	A4 SEF	CTL*	[0 to 65535 / 0 / 0]
7-506-	Jam Count by Paper Size	A5 SEF	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
134				
7-506-141	Jam Count by Paper Size	B4 SEF	CTL*	[0 to 65535 / 0 / 0]
7-506-142	Jam Count by Paper Size	B5 SEF	CTL*	[0 to 65535 / 0 / 0]
7-506-160	Jam Count by Paper Size	DLT SEF	CTL*	[0 to 65535 / 0 / 0]
7-506-164	Jam Count by Paper Size	LG SEF	CTL*	[0 to 65535 / 0 / 0]
7-506-166	Jam Count by Paper Size	LT SEF	CTL*	[0 to 65535 / 0 / 0]
7-506-172	Jam Count by Paper Size	HLT SEF	CTL*	[0 to 65535 / 0 / 0]
7-506-255	Jam Count by Paper Size	Others	CTL*	[0 to 65535 / 0 / 0]
7-507-001	Plotter Jam History	Latest	CTL*	[0 to 0 / 0 / 0]
7-507-002	Plotter Jam History	Latest 1	CTL*	[0 to 0 / 0 / 0]
7-507-003	Plotter Jam History	Latest 2	CTL*	[0 to 0 / 0 / 0]
7-507-004	Plotter Jam History	Latest 3	CTL*	[0 to 0 / 0 / 0]
7-507-005	Plotter Jam History	Latest 4	CTL*	[0 to 0 / 0 / 0]
7-507-006	Plotter Jam History	Latest 5	CTL*	[0 to 0 / 0 / 0]
7-507-007	Plotter Jam History	Latest 6	CTL*	[0 to 0 / 0 / 0]
7-507-008	Plotter Jam History	Latest 7	CTL*	[0 to 0 / 0 / 0]
7-507-009	Plotter Jam History	Latest 8	CTL*	[0 to 0 / 0 / 0]
7-507-010	Plotter Jam History	Latest 9	CTL*	[0 to 0 / 0 / 0]
7-508-	Original Jam History	Latest	CTL*	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
7-508-002	Original Jam History	Latest 1	CTL*	[0 to 0 / 0 / 0]
7-508-003	Original Jam History	Latest 2	CTL*	[0 to 0 / 0 / 0]
7-508-004	Original Jam History	Latest 3	CTL*	[0 to 0 / 0 / 0]
7-508-005	Original Jam History	Latest 4	CTL*	[0 to 0 / 0 / 0]
7-508-006	Original Jam History	Latest 5	CTL*	[0 to 0 / 0 / 0]
7-508-007	Original Jam History	Latest 6	CTL*	[0 to 0 / 0 / 0]
7-508-008	Original Jam History	Latest 7	CTL*	[0 to 0 / 0 / 0]
7-508-009	Original Jam History	Latest 8	CTL*	[0 to 0 / 0 / 0]
7-508-010	Original Jam History	Latest 9	CTL*	[0 to 0 / 0 / 0]
7-509-045	Paper Jam Location	Entrance: On	CTL*	[0 to 65535 / 0 / 0]
7-509-046	Paper Jam Location	Entrance: Off	CTL*	[0 to 65535 / 0 / 0]
7-509-047	Paper Jam Location	Original Exit Sensor: On	CTL*	[0 to 65535 / 0 / 0]
7-509-048	Paper Jam Location	Original Exit Sensor: Off	CTL*	[0 to 65535 / 0 / 0]
7-509-049	Paper Jam Location	Shift Motor	CTL*	[0 to 65535 / 0 / 0]
7-509-050	Paper Jam Location	Junction Motor	CTL*	[0 to 65535 / 0 / 0]
7-509-051	Paper Jam Location	Exit Pressure Release Motor	CTL*	[0 to 65535 / 0 / 0]
7-509-052	Paper Jam Location	Staple Motor	CTL*	[0 to 65535 / 0 / 0]
7-509-	Paper Jam Location	Feed-Out: Off	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
053				
7-509-093	Paper Jam Location	No Exit Response	CTL*	[0 to 65535 / 0 / 0]
7-509-094	Paper Jam Location	Main Machine Setting Incorrect	CTL*	[0 to 65535 / 0 / 0]
7-509-095	Paper Jam Location	Registration: On	CTL*	[0 to 65535 / 0 / 0]
7-509-096	Paper Jam Location	Registration: Off	CTL*	[0 to 65535 / 0 / 0]
7-509-097	Paper Jam Location	1st 2-direction Paper Feed SN: On	CTL*	[0 to 65535 / 0 / 0]
7-509-098	Paper Jam Location	1st 2-direction Paper Feed SN: Off	CTL*	[0 to 65535 / 0 / 0]
7-509-099	Paper Jam Location	2nd 2-direction Paper Feed SN: On	CTL*	[0 to 65535 / 0 / 0]
7-509-100	Paper Jam Location	2nd 2-direction Paper Feed SN: Off	CTL*	[0 to 65535 / 0 / 0]
7-509-101	Paper Jam Location	Additional Fold: On	CTL*	[0 to 65535 / 0 / 0]
7-509-102	Paper Jam Location	Additional Fold: Off	CTL*	[0 to 65535 / 0 / 0]
7-509-103	Paper Jam Location	Top Tray Exit: On	CTL*	[0 to 65535 / 0 / 0]
7-509-104	Paper Jam Location	Top Tray Exit: Off	CTL*	[0 to 65535 / 0 / 0]
7-509-105	Paper Jam Location	Bridge Exit: On	CTL*	[0 to 65535 / 0 / 0]
7-509-106	Paper Jam Location	Bridge Exit: Off	CTL*	[0 to 65535 / 0 / 0]
7-509-115	Paper Jam Location	Registration Motor	CTL*	[0 to 65535 / 0 / 0]
7-509-116	Paper Jam Location	Folding Junction Motor	CTL*	[0 to 65535 / 0 / 0]
7-509-117	Paper Jam Location	Transport Motor	CTL*	[0 to 65535 / 0 / 0]
7-509-	Paper Jam Location	Folding Motor	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
118				
7-509-119	Paper Jam Location	2nd 2-direction Paper Feed Motor	CTL*	[0 to 65535 / 0 / 0]
7-509-120	Paper Jam Location	Additional Folding Motor	CTL*	[0 to 65535 / 0 / 0]
7-509-143	Paper Jam Location	No Exit Response	CTL*	[0 to 65535 / 0 / 0]
7-509-144	Paper Jam Location	Main Machine Setting Incorrect	CTL*	[0 to 65535 / 0 / 0]
7-514-001	Paper Jam Count by Location	At Power On	CTL*	[0 to 65535 / 0 / 0]
7-514-003	Paper Jam Count by Location	Tray1: On	CTL*	[0 to 65535 / 0 / 0]
7-514-004	Paper Jam Count by Location	Tray2: On	CTL*	[0 to 65535 / 0 / 0]
7-514-005	Paper Jam Count by Location	Tray3: On	CTL*	[0 to 65535 / 0 / 0]
7-514-006	Paper Jam Count by Location	Tray4: On	CTL*	[0 to 65535 / 0 / 0]
7-514-007	Paper Jam Count by Location	LCT: On	CTL*	[0 to 65535 / 0 / 0]
7-514-008	Paper Jam Count by Location	Bypass: On	CTL*	[0 to 65535 / 0 / 0]
7-514-009	Paper Jam Count by Location	Duplex: On	CTL*	[0 to 65535 / 0 / 0]
7-514-010	Paper Jam Count by Location	Timing: On	CTL*	[0 to 65535 / 0 / 0]
7-514-011	Paper Jam Count by Location	Transport Sn1: On	CTL*	[0 to 65535 / 0 / 0]
7-514-012	Paper Jam Count by Location	Transport Sn2: On	CTL*	[0 to 65535 / 0 / 0]
7-514-013	Paper Jam Count by Location	Vertical Trans. Sn3: On	CTL*	[0 to 65535 / 0 / 0]
7-514-014	Paper Jam Count by Location	Vertical Trans. Sn4: On	CTL*	[0 to 65535 / 0 / 0]
7-514-	Paper Jam Count by	LCT Transport Sn: On	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
015	Location			
7-514-017	Paper Jam Count by Location	Registration Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-514-018	Paper Jam Count by Location	Fusing Ent Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-514-019	Paper Jam Count by Location	Fusing Ext Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-514-020	Paper Jam Count by Location	Paper Ext Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-514-021	Paper Jam Count by Location	Bridge Tray Exit Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-514-022	Paper Jam Count by Location	Bridge Relay Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-514-024	Paper Jam Count by Location	Inverter Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-514-025	Paper Jam Count by Location	Duplex Exit Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-514-027	Paper Jam Count by Location	Duplex Entrance Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-514-051	Paper Jam Count by Location	Tray1: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-052	Paper Jam Count by Location	Tray2: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-053	Paper Jam Count by Location	Tray3: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-054	Paper Jam Count by Location	Tray4: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-055	Paper Jam Count by Location	LCT Transport Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-057	Paper Jam Count by Location	Registratin Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-060	Paper Jam Count by Location	Paper Ext Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-061	Paper Jam Count by Location	Bridge Tray Ext Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-	Paper Jam Count by	Bridge Relay Sn: Off	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
062	Location			
7-514-064	Paper Jam Count by Location	Inverter Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-065	Paper Jam Count by Location	Duplex Ext Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-067	Paper Jam Count by Location	Duplex Ent Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-100	Paper Jam Count by Location	Entrance Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-514-101	Paper Jam Count by Location	Entrance Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-102	Paper Jam Count by Location	Transport Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-514-103	Paper Jam Count by Location	Transport Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-104	Paper Jam Count by Location	Paper Exit	CTL*	[0 to 65535 / 0 / 0]
7-514-105	Paper Jam Count by Location	Front Jogger Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-106	Paper Jam Count by Location	Rear Jogger Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-107	Paper Jam Count by Location	Shift Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-108	Paper Jam Count by Location	Positioning Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-109	Paper Jam Count by Location	Exit Guide Plate Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-110	Paper Jam Count by Location	Stapler Shift Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-111	Paper Jam Count by Location	Tray Lift Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-112	Paper Jam Count by Location	Staple Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-113	Paper Jam Count by Location	Stack Height Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-	Paper Jam Count by	Punch Motor	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
114	Location			
7-514-115	Paper Jam Count by Location	Punch Move Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-116	Paper Jam Count by Location	S-to-S Registration Move Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-148	Paper Jam Count by Location	No Exit Response	CTL*	[0 to 65535 / 0 / 0]
7-514-149	Paper Jam Count by Location	Main Machine Setting Incorrect	CTL*	[0 to 65535 / 0 / 0]
7-514-150	Paper Jam Count by Location	Entrance Sensor: On	CTL*	[0 to 65535 / 0 / 0]
7-514-151	Paper Jam Count by Location	Entrance Sensor: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-152	Paper Jam Count by Location	Horizontal Transport Sensor: On	CTL*	[0 to 65535 / 0 / 0]
7-514-153	Paper Jam Count by Location	Horizontal Transport Sensor: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-154	Paper Jam Count by Location	Switchback Transport Sensor: On	CTL*	[0 to 65535 / 0 / 0]
7-514-155	Paper Jam Count by Location	Switchback Transport Sensor: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-156	Paper Jam Count by Location	Proof Tray Exit: On	CTL*	[0 to 65535 / 0 / 0]
7-514-157	Paper Jam Count by Location	Proof Tray Exit: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-158	Paper Jam Count by Location	Shift Tray Exit: On	CTL*	[0 to 65535 / 0 / 0]
7-514-159	Paper Jam Count by Location	Shift Tray Exit: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-160	Paper Jam Count by Location	Booklet Stapler Exit: On	CTL*	[0 to 65535 / 0 / 0]
7-514-161	Paper Jam Count by Location	Booklet Stapler Exit: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-162	Paper Jam Count by Location	Enrance Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-	Paper Jam Count by	Horizontal Transport Motor	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
163	Location			
7-514-164	Paper Jam Count by Location	Pre-Stack Transport Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-165	Paper Jam Count by Location	ITB Transport Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-166	Paper Jam Count by Location	Exit Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-167	Paper Jam Count by Location	TE Press Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-168	Paper Jam Count by Location	Ext Plate Guide Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-169	Paper Jam Count by Location	Punching Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-170	Paper Jam Count by Location	Punch Move Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-171	Paper Jam Count by Location	S-to-S Registration Move Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-172	Paper Jam Count by Location	Lower Junction Solenoid Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-173	Paper Jam Count by Location	Jogger Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-174	Paper Jam Count by Location	Positioning Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-175	Paper Jam Count by Location	Feed Out Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-176	Paper Jam Count by Location	Corner Stapler Move Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-177	Paper Jam Count by Location	Corner Stapler Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-178	Paper Jam Count by Location	Saddle Stitch Stapler Jogger Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-179	Paper Jam Count by Location	Saddle Stitch Stapler Jog SOL Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-180	Paper Jam Count by Location	Saddle Stitch Stapler Standard Fence Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-	Paper Jam Count by	Saddle Stitch Stapler Motor	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
181	Location			
7-514-182	Paper Jam Count by Location	Dynamic Roller Transport Mt	CTL*	[0 to 65535 / 0 / 0]
7-514-183	Paper Jam Count by Location	Folder Transport Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-184	Paper Jam Count by Location	Flat Fold Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-185	Paper Jam Count by Location	Output Tray Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-186	Paper Jam Count by Location	Shift Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-187	Paper Jam Count by Location	Shift Tray Jogger Front Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-188	Paper Jam Count by Location	Shift Tray Jogger Rear Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-189	Paper Jam Count by Location	Shift Tray Jogger Retraction Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-190	Paper Jam Count by Location	Stack Roller Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-191	Paper Jam Count by Location	Leading Edge Guide Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-192	Paper Jam Count by Location	Positioning Roller Transport Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-193	Paper Jam Count by Location	Paper Guide Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-194	Paper Jam Count by Location	Main Machine Setting Incorrect	CTL*	[0 to 65535 / 0 / 0]
7-514-200	Paper Jam Count by Location	Entrance: On	CTL*	[0 to 65535 / 0 / 0]
7-514-201	Paper Jam Count by Location	Entrance: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-202	Paper Jam Count by Location	Proof Tray Exit: On	CTL*	[0 to 65535 / 0 / 0]
7-514-203	Paper Jam Count by Location	Proof Tray Exit: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-	Paper Jam Count by	Right Relay: On	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
204	Location			
7-514-205	Paper Jam Count by Location	Left Relay: On	CTL*	[0 to 65535 / 0 / 0]
7-514-206	Paper Jam Count by Location	Left Relay: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-207	Paper Jam Count by Location	Shift Tray Exit: On	CTL*	[0 to 65535 / 0 / 0]
7-514-208	Paper Jam Count by Location	Shift Tray Exit: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-209	Paper Jam Count by Location	Stack: On	CTL*	[0 to 65535 / 0 / 0]
7-514-210	Paper Jam Count by Location	TE Stopper: On	CTL*	[0 to 65535 / 0 / 0]
7-514-211	Paper Jam Count by Location	TE Stopper: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-212	Paper Jam Count by Location	Booklet Folder Exit: On	CTL*	[0 to 65535 / 0 / 0]
7-514-213	Paper Jam Count by Location	Booklet Folder Exit: Off	CTL*	[0 to 65535 / 0 / 0]
7-514-220	Paper Jam Count by Location	Entrance Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-221	Paper Jam Count by Location	Proof Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-222	Paper Jam Count by Location	Exit Transport/ Positioning Roller Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-223	Paper Jam Count by Location	Shift Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-224	Paper Jam Count by Location	Jogger Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-225	Paper Jam Count by Location	Exit Guide Plate Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-226	Paper Jam Count by Location	Feed Out Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-227	Paper Jam Count by Location	Output Tray Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-	Paper Jam Count by	Positioning Motor	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
228	Location			
7-514-229	Paper Jam Count by Location	Stapler Shift Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-230	Paper Jam Count by Location	Stapler Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-231	Paper Jam Count by Location	Punch Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-232	Paper Jam Count by Location	Stack Transport Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-233	Paper Jam Count by Location	LE Stopper Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-234	Paper Jam Count by Location	Folder Blade Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-235	Paper Jam Count by Location	Paper Guide Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-236	Paper Jam Count by Location	Stapler Shift Motor(without staples)	CTL*	[0 to 65535 / 0 / 0]
7-514-237	Paper Jam Count by Location	Stapler Motor(without staples)	CTL*	[0 to 65535 / 0 / 0]
7-514-238	Paper Jam Count by Location	Movable Guide Motor	CTL*	[0 to 65535 / 0 / 0]
7-514-248	Paper Jam Count by Location	No Exit Response	CTL*	[0 to 65535 / 0 / 0]
7-514-249	Paper Jam Count by Location	Main Machine Setting Incorrect	CTL*	[0 to 65535 / 0 / 0]
7-515-001	Original Jam Count by Detection	At Power On	CTL*	[0 to 65535 / 0 / 0]
7-515-013	Original Jam Count by Detection	Separation Sensor: On	CTL*	[0 to 65535 / 0 / 0]
7-515-014	Original Jam Count by Detection	Skew Correction Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-515-015	Original Jam Count by Detection	Scanning Entrance Sn: On	CTL*	[0 to 65535 / 0 / 0]
7-515-016	Original Jam Count by Detection	Registration Sensor: On	CTL*	[0 to 65535 / 0 / 0]
7-515-	Original Jam Count by	Original Exit Sensor: On	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
017	Detection			
7-515-063	Original Jam Count by Detection	Separation Sensor: Off	CTL*	[0 to 65535 / 0 / 0]
7-515-064	Original Jam Count by Detection	Skew Correction Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-515-065	Original Jam Count by Detection	Scanning Entrance Sn: Off	CTL*	[0 to 65535 / 0 / 0]
7-515-066	Original Jam Count by Detection	Registration Sensor: Off	CTL*	[0 to 65535 / 0 / 0]
7-515-067	Original Jam Count by Detection	Original Exit Sensor: Off	CTL*	[0 to 65535 / 0 / 0]
7-515-239	Original Jam Count by Detection	Original Pull	CTL*	[0 to 65535 / 0 / 0]
7-516-005	Paper Size Jam Count	A4 LEF	CTL*	[0 to 65535 / 0 / 0]
7-516-006	Paper Size Jam Count	A5 LEF	CTL*	[0 to 65535 / 0 / 0]
7-516-014	Paper Size Jam Count	B5 LEF	CTL*	[0 to 65535 / 0 / 0]
7-516-038	Paper Size Jam Count	LT LEF	CTL*	[0 to 65535 / 0 / 0]
7-516-044	Paper Size Jam Count	HLT LEF	CTL*	[0 to 65535 / 0 / 0]
7-516-132	Paper Size Jam Count	A3 SEF	CTL*	[0 to 65535 / 0 / 0]
7-516-133	Paper Size Jam Count	A4 SEF	CTL*	[0 to 65535 / 0 / 0]
7-516-134	Paper Size Jam Count	A5 SEF	CTL*	[0 to 65535 / 0 / 0]
7-516-141	Paper Size Jam Count	B4 SEF	CTL*	[0 to 65535 / 0 / 0]
7-516-142	Paper Size Jam Count	B5 SEF	CTL*	[0 to 65535 / 0 / 0]
7-516-160	Paper Size Jam Count	DLT SEF	CTL*	[0 to 65535 / 0 / 0]
7-516-	Paper Size Jam Count	LG SEF	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
164				
7-516-166	Paper Size Jam Count	LT SEF	CTL*	[0 to 65535 / 0 / 0]
7-516-172	Paper Size Jam Count	HLT SEF	CTL*	[0 to 65535 / 0 / 0]
7-516-255	Paper Size Jam Count	Others	CTL*	[0 to 65535 / 0 / 0]
7-519-045	Paper Jam Count by Location	Entrance: On	CTL*	[0 to 65535 / 0 / 0]
7-519-046	Paper Jam Count by Location	Entrance: Off	CTL*	[0 to 65535 / 0 / 0]
7-519-047	Paper Jam Count by Location	Original Exit Sensor: On	CTL*	[0 to 65535 / 0 / 0]
7-519-048	Paper Jam Count by Location	Original Exit Sensor: Off	CTL*	[0 to 65535 / 0 / 0]
7-519-049	Paper Jam Count by Location	Shift Motor	CTL*	[0 to 65535 / 0 / 0]
7-519-050	Paper Jam Count by Location	Junction Motor	CTL*	[0 to 65535 / 0 / 0]
7-519-051	Paper Jam Count by Location	Exit Pressure Release Motor	CTL*	[0 to 65535 / 0 / 0]
7-519-052	Paper Jam Count by Location	Staple Motor	CTL*	[0 to 65535 / 0 / 0]
7-519-053	Paper Jam Count by Location	Feed-Out: Off	CTL*	[0 to 65535 / 0 / 0]
7-519-093	Paper Jam Count by Location	No Exit Response	CTL*	[0 to 65535 / 0 / 0]
7-519-094	Paper Jam Count by Location	Main Machine Setting Incorrect	CTL*	[0 to 65535 / 0 / 0]
7-519-095	Paper Jam Count by Location	Registration: On	CTL*	[0 to 65535 / 0 / 0]
7-519-096	Paper Jam Count by Location	Registration: Off	CTL*	[0 to 65535 / 0 / 0]
7-519-097	Paper Jam Count by Location	1st 2-direction Paper Feed SN: On	CTL*	[0 to 65535 / 0 / 0]
7-519-	Paper Jam Count by	1st 2-direction Paper Feed SN:	CTL*	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
098	Location	Off		
7-519-099	Paper Jam Count by Location	2nd 2-direction Paper Feed SN: On	CTL*	[0 to 65535 / 0 / 0]
7-519-100	Paper Jam Count by Location	2nd 2-direction Paper Feed SN: Off	CTL*	[0 to 65535 / 0 / 0]
7-519-101	Paper Jam Count by Location	Additional Fold: On	CTL*	[0 to 65535 / 0 / 0]
7-519-102	Paper Jam Count by Location	Additional Fold: Off	CTL*	[0 to 65535 / 0 / 0]
7-519-103	Paper Jam Count by Location	Top Tray Exit: On	CTL*	[0 to 65535 / 0 / 0]
7-519-104	Paper Jam Count by Location	Top Tray Exit: Off	CTL*	[0 to 65535 / 0 / 0]
7-519-105	Paper Jam Count by Location	Bridge Exit: On	CTL*	[0 to 65535 / 0 / 0]
7-519-106	Paper Jam Count by Location	Bridge Exit: Off	CTL*	[0 to 65535 / 0 / 0]
7-519-115	Paper Jam Count by Location	Registration Motor	CTL*	[0 to 65535 / 0 / 0]
7-519-116	Paper Jam Count by Location	Folding Junction Motor	CTL*	[0 to 65535 / 0 / 0]
7-519-117	Paper Jam Count by Location	Transport Motor	CTL*	[0 to 65535 / 0 / 0]
7-519-118	Paper Jam Count by Location	Folding Motor	CTL*	[0 to 65535 / 0 / 0]
7-519-119	Paper Jam Count by Location	2nd 2-direction Paper Feed Motor	CTL*	[0 to 65535 / 0 / 0]
7-519-120	Paper Jam Count by Location	Additional Folding Motor	CTL*	[0 to 65535 / 0 / 0]
7-519-143	Paper Jam Count by Location	No Exit Response	CTL*	[0 to 65535 / 0 / 0]
7-519-144	Paper Jam Count by Location	Main Machine Setting Incorrect	CTL*	[0 to 65535 / 0 / 0]
7-520-001	Update Log	ErrorRecord1	CTL*	[0 to 255 / 0 / 1]
7-520-	Update Log	ErrorRecord2	CTL*	[0 to 255 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
002				
7-520-003	Update Log	ErrorRecord3	CTL*	[0 to 255 / 0 / 1]
7-520-004	Update Log	ErrorRecord4	CTL*	[0 to 255 / 0 / 1]
7-520-005	Update Log	ErrorRecord5	CTL*	[0 to 255 / 0 / 1]
7-520-006	Update Log	ErrorRecord6	CTL*	[0 to 255 / 0 / 1]
7-520-007	Update Log	ErrorRecord7	CTL*	[0 to 255 / 0 / 1]
7-520-008	Update Log	ErrorRecord8	CTL*	[0 to 255 / 0 / 1]
7-520-009	Update Log	ErrorRecord9	CTL*	[0 to 255 / 0 / 1]
7-520-010	Update Log	ErrorRecord10	CTL*	[0 to 255 / 0 / 1]
7-520-011	Update Log	Auto:StartDate1	CTL*	[0 to 0 / 0 / 0]
7-520-012	Update Log	Auto:StartDate2	CTL*	[0 to 0 / 0 / 0]
7-520-013	Update Log	Auto:StartDate3	CTL*	[0 to 0 / 0 / 0]
7-520-014	Update Log	Auto:StartDate4	CTL*	[0 to 0 / 0 / 0]
7-520-015	Update Log	Auto:StartDate5	CTL*	[0 to 0 / 0 / 0]
7-520-021	Update Log	Auto:EndDate1	CTL*	[0 to 0 / 0 / 0]
7-520-022	Update Log	Auto:EndDate2	CTL*	[0 to 0 / 0 / 0]
7-520-023	Update Log	Auto:EndDate3	CTL*	[0 to 0 / 0 / 0]
7-520-024	Update Log	Auto:EndDate4	CTL*	[0 to 0 / 0 / 0]
7-520-	Update Log	Auto:EndDate5	CTL*	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
025				
7-520-031	Update Log	Auto:Piecemark1	CTL*	[0 to 0 / 0 / 0]
7-520-032	Update Log	Auto:Piecemark2	CTL*	[0 to 0 / 0 / 0]
7-520-033	Update Log	Auto:Piecemark3	CTL*	[0 to 0 / 0 / 0]
7-520-034	Update Log	Auto:Piecemark4	CTL*	[0 to 0 / 0 / 0]
7-520-035	Update Log	Auto:Piecemark5	CTL*	[0 to 0 / 0 / 0]
7-520-041	Update Log	Auto:Version1	CTL*	[0 to 0 / 0 / 0]
7-520-042	Update Log	Auto:Version2	CTL*	[0 to 0 / 0 / 0]
7-520-043	Update Log	Auto:Version3	CTL*	[0 to 0 / 0 / 0]
7-520-044	Update Log	Auto:Version4	CTL*	[0 to 0 / 0 / 0]
7-520-045	Update Log	Auto:Version5	CTL*	[0 to 0 / 0 / 0]
7-520-051	Update Log	Auto:Result1	CTL*	[0 to 255 / 0 / 1]
7-520-052	Update Log	Auto:Result2	CTL*	[0 to 255 / 0 / 1]
7-520-053	Update Log	Auto:Result3	CTL*	[0 to 255 / 0 / 1]
7-520-054	Update Log	Auto:Result4	CTL*	[0 to 255 / 0 / 1]
7-520-055	Update Log	Auto:Result5	CTL*	[0 to 255 / 0 / 1]
7-520-056	Update Log	Auto:Result6	CTL*	[0 to 255 / 0 / 1]
7-520-057	Update Log	Auto:Result7	CTL*	[0 to 255 / 0 / 1]
7-520-	Update Log	Auto:Result8	CTL*	[0 to 255 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
058				
7-520-059	Update Log	Auto:Result9	CTL*	[0 to 255 / 0 / 1]
7-520-060	Update Log	Auto:Result10	CTL*	[0 to 255 / 0 / 1]
7-617-001	PM Parts Counter Display	Normal	CTL*	[0 to 9999999 / 0 / 0]
7-617-002	PM Parts Counter Display	Df	CTL*	[0 to 9999999 / 0 / 0]
7-618-001	PM Parts Counter Reset	Normal	CTL*	[0 to 0 / 0 / 0]
7-618-002	PM Parts Counter Reset	Df	CTL*	[0 to 0 / 0 / 0]
7-621-002	PM Counter Display:Pages	#PCU	ENG	[0 to 99999999 / 0 / 1page]
7-621-009	PM Counter Display:Pages	Cleaning Blade	ENG	[0 to 99999999 / 0 / 1page]
7-621-018	PM Counter Display:Pages	Charge Roller	ENG*	[0 to 99999999 / 0 / 1page]
7-621-019	PM Counter Display:Pages	Cleaner:Charge Roller	ENG	[0 to 99999999 / 0 / 1page]
7-621-021	PM Counter Display:Pages	OPC	ENG	[0 to 99999999 / 0 / 1page]
7-621-022	PM Counter Display:Pages	Stripper	ENG	[0 to 99999999 / 0 / 1page]
7-621-023	PM Counter Display:Pages	#Dev Unit	ENG	[0 to 99999999 / 0 / 1page]
7-621-024	PM Counter Display:Pages	Developer	ENG	[0 to 99999999 / 0 / 1page]
7-621-025	PM Counter Display:Pages	Development Filter	ENG	[0 to 99999999 / 0 / 1page]
7-621-028	PM Counter Display:Pages	Bearing:Development Screw	ENG	[0 to 99999999 / 0 / 1page]
7-621-108	PM Counter Display:Pages	Paper Transfer Roller Unit	ENG	[0 to 99999999 / 0 / 1page]
7-621-	PM Counter Display:Pages	Fusing Unit	ENG	[0 to 99999999 / 0 /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
115				1page]
7-621-116	PM Counter Display:Pages	Fusing Belt	ENG	[0 to 99999999 / 0 / 1page]
7-621-118	PM Counter Display:Pages	Pressure Roller	ENG	[0 to 99999999 / 0 / 1page]
7-621-119	PM Counter Display:Pages	Bearing:Pressure Roller	ENG	[0 to 99999999 / 0 / 1page]
7-621-142	PM Counter Display:Pages	Waste Toner bottle	ENG	[0 to 99999999 / 0 / 1mg]
7-621-206	PM Counter Display:Pages	ADF Pick-up Roller	ENG	[0 to 99999999 / 0 / 1page]
7-621-207	PM Counter Display:Pages	ADF Supply Belt	ENG	[0 to 99999999 / 0 / 1page]
7-621-208	PM Counter Display:Pages	ADF Reverse Roller	ENG	[0 to 99999999 / 0 / 1page]
7-622-002	PM Counter Reset	#PCU	ENG	[0 to 1 / 0 / 1]
7-622-009	PM Counter Reset	Cleaning Blade	ENG	[0 to 1 / 0 / 1]
7-622-018	PM Counter Reset	Charge Roller	ENG	[0 to 1 / 0 / 1]
7-622-019	PM Counter Reset	Cleaner:Charge Roller	ENG	[0 to 1 / 0 / 1]
7-622-021	PM Counter Reset	OPC	ENG	[0 to 1 / 0 / 1]
7-622-022	PM Counter Reset	Stripper	ENG	[0 to 1 / 0 / 1]
7-622-023	PM Counter Reset	#Dev Unit	ENG	[0 to 1 / 0 / 1]
7-622-024	PM Counter Reset	Developer	ENG	[0 to 1 / 0 / 1]
7-622-025	PM Counter Reset	Development Filter	ENG	[0 to 1 / 0 / 1]
7-622-028	PM Counter Reset	Bearing:Development Screw	ENG	[0 to 1 / 0 / 1]
7-622-	PM Counter Reset	Paper Transfer Roller Unit	ENG	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
108				
7-622-115	PM Counter Reset	Fusing Unit	ENG	[0 to 1 / 0 / 1]
7-622-116	PM Counter Reset	Fusing Belt	ENG	[0 to 1 / 0 / 1]
7-622-118	PM Counter Reset	Pressure Roller	ENG	[0 to 1 / 0 / 1]
7-622-119	PM Counter Reset	Bearing:Pressure Roller	ENG	[0 to 1 / 0 / 1]
7-622-206	PM Counter Reset	ADF Pick-up Roller	ENG	[0 to 1 / 0 / 1]
7-622-207	PM Counter Reset	ADF Supply Belt	ENG	[0 to 1 / 0 / 1]
7-622-208	PM Counter Reset	ADF Reverse Roller	ENG	[0 to 1 / 0 / 1]
7-622-250	PM Counter Reset	SCS	ENG	[0 to 1 / 0 / 1]
7-624-002	Part Replacement Operation ON/OFF	#PCU	CTL	[0 to 1 / 1 / 1]
7-624-009	Part Replacement Operation ON/OFF	Cleaning Blade	CTL	[0 to 1 / 1 / 1]
7-624-018	Part Replacement Operation ON/OFF	Charge Roller	CTL	[0 to 1 / 1 / 1]
7-624-019	Part Replacement Operation ON/OFF	Cleaner:Charge Roller	CTL	[0 to 1 / 1 / 1]
7-624-021	Part Replacement Operation ON/OFF	OPC	CTL	[0 to 1 / 1 / 1]
7-624-022	Part Replacement Operation ON/OFF	Stripper	CTL	[0 to 1 / 1 / 1]
7-624-023	Part Replacement Operation ON/OFF	#Dev Unit	CTL	[0 to 1 / 1 / 1]
7-624-024	Part Replacement Operation ON/OFF	Developer	CTL	[0 to 1 / 1 / 1]
7-624-025	Part Replacement Operation ON/OFF	Development Filter	CTL	[0 to 1 / 1 / 1]
7-624-	Part Replacement Operation	Bearing:Development Screw	CTL	[0 to 1 / 1 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
028	ON/OFF			
7-624-108	Part Replacement Operation ON/OFF	#Paper Transfer Roller Unit	CTL	[0 to 1 / 1 / 1]
7-624-115	Part Replacement Operation ON/OFF	#Fusing Unit	CTL	[0 to 1 / 1 / 1]
7-624-116	Part Replacement Operation ON/OFF	Fusing Belt	CTL	[0 to 1 / 1 / 1]
7-624-118	Part Replacement Operation ON/OFF	Pressure Roller	CTL	[0 to 1 / 1 / 1]
7-624-119	Part Replacement Operation ON/OFF	Bearing:Pressure Roller	CTL	[0 to 1 / 1 / 1]
7-624-142	Part Replacement Operation ON/OFF	#Waste Toner Bottle	CTL	[0 to 1 / 1 / 1]
7-624-206	Part Replacement Operation ON/OFF	#ADF Pick-up Roller	CTL	[0 to 1 / 1 / 1]
7-624-207	Part Replacement Operation ON/OFF	#ADF Paper Supply Belt	CTL	[0 to 1 / 1 / 1]
7-624-208	Part Replacement Operation ON/OFF	#ADF Reverse Roller	CTL	[0 to 1 / 1 / 1]
7-628-002	PM Counter Reset	SCS	ENG	[0 to 1 / 0 / 1]
7-801-002	ROM No.	Engine	ENG	[0 to 0 / 0 / 0]
7-801-005	ROM No.	ADF	ENG	[0 to 0 / 0 / 0]
7-801-007	ROM No.	Finisher	ENG	[0 to 0 / 0 / 0]
7-801-009	ROM No.	PTU	ENG	[0 to 0 / 0 / 0]
7-801-010	ROM No.	LCT	ENG	[0 to 0 / 0 / 0]
7-801-019	ROM No.	PTU2	ENG	[0 to 0 / 0 / 0]
7-801-025	ROM No.	Folder	ENG	[0 to 0 / 0 / 0]
7-801-	Firmware Version	Engine	ENG	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
102				
7-801-105	Firmware Version	ADF	ENG	[0 to 0 / 0 / 0]
7-801-107	Firmware Version	Finisher	ENG	[0 to 0 / 0 / 0]
7-801-109	Firmware Version	PTU	ENG	[0 to 0 / 0 / 0]
7-801-110	Firmware Version	LCT	ENG	[0 to 0 / 0 / 0]
7-801-125	Firmware Version	Folder	ENG	[0 to 0 / 0 / 0]
7-801-255	ROM No./ Firmware Version		CTL*	[0 to 0 / 0 / 0]
7-803-001	PM Counter Display	Paper	CTL*	[0 to 9999999 / 0 / 0]
7-804-001	PM Counter Reset	Paper	CTL	[0 to 0 / 0 / 0]
7-807-001	SC/Jam Counter Reset		CTL	[0 to 0 / 0 / 0]
7-826-001	MF Error Counter	Error Total	CTL*	[0 to 9999999 / 0 / 0]
7-826-002	MF Error Counter	Error Staple	CTL*	[0 to 9999999 / 0 / 0]
7-827-001	MF Error Counter Clear		CTL	[0 to 0 / 0 / 0]
7-832-001	Self-Diagnose Result Display		CTL*	[0 to 0 / 0 / 0]
7-836-001	Total Memory Size		CTL	[0 to 0xffffffff / 0 / 0MB]
7-840-001	ServiceSP Entry Code Chg Hist	Change Time :Latest	CTL*	[0 to 0 / 0 / 0]
7-840-002	ServiceSP Entry Code Chg Hist	Change Time :Last1	CTL*	[0 to 0 / 0 / 0]
7-840-101	ServiceSP Entry Code Chg Hist	Initialize Time :Latest	CTL*	[0 to 0 / 0 / 0]
7-840-	ServiceSP Entry Code Chg	Initialize Time :Last1	CTL*	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
102	Hist			
7-852-001	DF Glass Dust Check	Dust Detection Counter	ENG*	[0 to 65535 / 0 / 1]
7-852-002	DF Glass Dust Check	Dust Counter Clear Counter	ENG*	[0 to 65535 / 0 / 1]
7-852-003	DF Glass Dust Check	Dust Detection Counter: Back	ENG*	[0 to 65535 / 0 / 1]
7-901-001	Assert Info.	File Name	CTL*	[0 to 0 / 0 / 0]
7-901-002	Assert Info.	Number of Lines	CTL*	[0 to 0 / 0 / 0]
7-901-003	Assert Info.	Location	CTL*	[0 to 0 / 0 / 0]
7-910-001	ROM No	System/Copy	CTL	[0 to 0 / 0 / 0]
7-910-002	ROM No	Engine	CTL	[0 to 0 / 0 / 0]
7-910-003	ROM No	Lcdc	CTL	[0 to 0 / 0 / 0]
7-910-005	ROM No	ADF	CTL	[0 to 0 / 0 / 0]
7-910-007	ROM No	Finisher1	CTL	[0 to 0 / 0 / 0]
7-910-009	ROM No	Bank	CTL	[0 to 0 / 0 / 0]
7-910-010	ROM No	LCT	CTL	[0 to 0 / 0 / 0]
7-910-012	ROM No	FCU	CTL	[0 to 0 / 0 / 0]
7-910-018	ROM No	NetworkSupport	CTL	[0 to 0 / 0 / 0]
7-910-019	ROM No	Bank2	CTL	[0 to 0 / 0 / 0]
7-910-022	ROM No	BIOS	CTL	[0 to 0 / 0 / 0]
7-910-	ROM No	HDD Format Option	CTL	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
023				
7-910-025	ROM No	Folding Unit	CTL	[0 to 0 / 0 / 0]
7-910-150	ROM No	RPCS	CTL	[0 to 0 / 0 / 0]
7-910-151	ROM No	PS	CTL	[0 to 0 / 0 / 0]
7-910-152	ROM No	RPDL	CTL	[0 to 0 / 0 / 0]
7-910-153	ROM No	R98	CTL	[0 to 0 / 0 / 0]
7-910-154	ROM No	R16	CTL	[0 to 0 / 0 / 0]
7-910-155	ROM No	RPGL	CTL	[0 to 0 / 0 / 0]
7-910-156	ROM No	R55	CTL	[0 to 0 / 0 / 0]
7-910-157	ROM No	RTIFF	CTL	[0 to 0 / 0 / 0]
7-910-158	ROM No	PCL	CTL	[0 to 0 / 0 / 0]
7-910-159	ROM No	PCLXL	CTL	[0 to 0 / 0 / 0]
7-910-160	ROM No	MSIS	CTL	[0 to 0 / 0 / 0]
7-910-162	ROM No	PDF	CTL	[0 to 0 / 0 / 0]
7-910-165	ROM No	PJL	CTL	[0 to 0 / 0 / 0]
7-910-166	ROM No	IPDS	CTL	[0 to 0 / 0 / 0]
7-910-167	ROM No	MediaPrint:JPEG	CTL	[0 to 0 / 0 / 0]
7-910-168	ROM No	MediaPrint:TIFF	CTL	[0 to 0 / 0 / 0]
7-910-	ROM No	XPS	CTL	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
169				
7-910-180	ROM No	FONT	CTL	[0 to 0 / 0 / 0]
7-910-181	ROM No	FONT1	CTL	[0 to 0 / 0 / 0]
7-910-182	ROM No	FONT2	CTL	[0 to 0 / 0 / 0]
7-910-183	ROM No	FONT3	CTL	[0 to 0 / 0 / 0]
7-910-184	ROM No	FONT4	CTL	[0 to 0 / 0 / 0]
7-910-185	ROM No	FONT5	CTL	[0 to 0 / 0 / 0]
7-910-186	ROM No	FONT6	CTL	[0 to 0 / 0 / 0]
7-910-187	ROM No	FONT7	CTL	[0 to 0 / 0 / 0]
7-910-200	ROM No	Factory	CTL	[0 to 0 / 0 / 0]
7-910-201	ROM No	Copy	CTL	[0 to 0 / 0 / 0]
7-910-202	ROM No	NetworkDocBox	CTL	[0 to 0 / 0 / 0]
7-910-203	ROM No	Fax	CTL	[0 to 0 / 0 / 0]
7-910-204	ROM No	Printer	CTL	[0 to 0 / 0 / 0]
7-910-205	ROM No	Scanner	CTL	[0 to 0 / 0 / 0]
7-910-206	ROM No	RFax	CTL	[0 to 0 / 0 / 0]
7-910-210	ROM No	MIB	CTL	[0 to 0 / 0 / 0]
7-910-211	ROM No	Websupport	CTL	[0 to 0 / 0 / 0]
7-910-	ROM No	WebUapl	CTL	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
212				
7-910-213	ROM No	SDK1	CTL	[0 to 0 / 0 / 0]
7-910-214	ROM No	SDK2	CTL	[0 to 0 / 0 / 0]
7-910-215	ROM No	SDK3	CTL	[0 to 0 / 0 / 0]
7-910-250	ROM No	Package	CTL	[0 to 0 / 0 / 0]
7-911-001	Firmware Version	System/Copy	CTL	[0 to 0 / 0 / 0]
7-911-002	Firmware Version	Engine	CTL	[0 to 0 / 0 / 0]
7-911-003	Firmware Version	Lcdc	CTL	[0 to 0 / 0 / 0]
7-911-005	Firmware Version	ADF	CTL	[0 to 0 / 0 / 0]
7-911-007	Firmware Version	Finisher1	CTL	[0 to 0 / 0 / 0]
7-911-009	Firmware Version	Bank	CTL	[0 to 0 / 0 / 0]
7-911-010	Firmware Version	LCT	CTL	[0 to 0 / 0 / 0]
7-911-012	Firmware Version	FCU	CTL	[0 to 0 / 0 / 0]
7-911-018	Firmware Version	NetworkSupport	CTL	[0 to 0 / 0 / 0]
7-911-019	Firmware Version	Bank2	CTL	[0 to 0 / 0 / 0]
7-911-022	Firmware Version	BIOS	CTL	[0 to 0 / 0 / 0]
7-911-023	Firmware Version	HDD Format Option	CTL	[0 to 0 / 0 / 0]
7-911-025	Firmware Version	Folding Unit	CTL	[0 to 0 / 0 / 0]
7-911-	Firmware Version	RPCS	CTL	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
150				
7-911-151	Firmware Version	PS	CTL	[0 to 0 / 0 / 0]
7-911-152	Firmware Version	RPDL	CTL	[0 to 0 / 0 / 0]
7-911-153	Firmware Version	R98	CTL	[0 to 0 / 0 / 0]
7-911-154	Firmware Version	R16	CTL	[0 to 0 / 0 / 0]
7-911-155	Firmware Version	RPGL	CTL	[0 to 0 / 0 / 0]
7-911-156	Firmware Version	R55	CTL	[0 to 0 / 0 / 0]
7-911-157	Firmware Version	RTIFF	CTL	[0 to 0 / 0 / 0]
7-911-158	Firmware Version	PCL	CTL	[0 to 0 / 0 / 0]
7-911-159	Firmware Version	PCLXL	CTL	[0 to 0 / 0 / 0]
7-911-160	Firmware Version	MSIS	CTL	[0 to 0 / 0 / 0]
7-911-162	Firmware Version	PDF	CTL	[0 to 0 / 0 / 0]
7-911-165	Firmware Version	PJL	CTL	[0 to 0 / 0 / 0]
7-911-166	Firmware Version	IPDS	CTL	[0 to 0 / 0 / 0]
7-911-167	Firmware Version	MediaPrint:JPEG	CTL	[0 to 0 / 0 / 0]
7-911-168	Firmware Version	MediaPrint:TIFF	CTL	[0 to 0 / 0 / 0]
7-911-169	Firmware Version	XPS	CTL	[0 to 0 / 0 / 0]
7-911-180	Firmware Version	FONT	CTL	[0 to 0 / 0 / 0]
7-911-	Firmware Version	FONT1	CTL	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
181				
7-911-182	Firmware Version	FONT2	CTL	[0 to 0 / 0 / 0]
7-911-183	Firmware Version	FONT3	CTL	[0 to 0 / 0 / 0]
7-911-184	Firmware Version	FONT4	CTL	[0 to 0 / 0 / 0]
7-911-185	Firmware Version	FONT5	CTL	[0 to 0 / 0 / 0]
7-911-186	Firmware Version	FONT6	CTL	[0 to 0 / 0 / 0]
7-911-187	Firmware Version	FONT7	CTL	[0 to 0 / 0 / 0]
7-911-200	Firmware Version	Factory	CTL	[0 to 0 / 0 / 0]
7-911-201	Firmware Version	Copy	CTL	[0 to 0 / 0 / 0]
7-911-202	Firmware Version	NetworkDocBox	CTL	[0 to 0 / 0 / 0]
7-911-203	Firmware Version	Fax	CTL	[0 to 0 / 0 / 0]
7-911-204	Firmware Version	Printer	CTL	[0 to 0 / 0 / 0]
7-911-205	Firmware Version	Scanner	CTL	[0 to 0 / 0 / 0]
7-911-206	Firmware Version	RFax	CTL	[0 to 0 / 0 / 0]
7-911-210	Firmware Version	MIB	CTL	[0 to 0 / 0 / 0]
7-911-211	Firmware Version	Websupport	CTL	[0 to 0 / 0 / 0]
7-911-212	Firmware Version	WebUapl	CTL	[0 to 0 / 0 / 0]
7-911-213	Firmware Version	SDK1	CTL	[0 to 0 / 0 / 0]
7-911-	Firmware Version	SDK2	CTL	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
214				
7-911-215	Firmware Version	SDK3	CTL	[0 to 0 / 0 / 0]
7-911-250	Firmware Version	Package	CTL	[0 to 0 / 0 / 0]
7-942-002	PM Counter Display:Distance(%)	#PCU	ENG	[0 to 255 / 0 / 1%]
7-942-009	PM Counter Display:Distance(%)	Cleaning Blade	ENG	[0 to 255 / 0 / 1%]
7-942-018	PM Counter Display:Distance(%)	Charge Roller	ENG	[0 to 255 / 0 / 1%]
7-942-019	PM Counter Display:Distance(%)	Cleaner:Charge Roller	ENG	[0 to 255 / 0 / 1%]
7-942-021	PM Counter Display:Distance(%)	OPC	ENG	[0 to 255 / 0 / 1%]
7-942-022	PM Counter Display:Distance(%)	Stripper	ENG	[0 to 255 / 0 / 1%]
7-942-023	PM Counter Display:Distance(%)	#Dev Unit	ENG	[0 to 255 / 0 / 1%]
7-942-024	PM Counter Display:Distance(%)	Developer	ENG	[0 to 255 / 0 / 1%]
7-942-025	PM Counter Display:Distance(%)	Development Filter	ENG	[0 to 255 / 0 / 1%]
7-942-028	PM Counter Display:Distance(%)	Bearing:Development Screw	ENG	[0 to 255 / 0 / 1%]
7-942-108	PM Counter Display:Distance(%)	Paper Transfer Roller Unit	ENG	[0 to 255 / 0 / 1%]
7-942-115	PM Counter Display:Distance(%)	Fusing Unit	ENG	[0 to 255 / 0 / 1%]
7-942-116	PM Counter Display:Distance(%)	Fusing Belt	ENG	[0 to 255 / 0 / 1%]
7-942-118	PM Counter Display:Distance(%)	Pressure Roller	ENG	[0 to 255 / 0 / 1%]
7-942-119	PM Counter Display:Distance(%)	Bearing:Pressure Roller	ENG	[0 to 255 / 0 / 1%]
7-944-	PM Counter	#PCU	ENG*	[0 to 4294967295 / 0 /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
002	Display:Distance			1mm]
7-944-009	PM Counter Display:Distance	Cleaning Blade	ENG	[0 to 4294967295 / 0 / 1mm]
7-944-018	PM Counter Display:Distance	Charge Roller	ENG*	[0 to 4294967295 / 0 / 1mm]
7-944-019	PM Counter Display:Distance	Cleaner:Charge Roller	ENG	[0 to 4294967295 / 0 / 1mm]
7-944-021	PM Counter Display:Distance	OPC	ENG*	[0 to 4294967295 / 0 / 1mm]
7-944-022	PM Counter Display:Distance	Stripper	ENG	[0 to 4294967295 / 0 / 1mm]
7-944-023	PM Counter Display:Distance	#Dev Unit	ENG	[0 to 4294967295 / 0 / 1mm]
7-944-024	PM Counter Display:Distance	Developer	ENG*	[0 to 4294967295 / 0 / 1mm]
7-944-025	PM Counter Display:Distance	Development Filter	ENG	[0 to 4294967295 / 0 / 1mm]
7-944-028	PM Counter Display:Distance	Bearing:Development Screw	ENG	[0 to 4294967295 / 0 / 1mm]
7-944-108	PM Counter Display:Distance	Paper Transfer Roller Unit	ENG	[0 to 4294967295 / 0 / 1mm]
7-944-115	PM Counter Display:Distance	Fusing Unit	ENG	[0 to 4294967295 / 0 / 1mm]
7-944-116	PM Counter Display:Distance	Fusing Belt	ENG	[0 to 4294967295 / 0 / 1mm]
7-944-118	PM Counter Display:Distance	Pressure Roller	ENG	[0 to 4294967295 / 0 / 1mm]
7-944-119	PM Counter Display:Distance	Bearing:Pressure Roller	ENG	[0 to 4294967295 / 0 / 1mm]
7-951-002	Remain Day Counter:Pages	#PCU	ENG	[0 to 255 / 255 / 1days]
7-951-009	Remain Day Counter:Pages	Cleaning Blade	ENG	[0 to 255 / 255 / 1days]
7-951-018	Remain Day Counter:Pages	Charge Roller	ENG	[0 to 255 / 255 / 1days]
7-951-	Remain Day Counter:Pages	Cleaner:Charge Roller	ENG	[0 to 255 / 255 /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
019				1days]
7-951-021	Remain Day Counter:Pages	OPC	ENG	[0 to 255 / 255 / 1days]
7-951-022	Remain Day Counter:Pages	Stripper	ENG	[0 to 255 / 255 / 1days]
7-951-023	Remain Day Counter:Pages	#Dev Unit	ENG	[0 to 255 / 255 / 1days]
7-951-024	Remain Day Counter:Pages	Developer	ENG	[0 to 255 / 255 / 1days]
7-951-025	Remain Day Counter:Pages	Development Filter	ENG	[0 to 255 / 255 / 1days]
7-951-028	Remain Day Counter:Pages	Bearing:Development Screw	ENG	[0 to 255 / 255 / 1days]
7-951-108	Remain Day Counter:Pages	Paper Transfer Roller Unit	ENG	[0 to 255 / 255 / 1days]
7-951-115	Remain Day Counter:Pages	Fusing Unit	ENG	[0 to 255 / 255 / 1days]
7-951-116	Remain Day Counter:Pages	Fusing Belt	ENG	[0 to 255 / 255 / 1days]
7-951-118	Remain Day Counter:Pages	Pressure Roller	ENG	[0 to 255 / 255 / 1days]
7-951-119	Remain Day Counter:Pages	Bearing:Pressure Roller	ENG	[0 to 255 / 255 / 1days]
7-951-142	Remain Day Counter:Pages	Waste Toner bottle	ENG	[0 to 255 / 255 / 1days]
7-951-206	Remain Day Counter:Pages	ADF Pick-up Roller	ENG	[0 to 255 / 255 / 1days]
7-951-207	Remain Day Counter:Pages	ADF Supply Belt	ENG	[0 to 255 / 255 / 1days]
7-951-208	Remain Day Counter:Pages	ADF Reverse Roller	ENG	[0 to 255 / 255 / 1days]
7-952-002	Remain Day Counter:Distance	#PCU	ENG	[0 to 255 / 255 / 1days]
7-952-009	Remain Day Counter:Distance	Cleaning Blade	ENG	[0 to 255 / 255 / 1days]
7-952-	Remain Day	Charge Roller	ENG	[0 to 255 / 255 /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
018	Counter:Distance			1days]
7-952-019	Remain Day Counter:Distance	Cleaner:Charge Roller	ENG	[0 to 255 / 255 / 1days]
7-952-021	Remain Day Counter:Distance	OPC	ENG	[0 to 255 / 255 / 1days]
7-952-022	Remain Day Counter:Distance	Stripper	ENG	[0 to 255 / 255 / 1days]
7-952-023	Remain Day Counter:Distance	#Dev Unit	ENG	[0 to 255 / 255 / 1days]
7-952-024	Remain Day Counter:Distance	Developer	ENG	[0 to 255 / 255 / 1days]
7-952-025	Remain Day Counter:Distance	Development Filter	ENG	[0 to 255 / 255 / 1days]
7-952-028	Remain Day Counter:Distance	Bearing:Development Screw	ENG	[0 to 255 / 255 / 1days]
7-952-108	Remain Day Counter:Distance	Paper Transfer Roller Unit	ENG	[0 to 255 / 255 / 1days]
7-952-115	Remain Day Counter:Distance	Fusing Unit	ENG	[0 to 255 / 255 / 1days]
7-952-116	Remain Day Counter:Distance	Fusing Belt	ENG	[0 to 255 / 255 / 1days]
7-952-118	Remain Day Counter:Distance	Pressure Roller	ENG	[0 to 255 / 255 / 1days]
7-952-119	Remain Day Counter:Distance	Bearing:Pressure Roller	ENG	[0 to 255 / 255 / 1days]
7-954-002	PM Counter Display:Pages(%)	#PCU	ENG	[0 to 255 / 0 / 1%]
7-954-009	PM Counter Display:Pages(%)	Cleaning Blade	ENG	[0 to 255 / 0 / 1%]
7-954-018	PM Counter Display:Pages(%)	Charge Roller	ENG	[0 to 255 / 0 / 1%]
7-954-019	PM Counter Display:Pages(%)	Cleaner:Charge Roller	ENG	[0 to 255 / 0 / 1%]
7-954-021	PM Counter Display:Pages(%)	OPC	ENG	[0 to 255 / 0 / 1%]
7-954-	PM Counter	Stripper	ENG	[0 to 255 / 0 / 1%]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
022	Display:Pages(%)			
7-954-023	PM Counter Display:Pages(%)	#Dev Unit	ENG	[0 to 255 / 0 / 1%]
7-954-024	PM Counter Display:Pages(%)	Developer	ENG	[0 to 255 / 0 / 1%]
7-954-025	PM Counter Display:Pages(%)	Development Filter	ENG	[0 to 255 / 0 / 1%]
7-954-028	PM Counter Display:Pages(%)	Bearing:Development Screw	ENG	[0 to 255 / 0 / 1%]
7-954-108	PM Counter Display:Pages(%)	Paper Transfer Roller Unit	ENG	[0 to 255 / 0 / 1%]
7-954-115	PM Counter Display:Pages(%)	Fusing Unit	ENG	[0 to 255 / 0 / 1%]
7-954-116	PM Counter Display:Pages(%)	Fusing Belt	ENG	[0 to 255 / 0 / 1%]
7-954-118	PM Counter Display:Pages(%)	Pressure Roller	ENG	[0 to 255 / 0 / 1%]
7-954-119	PM Counter Display:Pages(%)	Bearing:Pressure Roller	ENG	[0 to 255 / 0 / 1%]
7-954-142	PM Counter Display:Pages(%)	Waste Toner bottle	ENG	[0 to 255 / 0 / 1%]
7-954-206	PM Counter Display:Pages(%)	ADF Pick-up Roller	ENG	[0 to 255 / 0 / 1%]
7-954-207	PM Counter Display:Pages(%)	ADF Supply Belt	ENG	[0 to 255 / 0 / 1%]
7-954-208	PM Counter Display:Pages(%)	ADF Reverse Roller	ENG	[0 to 255 / 0 / 1%]
7-955-002	Estimated Remain Pages	#PCU	ENG	[0 to 9999999 / 0 / 1page]
7-955-009	Estimated Remain Pages	Cleaning Blade	ENG	[0 to 9999999 / 0 / 1page]
7-955-018	Estimated Remain Pages	Charge Roller	ENG	[0 to 9999999 / 0 / 1page]
7-955-019	Estimated Remain Pages	Cleaner:Charge Roller	ENG	[0 to 9999999 / 0 / 1page]
7-955-	Estimated Remain Pages	OPC	ENG	[0 to 9999999 / 0 /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
021				1page]
7-955-022	Estimated Remain Pages	Stripper	ENG	[0 to 9999999 / 0 / 1page]
7-955-023	Estimated Remain Pages	#Dev Unit	ENG	[0 to 9999999 / 0 / 1page]
7-955-024	Estimated Remain Pages	Developer	ENG	[0 to 9999999 / 0 / 1page]
7-955-025	Estimated Remain Pages	Development Filter	ENG	[0 to 9999999 / 0 / 1page]
7-955-028	Estimated Remain Pages	Bearing:Development Screw	ENG	[0 to 9999999 / 0 / 1page]
7-955-108	Estimated Remain Pages	Paper Transfer Roller Unit	ENG	[0 to 9999999 / 0 / 1page]
7-955-115	Estimated Remain Pages	Fusing Unit	ENG	[0 to 9999999 / 0 / 1page]
7-955-116	Estimated Remain Pages	Fusing Belt	ENG	[0 to 9999999 / 0 / 1page]
7-955-118	Estimated Remain Pages	Pressure Roller	ENG	[0 to 9999999 / 0 / 1page]
7-955-119	Estimated Remain Pages	Bearing:Pressure Roller	ENG	[0 to 9999999 / 0 / 1page]
7-956-002	Estimated Remain Days	#PCU	ENG	[0 to 255 / 255 / 1days]
7-956-009	Estimated Remain Days	Cleaning Blade	ENG	[0 to 255 / 255 / 1days]
7-956-018	Estimated Remain Days	Charge Roller	ENG	[0 to 255 / 255 / 1days]
7-956-019	Estimated Remain Days	Cleaner:Charge Roller	ENG	[0 to 255 / 255 / 1days]
7-956-021	Estimated Remain Days	OPC	ENG	[0 to 255 / 255 / 1days]
7-956-022	Estimated Remain Days	Stripper	ENG	[0 to 255 / 255 / 1days]
7-956-023	Estimated Remain Days	#Dev Unit	ENG	[0 to 255 / 255 / 1days]
7-956-	Estimated Remain Days	Developer	ENG	[0 to 255 / 255 /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
024				1days]
7-956-025	Estimated Remain Days	Development Filter	ENG	[0 to 255 / 255 / 1days]
7-956-028	Estimated Remain Days	Bearing:Development Screw	ENG	[0 to 255 / 255 / 1days]
7-956-108	Estimated Remain Days	Paper Transfer Roller Unit	ENG	[0 to 255 / 255 / 1days]
7-956-115	Estimated Remain Days	Fusing Unit	ENG	[0 to 255 / 255 / 1days]
7-956-116	Estimated Remain Days	Fusing Belt	ENG	[0 to 255 / 255 / 1days]
7-956-118	Estimated Remain Days	Pressure Roller	ENG	[0 to 255 / 255 / 1days]
7-956-119	Estimated Remain Days	Bearing:Pressure Roller	ENG	[0 to 255 / 255 / 1days]
7-956-142	Estimated Remain Days	Waste Toner bottle	ENG	[0 to 255 / 255 / 1days]
7-956-206	Estimated Remain Days	ADF Pick-up Roller	ENG	[0 to 255 / 255 / 1days]
7-956-207	Estimated Remain Days	ADF Supply Belt	ENG	[0 to 255 / 255 / 1days]
7-956-208	Estimated Remain Days	ADF Reverse Roller	ENG	[0 to 255 / 255 / 1days]
7-960-002	Estimated Usage Rate	#PCU	ENG	[0 to 255 / 0 / 1%]
7-960-009	Estimated Usage Rate	Cleaning Blade	ENG	[0 to 255 / 0 / 1%]
7-960-018	Estimated Usage Rate	Charge Roller	ENG	[0 to 255 / 0 / 1%]
7-960-019	Estimated Usage Rate	Cleaner:Charge Roller	ENG	[0 to 255 / 0 / 1%]
7-960-021	Estimated Usage Rate	OPC	ENG	[0 to 255 / 0 / 1%]
7-960-022	Estimated Usage Rate	Stripper	ENG	[0 to 255 / 0 / 1%]
7-960-	Estimated Usage Rate	#Dev Unit	ENG	[0 to 255 / 0 / 1%]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
023				
7-960-024	Estimated Usage Rate	Developer	ENG	[0 to 255 / 0 / 1%]
7-960-025	Estimated Usage Rate	Development Filter	ENG	[0 to 255 / 0 / 1%]
7-960-028	Estimated Usage Rate	Bearing:Development Screw	ENG	[0 to 255 / 0 / 1%]
7-960-108	Estimated Usage Rate	Paper Transfer Roller Unit	ENG	[0 to 255 / 0 / 1%]
7-960-115	Estimated Usage Rate	Fusing Unit	ENG	[0 to 255 / 0 / 1%]
7-960-116	Estimated Usage Rate	Fusing Belt	ENG	[0 to 255 / 0 / 1%]
7-960-118	Estimated Usage Rate	Pressure Roller	ENG	[0 to 255 / 0 / 1%]
7-960-119	Estimated Usage Rate	Bearing:Pressure Roller	ENG	[0 to 255 / 0 / 1%]
7-960-142	Estimated Usage Rate	Waste Toner bottle	ENG	[0 to 255 / 0 / 1%]
7-960-206	Estimated Usage Rate	ADF Pick-up Roller	ENG	[0 to 255 / 0 / 1%]
7-960-207	Estimated Usage Rate	ADF Supply Belt	ENG	[0 to 255 / 0 / 1%]
7-960-208	Estimated Usage Rate	ADF Reverse Roller	ENG	[0 to 255 / 0 / 1%]
7-979-001	CPU Reset Log	Data1	ENG*	[0x00 to 0xFF / 0x00 / 1]
7-979-002	CPU Reset Log	Data2	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]
7-979-003	CPU Reset Log	Data3	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]
7-979-004	CPU Reset Log	Data4	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]
7-979-005	CPU Reset Log	Data5	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]
7-979-	CPU Reset Log	Data6	ENG*	[0x0000 to 0xFFFF /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
006				0x0000 / 1]
7-979-007	CPU Reset Log	Data7	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]
7-979-008	CPU Reset Log	Data8	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]
7-979-009	CPU Reset Log	Data9	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]
7-979-010	CPU Reset Log	Data10	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]
7-979-011	CPU Reset Log	Data11	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]
7-979-012	CPU Reset Log	Data12	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]
7-979-013	CPU Reset Log	Data13	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]
7-979-014	CPU Reset Log	Data14	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]
7-979-015	CPU Reset Log	Data15	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]
7-979-016	CPU Reset Log	Data16	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]
7-979-017	CPU Reset Log	Data17	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]
7-979-018	CPU Reset Log	Data18	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]
7-979-019	CPU Reset Log	Data19	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]
7-979-020	CPU Reset Log	Data20	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]
7-979-021	CPU Reset Log	Data21	ENG*	[0x0000 to 0xFFFF / 0x0000 / 1]

SP Group 8000

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
8-001-001	T:Total Jobs		CTL*	[0 to 99999999 / 0 / 1]
8-002-001	C:Total Jobs		CTL*	[0 to 99999999 / 0 / 1]
8-003-001	F:Total Jobs		CTL*	[0 to 99999999 / 0 / 1]
8-004-001	P:Total Jobs		CTL*	[0 to 99999999 / 0 / 1]
8-005-001	S:Total Jobs		CTL*	[0 to 99999999 / 0 / 1]
8-006-001	L:Total Jobs		CTL*	[0 to 99999999 / 0 / 1]
8-011-001	T:Jobs/LS		CTL*	[0 to 99999999 / 0 / 1]
8-012-001	C:Jobs/LS		CTL*	[0 to 99999999 / 0 / 1]
8-013-001	F:Jobs/LS		CTL*	[0 to 99999999 / 0 / 1]
8-014-001	P:Jobs/LS		CTL*	[0 to 99999999 / 0 / 1]
8-015-001	S:Jobs/LS		CTL*	[0 to 99999999 / 0 / 1]
8-016-001	L:Jobs/LS		CTL*	[0 to 99999999 / 0 / 1]
8-017-001	O:Jobs/LS		CTL*	[0 to 99999999 / 0 / 1]
8-021-001	T:Pjob/LS		CTL*	[0 to 99999999 / 0 / 1]
8-022-001	C:Pjob/LS		CTL*	[0 to 99999999 / 0 / 1]
8-023-001	F:Pjob/LS		CTL*	[0 to 99999999 / 0 / 1]
8-024-001	P:Pjob/LS		CTL*	[0 to 99999999 / 0 / 1]
8-025-	S:Pjob/LS		CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
8-026-001	L:Pjob/LS		CTL*	[0 to 99999999 / 0 / 1]
8-027-001	O:Pjob/LS		CTL*	[0 to 99999999 / 0 / 1]
8-031-001	T:Pjob/DesApl		CTL*	[0 to 99999999 / 0 / 1]
8-032-001	C:Pjob/DesApl		CTL*	[0 to 99999999 / 0 / 1]
8-033-001	F:Pjob/DesApl		CTL*	[0 to 99999999 / 0 / 1]
8-034-001	P:Pjob/DesApl		CTL*	[0 to 99999999 / 0 / 1]
8-035-001	S:Pjob/DesApl		CTL*	[0 to 99999999 / 0 / 1]
8-036-001	L:Pjob/DesApl		CTL*	[0 to 99999999 / 0 / 1]
8-037-001	O:Pjob/DesApl		CTL*	[0 to 99999999 / 0 / 1]
8-041-001	T:TX Jobs/LS		CTL*	[0 to 99999999 / 0 / 1]
8-042-001	C:TX Jobs/LS		CTL*	[0 to 99999999 / 0 / 1]
8-043-001	F:TX Jobs/LS		CTL*	[0 to 99999999 / 0 / 1]
8-044-001	P:TX Jobs/LS		CTL*	[0 to 99999999 / 0 / 1]
8-045-001	S:TX Jobs/LS		CTL*	[0 to 99999999 / 0 / 1]
8-046-001	L:TX Jobs/LS		CTL*	[0 to 99999999 / 0 / 1]
8-047-001	O:TX Jobs/LS		CTL*	[0 to 99999999 / 0 / 1]
8-051-001	T:TX Jobs/DesApl		CTL*	[0 to 99999999 / 0 / 1]
8-052-	C:TX Jobs/DesApl		CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
8-053-001	F:TX Jobs/DesApl		CTL*	[0 to 99999999 / 0 / 1]
8-054-001	P:TX Jobs/DesApl		CTL*	[0 to 99999999 / 0 / 1]
8-055-001	S:TX Jobs/DesApl		CTL*	[0 to 99999999 / 0 / 1]
8-056-001	L:TX Jobs/DesApl		CTL*	[0 to 99999999 / 0 / 1]
8-057-001	O:TX Jobs/DesApl		CTL*	[0 to 99999999 / 0 / 1]
8-061-001	T:FIN Jobs	Sort	CTL*	[0 to 99999999 / 0 / 1]
8-061-002	T:FIN Jobs	Stack	CTL*	[0 to 99999999 / 0 / 1]
8-061-003	T:FIN Jobs	Staple	CTL*	[0 to 99999999 / 0 / 1]
8-061-004	T:FIN Jobs	Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-061-005	T:FIN Jobs	Z-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-061-006	T:FIN Jobs	Punch	CTL*	[0 to 99999999 / 0 / 1]
8-061-007	T:FIN Jobs	Other	CTL*	[0 to 99999999 / 0 / 1]
8-061-008	T:FIN Jobs	Inside-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-061-009	T:FIN Jobs	Three-IN-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-061-010	T:FIN Jobs	Three-OUT-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-061-011	T:FIN Jobs	Four-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-061-012	T:FIN Jobs	KANNON-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-061-	T:FIN Jobs	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
013				
8-061-014	T:FIN Jobs	Ring-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-061-015	T:FIN Jobs	3rd Vendor	CTL*	[0 to 99999999 / 0 / 1]
8-061-016	T:FIN Jobs	TwinLoop-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-062-001	C:FIN Jobs	Sort	CTL*	[0 to 99999999 / 0 / 1]
8-062-002	C:FIN Jobs	Stack	CTL*	[0 to 99999999 / 0 / 1]
8-062-003	C:FIN Jobs	Staple	CTL*	[0 to 99999999 / 0 / 1]
8-062-004	C:FIN Jobs	Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-062-005	C:FIN Jobs	Z-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-062-006	C:FIN Jobs	Punch	CTL*	[0 to 99999999 / 0 / 1]
8-062-007	C:FIN Jobs	Other	CTL*	[0 to 99999999 / 0 / 1]
8-062-008	C:FIN Jobs	Inside-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-062-009	C:FIN Jobs	Three-IN-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-062-010	C:FIN Jobs	Three-OUT-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-062-011	C:FIN Jobs	Four-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-062-012	C:FIN Jobs	KANNON-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-062-013	C:FIN Jobs	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-062-014	C:FIN Jobs	Ring-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-062-	C:FIN Jobs	3rd Vendor	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
015				
8-062-016	C:FIN Jobs	TwinLoop-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-063-001	F:FIN Jobs	Sort	CTL*	[0 to 99999999 / 0 / 1]
8-063-002	F:FIN Jobs	Stack	CTL*	[0 to 99999999 / 0 / 1]
8-063-003	F:FIN Jobs	Staple	CTL*	[0 to 99999999 / 0 / 1]
8-063-004	F:FIN Jobs	Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-063-005	F:FIN Jobs	Z-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-063-006	F:FIN Jobs	Punch	CTL*	[0 to 99999999 / 0 / 1]
8-063-007	F:FIN Jobs	Other	CTL*	[0 to 99999999 / 0 / 1]
8-063-008	F:FIN Jobs	Inside-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-063-009	F:FIN Jobs	Three-IN-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-063-010	F:FIN Jobs	Three-OUT-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-063-011	F:FIN Jobs	Four-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-063-012	F:FIN Jobs	KANNON-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-063-013	F:FIN Jobs	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-063-014	F:FIN Jobs	Ring-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-063-015	F:FIN Jobs	3rd Vendor	CTL*	[0 to 99999999 / 0 / 1]
8-063-016	F:FIN Jobs	TwinLoop-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-064-	P:FIN Jobs	Sort	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
8-064-002	P:FIN Jobs	Stack	CTL*	[0 to 99999999 / 0 / 1]
8-064-003	P:FIN Jobs	Staple	CTL*	[0 to 99999999 / 0 / 1]
8-064-004	P:FIN Jobs	Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-064-005	P:FIN Jobs	Z-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-064-006	P:FIN Jobs	Punch	CTL*	[0 to 99999999 / 0 / 1]
8-064-007	P:FIN Jobs	Other	CTL*	[0 to 99999999 / 0 / 1]
8-064-008	P:FIN Jobs	Inside-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-064-009	P:FIN Jobs	Three-IN-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-064-010	P:FIN Jobs	Three-OUT-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-064-011	P:FIN Jobs	Four-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-064-012	P:FIN Jobs	KANNON-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-064-013	P:FIN Jobs	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-064-014	P:FIN Jobs	Ring-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-064-015	P:FIN Jobs	3rd Vendor	CTL*	[0 to 99999999 / 0 / 1]
8-064-016	P:FIN Jobs	TwinLoop-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-065-001	S:FIN Jobs	Sort	CTL*	[0 to 99999999 / 0 / 1]
8-065-002	S:FIN Jobs	Stack	CTL*	[0 to 99999999 / 0 / 1]
8-065-	S:FIN Jobs	Staple	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
003				
8-065-004	S:FIN Jobs	Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-065-005	S:FIN Jobs	Z-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-065-006	S:FIN Jobs	Punch	CTL*	[0 to 99999999 / 0 / 1]
8-065-007	S:FIN Jobs	Other	CTL*	[0 to 99999999 / 0 / 1]
8-065-008	S:FIN Jobs	Inside-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-065-009	S:FIN Jobs	Three-IN-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-065-010	S:FIN Jobs	Three-OUT-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-065-011	S:FIN Jobs	Four-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-065-012	S:FIN Jobs	KANNON-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-065-013	S:FIN Jobs	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-065-014	S:FIN Jobs	Ring-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-065-015	S:FIN Jobs	3rd Vendor	CTL*	[0 to 99999999 / 0 / 1]
8-065-016	S:FIN Jobs	TwinLoop-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-066-001	L:FIN Jobs	Sort	CTL*	[0 to 99999999 / 0 / 1]
8-066-002	L:FIN Jobs	Stack	CTL*	[0 to 99999999 / 0 / 1]
8-066-003	L:FIN Jobs	Staple	CTL*	[0 to 99999999 / 0 / 1]
8-066-004	L:FIN Jobs	Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-066-	L:FIN Jobs	Z-Fold	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
005				
8-066-006	L:FIN Jobs	Punch	CTL*	[0 to 99999999 / 0 / 1]
8-066-007	L:FIN Jobs	Other	CTL*	[0 to 99999999 / 0 / 1]
8-066-008	L:FIN Jobs	Inside-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-066-009	L:FIN Jobs	Three-IN-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-066-010	L:FIN Jobs	Three-OUT-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-066-011	L:FIN Jobs	Four-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-066-012	L:FIN Jobs	KANNON-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-066-013	L:FIN Jobs	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-066-014	L:FIN Jobs	Ring-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-066-015	L:FIN Jobs	3rd Vendor	CTL*	[0 to 99999999 / 0 / 1]
8-066-016	L:FIN Jobs	TwinLoop-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-067-001	O:FIN Jobs	Sort	CTL*	[0 to 99999999 / 0 / 1]
8-067-002	O:FIN Jobs	Stack	CTL*	[0 to 99999999 / 0 / 1]
8-067-003	O:FIN Jobs	Staple	CTL*	[0 to 99999999 / 0 / 1]
8-067-004	O:FIN Jobs	Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-067-005	O:FIN Jobs	Z-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-067-006	O:FIN Jobs	Punch	CTL*	[0 to 99999999 / 0 / 1]
8-067-	O:FIN Jobs	Other	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
007				
8-067-008	O:FIN Jobs	Inside-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-067-009	O:FIN Jobs	Three-IN-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-067-010	O:FIN Jobs	Three-OUT-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-067-011	O:FIN Jobs	Four-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-067-012	O:FIN Jobs	KANNON-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-067-013	O:FIN Jobs	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-067-014	O:FIN Jobs	Ring-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-067-015	O:FIN Jobs	3rd Vendor	CTL*	[0 to 99999999 / 0 / 1]
8-067-016	O:FIN Jobs	TwinLoop-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-071-001	T:Jobs/PGS	1 Page	CTL*	[0 to 99999999 / 0 / 1]
8-071-002	T:Jobs/PGS	2 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-071-003	T:Jobs/PGS	3 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-071-004	T:Jobs/PGS	4 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-071-005	T:Jobs/PGS	5 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-071-006	T:Jobs/PGS	6~10 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-071-007	T:Jobs/PGS	11~20 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-071-008	T:Jobs/PGS	21~50 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-071-	T:Jobs/PGS	51~100 Pages	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
009				
8-071-010	T:Jobs/PGS	101~300 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-071-011	T:Jobs/PGS	301~500 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-071-012	T:Jobs/PGS	501~700 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-071-013	T:Jobs/PGS	701~1000 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-071-014	T:Jobs/PGS	1001~ Pages	CTL*	[0 to 99999999 / 0 / 1]
8-072-001	C:Jobs/PGS	1 Page	CTL*	[0 to 99999999 / 0 / 1]
8-072-002	C:Jobs/PGS	2 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-072-003	C:Jobs/PGS	3 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-072-004	C:Jobs/PGS	4 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-072-005	C:Jobs/PGS	5 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-072-006	C:Jobs/PGS	6~10 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-072-007	C:Jobs/PGS	11~20 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-072-008	C:Jobs/PGS	21~50 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-072-009	C:Jobs/PGS	51~100 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-072-010	C:Jobs/PGS	101~300 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-072-011	C:Jobs/PGS	301~500 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-072-012	C:Jobs/PGS	501~700 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-072-	C:Jobs/PGS	701~1000 Pages	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
013				
8-072-014	C:Jobs/PGS	1001~ Pages	CTL*	[0 to 99999999 / 0 / 1]
8-073-001	F:Jobs/PGS	1 Page	CTL*	[0 to 99999999 / 0 / 1]
8-073-002	F:Jobs/PGS	2 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-073-003	F:Jobs/PGS	3 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-073-004	F:Jobs/PGS	4 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-073-005	F:Jobs/PGS	5 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-073-006	F:Jobs/PGS	6~10 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-073-007	F:Jobs/PGS	11~20 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-073-008	F:Jobs/PGS	21~50 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-073-009	F:Jobs/PGS	51~100 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-073-010	F:Jobs/PGS	101~300 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-073-011	F:Jobs/PGS	301~500 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-073-012	F:Jobs/PGS	501~700 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-073-013	F:Jobs/PGS	701~1000 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-073-014	F:Jobs/PGS	1001~ Pages	CTL*	[0 to 99999999 / 0 / 1]
8-074-001	P:Jobs/PGS	1 Page	CTL*	[0 to 99999999 / 0 / 1]
8-074-002	P:Jobs/PGS	2 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-074-	P:Jobs/PGS	3 Pages	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
003				
8-074-004	P:Jobs/PGS	4 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-074-005	P:Jobs/PGS	5 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-074-006	P:Jobs/PGS	6~10 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-074-007	P:Jobs/PGS	11~20 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-074-008	P:Jobs/PGS	21~50 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-074-009	P:Jobs/PGS	51~100 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-074-010	P:Jobs/PGS	101~300 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-074-011	P:Jobs/PGS	301~500 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-074-012	P:Jobs/PGS	501~700 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-074-013	P:Jobs/PGS	701~1000 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-074-014	P:Jobs/PGS	1001~ Pages	CTL*	[0 to 99999999 / 0 / 1]
8-075-001	S:Jobs/PGS	1 Page	CTL*	[0 to 99999999 / 0 / 1]
8-075-002	S:Jobs/PGS	2 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-075-003	S:Jobs/PGS	3 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-075-004	S:Jobs/PGS	4 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-075-005	S:Jobs/PGS	5 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-075-006	S:Jobs/PGS	6~10 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-075-	S:Jobs/PGS	11~20 Pages	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
007				
8-075-008	S:Jobs/PGS	21~50 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-075-009	S:Jobs/PGS	51~100 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-075-010	S:Jobs/PGS	101~300 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-075-011	S:Jobs/PGS	301~500 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-075-012	S:Jobs/PGS	501~700 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-075-013	S:Jobs/PGS	701~1000 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-075-014	S:Jobs/PGS	1001~ Pages	CTL*	[0 to 99999999 / 0 / 1]
8-076-001	L:Jobs/PGS	1 Page	CTL*	[0 to 99999999 / 0 / 1]
8-076-002	L:Jobs/PGS	2 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-076-003	L:Jobs/PGS	3 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-076-004	L:Jobs/PGS	4 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-076-005	L:Jobs/PGS	5 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-076-006	L:Jobs/PGS	6~10 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-076-007	L:Jobs/PGS	11~20 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-076-008	L:Jobs/PGS	21~50 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-076-009	L:Jobs/PGS	51~100 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-076-010	L:Jobs/PGS	101~300 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-076-	L:Jobs/PGS	301~500 Pages	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
011				
8-076-012	L:Jobs/PGS	501~700 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-076-013	L:Jobs/PGS	701~1000 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-076-014	L:Jobs/PGS	1001~ Pages	CTL*	[0 to 99999999 / 0 / 1]
8-077-001	O:Jobs/PGS	1 Page	CTL*	[0 to 99999999 / 0 / 1]
8-077-002	O:Jobs/PGS	2 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-077-003	O:Jobs/PGS	3 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-077-004	O:Jobs/PGS	4 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-077-005	O:Jobs/PGS	5 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-077-006	O:Jobs/PGS	6~10 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-077-007	O:Jobs/PGS	11~20 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-077-008	O:Jobs/PGS	21~50 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-077-009	O:Jobs/PGS	51~100 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-077-010	O:Jobs/PGS	101~300 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-077-011	O:Jobs/PGS	301~500 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-077-012	O:Jobs/PGS	501~700 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-077-013	O:Jobs/PGS	701~1000 Pages	CTL*	[0 to 99999999 / 0 / 1]
8-077-014	O:Jobs/PGS	1001~ Pages	CTL*	[0 to 99999999 / 0 / 1]
8-081-	T:Smart Device	Smart Device	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
8-082-001	C:Smart Device	Smart Device	CTL*	[0 to 99999999 / 0 / 1]
8-083-001	F:Smart Device	Smart Device	CTL*	[0 to 99999999 / 0 / 1]
8-084-001	P:Smart Device	Smart Device	CTL*	[0 to 99999999 / 0 / 1]
8-085-001	S:Smart Device	Smart Device	CTL*	[0 to 99999999 / 0 / 1]
8-111-001	T:FAX TX Jobs	B/W(Tel)	CTL*	[0 to 99999999 / 0 / 1]
8-111-101	T:FAX TX Jobs	B/W(Cloud)	CTL*	[0 to 99999999 / 0 / 1]
8-113-001	F:FAX TX Jobs	B/W(Tel)	CTL*	[0 to 99999999 / 0 / 1]
8-113-101	F:FAX TX Jobs	B/W(Cloud)	CTL*	[0 to 99999999 / 0 / 1]
8-121-001	T:IFAX TX Jobs	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-123-001	F:IFAX TX Jobs	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-131-001	T:S-to-Email Jobs	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-131-002	T:S-to-Email Jobs	Color	CTL*	[0 to 99999999 / 0 / 1]
8-131-003	T:S-to-Email Jobs	ACS	CTL*	[0 to 99999999 / 0 / 1]
8-135-001	S:S-to-Email Jobs	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-135-002	S:S-to-Email Jobs	Color	CTL*	[0 to 99999999 / 0 / 1]
8-135-003	S:S-to-Email Jobs	ACS	CTL*	[0 to 99999999 / 0 / 1]
8-141-001	T:Deliv Jobs/Svr	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-141-	T:Deliv Jobs/Svr	Color	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
002				
8-141-003	T:Deliv Jobs/Svr	ACS	CTL*	[0 to 99999999 / 0 / 1]
8-145-001	S:Deliv Jobs/Svr	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-145-002	S:Deliv Jobs/Svr	Color	CTL*	[0 to 99999999 / 0 / 1]
8-145-003	S:Deliv Jobs/Svr	ACS	CTL*	[0 to 99999999 / 0 / 1]
8-151-001	T:Deliv Jobs/PC	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-151-002	T:Deliv Jobs/PC	Color	CTL*	[0 to 99999999 / 0 / 1]
8-151-003	T:Deliv Jobs/PC	ACS	CTL*	[0 to 99999999 / 0 / 1]
8-155-001	S:Deliv Jobs/PC	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-155-002	S:Deliv Jobs/PC	Color	CTL*	[0 to 99999999 / 0 / 1]
8-155-003	S:Deliv Jobs/PC	ACS	CTL*	[0 to 99999999 / 0 / 1]
8-161-001	T:PCFAX TX Jobs		CTL*	[0 to 99999999 / 0 / 1]
8-163-001	F:PCFAX TX Jobs		CTL*	[0 to 99999999 / 0 / 1]
8-171-001	T:Deliv Jobs/WSD/DSM	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-171-002	T:Deliv Jobs/WSD/DSM	Color	CTL*	[0 to 99999999 / 0 / 1]
8-171-003	T:Deliv Jobs/WSD/DSM	ACS	CTL*	[0 to 99999999 / 0 / 1]
8-175-001	S:Deliv Jobs/WSD/DSM	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-175-002	S:Deliv Jobs/WSD/DSM	Color	CTL*	[0 to 99999999 / 0 / 1]
8-175-	S:Deliv	ACS	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
003	Jobs/WSD/DSM			
8-181-001	T:Scan to Media Jobs	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-181-002	T:Scan to Media Jobs	Color	CTL*	[0 to 99999999 / 0 / 1]
8-181-003	T:Scan to Media Jobs	ACS	CTL*	[0 to 99999999 / 0 / 1]
8-185-001	S:Scan to Media Jobs	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-185-002	S:Scan to Media Jobs	Color	CTL*	[0 to 99999999 / 0 / 1]
8-185-003	S:Scan to Media Jobs	ACS	CTL*	[0 to 99999999 / 0 / 1]
8-191-001	T:Total Scan PGS		CTL*	[0 to 99999999 / 0 / 1]
8-192-001	C:Total Scan PGS		CTL*	[0 to 99999999 / 0 / 1]
8-193-001	F:Total Scan PGS		CTL*	[0 to 99999999 / 0 / 1]
8-195-001	S:Total Scan PGS		CTL*	[0 to 99999999 / 0 / 1]
8-196-001	L:Total Scan PGS		CTL*	[0 to 99999999 / 0 / 1]
8-201-001	T:LSize Scan PGS	A3/DLT, Larger	CTL*	[0 to 99999999 / 0 / 1]
8-203-001	F:LSize Scan PGS	A3/DLT, Larger	CTL*	[0 to 99999999 / 0 / 1]
8-205-001	S:LSize Scan PGS	A3/DLT, Larger	CTL*	[0 to 99999999 / 0 / 1]
8-211-001	T:Scan PGS/LS		CTL*	[0 to 99999999 / 0 / 1]
8-212-001	C:Scan PGS/LS		CTL*	[0 to 99999999 / 0 / 1]
8-213-001	F:Scan PGS/LS		CTL*	[0 to 99999999 / 0 / 1]
8-215-	S:Scan PGS/LS		CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
8-216-001	L:Scan PGS/LS		CTL*	[0 to 99999999 / 0 / 1]
8-221-001	ADF Org Feeds	Front	CTL*	[0 to 99999999 / 0 / 1]
8-221-002	ADF Org Feeds	Back	CTL*	[0 to 99999999 / 0 / 1]
8-231-001	Scan PGS/Mode	Large Volume	CTL*	[0 to 99999999 / 0 / 1]
8-231-002	Scan PGS/Mode	SADF	CTL*	[0 to 99999999 / 0 / 1]
8-231-003	Scan PGS/Mode	Mixed Size	CTL*	[0 to 99999999 / 0 / 1]
8-231-004	Scan PGS/Mode	Custom Size	CTL*	[0 to 99999999 / 0 / 1]
8-231-005	Scan PGS/Mode	Platen	CTL*	[0 to 99999999 / 0 / 1]
8-231-006	Scan PGS/Mode	Mixed 1side/2side	CTL*	[0 to 99999999 / 0 / 1]
8-241-001	T:Scan PGS/Org	Text	CTL*	[0 to 99999999 / 0 / 1]
8-241-002	T:Scan PGS/Org	Text/Photo	CTL*	[0 to 99999999 / 0 / 1]
8-241-003	T:Scan PGS/Org	Photo	CTL*	[0 to 99999999 / 0 / 1]
8-241-004	T:Scan PGS/Org	GenCopy, Pale	CTL*	[0 to 99999999 / 0 / 1]
8-241-005	T:Scan PGS/Org	Map	CTL*	[0 to 99999999 / 0 / 1]
8-241-006	T:Scan PGS/Org	Normal/Detail	CTL*	[0 to 99999999 / 0 / 1]
8-241-007	T:Scan PGS/Org	Fine/Super Fine	CTL*	[0 to 99999999 / 0 / 1]
8-241-008	T:Scan PGS/Org	Binary	CTL*	[0 to 99999999 / 0 / 1]
8-241-	T:Scan PGS/Org	Grayscale	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
009				
8-241-010	T:Scan PGS/Org	Color	CTL*	[0 to 99999999 / 0 / 1]
8-241-011	T:Scan PGS/Org	Other	CTL*	[0 to 99999999 / 0 / 1]
8-242-001	C:Scan PGS/Org	Text	CTL*	[0 to 99999999 / 0 / 1]
8-242-002	C:Scan PGS/Org	Text/Photo	CTL*	[0 to 99999999 / 0 / 1]
8-242-003	C:Scan PGS/Org	Photo	CTL*	[0 to 99999999 / 0 / 1]
8-242-004	C:Scan PGS/Org	GenCopy, Pale	CTL*	[0 to 99999999 / 0 / 1]
8-242-005	C:Scan PGS/Org	Map	CTL*	[0 to 99999999 / 0 / 1]
8-242-011	C:Scan PGS/Org	Other	CTL*	[0 to 99999999 / 0 / 1]
8-243-001	F:Scan PGS/Org	Text	CTL*	[0 to 99999999 / 0 / 1]
8-243-002	F:Scan PGS/Org	Text/Photo	CTL*	[0 to 99999999 / 0 / 1]
8-243-003	F:Scan PGS/Org	Photo	CTL*	[0 to 99999999 / 0 / 1]
8-243-006	F:Scan PGS/Org	Normal/Detail	CTL*	[0 to 99999999 / 0 / 1]
8-243-007	F:Scan PGS/Org	Fine/Super Fine	CTL*	[0 to 99999999 / 0 / 1]
8-243-011	F:Scan PGS/Org	Other	CTL*	[0 to 99999999 / 0 / 1]
8-245-001	S:Scan PGS/Org	Text	CTL*	[0 to 99999999 / 0 / 1]
8-245-002	S:Scan PGS/Org	Text/Photo	CTL*	[0 to 99999999 / 0 / 1]
8-245-003	S:Scan PGS/Org	Photo	CTL*	[0 to 99999999 / 0 / 1]
8-245-	S:Scan PGS/Org	GenCopy, Pale	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
004				
8-245-008	S:Scan PGS/Org	Binary	CTL*	[0 to 99999999 / 0 / 1]
8-245-009	S:Scan PGS/Org	Grayscale	CTL*	[0 to 99999999 / 0 / 1]
8-245-010	S:Scan PGS/Org	Color	CTL*	[0 to 99999999 / 0 / 1]
8-245-011	S:Scan PGS/Org	Other	CTL*	[0 to 99999999 / 0 / 1]
8-246-001	L:Scan PGS/Org	Text	CTL*	[0 to 99999999 / 0 / 1]
8-246-002	L:Scan PGS/Org	Text/Photo	CTL*	[0 to 99999999 / 0 / 1]
8-246-003	L:Scan PGS/Org	Photo	CTL*	[0 to 99999999 / 0 / 1]
8-246-004	L:Scan PGS/Org	GenCopy, Pale	CTL*	[0 to 99999999 / 0 / 1]
8-246-005	L:Scan PGS/Org	Map	CTL*	[0 to 99999999 / 0 / 1]
8-246-011	L:Scan PGS/Org	Other	CTL*	[0 to 99999999 / 0 / 1]
8-251-001	T:Scan PGS/ImgEdt		CTL*	[0 to 99999999 / 0 / 1]
8-252-001	C:Scan PGS/ImgEdt		CTL*	[0 to 99999999 / 0 / 1]
8-255-001	S:Scan PGS/ImgEdt		CTL*	[0 to 99999999 / 0 / 1]
8-256-001	L:Scan PGS/ImgEdt		CTL*	[0 to 99999999 / 0 / 1]
8-257-001	O:Scan PGS/ImgEdt		CTL*	[0 to 99999999 / 0 / 1]
8-281-001	T:Scan PGS/TWAIN		CTL*	[0 to 99999999 / 0 / 1]
8-285-001	S:Scan PGS/TWAIN		CTL*	[0 to 99999999 / 0 / 1]
8-291-	T:Scan PGS/Stamp		CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
8-293-001	F:Scan PGS/Stamp		CTL*	[0 to 99999999 / 0 / 1]
8-295-001	S:Scan PGS/Stamp		CTL*	[0 to 99999999 / 0 / 1]
8-301-001	T:Scan PGS/Size	A3	CTL*	[0 to 99999999 / 0 / 1]
8-301-002	T:Scan PGS/Size	A4	CTL*	[0 to 99999999 / 0 / 1]
8-301-003	T:Scan PGS/Size	A5	CTL*	[0 to 99999999 / 0 / 1]
8-301-004	T:Scan PGS/Size	B4	CTL*	[0 to 99999999 / 0 / 1]
8-301-005	T:Scan PGS/Size	B5	CTL*	[0 to 99999999 / 0 / 1]
8-301-006	T:Scan PGS/Size	DLT	CTL*	[0 to 99999999 / 0 / 1]
8-301-007	T:Scan PGS/Size	LG	CTL*	[0 to 99999999 / 0 / 1]
8-301-008	T:Scan PGS/Size	LT	CTL*	[0 to 99999999 / 0 / 1]
8-301-009	T:Scan PGS/Size	HLT	CTL*	[0 to 99999999 / 0 / 1]
8-301-010	T:Scan PGS/Size	Full Bleed	CTL*	[0 to 99999999 / 0 / 1]
8-301-254	T:Scan PGS/Size	Other (Standard)	CTL*	[0 to 99999999 / 0 / 1]
8-301-255	T:Scan PGS/Size	Other (Custom)	CTL*	[0 to 99999999 / 0 / 1]
8-302-001	C:Scan PGS/Size	A3	CTL*	[0 to 99999999 / 0 / 1]
8-302-002	C:Scan PGS/Size	A4	CTL*	[0 to 99999999 / 0 / 1]
8-302-003	C:Scan PGS/Size	A5	CTL*	[0 to 99999999 / 0 / 1]
8-302-	C:Scan PGS/Size	B4	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
004				
8-302-005	C:Scan PGS/Size	B5	CTL*	[0 to 99999999 / 0 / 1]
8-302-006	C:Scan PGS/Size	DLT	CTL*	[0 to 99999999 / 0 / 1]
8-302-007	C:Scan PGS/Size	LG	CTL*	[0 to 99999999 / 0 / 1]
8-302-008	C:Scan PGS/Size	LT	CTL*	[0 to 99999999 / 0 / 1]
8-302-009	C:Scan PGS/Size	HLT	CTL*	[0 to 99999999 / 0 / 1]
8-302-010	C:Scan PGS/Size	Full Bleed	CTL*	[0 to 99999999 / 0 / 1]
8-302-254	C:Scan PGS/Size	Other (Standard)	CTL*	[0 to 99999999 / 0 / 1]
8-302-255	C:Scan PGS/Size	Other (Custom)	CTL*	[0 to 99999999 / 0 / 1]
8-303-001	F:Scan PGS/Size	A3	CTL*	[0 to 99999999 / 0 / 1]
8-303-002	F:Scan PGS/Size	A4	CTL*	[0 to 99999999 / 0 / 1]
8-303-003	F:Scan PGS/Size	A5	CTL*	[0 to 99999999 / 0 / 1]
8-303-004	F:Scan PGS/Size	B4	CTL*	[0 to 99999999 / 0 / 1]
8-303-005	F:Scan PGS/Size	B5	CTL*	[0 to 99999999 / 0 / 1]
8-303-006	F:Scan PGS/Size	DLT	CTL*	[0 to 99999999 / 0 / 1]
8-303-007	F:Scan PGS/Size	LG	CTL*	[0 to 99999999 / 0 / 1]
8-303-008	F:Scan PGS/Size	LT	CTL*	[0 to 99999999 / 0 / 1]
8-303-009	F:Scan PGS/Size	HLT	CTL*	[0 to 99999999 / 0 / 1]
8-303-	F:Scan PGS/Size	Full Bleed	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
010				
8-303-254	F:Scan PGS/Size	Other (Standard)	CTL*	[0 to 99999999 / 0 / 1]
8-303-255	F:Scan PGS/Size	Other (Custom)	CTL*	[0 to 99999999 / 0 / 1]
8-305-001	S:Scan PGS/Size	A3	CTL*	[0 to 99999999 / 0 / 1]
8-305-002	S:Scan PGS/Size	A4	CTL*	[0 to 99999999 / 0 / 1]
8-305-003	S:Scan PGS/Size	A5	CTL*	[0 to 99999999 / 0 / 1]
8-305-004	S:Scan PGS/Size	B4	CTL*	[0 to 99999999 / 0 / 1]
8-305-005	S:Scan PGS/Size	B5	CTL*	[0 to 99999999 / 0 / 1]
8-305-006	S:Scan PGS/Size	DLT	CTL*	[0 to 99999999 / 0 / 1]
8-305-007	S:Scan PGS/Size	LG	CTL*	[0 to 99999999 / 0 / 1]
8-305-008	S:Scan PGS/Size	LT	CTL*	[0 to 99999999 / 0 / 1]
8-305-009	S:Scan PGS/Size	HLT	CTL*	[0 to 99999999 / 0 / 1]
8-305-010	S:Scan PGS/Size	Full Bleed	CTL*	[0 to 99999999 / 0 / 1]
8-305-254	S:Scan PGS/Size	Other (Standard)	CTL*	[0 to 99999999 / 0 / 1]
8-305-255	S:Scan PGS/Size	Other (Custom)	CTL*	[0 to 99999999 / 0 / 1]
8-306-001	L:Scan PGS/Size	A3	CTL*	[0 to 99999999 / 0 / 1]
8-306-002	L:Scan PGS/Size	A4	CTL*	[0 to 99999999 / 0 / 1]
8-306-003	L:Scan PGS/Size	A5	CTL*	[0 to 99999999 / 0 / 1]
8-306-	L:Scan PGS/Size	B4	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
004				
8-306-005	L:Scan PGS/Size	B5	CTL*	[0 to 99999999 / 0 / 1]
8-306-006	L:Scan PGS/Size	DLT	CTL*	[0 to 99999999 / 0 / 1]
8-306-007	L:Scan PGS/Size	LG	CTL*	[0 to 99999999 / 0 / 1]
8-306-008	L:Scan PGS/Size	LT	CTL*	[0 to 99999999 / 0 / 1]
8-306-009	L:Scan PGS/Size	HLT	CTL*	[0 to 99999999 / 0 / 1]
8-306-010	L:Scan PGS/Size	Full Bleed	CTL*	[0 to 99999999 / 0 / 1]
8-306-254	L:Scan PGS/Size	Other (Standard)	CTL*	[0 to 99999999 / 0 / 1]
8-306-255	L:Scan PGS/Size	Other (Custom)	CTL*	[0 to 99999999 / 0 / 1]
8-311-001	T:Scan PGS/Rez	1200dpi ~	CTL*	[0 to 99999999 / 0 / 1]
8-311-002	T:Scan PGS/Rez	600dpi~1199dpi	CTL*	[0 to 99999999 / 0 / 1]
8-311-003	T:Scan PGS/Rez	400dpi~599dpi	CTL*	[0 to 99999999 / 0 / 1]
8-311-004	T:Scan PGS/Rez	200dpi~399dpi	CTL*	[0 to 99999999 / 0 / 1]
8-311-005	T:Scan PGS/Rez	~199dpi	CTL*	[0 to 99999999 / 0 / 1]
8-315-001	S:Scan PGS/Rez	1200dpi ~	CTL*	[0 to 99999999 / 0 / 1]
8-315-002	S:Scan PGS/Rez	600dpi~1199dpi	CTL*	[0 to 99999999 / 0 / 1]
8-315-003	S:Scan PGS/Rez	400dpi~599dpi	CTL*	[0 to 99999999 / 0 / 1]
8-315-004	S:Scan PGS/Rez	200dpi~399dpi	CTL*	[0 to 99999999 / 0 / 1]
8-315-	S:Scan PGS/Rez	~199dpi	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
005				
8-321-001	T:Sacn Poster	2 Sheet	CTL*	[0 to 99999999 / 0 / 1]
8-321-002	T:Sacn Poster	4 Sheet	CTL*	[0 to 99999999 / 0 / 1]
8-321-003	T:Sacn Poster	9 Sheet	CTL*	[0 to 99999999 / 0 / 1]
8-322-001	C:Sacn Poster	2 Sheet	CTL*	[0 to 99999999 / 0 / 1]
8-322-002	C:Sacn Poster	4 Sheet	CTL*	[0 to 99999999 / 0 / 1]
8-322-003	C:Sacn Poster	9 Sheet	CTL*	[0 to 99999999 / 0 / 1]
8-326-001	L:Sacn Poster	2 Sheet	CTL*	[0 to 99999999 / 0 / 1]
8-326-002	L:Sacn Poster	4 Sheet	CTL*	[0 to 99999999 / 0 / 1]
8-326-003	L:Sacn Poster	9 Sheet	CTL*	[0 to 99999999 / 0 / 1]
8-381-001	T:Total PrtPGS	Field Number	CTL*	[0 to 99999999 / 0 / 1]
8-382-001	C:Total PrtPGS	Field Number	CTL*	[0 to 99999999 / 0 / 1]
8-383-001	F:Total PrtPGS	Field Number	CTL*	[0 to 99999999 / 0 / 1]
8-384-001	P:Total PrtPGS	Field Number	CTL*	[0 to 99999999 / 0 / 1]
8-385-001	S:Total PrtPGS	Field Number	CTL*	[0 to 99999999 / 0 / 1]
8-386-001	L:Total PrtPGS	Field Number	CTL*	[0 to 99999999 / 0 / 1]
8-387-001	O:Total PrtPGS	Field Number	CTL*	[0 to 99999999 / 0 / 1]
8-391-001	LSize PrtPGS	A3/DLT, Larger	CTL*	[0 to 99999999 / 0 / 1]
8-401-	T:PrtPGS/LS		CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
8-402-001	C:PrtPGS/LS		CTL*	[0 to 99999999 / 0 / 1]
8-403-001	F:PrtPGS/LS		CTL*	[0 to 99999999 / 0 / 1]
8-404-001	P:PrtPGS/LS		CTL*	[0 to 99999999 / 0 / 1]
8-405-001	S:PrtPGS/LS		CTL*	[0 to 99999999 / 0 / 1]
8-406-001	L:PrtPGS/LS		CTL*	[0 to 99999999 / 0 / 1]
8-411-001	Prints/Duplex		CTL*	[0 to 99999999 / 0 / 1]
8-421-001	T:PrtPGS/Dup Comb	Simplex> Duplex	CTL*	[0 to 99999999 / 0 / 1]
8-421-002	T:PrtPGS/Dup Comb	Duplex> Duplex	CTL*	[0 to 99999999 / 0 / 1]
8-421-003	T:PrtPGS/Dup Comb	Book> Duplex	CTL*	[0 to 99999999 / 0 / 1]
8-421-004	T:PrtPGS/Dup Comb	Simplex Combine	CTL*	[0 to 99999999 / 0 / 1]
8-421-005	T:PrtPGS/Dup Comb	Duplex Combine	CTL*	[0 to 99999999 / 0 / 1]
8-421-006	T:PrtPGS/Dup Comb	2in1	CTL*	[0 to 99999999 / 0 / 1]
8-421-007	T:PrtPGS/Dup Comb	4in1	CTL*	[0 to 99999999 / 0 / 1]
8-421-008	T:PrtPGS/Dup Comb	6in1	CTL*	[0 to 99999999 / 0 / 1]
8-421-009	T:PrtPGS/Dup Comb	8in1	CTL*	[0 to 99999999 / 0 / 1]
8-421-010	T:PrtPGS/Dup Comb	9in1	CTL*	[0 to 99999999 / 0 / 1]
8-421-011	T:PrtPGS/Dup Comb	16in1	CTL*	[0 to 99999999 / 0 / 1]
8-421-	T:PrtPGS/Dup Comb	Booklet	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
012				
8-421-013	T:PrtPGS/Dup Comb	Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-421-014	T:PrtPGS/Dup Comb	2in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-421-015	T:PrtPGS/Dup Comb	4in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-421-016	T:PrtPGS/Dup Comb	6in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-421-017	T:PrtPGS/Dup Comb	8in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-421-018	T:PrtPGS/Dup Comb	9in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-421-019	T:PrtPGS/Dup Comb	2in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-421-020	T:PrtPGS/Dup Comb	4in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-421-021	T:PrtPGS/Dup Comb	6in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-421-022	T:PrtPGS/Dup Comb	8in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-421-023	T:PrtPGS/Dup Comb	9in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-421-024	T:PrtPGS/Dup Comb	16in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-422-001	C:PrtPGS/Dup Comb	Simplex> Duplex	CTL*	[0 to 99999999 / 0 / 1]
8-422-002	C:PrtPGS/Dup Comb	Duplex> Duplex	CTL*	[0 to 99999999 / 0 / 1]
8-422-003	C:PrtPGS/Dup Comb	Book> Duplex	CTL*	[0 to 99999999 / 0 / 1]
8-422-004	C:PrtPGS/Dup Comb	Simplex Combine	CTL*	[0 to 99999999 / 0 / 1]
8-422-005	C:PrtPGS/Dup Comb	Duplex Combine	CTL*	[0 to 99999999 / 0 / 1]
8-422-	C:PrtPGS/Dup Comb	2in1	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
006				
8-422-007	C:PrtPGS/Dup Comb	4in1	CTL*	[0 to 99999999 / 0 / 1]
8-422-009	C:PrtPGS/Dup Comb	8in1	CTL*	[0 to 99999999 / 0 / 1]
8-422-012	C:PrtPGS/Dup Comb	Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-422-013	C:PrtPGS/Dup Comb	Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-422-014	C:PrtPGS/Dup Comb	2in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-422-015	C:PrtPGS/Dup Comb	4in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-422-017	C:PrtPGS/Dup Comb	8in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-422-019	C:PrtPGS/Dup Comb	2in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-422-020	C:PrtPGS/Dup Comb	4in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-422-022	C:PrtPGS/Dup Comb	8in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-423-001	F:PrtPGS/Dup Comb	Simplex> Duplex	CTL*	[0 to 99999999 / 0 / 1]
8-423-004	F:PrtPGS/Dup Comb	Simplex Combine	CTL*	[0 to 99999999 / 0 / 1]
8-423-005	F:PrtPGS/Dup Comb	Duplex Combine	CTL*	[0 to 99999999 / 0 / 1]
8-423-006	F:PrtPGS/Dup Comb	2in1	CTL*	[0 to 99999999 / 0 / 1]
8-423-007	F:PrtPGS/Dup Comb	4in1	CTL*	[0 to 99999999 / 0 / 1]
8-423-009	F:PrtPGS/Dup Comb	8in1	CTL*	[0 to 99999999 / 0 / 1]
8-423-011	F:PrtPGS/Dup Comb	16in1	CTL*	[0 to 99999999 / 0 / 1]
8-423-	F:PrtPGS/Dup Comb	Booklet	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
012				
8-423-013	F:PrtPGS/Dup Comb	Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-423-014	F:PrtPGS/Dup Comb	2in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-423-015	F:PrtPGS/Dup Comb	4in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-423-017	F:PrtPGS/Dup Comb	8in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-423-019	F:PrtPGS/Dup Comb	2in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-423-020	F:PrtPGS/Dup Comb	4in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-423-022	F:PrtPGS/Dup Comb	8in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-423-024	F:PrtPGS/Dup Comb	16in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-424-001	P:PrtPGS/Dup Comb	Simplex> Duplex	CTL*	[0 to 99999999 / 0 / 1]
8-424-004	P:PrtPGS/Dup Comb	Simplex Combine	CTL*	[0 to 99999999 / 0 / 1]
8-424-005	P:PrtPGS/Dup Comb	Duplex Combine	CTL*	[0 to 99999999 / 0 / 1]
8-424-006	P:PrtPGS/Dup Comb	2in1	CTL*	[0 to 99999999 / 0 / 1]
8-424-007	P:PrtPGS/Dup Comb	4in1	CTL*	[0 to 99999999 / 0 / 1]
8-424-008	P:PrtPGS/Dup Comb	6in1	CTL*	[0 to 99999999 / 0 / 1]
8-424-009	P:PrtPGS/Dup Comb	8in1	CTL*	[0 to 99999999 / 0 / 1]
8-424-010	P:PrtPGS/Dup Comb	9in1	CTL*	[0 to 99999999 / 0 / 1]
8-424-011	P:PrtPGS/Dup Comb	16in1	CTL*	[0 to 99999999 / 0 / 1]
8-424-	P:PrtPGS/Dup Comb	Booklet	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
012				
8-424-013	P:PrtPGS/Dup Comb	Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-424-014	P:PrtPGS/Dup Comb	2in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-424-015	P:PrtPGS/Dup Comb	4in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-424-016	P:PrtPGS/Dup Comb	6in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-424-017	P:PrtPGS/Dup Comb	8in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-424-018	P:PrtPGS/Dup Comb	9in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-424-019	P:PrtPGS/Dup Comb	2in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-424-020	P:PrtPGS/Dup Comb	4in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-424-021	P:PrtPGS/Dup Comb	6in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-424-022	P:PrtPGS/Dup Comb	8in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-424-023	P:PrtPGS/Dup Comb	9in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-424-024	P:PrtPGS/Dup Comb	16in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-425-001	S:PrtPGS/Dup Comb	Simplex> Duplex	CTL*	[0 to 99999999 / 0 / 1]
8-425-004	S:PrtPGS/Dup Comb	Simplex Combine	CTL*	[0 to 99999999 / 0 / 1]
8-425-005	S:PrtPGS/Dup Comb	Duplex Combine	CTL*	[0 to 99999999 / 0 / 1]
8-425-006	S:PrtPGS/Dup Comb	2in1	CTL*	[0 to 99999999 / 0 / 1]
8-425-007	S:PrtPGS/Dup Comb	4in1	CTL*	[0 to 99999999 / 0 / 1]
8-425-	S:PrtPGS/Dup Comb	8in1	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
009				
8-425-010	S:PrtPGS/Dup Comb	9in1	CTL*	[0 to 99999999 / 0 / 1]
8-425-011	S:PrtPGS/Dup Comb	16in1	CTL*	[0 to 99999999 / 0 / 1]
8-425-012	S:PrtPGS/Dup Comb	Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-425-013	S:PrtPGS/Dup Comb	Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-425-014	S:PrtPGS/Dup Comb	2in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-425-015	S:PrtPGS/Dup Comb	4in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-425-017	S:PrtPGS/Dup Comb	8in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-425-018	S:PrtPGS/Dup Comb	9in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-425-019	S:PrtPGS/Dup Comb	2in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-425-020	S:PrtPGS/Dup Comb	4in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-425-022	S:PrtPGS/Dup Comb	8in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-425-023	S:PrtPGS/Dup Comb	9in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-425-024	S:PrtPGS/Dup Comb	16in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-426-001	L:PrtPGS/Dup Comb	Simplex> Duplex	CTL*	[0 to 99999999 / 0 / 1]
8-426-004	L:PrtPGS/Dup Comb	Simplex Combine	CTL*	[0 to 99999999 / 0 / 1]
8-426-005	L:PrtPGS/Dup Comb	Duplex Combine	CTL*	[0 to 99999999 / 0 / 1]
8-426-006	L:PrtPGS/Dup Comb	2in1	CTL*	[0 to 99999999 / 0 / 1]
8-426-	L:PrtPGS/Dup Comb	4in1	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
007				
8-426-009	L:PrtPGS/Dup Comb	8in1	CTL*	[0 to 99999999 / 0 / 1]
8-426-011	L:PrtPGS/Dup Comb	16in1	CTL*	[0 to 99999999 / 0 / 1]
8-426-012	L:PrtPGS/Dup Comb	Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-426-013	L:PrtPGS/Dup Comb	Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-426-014	L:PrtPGS/Dup Comb	2in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-426-015	L:PrtPGS/Dup Comb	4in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-426-017	L:PrtPGS/Dup Comb	8in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-426-019	L:PrtPGS/Dup Comb	2in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-426-020	L:PrtPGS/Dup Comb	4in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-426-022	L:PrtPGS/Dup Comb	8in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-426-024	L:PrtPGS/Dup Comb	16in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-427-001	O:PrtPGS/Dup Comb	Simplex> Duplex	CTL*	[0 to 99999999 / 0 / 1]
8-427-002	O:PrtPGS/Dup Comb	Duplex> Duplex	CTL*	[0 to 99999999 / 0 / 1]
8-427-003	O:PrtPGS/Dup Comb	Book> Duplex	CTL*	[0 to 99999999 / 0 / 1]
8-427-004	O:PrtPGS/Dup Comb	Simplex Combine	CTL*	[0 to 99999999 / 0 / 1]
8-427-005	O:PrtPGS/Dup Comb	Duplex Combine	CTL*	[0 to 99999999 / 0 / 1]
8-427-006	O:PrtPGS/Dup Comb	2in1	CTL*	[0 to 99999999 / 0 / 1]
8-427-	O:PrtPGS/Dup Comb	4in1	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
007				
8-427-008	O:PrtPGS/Dup Comb	6in1	CTL*	[0 to 99999999 / 0 / 1]
8-427-009	O:PrtPGS/Dup Comb	8in1	CTL*	[0 to 99999999 / 0 / 1]
8-427-010	O:PrtPGS/Dup Comb	9in1	CTL*	[0 to 99999999 / 0 / 1]
8-427-011	O:PrtPGS/Dup Comb	16in1	CTL*	[0 to 99999999 / 0 / 1]
8-427-012	O:PrtPGS/Dup Comb	Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-427-013	O:PrtPGS/Dup Comb	Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-427-014	O:PrtPGS/Dup Comb	2in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-427-015	O:PrtPGS/Dup Comb	4in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-427-016	O:PrtPGS/Dup Comb	6in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-427-017	O:PrtPGS/Dup Comb	8in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-427-018	O:PrtPGS/Dup Comb	9in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-427-019	O:PrtPGS/Dup Comb	2in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-427-020	O:PrtPGS/Dup Comb	4in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-427-021	O:PrtPGS/Dup Comb	6in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-427-022	O:PrtPGS/Dup Comb	8in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-427-023	O:PrtPGS/Dup Comb	9in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-427-024	O:PrtPGS/Dup Comb	16in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]
8-431-	T:PrtPGS/ImgEdt	Cover/Slip Sheet	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
8-431-002	T:PrtPGS/ImgEdt	Series/Book	CTL*	[0 to 99999999 / 0 / 1]
8-431-003	T:PrtPGS/ImgEdt	User Stamp	CTL*	[0 to 99999999 / 0 / 1]
8-432-001	C:PrtPGS/ImgEdt	Cover/Slip Sheet	CTL*	[0 to 99999999 / 0 / 1]
8-432-002	C:PrtPGS/ImgEdt	Series/Book	CTL*	[0 to 99999999 / 0 / 1]
8-432-003	C:PrtPGS/ImgEdt	User Stamp	CTL*	[0 to 99999999 / 0 / 1]
8-434-001	P:PrtPGS/ImgEdt	Cover/Slip Sheet	CTL*	[0 to 99999999 / 0 / 1]
8-434-002	P:PrtPGS/ImgEdt	Series/Book	CTL*	[0 to 99999999 / 0 / 1]
8-434-003	P:PrtPGS/ImgEdt	User Stamp	CTL*	[0 to 99999999 / 0 / 1]
8-436-001	L:PrtPGS/ImgEdt	Cover/Slip Sheet	CTL*	[0 to 99999999 / 0 / 1]
8-436-002	L:PrtPGS/ImgEdt	Series/Book	CTL*	[0 to 99999999 / 0 / 1]
8-436-003	L:PrtPGS/ImgEdt	User Stamp	CTL*	[0 to 99999999 / 0 / 1]
8-437-001	O:PrtPGS/ImgEdt	Cover/Slip Sheet	CTL*	[0 to 99999999 / 0 / 1]
8-437-002	O:PrtPGS/ImgEdt	Series/Book	CTL*	[0 to 99999999 / 0 / 1]
8-437-003	O:PrtPGS/ImgEdt	User Stamp	CTL*	[0 to 99999999 / 0 / 1]
8-441-001	T:PrtPGS/Ppr Size	A3	CTL*	[0 to 99999999 / 0 / 1]
8-441-002	T:PrtPGS/Ppr Size	A4	CTL*	[0 to 99999999 / 0 / 1]
8-441-003	T:PrtPGS/Ppr Size	A5	CTL*	[0 to 99999999 / 0 / 1]
8-441-	T:PrtPGS/Ppr Size	B4	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
004				
8-441-005	T:PrtPGS/Ppr Size	B5	CTL*	[0 to 99999999 / 0 / 1]
8-441-006	T:PrtPGS/Ppr Size	DLT	CTL*	[0 to 99999999 / 0 / 1]
8-441-007	T:PrtPGS/Ppr Size	LG	CTL*	[0 to 99999999 / 0 / 1]
8-441-008	T:PrtPGS/Ppr Size	LT	CTL*	[0 to 99999999 / 0 / 1]
8-441-009	T:PrtPGS/Ppr Size	HLT	CTL*	[0 to 99999999 / 0 / 1]
8-441-010	T:PrtPGS/Ppr Size	Full Bleed	CTL*	[0 to 99999999 / 0 / 1]
8-441-254	T:PrtPGS/Ppr Size	Other (Standard)	CTL*	[0 to 99999999 / 0 / 1]
8-441-255	T:PrtPGS/Ppr Size	Other (Custom)	CTL*	[0 to 99999999 / 0 / 1]
8-442-001	C:PrtPGS/Ppr Size	A3	CTL*	[0 to 99999999 / 0 / 1]
8-442-002	C:PrtPGS/Ppr Size	A4	CTL*	[0 to 99999999 / 0 / 1]
8-442-003	C:PrtPGS/Ppr Size	A5	CTL*	[0 to 99999999 / 0 / 1]
8-442-004	C:PrtPGS/Ppr Size	B4	CTL*	[0 to 99999999 / 0 / 1]
8-442-005	C:PrtPGS/Ppr Size	B5	CTL*	[0 to 99999999 / 0 / 1]
8-442-006	C:PrtPGS/Ppr Size	DLT	CTL*	[0 to 99999999 / 0 / 1]
8-442-007	C:PrtPGS/Ppr Size	LG	CTL*	[0 to 99999999 / 0 / 1]
8-442-008	C:PrtPGS/Ppr Size	LT	CTL*	[0 to 99999999 / 0 / 1]
8-442-009	C:PrtPGS/Ppr Size	HLT	CTL*	[0 to 99999999 / 0 / 1]
8-442-	C:PrtPGS/Ppr Size	Full Bleed	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
010				
8-442-254	C:PrtPGS/Ppr Size	Other (Standard)	CTL*	[0 to 99999999 / 0 / 1]
8-442-255	C:PrtPGS/Ppr Size	Other (Custom)	CTL*	[0 to 99999999 / 0 / 1]
8-443-001	F:PrtPGS/Ppr Size	A3	CTL*	[0 to 99999999 / 0 / 1]
8-443-002	F:PrtPGS/Ppr Size	A4	CTL*	[0 to 99999999 / 0 / 1]
8-443-003	F:PrtPGS/Ppr Size	A5	CTL*	[0 to 99999999 / 0 / 1]
8-443-004	F:PrtPGS/Ppr Size	B4	CTL*	[0 to 99999999 / 0 / 1]
8-443-005	F:PrtPGS/Ppr Size	B5	CTL*	[0 to 99999999 / 0 / 1]
8-443-006	F:PrtPGS/Ppr Size	DLT	CTL*	[0 to 99999999 / 0 / 1]
8-443-007	F:PrtPGS/Ppr Size	LG	CTL*	[0 to 99999999 / 0 / 1]
8-443-008	F:PrtPGS/Ppr Size	LT	CTL*	[0 to 99999999 / 0 / 1]
8-443-009	F:PrtPGS/Ppr Size	HLT	CTL*	[0 to 99999999 / 0 / 1]
8-443-010	F:PrtPGS/Ppr Size	Full Bleed	CTL*	[0 to 99999999 / 0 / 1]
8-443-254	F:PrtPGS/Ppr Size	Other (Standard)	CTL*	[0 to 99999999 / 0 / 1]
8-443-255	F:PrtPGS/Ppr Size	Other (Custom)	CTL*	[0 to 99999999 / 0 / 1]
8-444-001	P:PrtPGS/Ppr Size	A3	CTL*	[0 to 99999999 / 0 / 1]
8-444-002	P:PrtPGS/Ppr Size	A4	CTL*	[0 to 99999999 / 0 / 1]
8-444-003	P:PrtPGS/Ppr Size	A5	CTL*	[0 to 99999999 / 0 / 1]
8-444-	P:PrtPGS/Ppr Size	B4	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
004				
8-444-005	P:PrtPGS/Ppr Size	B5	CTL*	[0 to 99999999 / 0 / 1]
8-444-006	P:PrtPGS/Ppr Size	DLT	CTL*	[0 to 99999999 / 0 / 1]
8-444-007	P:PrtPGS/Ppr Size	LG	CTL*	[0 to 99999999 / 0 / 1]
8-444-008	P:PrtPGS/Ppr Size	LT	CTL*	[0 to 99999999 / 0 / 1]
8-444-009	P:PrtPGS/Ppr Size	HLT	CTL*	[0 to 99999999 / 0 / 1]
8-444-010	P:PrtPGS/Ppr Size	Full Bleed	CTL*	[0 to 99999999 / 0 / 1]
8-444-254	P:PrtPGS/Ppr Size	Other (Standard)	CTL*	[0 to 99999999 / 0 / 1]
8-444-255	P:PrtPGS/Ppr Size	Other (Custom)	CTL*	[0 to 99999999 / 0 / 1]
8-445-001	S:PrtPGS/Ppr Size	A3	CTL*	[0 to 99999999 / 0 / 1]
8-445-002	S:PrtPGS/Ppr Size	A4	CTL*	[0 to 99999999 / 0 / 1]
8-445-003	S:PrtPGS/Ppr Size	A5	CTL*	[0 to 99999999 / 0 / 1]
8-445-004	S:PrtPGS/Ppr Size	B4	CTL*	[0 to 99999999 / 0 / 1]
8-445-005	S:PrtPGS/Ppr Size	B5	CTL*	[0 to 99999999 / 0 / 1]
8-445-006	S:PrtPGS/Ppr Size	DLT	CTL*	[0 to 99999999 / 0 / 1]
8-445-007	S:PrtPGS/Ppr Size	LG	CTL*	[0 to 99999999 / 0 / 1]
8-445-008	S:PrtPGS/Ppr Size	LT	CTL*	[0 to 99999999 / 0 / 1]
8-445-009	S:PrtPGS/Ppr Size	HLT	CTL*	[0 to 99999999 / 0 / 1]
8-445-	S:PrtPGS/Ppr Size	Full Bleed	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
010				
8-445-254	S:PrtPGS/Ppr Size	Other (Standard)	CTL*	[0 to 99999999 / 0 / 1]
8-445-255	S:PrtPGS/Ppr Size	Other (Custom)	CTL*	[0 to 99999999 / 0 / 1]
8-446-001	L:PrtPGS/Ppr Size	A3	CTL*	[0 to 99999999 / 0 / 1]
8-446-002	L:PrtPGS/Ppr Size	A4	CTL*	[0 to 99999999 / 0 / 1]
8-446-003	L:PrtPGS/Ppr Size	A5	CTL*	[0 to 99999999 / 0 / 1]
8-446-004	L:PrtPGS/Ppr Size	B4	CTL*	[0 to 99999999 / 0 / 1]
8-446-005	L:PrtPGS/Ppr Size	B5	CTL*	[0 to 99999999 / 0 / 1]
8-446-006	L:PrtPGS/Ppr Size	DLT	CTL*	[0 to 99999999 / 0 / 1]
8-446-007	L:PrtPGS/Ppr Size	LG	CTL*	[0 to 99999999 / 0 / 1]
8-446-008	L:PrtPGS/Ppr Size	LT	CTL*	[0 to 99999999 / 0 / 1]
8-446-009	L:PrtPGS/Ppr Size	HLT	CTL*	[0 to 99999999 / 0 / 1]
8-446-010	L:PrtPGS/Ppr Size	Full Bleed	CTL*	[0 to 99999999 / 0 / 1]
8-446-254	L:PrtPGS/Ppr Size	Other (Standard)	CTL*	[0 to 99999999 / 0 / 1]
8-446-255	L:PrtPGS/Ppr Size	Other (Custom)	CTL*	[0 to 99999999 / 0 / 1]
8-447-001	O:PrtPGS/Ppr Size	A3	CTL*	[0 to 99999999 / 0 / 1]
8-447-002	O:PrtPGS/Ppr Size	A4	CTL*	[0 to 99999999 / 0 / 1]
8-447-003	O:PrtPGS/Ppr Size	A5	CTL*	[0 to 99999999 / 0 / 1]
8-447-	O:PrtPGS/Ppr Size	B4	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
004				
8-447-005	O:PrtPGS/Ppr Size	B5	CTL*	[0 to 99999999 / 0 / 1]
8-447-006	O:PrtPGS/Ppr Size	DLT	CTL*	[0 to 99999999 / 0 / 1]
8-447-007	O:PrtPGS/Ppr Size	LG	CTL*	[0 to 99999999 / 0 / 1]
8-447-008	O:PrtPGS/Ppr Size	LT	CTL*	[0 to 99999999 / 0 / 1]
8-447-009	O:PrtPGS/Ppr Size	HLT	CTL*	[0 to 99999999 / 0 / 1]
8-447-010	O:PrtPGS/Ppr Size	Full Bleed	CTL*	[0 to 99999999 / 0 / 1]
8-447-254	O:PrtPGS/Ppr Size	Other (Standard)	CTL*	[0 to 99999999 / 0 / 1]
8-447-255	O:PrtPGS/Ppr Size	Other (Custom)	CTL*	[0 to 99999999 / 0 / 1]
8-451-001	PrtPGS/Ppr Tray	Bypass Tray	CTL*	[0 to 99999999 / 0 / 1]
8-451-002	PrtPGS/Ppr Tray	Tray 1	CTL*	[0 to 99999999 / 0 / 1]
8-451-003	PrtPGS/Ppr Tray	Tray 2	CTL*	[0 to 99999999 / 0 / 1]
8-451-004	PrtPGS/Ppr Tray	Tray 3	CTL*	[0 to 99999999 / 0 / 1]
8-451-005	PrtPGS/Ppr Tray	Tray 4	CTL*	[0 to 99999999 / 0 / 1]
8-451-006	PrtPGS/Ppr Tray	Tray 5	CTL*	[0 to 99999999 / 0 / 1]
8-451-007	PrtPGS/Ppr Tray	Tray 6	CTL*	[0 to 99999999 / 0 / 1]
8-451-008	PrtPGS/Ppr Tray	Tray 7	CTL*	[0 to 99999999 / 0 / 1]
8-451-009	PrtPGS/Ppr Tray	Tray 8	CTL*	[0 to 99999999 / 0 / 1]
8-451-	PrtPGS/Ppr Tray	Tray 9	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
010				
8-451-011	PrtPGS/Ppr Tray	Tray 10	CTL*	[0 to 99999999 / 0 / 1]
8-451-012	PrtPGS/Ppr Tray	Tray 11	CTL*	[0 to 99999999 / 0 / 1]
8-451-013	PrtPGS/Ppr Tray	Tray 12	CTL*	[0 to 99999999 / 0 / 1]
8-451-014	PrtPGS/Ppr Tray	Tray 13	CTL*	[0 to 99999999 / 0 / 1]
8-451-015	PrtPGS/Ppr Tray	Tray 14	CTL*	[0 to 99999999 / 0 / 1]
8-451-016	PrtPGS/Ppr Tray	Tray 15	CTL*	[0 to 99999999 / 0 / 1]
8-451-101	PrtPGS/Ppr Tray	LC Inserter	CTL*	[0 to 99999999 / 0 / 1]
8-451-102	PrtPGS/Ppr Tray	3rd Vendor	CTL*	[0 to 99999999 / 0 / 1]
8-461-001	T:PrtPGS/Ppr Type	Normal	CTL*	[0 to 99999999 / 0 / 1]
8-461-002	T:PrtPGS/Ppr Type	Recycled	CTL*	[0 to 99999999 / 0 / 1]
8-461-003	T:PrtPGS/Ppr Type	Special	CTL*	[0 to 99999999 / 0 / 1]
8-461-004	T:PrtPGS/Ppr Type	Thick	CTL*	[0 to 99999999 / 0 / 1]
8-461-005	T:PrtPGS/Ppr Type	Normal (Back)	CTL*	[0 to 99999999 / 0 / 1]
8-461-006	T:PrtPGS/Ppr Type	Thick (Back)	CTL*	[0 to 99999999 / 0 / 1]
8-461-007	T:PrtPGS/Ppr Type	OHP	CTL*	[0 to 99999999 / 0 / 1]
8-461-008	T:PrtPGS/Ppr Type	Other	CTL*	[0 to 99999999 / 0 / 1]
8-462-001	C:PrtPGS/Ppr Type	Normal	CTL*	[0 to 99999999 / 0 / 1]
8-462-	C:PrtPGS/Ppr Type	Recycled	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
002				
8-462-003	C:PrtPGS/Ppr Type	Special	CTL*	[0 to 99999999 / 0 / 1]
8-462-004	C:PrtPGS/Ppr Type	Thick	CTL*	[0 to 99999999 / 0 / 1]
8-462-005	C:PrtPGS/Ppr Type	Normal (Back)	CTL*	[0 to 99999999 / 0 / 1]
8-462-006	C:PrtPGS/Ppr Type	Thick (Back)	CTL*	[0 to 99999999 / 0 / 1]
8-462-007	C:PrtPGS/Ppr Type	OHP	CTL*	[0 to 99999999 / 0 / 1]
8-462-008	C:PrtPGS/Ppr Type	Other	CTL*	[0 to 99999999 / 0 / 1]
8-463-001	F:PrtPGS/Ppr Type	Normal	CTL*	[0 to 99999999 / 0 / 1]
8-463-002	F:PrtPGS/Ppr Type	Recycled	CTL*	[0 to 99999999 / 0 / 1]
8-463-003	F:PrtPGS/Ppr Type	Special	CTL*	[0 to 99999999 / 0 / 1]
8-463-004	F:PrtPGS/Ppr Type	Thick	CTL*	[0 to 99999999 / 0 / 1]
8-463-005	F:PrtPGS/Ppr Type	Normal (Back)	CTL*	[0 to 99999999 / 0 / 1]
8-463-006	F:PrtPGS/Ppr Type	Thick (Back)	CTL*	[0 to 99999999 / 0 / 1]
8-463-007	F:PrtPGS/Ppr Type	OHP	CTL*	[0 to 99999999 / 0 / 1]
8-463-008	F:PrtPGS/Ppr Type	Other	CTL*	[0 to 99999999 / 0 / 1]
8-464-001	P:PrtPGS/Ppr Type	Normal	CTL*	[0 to 99999999 / 0 / 1]
8-464-002	P:PrtPGS/Ppr Type	Recycled	CTL*	[0 to 99999999 / 0 / 1]
8-464-003	P:PrtPGS/Ppr Type	Special	CTL*	[0 to 99999999 / 0 / 1]
8-464-	P:PrtPGS/Ppr Type	Thick	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
004				
8-464-005	P:PrtPGS/Ppr Type	Normal (Back)	CTL*	[0 to 99999999 / 0 / 1]
8-464-006	P:PrtPGS/Ppr Type	Thick (Back)	CTL*	[0 to 99999999 / 0 / 1]
8-464-007	P:PrtPGS/Ppr Type	OHP	CTL*	[0 to 99999999 / 0 / 1]
8-464-008	P:PrtPGS/Ppr Type	Other	CTL*	[0 to 99999999 / 0 / 1]
8-466-001	L:PrtPGS/Ppr Type	Normal	CTL*	[0 to 99999999 / 0 / 1]
8-466-002	L:PrtPGS/Ppr Type	Recycled	CTL*	[0 to 99999999 / 0 / 1]
8-466-003	L:PrtPGS/Ppr Type	Special	CTL*	[0 to 99999999 / 0 / 1]
8-466-004	L:PrtPGS/Ppr Type	Thick	CTL*	[0 to 99999999 / 0 / 1]
8-466-005	L:PrtPGS/Ppr Type	Normal (Back)	CTL*	[0 to 99999999 / 0 / 1]
8-466-006	L:PrtPGS/Ppr Type	Thick (Back)	CTL*	[0 to 99999999 / 0 / 1]
8-466-007	L:PrtPGS/Ppr Type	OHP	CTL*	[0 to 99999999 / 0 / 1]
8-466-008	L:PrtPGS/Ppr Type	Other	CTL*	[0 to 99999999 / 0 / 1]
8-471-001	PrtPGS/Mag	~49%	CTL*	[0 to 99999999 / 0 / 1]
8-471-002	PrtPGS/Mag	50%~99%	CTL*	[0 to 99999999 / 0 / 1]
8-471-003	PrtPGS/Mag	100%	CTL*	[0 to 99999999 / 0 / 1]
8-471-004	PrtPGS/Mag	101%~200%	CTL*	[0 to 99999999 / 0 / 1]
8-471-005	PrtPGS/Mag	201% ~	CTL*	[0 to 99999999 / 0 / 1]
8-481-	T:PrtPGS/TonSave		CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
8-484-001	P:PrtPGS/TonSave		CTL*	[0 to 99999999 / 0 / 1]
8-511-001	T:PrtPGS/Emul	RPCS	CTL*	[0 to 99999999 / 0 / 1]
8-511-002	T:PrtPGS/Emul	RPDL	CTL*	[0 to 99999999 / 0 / 1]
8-511-003	T:PrtPGS/Emul	PS3	CTL*	[0 to 99999999 / 0 / 1]
8-511-004	T:PrtPGS/Emul	R98	CTL*	[0 to 99999999 / 0 / 1]
8-511-005	T:PrtPGS/Emul	R16	CTL*	[0 to 99999999 / 0 / 1]
8-511-006	T:PrtPGS/Emul	GL/GL2	CTL*	[0 to 99999999 / 0 / 1]
8-511-007	T:PrtPGS/Emul	R55	CTL*	[0 to 99999999 / 0 / 1]
8-511-008	T:PrtPGS/Emul	RTIFF	CTL*	[0 to 99999999 / 0 / 1]
8-511-009	T:PrtPGS/Emul	PDF	CTL*	[0 to 99999999 / 0 / 1]
8-511-010	T:PrtPGS/Emul	PCL5e/5c	CTL*	[0 to 99999999 / 0 / 1]
8-511-011	T:PrtPGS/Emul	PCL XL	CTL*	[0 to 99999999 / 0 / 1]
8-511-012	T:PrtPGS/Emul	IPDL-C	CTL*	[0 to 99999999 / 0 / 1]
8-511-013	T:PrtPGS/Emul	BM-Links	CTL*	[0 to 99999999 / 0 / 1]
8-511-014	T:PrtPGS/Emul	Other	CTL*	[0 to 99999999 / 0 / 1]
8-511-015	T:PrtPGS/Emul	IPDS	CTL*	[0 to 99999999 / 0 / 1]
8-511-016	T:PrtPGS/Emul	XPS	CTL*	[0 to 99999999 / 0 / 1]
8-514-	P:PrtPGS/Emul	RPCS	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
8-514-002	P:PrtPGS/Emul	RPDL	CTL*	[0 to 99999999 / 0 / 1]
8-514-003	P:PrtPGS/Emul	PS3	CTL*	[0 to 99999999 / 0 / 1]
8-514-004	P:PrtPGS/Emul	R98	CTL*	[0 to 99999999 / 0 / 1]
8-514-005	P:PrtPGS/Emul	R16	CTL*	[0 to 99999999 / 0 / 1]
8-514-006	P:PrtPGS/Emul	GL/GL2	CTL*	[0 to 99999999 / 0 / 1]
8-514-007	P:PrtPGS/Emul	R55	CTL*	[0 to 99999999 / 0 / 1]
8-514-008	P:PrtPGS/Emul	RTIFF	CTL*	[0 to 99999999 / 0 / 1]
8-514-009	P:PrtPGS/Emul	PDF	CTL*	[0 to 99999999 / 0 / 1]
8-514-010	P:PrtPGS/Emul	PCL5e/5c	CTL*	[0 to 99999999 / 0 / 1]
8-514-011	P:PrtPGS/Emul	PCL XL	CTL*	[0 to 99999999 / 0 / 1]
8-514-012	P:PrtPGS/Emul	IPDL-C	CTL*	[0 to 99999999 / 0 / 1]
8-514-013	P:PrtPGS/Emul	BM-Links	CTL*	[0 to 99999999 / 0 / 1]
8-514-014	P:PrtPGS/Emul	Other	CTL*	[0 to 99999999 / 0 / 1]
8-514-015	P:PrtPGS/Emul	IPDS	CTL*	[0 to 99999999 / 0 / 1]
8-514-016	P:PrtPGS/Emul	XPS	CTL*	[0 to 99999999 / 0 / 1]
8-521-001	T:PrtPGS/FIN	Sort	CTL*	[0 to 99999999 / 0 / 1]
8-521-002	T:PrtPGS/FIN	Stack	CTL*	[0 to 99999999 / 0 / 1]
8-521-	T:PrtPGS/FIN	Staple	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
003				
8-521-004	T:PrtPGS/FIN	Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-521-005	T:PrtPGS/FIN	Z-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-521-006	T:PrtPGS/FIN	Punch	CTL*	[0 to 99999999 / 0 / 1]
8-521-007	T:PrtPGS/FIN	Other	CTL*	[0 to 99999999 / 0 / 1]
8-521-008	T:PrtPGS/FIN	Inside-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-521-009	T:PrtPGS/FIN	Three-IN-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-521-010	T:PrtPGS/FIN	Three-OUT-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-521-011	T:PrtPGS/FIN	Four-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-521-012	T:PrtPGS/FIN	KANNON-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-521-013	T:PrtPGS/FIN	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-521-014	T:PrtPGS/FIN	Ring-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-521-015	T:PrtPGS/FIN	3rd Vendor	CTL*	[0 to 99999999 / 0 / 1]
8-521-016	T:PrtPGS/FIN	TwinLoop-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-522-001	C:PrtPGS/FIN	Sort	CTL*	[0 to 99999999 / 0 / 1]
8-522-002	C:PrtPGS/FIN	Stack	CTL*	[0 to 99999999 / 0 / 1]
8-522-003	C:PrtPGS/FIN	Staple	CTL*	[0 to 99999999 / 0 / 1]
8-522-004	C:PrtPGS/FIN	Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-522-	C:PrtPGS/FIN	Z-Fold	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
005				
8-522-006	C:PrtPGS/FIN	Punch	CTL*	[0 to 99999999 / 0 / 1]
8-522-007	C:PrtPGS/FIN	Other	CTL*	[0 to 99999999 / 0 / 1]
8-522-008	C:PrtPGS/FIN	Inside-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-522-009	C:PrtPGS/FIN	Three-IN-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-522-010	C:PrtPGS/FIN	Three-OUT-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-522-011	C:PrtPGS/FIN	Four-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-522-012	C:PrtPGS/FIN	KANNON-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-522-013	C:PrtPGS/FIN	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-522-014	C:PrtPGS/FIN	Ring-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-522-015	C:PrtPGS/FIN	3rd Vendor	CTL*	[0 to 99999999 / 0 / 1]
8-522-016	C:PrtPGS/FIN	TwinLoop-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-523-001	F:PrtPGS/FIN	Sort	CTL*	[0 to 99999999 / 0 / 1]
8-523-002	F:PrtPGS/FIN	Stack	CTL*	[0 to 99999999 / 0 / 1]
8-523-003	F:PrtPGS/FIN	Staple	CTL*	[0 to 99999999 / 0 / 1]
8-523-004	F:PrtPGS/FIN	Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-523-005	F:PrtPGS/FIN	Z-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-523-006	F:PrtPGS/FIN	Punch	CTL*	[0 to 99999999 / 0 / 1]
8-523-	F:PrtPGS/FIN	Other	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
007				
8-523-008	F:PrtPGS/FIN	Inside-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-523-009	F:PrtPGS/FIN	Three-IN-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-523-010	F:PrtPGS/FIN	Three-OUT-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-523-011	F:PrtPGS/FIN	Four-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-523-012	F:PrtPGS/FIN	KANNON-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-523-013	F:PrtPGS/FIN	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-523-014	F:PrtPGS/FIN	Ring-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-523-015	F:PrtPGS/FIN	3rd Vendor	CTL*	[0 to 99999999 / 0 / 1]
8-523-016	F:PrtPGS/FIN	TwinLoop-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-524-001	P:PrtPGS/FIN	Sort	CTL*	[0 to 99999999 / 0 / 1]
8-524-002	P:PrtPGS/FIN	Stack	CTL*	[0 to 99999999 / 0 / 1]
8-524-003	P:PrtPGS/FIN	Staple	CTL*	[0 to 99999999 / 0 / 1]
8-524-004	P:PrtPGS/FIN	Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-524-005	P:PrtPGS/FIN	Z-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-524-006	P:PrtPGS/FIN	Punch	CTL*	[0 to 99999999 / 0 / 1]
8-524-007	P:PrtPGS/FIN	Other	CTL*	[0 to 99999999 / 0 / 1]
8-524-008	P:PrtPGS/FIN	Inside-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-524-	P:PrtPGS/FIN	Three-IN-Fold	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
009				
8-524-010	P:PrtPGS/FIN	Three-OUT-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-524-011	P:PrtPGS/FIN	Four-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-524-012	P:PrtPGS/FIN	KANNON-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-524-013	P:PrtPGS/FIN	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-524-014	P:PrtPGS/FIN	Ring-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-524-015	P:PrtPGS/FIN	3rd Vendor	CTL*	[0 to 99999999 / 0 / 1]
8-524-016	P:PrtPGS/FIN	TwinLoop-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-525-001	S:PrtPGS/FIN	Sort	CTL*	[0 to 99999999 / 0 / 1]
8-525-002	S:PrtPGS/FIN	Stack	CTL*	[0 to 99999999 / 0 / 1]
8-525-003	S:PrtPGS/FIN	Staple	CTL*	[0 to 99999999 / 0 / 1]
8-525-004	S:PrtPGS/FIN	Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-525-005	S:PrtPGS/FIN	Z-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-525-006	S:PrtPGS/FIN	Punch	CTL*	[0 to 99999999 / 0 / 1]
8-525-007	S:PrtPGS/FIN	Other	CTL*	[0 to 99999999 / 0 / 1]
8-525-008	S:PrtPGS/FIN	Inside-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-525-009	S:PrtPGS/FIN	Three-IN-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-525-010	S:PrtPGS/FIN	Three-OUT-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-525-	S:PrtPGS/FIN	Four-Fold	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
011				
8-525-012	S:PrtPGS/FIN	KANNON-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-525-013	S:PrtPGS/FIN	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-525-014	S:PrtPGS/FIN	Ring-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-525-015	S:PrtPGS/FIN	3rd Vendor	CTL*	[0 to 99999999 / 0 / 1]
8-525-016	S:PrtPGS/FIN	TwinLoop-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-526-001	L:PrtPGS/FIN	Sort	CTL*	[0 to 99999999 / 0 / 1]
8-526-002	L:PrtPGS/FIN	Stack	CTL*	[0 to 99999999 / 0 / 1]
8-526-003	L:PrtPGS/FIN	Staple	CTL*	[0 to 99999999 / 0 / 1]
8-526-004	L:PrtPGS/FIN	Booklet	CTL*	[0 to 99999999 / 0 / 1]
8-526-005	L:PrtPGS/FIN	Z-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-526-006	L:PrtPGS/FIN	Punch	CTL*	[0 to 99999999 / 0 / 1]
8-526-007	L:PrtPGS/FIN	Other	CTL*	[0 to 99999999 / 0 / 1]
8-526-008	L:PrtPGS/FIN	Inside-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-526-009	L:PrtPGS/FIN	Three-IN-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-526-010	L:PrtPGS/FIN	Three-OUT-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-526-011	L:PrtPGS/FIN	Four-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-526-012	L:PrtPGS/FIN	KANNON-Fold	CTL*	[0 to 99999999 / 0 / 1]
8-526-	L:PrtPGS/FIN	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
013				
8-526-014	L:PrtPGS/FIN	Ring-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-526-015	L:PrtPGS/FIN	3rd Vendor	CTL*	[0 to 99999999 / 0 / 1]
8-526-016	L:PrtPGS/FIN	TwinLoop-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-531-001	Staple	Staples	CTL*	[0 to 99999999 / 0 / 1]
8-531-002	Staple	Stapless	CTL*	[0 to 99999999 / 0 / 1]
8-551-001	T:PrtBooks/FIN	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-551-002	T:PrtBooks/FIN	Ring-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-551-003	T:PrtBooks/FIN	TwinLoop-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-552-001	C:PrtBooks/FIN	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-552-002	C:PrtBooks/FIN	Ring-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-552-003	C:PrtBooks/FIN	TwinLoop-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-554-001	P:PrtBooks/FIN	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-554-002	P:PrtBooks/FIN	Ring-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-554-003	P:PrtBooks/FIN	TwinLoop-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-556-001	L:PrtBooks/FIN	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-556-002	L:PrtBooks/FIN	Ring-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-556-003	L:PrtBooks/FIN	TwinLoop-Bind	CTL*	[0 to 99999999 / 0 / 1]
8-561-	T:A Sheet Of Paper	Total: Over A3/DLT	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
8-561-002	T:A Sheet Of Paper	Total: Under A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-561-003	T:A Sheet Of Paper	Duplex: Over A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-561-004	T:A Sheet Of Paper	Duplex: Under A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-562-001	C:A Sheet Of Paper	Total: Over A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-562-002	C:A Sheet Of Paper	Total: Under A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-562-003	C:A Sheet Of Paper	Duplex: Over A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-562-004	C:A Sheet Of Paper	Duplex: Under A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-563-001	F:A Sheet Of Paper	Total: Over A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-563-002	F:A Sheet Of Paper	Total: Under A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-563-003	F:A Sheet Of Paper	Duplex: Over A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-563-004	F:A Sheet Of Paper	Duplex: Under A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-564-001	P:A Sheet Of Paper	Total: Over A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-564-002	P:A Sheet Of Paper	Total: Under A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-564-003	P:A Sheet Of Paper	Duplex: Over A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-564-004	P:A Sheet Of Paper	Duplex: Under A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-566-001	L:A Sheet Of Paper	Total: Over A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-566-002	L:A Sheet Of Paper	Total: Under A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-566-	L:A Sheet Of Paper	Duplex: Over A3/DLT	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
003				
8-566-004	L:A Sheet Of Paper	Duplex: Under A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-567-001	O:A Sheet Of Paper	Total: Over A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-567-002	O:A Sheet Of Paper	Total: Under A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-567-003	O:A Sheet Of Paper	Duplex: Over A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-567-004	O:A Sheet Of Paper	Duplex: Under A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-581-001	T:Counter	Total	CTL*	[0 to 99999999 / 0 / 1]
8-581-032	T:Counter	Total(A3)	CTL*	[0 to 99999999 / 0 / 1]
8-591-001	O:Counter	A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-591-002	O:Counter	Duplex	CTL*	[0 to 99999999 / 0 / 1]
8-601-001	T:Coverage Counter	B/W	CTL*	[0 to 2147483647 / 0 / 1%]
8-601-011	T:Coverage Counter	B/W Printing Pages	CTL*	[0 to 99999999 / 0 / 1]
8-602-001	C:Coverage Counter	B/W	CTL*	[0 to 2147483647 / 0 / 1%]
8-603-001	F:Coverage Counter	B/W	CTL*	[0 to 2147483647 / 0 / 1%]
8-604-001	P:Coverage Counter	B/W	CTL*	[0 to 2147483647 / 0 / 1%]
8-606-001	L:Coverage Counter	B/W	CTL*	[0 to 2147483647 / 0 / 1%]
8-617-001	SDK Apli Counter	SDK-1	CTL*	[0 to 99999999 / 0 / 1]
8-617-002	SDK Apli Counter	SDK-2	CTL*	[0 to 99999999 / 0 / 1]
8-617-	SDK Apli Counter	SDK-3	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
003				
8-617-004	SDK Apli Counter	SDK-4	CTL*	[0 to 99999999 / 0 / 1]
8-617-005	SDK Apli Counter	SDK-5	CTL*	[0 to 99999999 / 0 / 1]
8-617-006	SDK Apli Counter	SDK-6	CTL*	[0 to 99999999 / 0 / 1]
8-617-007	SDK Apli Counter	SDK-7	CTL*	[0 to 99999999 / 0 / 1]
8-617-008	SDK Apli Counter	SDK-8	CTL*	[0 to 99999999 / 0 / 1]
8-617-009	SDK Apli Counter	SDK-9	CTL*	[0 to 99999999 / 0 / 1]
8-617-010	SDK Apli Counter	SDK-10	CTL*	[0 to 99999999 / 0 / 1]
8-617-011	SDK Apli Counter	SDK-11	CTL*	[0 to 99999999 / 0 / 1]
8-617-012	SDK Apli Counter	SDK-12	CTL*	[0 to 99999999 / 0 / 1]
8-621-001	Func Use Counter	Function-001	CTL*	[0 to 99999999 / 0 / 1]
8-621-002	Func Use Counter	Function-002	CTL*	[0 to 99999999 / 0 / 1]
8-621-003	Func Use Counter	Function-003	CTL*	[0 to 99999999 / 0 / 1]
8-621-004	Func Use Counter	Function-004	CTL*	[0 to 99999999 / 0 / 1]
8-621-005	Func Use Counter	Function-005	CTL*	[0 to 99999999 / 0 / 1]
8-621-006	Func Use Counter	Function-006	CTL*	[0 to 99999999 / 0 / 1]
8-621-007	Func Use Counter	Function-007	CTL*	[0 to 99999999 / 0 / 1]
8-621-008	Func Use Counter	Function-008	CTL*	[0 to 99999999 / 0 / 1]
8-621-	Func Use Counter	Function-009	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
009				
8-621-010	Func Use Counter	Function-010	CTL*	[0 to 99999999 / 0 / 1]
8-621-011	Func Use Counter	Function-011	CTL*	[0 to 99999999 / 0 / 1]
8-621-012	Func Use Counter	Function-012	CTL*	[0 to 99999999 / 0 / 1]
8-621-013	Func Use Counter	Function-013	CTL*	[0 to 99999999 / 0 / 1]
8-621-014	Func Use Counter	Function-014	CTL*	[0 to 99999999 / 0 / 1]
8-621-015	Func Use Counter	Function-015	CTL*	[0 to 99999999 / 0 / 1]
8-621-016	Func Use Counter	Function-016	CTL*	[0 to 99999999 / 0 / 1]
8-621-017	Func Use Counter	Function-017	CTL*	[0 to 99999999 / 0 / 1]
8-621-018	Func Use Counter	Function-018	CTL*	[0 to 99999999 / 0 / 1]
8-621-019	Func Use Counter	Function-019	CTL*	[0 to 99999999 / 0 / 1]
8-621-020	Func Use Counter	Function-020	CTL*	[0 to 99999999 / 0 / 1]
8-621-021	Func Use Counter	Function-021	CTL*	[0 to 99999999 / 0 / 1]
8-621-022	Func Use Counter	Function-022	CTL*	[0 to 99999999 / 0 / 1]
8-621-023	Func Use Counter	Function-023	CTL*	[0 to 99999999 / 0 / 1]
8-621-024	Func Use Counter	Function-024	CTL*	[0 to 99999999 / 0 / 1]
8-621-025	Func Use Counter	Function-025	CTL*	[0 to 99999999 / 0 / 1]
8-621-026	Func Use Counter	Function-026	CTL*	[0 to 99999999 / 0 / 1]
8-621-	Func Use Counter	Function-027	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
027				
8-621-028	Func Use Counter	Function-028	CTL*	[0 to 99999999 / 0 / 1]
8-621-029	Func Use Counter	Function-029	CTL*	[0 to 99999999 / 0 / 1]
8-621-030	Func Use Counter	Function-030	CTL*	[0 to 99999999 / 0 / 1]
8-621-031	Func Use Counter	Function-031	CTL*	[0 to 99999999 / 0 / 1]
8-621-032	Func Use Counter	Function-032	CTL*	[0 to 99999999 / 0 / 1]
8-621-033	Func Use Counter	Function-033	CTL*	[0 to 99999999 / 0 / 1]
8-621-034	Func Use Counter	Function-034	CTL*	[0 to 99999999 / 0 / 1]
8-621-035	Func Use Counter	Function-035	CTL*	[0 to 99999999 / 0 / 1]
8-621-036	Func Use Counter	Function-036	CTL*	[0 to 99999999 / 0 / 1]
8-621-037	Func Use Counter	Function-037	CTL*	[0 to 99999999 / 0 / 1]
8-621-038	Func Use Counter	Function-038	CTL*	[0 to 99999999 / 0 / 1]
8-621-039	Func Use Counter	Function-039	CTL*	[0 to 99999999 / 0 / 1]
8-621-040	Func Use Counter	Function-040	CTL*	[0 to 99999999 / 0 / 1]
8-621-041	Func Use Counter	Function-041	CTL*	[0 to 99999999 / 0 / 1]
8-621-042	Func Use Counter	Function-042	CTL*	[0 to 99999999 / 0 / 1]
8-621-043	Func Use Counter	Function-043	CTL*	[0 to 99999999 / 0 / 1]
8-621-044	Func Use Counter	Function-044	CTL*	[0 to 99999999 / 0 / 1]
8-621-	Func Use Counter	Function-045	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
045				
8-621-046	Func Use Counter	Function-046	CTL*	[0 to 99999999 / 0 / 1]
8-621-047	Func Use Counter	Function-047	CTL*	[0 to 99999999 / 0 / 1]
8-621-048	Func Use Counter	Function-048	CTL*	[0 to 99999999 / 0 / 1]
8-621-049	Func Use Counter	Function-049	CTL*	[0 to 99999999 / 0 / 1]
8-621-050	Func Use Counter	Function-050	CTL*	[0 to 99999999 / 0 / 1]
8-621-051	Func Use Counter	Function-051	CTL*	[0 to 99999999 / 0 / 1]
8-621-052	Func Use Counter	Function-052	CTL*	[0 to 99999999 / 0 / 1]
8-621-053	Func Use Counter	Function-053	CTL*	[0 to 99999999 / 0 / 1]
8-621-054	Func Use Counter	Function-054	CTL*	[0 to 99999999 / 0 / 1]
8-621-055	Func Use Counter	Function-055	CTL*	[0 to 99999999 / 0 / 1]
8-621-056	Func Use Counter	Function-056	CTL*	[0 to 99999999 / 0 / 1]
8-621-057	Func Use Counter	Function-057	CTL*	[0 to 99999999 / 0 / 1]
8-621-058	Func Use Counter	Function-058	CTL*	[0 to 99999999 / 0 / 1]
8-621-059	Func Use Counter	Function-059	CTL*	[0 to 99999999 / 0 / 1]
8-621-060	Func Use Counter	Function-060	CTL*	[0 to 99999999 / 0 / 1]
8-621-061	Func Use Counter	Function-061	CTL*	[0 to 99999999 / 0 / 1]
8-621-062	Func Use Counter	Function-062	CTL*	[0 to 99999999 / 0 / 1]
8-621-	Func Use Counter	Function-063	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
063				
8-621-064	Func Use Counter	Function-064	CTL*	[0 to 99999999 / 0 / 1]
8-631-001	T:FAX TX PGS	B/W(Tel)	CTL*	[0 to 99999999 / 0 / 1]
8-631-101	T:FAX TX PGS	B/W(Cloud)	CTL*	[0 to 99999999 / 0 / 1]
8-633-001	F:FAX TX PGS	B/W(Tel)	CTL*	[0 to 99999999 / 0 / 1]
8-633-101	F:FAX TX PGS	B/W(Cloud)	CTL*	[0 to 99999999 / 0 / 1]
8-641-001	T:IFAX TX PGS	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-643-001	F:IFAX TX PGS	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-651-001	T:S-to-Email PGS	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-651-002	T:S-to-Email PGS	Color	CTL*	[0 to 99999999 / 0 / 1]
8-655-001	S:S-to-Email PGS	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-655-002	S:S-to-Email PGS	Color	CTL*	[0 to 99999999 / 0 / 1]
8-661-001	T:Deliv PGS/Svr	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-661-002	T:Deliv PGS/Svr	Color	CTL*	[0 to 99999999 / 0 / 1]
8-665-001	S:Deliv PGS/Svr	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-665-002	S:Deliv PGS/Svr	Color	CTL*	[0 to 99999999 / 0 / 1]
8-671-001	T:Deliv PGS/PC	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-671-002	T:Deliv PGS/PC	Color	CTL*	[0 to 99999999 / 0 / 1]
8-675-	S:Deliv PGS/PC	B/W	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
001				
8-675-002	S:Deliv PGS/PC	Color	CTL*	[0 to 99999999 / 0 / 1]
8-681-001	T:PCFAX TXPGS		CTL*	[0 to 99999999 / 0 / 1]
8-683-001	F:PCFAX TXPGS		CTL*	[0 to 99999999 / 0 / 1]
8-691-001	T:TX PGS/LS		CTL*	[0 to 99999999 / 0 / 1]
8-692-001	C:TX PGS/LS		CTL*	[0 to 99999999 / 0 / 1]
8-693-001	F:TX PGS/LS		CTL*	[0 to 99999999 / 0 / 1]
8-694-001	P:TX PGS/LS		CTL*	[0 to 99999999 / 0 / 1]
8-695-001	S:TX PGS/LS		CTL*	[0 to 99999999 / 0 / 1]
8-696-001	L:TX PGS/LS		CTL*	[0 to 99999999 / 0 / 1]
8-701-001	TX PGS/Port	PSTN-1	CTL*	[0 to 99999999 / 0 / 1]
8-701-002	TX PGS/Port	PSTN-2	CTL*	[0 to 99999999 / 0 / 1]
8-701-003	TX PGS/Port	PSTN-3	CTL*	[0 to 99999999 / 0 / 1]
8-701-004	TX PGS/Port	ISDN(G3,G4)	CTL*	[0 to 99999999 / 0 / 1]
8-701-005	TX PGS/Port	Network	CTL*	[0 to 99999999 / 0 / 1]
8-711-001	T:Scan PGS/Comp	JPEG/JPEG2000	CTL*	[0 to 99999999 / 0 / 1]
8-711-002	T:Scan PGS/Comp	TIFF(Multi/Single)	CTL*	[0 to 99999999 / 0 / 1]
8-711-003	T:Scan PGS/Comp	PDF	CTL*	[0 to 99999999 / 0 / 1]
8-711-	T:Scan PGS/Comp	Other	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
004				
8-711-005	T:Scan PGS/Comp	PDF/Comp	CTL*	[0 to 99999999 / 0 / 1]
8-711-006	T:Scan PGS/Comp	PDF/A	CTL*	[0 to 99999999 / 0 / 1]
8-711-007	T:Scan PGS/Comp	PDF(OCR)	CTL*	[0 to 99999999 / 0 / 1]
8-711-008	T:Scan PGS/Comp	PDF/Comp(OCR)	CTL*	[0 to 99999999 / 0 / 1]
8-711-009	T:Scan PGS/Comp	PDF/A(OCR)	CTL*	[0 to 99999999 / 0 / 1]
8-715-001	S:Scan PGS/Comp	JPEG/JPEG2000	CTL*	[0 to 99999999 / 0 / 1]
8-715-002	S:Scan PGS/Comp	TIFF(Multi/Single)	CTL*	[0 to 99999999 / 0 / 1]
8-715-003	S:Scan PGS/Comp	PDF	CTL*	[0 to 99999999 / 0 / 1]
8-715-004	S:Scan PGS/Comp	Other	CTL*	[0 to 99999999 / 0 / 1]
8-715-005	S:Scan PGS/Comp	PDF/Comp	CTL*	[0 to 99999999 / 0 / 1]
8-715-006	S:Scan PGS/Comp	PDF/A	CTL*	[0 to 99999999 / 0 / 1]
8-715-007	S:Scan PGS/Comp	PDF(OCR)	CTL*	[0 to 99999999 / 0 / 1]
8-715-008	S:Scan PGS/Comp	PDF/Comp(OCR)	CTL*	[0 to 99999999 / 0 / 1]
8-715-009	S:Scan PGS/Comp	PDF/A(OCR)	CTL*	[0 to 99999999 / 0 / 1]
8-721-001	T:Deliv PGS/WSD/DSM	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-721-002	T:Deliv PGS/WSD/DSM	Color	CTL*	[0 to 99999999 / 0 / 1]
8-725-001	S:Deliv PGS/WSD/DSM	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-725-	S:Deliv	Color	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
002	PGS/WSD/DSM			
8-731-001	T:Scan PGS/Media	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-731-002	T:Scan PGS/Media	Color	CTL*	[0 to 99999999 / 0 / 1]
8-735-001	S:Scan PGS/Media	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-735-002	S:Scan PGS/Media	Color	CTL*	[0 to 99999999 / 0 / 1]
8-741-001	RX PGS/Port	PSTN-1	CTL*	[0 to 99999999 / 0 / 1]
8-741-002	RX PGS/Port	PSTN-2	CTL*	[0 to 99999999 / 0 / 1]
8-741-003	RX PGS/Port	PSTN-3	CTL*	[0 to 99999999 / 0 / 1]
8-741-004	RX PGS/Port	ISDN(G3,G4)	CTL*	[0 to 99999999 / 0 / 1]
8-741-005	RX PGS/Port	Network	CTL*	[0 to 99999999 / 0 / 1]
8-771-001	Dev Counter	Total	CTL*	[0 to 99999999 / 0 / 1]
8-781-001	Toner_Botol_Info.	BK	CTL*	[0 to 99999999 / 0 / 1]
8-791-001	LS Memory Remain		CTL*	[0 to 100 / 0 / 1%]
8-801-001	Toner Remain	K	CTL*	[0 to 100 / 0 / 1%]
8-811-001	Eco Counter	Eco Total	CTL*	[0 to 99999999 / 0 / 1]
8-811-004	Eco Counter	Duplex	CTL*	[0 to 99999999 / 0 / 1]
8-811-005	Eco Counter	Combine	CTL*	[0 to 99999999 / 0 / 1]
8-811-008	Eco Counter	Duplex(%)	CTL*	[0 to 100 / 0 / 1%]
8-811-	Eco Counter	Combine(%)	CTL*	[0 to 100 / 0 / 1%]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
009				
8-811-010	Eco Counter	Paper Cut(%)	CTL*	[0 to 100 / 0 / 1%]
8-811-051	Eco Counter	Sync Eco Total	CTL*	[0 to 99999999 / 0 / 1]
8-811-054	Eco Counter	Sync Duplex	CTL*	[0 to 99999999 / 0 / 1]
8-811-055	Eco Counter	Sync Combine	CTL*	[0 to 99999999 / 0 / 1]
8-811-058	Eco Counter	Sync Duplex(%)	CTL*	[0 to 100 / 0 / 1%]
8-811-059	Eco Counter	Sync Combine(%)	CTL*	[0 to 100 / 0 / 1%]
8-811-060	Eco Counter	Sync Paper Cut(%)	CTL*	[0 to 100 / 0 / 1%]
8-811-101	Eco Counter	Eco Totalr:Last	CTL*	[0 to 99999999 / 0 / 1]
8-811-104	Eco Counter	Duplex:Last	CTL*	[0 to 99999999 / 0 / 1]
8-811-105	Eco Counter	Combine:Last	CTL*	[0 to 99999999 / 0 / 1]
8-811-108	Eco Counter	Duplex(%):Last	CTL*	[0 to 100 / 0 / 1%]
8-811-109	Eco Counter	Combine(%):Last	CTL*	[0 to 100 / 0 / 1%]
8-811-110	Eco Counter	Paper Cut(%):Last	CTL*	[0 to 100 / 0 / 1%]
8-811-151	Eco Counter	Sync Eco Totalr:Last	CTL*	[0 to 99999999 / 0 / 1]
8-811-154	Eco Counter	Sync Duplex:Last	CTL*	[0 to 99999999 / 0 / 1]
8-811-155	Eco Counter	Sync Combine:Last	CTL*	[0 to 99999999 / 0 / 1]
8-811-158	Eco Counter	Sync Duplex(%):Last	CTL*	[0 to 100 / 0 / 1%]
8-811-	Eco Counter	Sync Combine(%):Last	CTL*	[0 to 100 / 0 / 1%]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
159				
8-811-160	Eco Counter	Sync Paper Cut(%):Last	CTL*	[0 to 100 / 0 / 1%]
8-851-011	Cvr Cnt:0-10%	0~2%:BK	CTL*	[0 to 99999999 / 0 / 1]
8-851-021	Cvr Cnt:0-10%	3~4%:BK	CTL*	[0 to 99999999 / 0 / 1]
8-851-031	Cvr Cnt:0-10%	5~7%:BK	CTL*	[0 to 99999999 / 0 / 1]
8-851-041	Cvr Cnt:0-10%	8~10%:BK	CTL*	[0 to 99999999 / 0 / 1]
8-861-001	Cvr Cnt:11-20%	BK	CTL*	[0 to 99999999 / 0 / 1]
8-871-001	Cvr Cnt:21-30%	BK	CTL*	[0 to 99999999 / 0 / 1]
8-881-001	Cvr Cnt:31%-	BK	CTL*	[0 to 99999999 / 0 / 1]
8-891-001	Page/Toner Bottle	BK	CTL*	[0 to 99999999 / 0 / 1]
8-901-001	Page/Toner_Prev1	BK	CTL*	[0 to 99999999 / 0 / 1]
8-911-001	Page/Toner_Prev2	BK	CTL*	[0 to 99999999 / 0 / 1]
8-921-001	Cvr Cnt/Total	Coverage(%):BK	CTL*	[0 to 2147483647 / 0 / 1%]
8-921-011	Cvr Cnt/Total	Coverage/P:BK	CTL*	[0 to 99999999 / 0 / 1]
8-941-001	Machine Status	Operation Time	CTL*	[0 to 99999999 / 0 / 1]
8-941-002	Machine Status	Standby Time	CTL*	[0 to 99999999 / 0 / 1]
8-941-003	Machine Status	Energy Save Time	CTL*	[0 to 99999999 / 0 / 1]
8-941-004	Machine Status	Low Power Time	CTL*	[0 to 99999999 / 0 / 1]
8-941-	Machine Status	Off Mode Time	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
005				
8-941-006	Machine Status	SC	CTL*	[0 to 99999999 / 0 / 1]
8-941-007	Machine Status	PrtJam	CTL*	[0 to 99999999 / 0 / 1]
8-941-008	Machine Status	OrgJam	CTL*	[0 to 99999999 / 0 / 1]
8-941-009	Machine Status	Supply PM Unit End	CTL*	[0 to 99999999 / 0 / 1]
8-951-001	AddBook Register	User Code /User ID	CTL*	[0 to 99999 / 0 / 1]
8-951-002	AddBook Register	Mail Address	CTL*	[0 to 99999 / 0 / 1]
8-951-003	AddBook Register	Fax Destination	CTL*	[0 to 99999 / 0 / 1]
8-951-004	AddBook Register	Group	CTL*	[0 to 99999 / 0 / 1]
8-951-005	AddBook Register	Transfer Request	CTL*	[0 to 99999 / 0 / 1]
8-951-006	AddBook Register	F-Code	CTL*	[0 to 99999 / 0 / 1]
8-951-007	AddBook Register	Copy Program	CTL*	[0 to 255 / 0 / 1]
8-951-008	AddBook Register	Fax Program	CTL*	[0 to 255 / 0 / 1]
8-951-009	AddBook Register	Printer Program	CTL*	[0 to 255 / 0 / 1]
8-951-010	AddBook Register	Scanner Program	CTL*	[0 to 255 / 0 / 1]
8-961-001	Electricity Status	Ctrl Standby Time	CTL*	[0 to 99999999 / 0 / 1]
8-961-002	Electricity Status	STR Time	CTL*	[0 to 99999999 / 0 / 1]
8-961-003	Electricity Status	Main Power Off Time	CTL*	[0 to 99999999 / 0 / 1]
8-961-	Electricity Status	Reading and Printing Time	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
004				
8-961-005	Electricity Status	Printing Time	CTL*	[0 to 99999999 / 0 / 1]
8-961-006	Electricity Status	Reading Time	CTL*	[0 to 99999999 / 0 / 1]
8-961-007	Electricity Status	Eng Waiting Time	CTL*	[0 to 99999999 / 0 / 1]
8-961-008	Electricity Status	Low Pawer State Time	CTL*	[0 to 99999999 / 0 / 1]
8-961-009	Electricity Status	Silent State Time	CTL*	[0 to 99999999 / 0 / 1]
8-961-010	Electricity Status	Heater Off State Time	CTL*	[0 to 99999999 / 0 / 1]
8-961-011	Electricity Status	LCD on Time	CTL*	[0 to 99999999 / 0 / 1]
8-961-101	Electricity Status	Silent Print	CTL*	[0 to 99999999 / 0 / 1]
8-971-001	Unit Control	Engine Off Recovery Count	CTL*	[0 to 99999999 / 0 / 1]
8-971-002	Unit Control	Power Off Count	CTL*	[0 to 99999999 / 0 / 1]
8-971-003	Unit Control	Force Power Off Count	CTL*	[0 to 99999999 / 0 / 1]
8-999-001	Admin. Counter List	Total	CTL*	[0 to 99999999 / 0 / 1]
8-999-003	Admin. Counter List	Copy: BW	CTL*	[0 to 99999999 / 0 / 1]
8-999-007	Admin. Counter List	Printer: BW	CTL*	[0 to 99999999 / 0 / 1]
8-999-010	Admin. Counter List	Fax Print: BW	CTL*	[0 to 99999999 / 0 / 1]
8-999-012	Admin. Counter List	A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
8-999-013	Admin. Counter List	Duplex	CTL*	[0 to 99999999 / 0 / 1]
8-999-	Admin. Counter List	Copy: BW(%)	CTL*	[0 to 2147483647 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
023				
8-999-027	Admin. Counter List	Printer: BW(%)	CTL*	[0 to 2147483647 / 0 / 1]
8-999-030	Admin. Counter List	Fax Print: BW(%)	CTL*	[0 to 2147483647 / 0 / 1]
8-999-101	Admin. Counter List	Transmission Total: Color	CTL*	[0 to 99999999 / 0 / 1]
8-999-102	Admin. Counter List	Transmission Total: BW	CTL*	[0 to 99999999 / 0 / 1]
8-999-103	Admin. Counter List	FAX Transmission	CTL*	[0 to 99999999 / 0 / 1]
8-999-104	Admin. Counter List	Scanner Transmission: Color	CTL*	[0 to 99999999 / 0 / 1]
8-999-105	Admin. Counter List	Scanner Transmission: BW	CTL*	[0 to 99999999 / 0 / 1]

Printer Service Menu

SP1-XXX (Service Mode)

1001	**[Bit Switch]**			
1-001-001	Bit Switch 1		0	1
	bit 0	DFU	-	-
	bit 1	Responding with the hostname as the sysName	Model name (PnP name)	Hostname
		This BitSwitch can change the value of the sysName. 0 (default): Model name (PnP name) such as "MP C401SP" 1: Host name		
	bit 2	DFU	-	-
	bit 3	**No I/O Timeout**	**Disabled**	Enabled
		Enables/Disables MFP I/O Timeouts. If enabled, the MFP I/O Timeout setting will have no affect. I/O Timeouts will never occur.		
	bit 4	**SD Card Save Mode**	**Disabled**	Enabled
		If this bit switch is enabled, print jobs will be saved to the GW SD slot and not output to paper.		
	bit 5	**[PS and PDF] Paper size error margin**	±5pt	±10pt
		When a PS job is printed by using a custom paper size, the job might not be printed because of a paper size mismatch caused by a calculation error. By default, the error margin for matching to a paper size is ±5 points. By enabling this BitSwitch, the error margin for matching to a paper size can be extended to ±10 points.		
	bit 6	DFU	-	-
	bit 7	**[RPCS,PCL]: Printable area frame border**	**Disabled**	Enabled
		Prints all RPCS and PCL jobs with a border around the printable area.		

1001	**[Bit Switch]**			
1-001-002	Bit Switch 2		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	**Applying a Collate Type**	**Shift Collate**	Normal Collate
		A collate type (shift or normal) will be applied to all jobs that do not explicitly define a collate		

		type. **Note:** If #5-0 is enabled, this BitSwitch has no effect.		
	bit 3	**[PCL5e/c,PS]: PDL Auto Switching**	**Enabled**	Disabled
		Enables/Disables the MFPs ability to change the PDL processor mid-job. Some host systems submit jobs that contain both PS and PCL5e/c. If Auto PDL switching is disabled, these jobs will not be printed properly.		
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	**[Bit Switch]**			
1-001-003	Bit Switch 3		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	**[PCL5e/c]: Legacy HP compatibility**	**Disabled**	Enabled
		Uses the same left margin as older HP models such as HP4000/HP8000. In other words, the left margin defined in the job (usually "<ESC>*r0A") will be changed to "<ESC>*r1A".		
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	**[Bit Switch]**		
1-001-	Bit Switch 4	0	1

004	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	**IPDS print-side reversal**	**Disabled**	Enabled
		If enabled, the simplex pages of IPDS jobs will be printed on the front side because of printing on the back side of the page. This might reduce printing speed.		
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	**[Bit Switch]**			
1-001-005	Bit Switch 5		0	1
	bit 0	**Show "Collate Type", "Staple Type" and "Punch Type" buttons on the operation panel.**	**Disabled**	Enabled
		If enabled, users will be able to configure a Collate Type, Staple Type, and Punch Type from the operation panel. The available Types will depend on the device and configured options. After enabling this BitSw, the settings will appear under: "User Tools > Printer Features > System"		
	bit 1	**Multiple copies if a paper size or type mismatch occurs**	**Disabled (single copy)**	Enabled (multiple)
		If a paper size or type mismatch occurs during the printing of multiple copies, only a single copy is output by default. Using this BitSw, the device can be configured to print all copies even if a paper mismatch occurs.		
	bit 2	**Prevent SDK applications from altering the contents of a job.**	**Disabled**	Enabled
		If this BitSw is enabled, SDK applications will not be able to alter print data. This is achieved by preventing SDK applications from accessing a module called the "GPS Filter". Note: The main purpose of this BitSw is for troubleshooting the effects of SDK applications on data.		

	bit 3	**[PS] PS Criteria**	**Pattern3**	Pattern1
		Change the number of PS criterion used by the PS interpreter to determine whether a job is PS data or not. For details, refer to "Printing Features".		
	bit 4	**Increase max. number of stored jobs.**	**Disabled (100)**	Enabled (750)
		Changes the maximum number of jobs that can be stored on the HDD. The default (disabled) is 100. If this is enabled, the max. will be raised to 750 or 1000 depending on the model.		
	bit 5	DFU	-	-
	bit 6	**Method for determining the image rotation for the edge to bind on.**	**Disabled**	Enabled
		If enabled, the image rotation will be performed as they were in the specifications of older models for the binding of pages of mixed orientation jobs. The old models are below: - PCL: Pre-04A models - PS/PDF/RPCS:Pre-05S models		
	bit 7	**Letterhead mode printing**	**Disabled**	Enabled (Duplex)
		Routes all pages through the duplex unit. If this is disabled, simplex pages or the last page of an odd-paged duplex job, are not routed through the duplex unit. This could result in problems with letterhead/pre-printed pages. Only affects pages specified as Letterhead paper.		

1001	**[Bit Switch]**			
1-001-006	Bit Switch 6		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	**[Bit Switch]**			
1-001-007	Bit Switch 7		0	1
	bit	**Print path**	**Disabled**	Enabled

	0	If enabled, simplex pages (in mixed simplex/duplex PS/PCL5 jobs only) and the last page of an odd paged duplex job (PS, PCL5, PCL6), are always routed through the duplex unit. Not having to switch paper paths increases the print speed slightly.		
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	**[Bit Switch]**			
1-001-008	Bit Switch 8		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	**[PCL,PS]: Allow BW jobs to print without requiring User Code**	**Disabled**	Enabled (allow BW jobs to print without a user code)
		BW jobs submitted without a user code will be printed even if usercode authentication is enabled. **Note:** Color jobs will not be printed without a valid user code.		
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit	**[PDF]: Orientation Auto Detect Function**	**Enabled**	Disabled

	7	Automatically chooses page orientations of PDF jobs (Landscape or Portrait) based on the content.

1001	**[Bit Switch]**			
1-001-009	Bit Switch 9		0	1
	bit 0	**PDL Auto Detection timeout of jobs submitted via USB or Parallel Port (IEEE 1284).**	**Disabled (Immediately)**	Enabled (10 seconds)
		To be used if PDL auto-detection fails. A failure of PDL auto detection doesn't necessarily mean that the job can't be printed. This bit switch tells the device whether to time-out immediately (default) upon failure or to wait 10 seconds.		
	bit 1	DFU	-	-
	bit 2	**Job Cancel**	**Disabled (Not cancelled)**	Enabled (Cancelled)
		If this bit switch, all jobs will be cancelled after a jam occurs. **Note:** If this bitsw is enabled, printing under the following conditions might result in problems: - Job submission via USB or Parallel Port - Spool printing (WIM >Configuration > Device Settings > System)		
	bit 3	**PCL/PS bypass tray paper rotation (SEF/LEF)**	**Disabled**	Enabled
		This bitsw causes the device to revert to the behavior of previous generations. It only takes effect if "Bypass Tray Setting Priority" = "Driver/Command". Previous spec (bitsw=1): If a standard sized paper mismatch occurred in the bypass tray, the MFP always prompted for SEF paper. If this bitsw=0 (default) then in the event of a standard sized paper mismatch, the MFP will always prompt for paper of the rotation (SEF/LEF) determined by the MFP bypass tray paper setting or by the bypass tray sensor.		
	bit 4	**Timing of the PJL Status ReadBack (JOB END) when printing multiple collated copies.**	**Disable**	Enable
		This bitsw determines the timing of the PJL USTATUS JOB END sent when multiple collated copies are being printed. 0 (default): JOB END is sent by the device to the client after the first copy has completed printing. This causes the page counter to be incremented after the first copy and then again at the end of the job. 1: JOB END is sent by the device to the client after the last copy has finished printing. This causes the page counter to be incremented at the end of each job.		
	bit 5	**Display UTF-8 text in the operation panel**	**Enabled**	Disabled
		Enabled (=0): Text composed of UTF-8 characters can be displayed in the operation panel.		

		Disabled (=1): UTF-8 characters cannot be displayed in the operation panel. For example, job names are sometimes stored in the MIB using UTF-8 encoded characters. When these are displayed on the operation panel, they will be garbled unless this BitSw is enabled (=0).		
	bit 6	**Disable super option**	**Enabled**	Disabled
		Switches super option disable on / off. It this is On, multiple jobs are grouped at LPR port. PJL settings are enabled even jobs that are specified queue names are sent.		
	bit 7	**Enable/Disable Print from USB/SD's Preview function**	Enabled	**Disabled**
		Determines whether Print from USB/SD will have the Preview function. Enabled (=0): Print from USB/SD will have the Preview function. Disabled (=1): Print from USB/SD will not have the Preview function.		

1001	**[Bit Switch]**			
1-001-010	Bit Switch A		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	**Store and Skip Errored Job locks the queue**	**Queue is not locked after SSEJ**	Queue locked after SSEJ
		If this is 1, then after a job is stored using Store and Skip Errored Job (SSEJ), new jobs cannot be added to the queue until the stored job has been completely printed.		
	bit 6	**Allow use of Store and Skip Errored Job if connected to an external charge device.**	**Does not allow SSEJ with ECD**	Allows SSEJ with ECD
		If this is 0, Store and Skip Errored Job (SSEJ) will be automatically disabled if an external charge device is connected. **Note:** We do not officially support enabling this bitsw (1). Use it at your own risk.		
	bit 7	**Job cancels remaining pages when the paid-for pages have been printed on an external charge**	**Job does not cancel**	Job cancels

		device		
		When setting 1 is enabled, after printing the paid-for pages on an external charge device, the job that includes any remaining pages will be canceled. This setting will prevent the next user from printing the unnecessary pages from the previous user's print job.		

1001	**[Bit Switch]**			
1-001-011	Bit Switch B		0	1
	bit 0	**Show Menu List**	**Hide Menu List**	Show Menu List
		If this is 0, the Menu List button will be removed from Printer Features.		
	bit 1	**Print job interruption**	**Does not allow interruption**	Allow interruption
		0 (default): Print jobs are not interrupted. If a job is promoted to the top of the print queue, it will wait for the currently printing job to finish. 1: If a job is promoted to the top of the queue, it will interrupt the currently printing job and start printing immediately.		
	bit 2	DFU	-	-
	bit 3	**Change the behavior of the center staple**	**Cancel the job**	Continue to print
		This Bit Switch can change the behavior of the center staple when the maximum number of sheets for stapling is exceeded. 0 (default): The job is canceled and an error is recorded in the log. 1: The job is not canceled and is produced. How the job is produced in any behavior depends on the type of finisher.		
	bit 4	**Add "Apply Auto Paper Select" is the condition that decides if the device's paper size or paper type should be overwritten.**	**Disabled**	Enabled
		If this BitSwitch is set to "1" (enabled), the "Apply Auto Paper Select" setting will decide if the paper size or paper type that is specified in the device settings should be overwritten by the job's commands when "Tray Setting Priority" is set to "Driver/Command" or "Any Type". - Apply Auto Paper Select = OFF: Overwritten (priority is given to the job’s commands) - Apply Auto Paper Select = ON: Not overwritten (priority is given to the device settings)		
	bit 5	DFU	-	-

	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	**[Bit Switch]**			
1-001-012	Bit Switch C		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	**Change the user ID type displayed on the operation panel**	**Disabled**	Enabled
		As of 15S models, the Login User Name can be displayed on the operation panel. The user ID type displayed on the operation panel can be changed by configuring BitSwitch #12-5 as follows: - 0 (default): Login User Name - 1: User ID. If this is enabled, User ID will be displayed, which is equivalent to the behavior exhibited in 14A and earlier models.		
	bit 6	**AirPrint**	**Enabled**	Disabled
		For 15S and later models that support AirPrint, AirPrint can be disabled by changing this Bit Switch from 0 (default) to 1.		
	bit 7	DFU	-	-

1003	**[Clear Setting]**		
1-003-001	Initialize Printer System	*CTL	[- / - / -] [Execute]
	Initializes settings in the "System" menu of the user mode.		
1-003-003	Delete Program	*CTL	[- / - / -] [Execute]

1004	**[Print Summary]**

	Prints the service summary sheet (a summary of all the controller settings).		
1-004-001	Print Printer Summary	*CTL	[- / - / -] [Execute]
1-004-002	Print Printer Summary2	*CTL	[- / - / -] [Execute]

1005	**[Display Version]**		
1-005-002	Printer Version	*CTL	[- / - / -]
	Displays the version of the controller firmware.		

1110	**[Media Print Device Setting]**		
	Selects the setting for the media print device.		
1-110-002	0: Disable 1: Enable	*CTL	[0 or 1 / **1** / 1 / step]

1111	**[All Job Delete Mode]**		
1-111-001	0:excluding New Job 1:including New Job	*CTL	[0 or 1 / **0** / 1 / step] 0: Excluding New Job 1: Including New Job
	Selects whether to include an image processing job in jobs subject to full cancellation from the SCS job list.		

1117	**[Airprint]**		
1-117-001	-	CTL*	[0 or 1 / 0 / 1 / step]

Scanner Service Menu

SP1-XXX (System and Others)

1001	**[Scan Nv Version]**		
1-001-005	-	*CTL	[- / - / -]

1005	**[Erase Margin(Remote scan)]**		
1-005-001	Range from 0 to 5 mm	*CTL	[0 to 5 / **0** / 1 mm / step]

1009	**[Remote scan disable]**		
1-009-001	-	*CTL	[0 or 1 / **0** / 1 / step] 0: ON (enabled) 1: OFF (disabled)

1010	**[Non Display Clear Light PDF]**		
1-010-001	-	*CTL	[0 or 1 / **0** / 1 / step] 0: Display, 1: No display

1011	**[Org Count Display]**		
1-011-001	-	*CTL	[0 or 1 / **0** / 1 / step] 0: OFF (no display) 1: ON (count displays)

1012	**[User Info Release]**		
1-012-001	-	*CTL	[0 or 1 / **1** / 1 / step] 1: Release 0: Do not release

1013	**[Scan to Media Device Setting]**		
1-013-002	-	*CTL	[0 or 1 / **1** / 1 / step] 0: Disable 1: Enable

1014	**[Scan to Folder Pass Input Set]**		
1-014-001	0: OFF 1: ON	*CTL	[0 or 1 / **0** / 1 / step] **0: OFF** 1: ON

1041	[Scan:FlairAPI Setting]			
1-041-001	0x00 – 0xff	*CTL	* see BitSwitch below:	
	Sets Scanner FlairAPI Function enable / disable. This SP is set by BitSwitch and needs to reboot the machine after making changes.			
bit	Setting	meanings		Description
		0	1	
bit 0	Start of FlairAPI Server	**Off (Do not Start)**	On (Start)	Sets whether to start exclusive FlairAPI http server. If it is 0, scanning FlairAPI function and simple UI function will be disabled.
bit 1	Access permission of FlairAPI from outside of the machine	**Disabled**	Enabled	If it is “0”, accessing is limited from the machine only, such as operating panel, SDK/J, MFP browsers etc… If it is “1”, accessing is allowed from outside of FlairAPI such as PC, Remote UI, IT-Box etc…
bit 2	IPv6 (Exclusive) / IPv4 (Priority) Switching	**IPv6 (Exclusive)**	IPv4 (Priority)	If this bit is “0”, only IPv6 accessing is permitted. If this bit is “1” and IPv4 is enabled, the machine uses IPv4 accessing. If this bit is “1” and IPv4 is disabled, the machine uses IPv6 accessing. In this case, it is unable to access through Smart Operation Panel if IPv4 address is enabled.
bit 3	Remote UI Function	**Not Used**	Use	Sets use of Remote UI for scanner function.
bit 4	Reserved	-	-	-
bit 5	Reserved	-	-	-
bit 6	Reserved	-	-	-
bit 7	Reserved	-	-	-

SP2-XXX (Scanning-image quality)

2021	[Compression Level (Gray-scale)]		
2-021-001	Comp1:5-95	*CTL	[5 to 95 / **20** / 1 / step]
2-021-002	Comp2:5-95	*CTL	[5 to 95 / **40** / 1 / step]
2-021-003	Comp3:5-95	*CTL	[5 to 95 / **65** / 1 / step]
2-021-004	Comp4:5-95	*CTL	[5 to 95 / **80** / 1 / step]
2-021-005	Comp5:5-95	*CTL	[5 to 95 / **95** / 1 / step]

2023	[ClearLightPDF:ACS Setting]		
	This SP code enables/disables the ACS function.		
2-023-001	-	*CTL	[0 or 1 / **1** / 1 / step]

			0: Disable **1: Enable**

2024	**[Compression ratio of ClearLight PDF]**		
2-024-001	Compression Ratio (Normal image)	*CTL	[5 to 95 / **25** / 1 / step]
2-024-002	Compression Ratio (High)	*CTL	[5 to 95 / **15** / 1 / step]

2025	**[Compression ratio of ClearLightPDF JPEG2000]**		
2-025-001	Compression Ratio (Normal) JPEG2000	*CTL	[5 to 95 / **25** / 1 / step]
2-025-002	Compression Ratio (High) JEPG2000	*CTL	[5 to 95 / **15** / 1 / step]

2030	**[OCR PDF DetectSens]**		
2-030-001	White Lumi Value: 0 - 255	*CTL	[0 to 255 / **250** / 1 / step]
2-030-002	White Pix Ratio: 0 - 100	*CTL	[0 to 100 / **80** / 1 / step]
2-030-003	White Tile Ratio: 0 - 100	*CTL	[0 to 100 / **80** / 1 / step]

2031	**[Vertical Judgment Setting]**		
2-031-001	Function Setting: 0 - 1	*CTL	[0 or 1 / **1** / 1 / step] 0:Enable 1:Disable
	When the image does not become upright state due to the vertical judgment error, set this SP to "0: Disable". After changing the setting, turn OFF/ON the main power.		
2-031-002	Algorithm Setting: 0 - 2	*CTL	[0 to 3 / **1** / 1 / step] 0: Normal Algorithm 1: Simple Algorithm 2: Composite Algorithm
	Set the identification algorithm when SP2-031-001 is "1: Enable". Change the setting when the vertical judgment error occur frequently. After changing the setting, turn OFF/ON the main power.		

Input and Output Check

Input Check Table

Main Machine, Paper Feed Tray

5803	[INPUT Check]		
5-803-001	Registration Sensor	ENG	[0 to 1 / 0 / 1] 0: paper exist 1: paper non exist
5-803-002	Paper Feed Sensor 1	ENG	[0 to 1 / 0 / 1] 0: paper exist 1: paper non exist
5-803-003	Transport Sensor 1	ENG	[0 to 1 / 0 / 1] 0: paper exist 1: paper non exist
5-803-004	Paper Feed Sensor 2	ENG	[0 to 1 / 0 / 1] 0: paper exist 1: paper non exist
5-803-005	Transport Sensor 2	ENG	[0 to 1 / 0 / 1] 0: paper exist 1: paper non exist
5-803-006	Fusing Exit Sensor	ENG	[0 to 1 / 0 / 1] 0: paper exist 1: paper non exist
5-803-007	Fusing Entrance Sensor	ENG	[0 to 1 / 0 / 1] 0: paper exist 1: paper non exist
5-803-008	Paper Exit Sensor	ENG	[0 to 1 / 0 / 1] 0: paper exist 1: paper non exist
5-803-009	Inverter Sensor	ENG	[0 to 1 / 0 / 1] 0: paper exist 1: paper non exist
5-803-010	Duplex Exit Sensor	ENG	[0 to 1 / 0 / 1] 0: paper exist 1: paper non exist
5-803-011	Duplex Entrance Sensor	ENG	[0 to 1 / 0 / 1] 0: paper exist 1: paper non exist

5803	[INPUT Check]		
5-803-012	Paper Exit Tray Full Sensor	ENG	[0 to 1 / 0 / 1] 0: Not full 1: full
5-803-013	Tray 1 Remain Switch	ENG	[0 to 3 / 0 / 1] When full is 100%, 11: 71 to 100% 01: 31 to 70% 00: 11 to 30% 10: 1 to 10%
5-803-014	Tray 1 Upper Limit Sensor	ENG	[0 to 1 / 0 / 1] 0: less then limit 1: high then limit
5-803-015	Tray 1 Paper End Sensor	ENG	[0 to 1 / 0 / 1] 0: No paper 1: paper remaining
5-803-016	Tray 1 Set Switch	ENG	[0 to 1 / 0 / 1] 0: set 1:not set
5-803-017	Tray 2 Remain Switch	ENG	[0 to 3 / 0 / 1] When full is 100%, 11: 71 to 100% 01: 31 to 70% 00: 11 to 30% 10: 1 to 10%
5-803-018	Tray 2 Upper Limit Sensor	ENG	[0 to 1 / 0 / 1] 0: less then limit 1: high then limit
5-803-019	Tray 2 Paper End Sensor	ENG	[0 to 1 / 0 / 1] 0: No paper 1: paper remaining
5-803-020	Tray 2 Set Switch	ENG	[0 to 1 / 0 / 1] 0: set 1: not set
5-803-021	Tray 2 Size Switch	ENG	[0 to 15 / 0 / 1]
5-803-022	Bypass Paper End Sensor	ENG	[0 to 1 / 0 / 1] 0: No paper 1: paper remaining

5803	[INPUT Check]		
5-803-023	Bypass Main Scan Length Switch	ENG	[0 to 15 / 0 / 1]
5-803-024	Bypass Sub Scan Length Sensor	ENG	[0 to 1 / 0 / 1]
5-803-025	Main Door Interlock Switch	ENG	[0 to 1 / 0 / 1] 00: Unlocked 11: Locked
5-803-026	Right Door Open/Close Switch	ENG	[0 to 1 / 0 / 1] 0: close 1: open
5-803-027	Duplex Guide Plate Open/Close Switch	ENG	[0 to 1 / 0 / 1] 0: close 1: open
5-803-028	Transfer Open/Close Sensor	ENG	[0 to 1 / 0 / 1] 0: open 1: close
5-803-029	Transfer Contact Sensor	ENG	[0 to 1 / 0 / 1] 0: Abutting 1: Alienate
5-803-032	Waste Toner Bottle Near Full Sensor	ENG	[0 to 1 / 0 / 1] 0: Not full 1: full
5-803-033	Toner Bottle Set Switch	ENG	[0 to 1 / 0 / 1] 0: set 1: not set
5-803-038	Fusing Set & Country Detection	ENG	[0 to 7 / 0 / 1] 0111:200V system 1011:100V System
5-803-039	Fusing New Fuse Blown Detection	ENG	[0 to 1 / 0 / 1] 0: New 1: Old
5-803-048	Fusing Exit Fan1:Lock	ENG	[0 to 1 / 0 / 1] 0: Running 1: Stopped, or locked
5-803-049	Fusing Exit Fan2:Lock	ENG	[0 to 1 / 0 / 1] 0: Running 1: Stopped, or locked

5803	[INPUT Check]		
5-803-051	PSU Cooling Fan:Lock	ENG	[0 to 1 / 0 / 1] 0: Running 1: Stopped, or locked
5-803-057	Main Exhaust Fan:Lock	ENG	[0 to 1 / 0 / 1] 0: Running 1: Stopped, or locked
5-803-058	Paper Exit Cooling Fan:Lock	ENG	[0 to 1 / 0 / 1] 0: Running 1: Stopped, or locked
5-803-060	Toner Bottle Cooling Fan:Lock	ENG	[0 to 1 / 0 / 1] 0: Running 1: Stopped, or locked
5-803-061	Development Motor:Lock	ENG	[0 to 1 / 0 / 1] 0: Running 1: Stopped, or locked
5-803-065	Fusing/Fusing Exit Motor:Lock	ENG	[0 to 1 / 0 / 1] 0: Running 1: Stopped, or locked
5-803-066	Drum Motor:Lock	ENG	[0 to 1 / 0 / 1] 0: Running 1: Stopped, or locked
5-803-067	HVP/Separation DC/(-):Abnormal Detection	ENG	[0 to 1 / 0 / 1] 0: SC detected 1: Normal
5-803-068	HVP/ChargeDC/(-):Abnormal Detection	ENG	[0 to 1 / 0 / 1] 0: SC detected 1: Normal
5-803-069	HVP/PTR DC/(+)&(-):Abnormal Detection	ENG	[0 to 1 / 0 / 1] 0: SC detected 1: Normal
5-803-070	HVP/Development DC/(-):Abnormal Detection	ENG	[0 to 1 / 0 / 1] 0: SC detected 1: Normal
5-803-072	Key Counter:Set Sensor 1	ENG	[0 to 1 / 0 / 1] 0: set 1:unset key counter: set 1=0, 2=1 for set, others for unset

5803	[INPUT Check]		
5-803-073	Key Counter:Set Sensor 2	ENG	[0 to 1 / 0 / 1] 0: set 1:unset key counter: set 1=0, 2=1 for set, others for unset
5-803-074	Key Card:Set Detection	ENG	[0 to 1 / 0 / 1] 0: set 1: not set
5-803-075	1-Bin Remain Paper Detection	ENG	[0 to 1 / 0 / 1] 0: paper exist 1: paper non exist
5-803-076	1-Bin Set Detection	ENG	[0 to 1 / 0 / 1] 0: paper exist 1: paper non exist
5-803-077	Bridge Relay Sensor	ENG	[0 to 1 / 0 / 1] 0: paper exist 1: paper non exist
5-803-078	Bridge Exit Sensor	ENG	[0 to 1 / 0 / 1] 0: Paper exist 1: Paper do not exist
5-803-079	Relay Set Detection Mechanism	ENG	[0 to 1 / 0 / 1] 0: set 1:not set
5-803-082	RelayTransCov OP Detect/LeftTransCov OP Sn	ENG	[0 to 1 / 0 / 1] 0: close 1: open
5-803-083	RelayPprExitCovOP Detect/UpperTransCovOP Sn	ENG	[0 to 1 / 0 / 1] 0: close 1: open
5-803-084	Shift Tray Set Detection Mechanism	ENG	[0 to 1 / 0 / 1] 01: set 11:not set
5-803-085	Shift Tray Position Sensor 1	ENG	[0 to 1 / 0 / 1] 0: Stop on this side. during moving towards inner 1: Stop on inner side. during moving towards this side
5-803-	GAVD Open/Close Detection	ENG	[0 to 1 / 0 / 1]

5803	[INPUT Check]		
094			
5-803-095	Relay Fuse Blown Detection +24V	ENG	[0 to 1 / 0 / 1] 0: Not cut 1: Cut
5-803-096	Relay Fuse Blown Detection +5V	ENG	[0 to 1 / 0 / 1] 0: Not cut 1: Cut
5-803-100	PCB Ver Management	ENG	[0 to 15 / 0 / 1]
5-803-101	Tray 1 Size Switch	ENG	[0 to 15 / 0 / 1]
5-803-102		ENG	[0 to 1 / 0 / 1]
5-803-200	HP Senser	ENG	[0 to 1 / 0 / 1]
5-803-201	Platen Cover Sensor	ENG	[0 to 1 / 0 / 1]
5-803-211	Bank: Tray3: Feed Sensor	ENG	[0 to 1 / 0 / 1] 0: paper not detected 1: paper detected.
5-803-212	Bank: Tray4: Feed Sensor	ENG	[0 to 1 / 0 / 1] 0: paper not detected 1: paper detected.
5-803-213	Bank: Tray5: Feed Sensor	ENG	[0 to 1 / 0 / 1] 0: paper not detected 1: paper detected.
5-803-214	Bank: Tray3: Transport Sensor	ENG	[0 to 1 / 0 / 1] 0: paper not detected 1: paper detected.
5-803-215	Bank: Tray4: Transport Sensor	ENG	[0 to 1 / 0 / 1] 0: paper not detected 1: paper detected.
5-803-216	Bank: Tray5: Transport Sensor	ENG	[0 to 1 / 0 / 1] 0: paper not detected 1: paper detected.
5-803-217	Bank: Feed Cover Open Detection 1	ENG	[0 to 1 / 0 / 1] 0: cover open

5803	[INPUT Check]		
			1: cover closed
5-803-218	Bank: Feed Cover Open Detection 2	ENG	[0 to 1 / 0 / 1] 0: cover open 1: cover closed
5-803-219	LCT Paper Supply Open/Close	ENG	[0 to 1 / 0 / 1] 0: cover open 1: cover closed
5-803-220	LCT Slide Open/Close	ENG	[0 to 1 / 0 / 1] 0: slide open 1: slide closed

ADF

6007	[ADF INPUT Check]		
6-007-001	Original Length 1 (B5 Detection Sensor)	ENG	[0 to 1 / 0 / 1]
6-007-002	Original Length 2 (A4 Detection Sensor)	ENG	[0 to 1 / 0 / 1]
6-007-003	Original Length 3 (LG Detection Sensor)	ENG	[0 to 1 / 0 / 1]
6-007-004	Original Width 1	ENG	[0 to 1 / 0 / 1]
6-007-005	Original Width 2	ENG	[0 to 1 / 0 / 1]
6-007-006	Original Width 3	ENG	[0 to 1 / 0 / 1]
6-007-007	Original Width 4	ENG	[0 to 1 / 0 / 1]
6-007-008	Original Width 5	ENG	[0 to 1 / 0 / 1]
6-007-009	Original Detection	ENG	[0 to 1 / 0 / 1]
6-007-011	Skew Correction	ENG	[0 to 1 / 0 / 1]
6-007-013	Registration Sensor	ENG	[0 to 1 / 0 / 1]
6-007-014	Exit Sensor	ENG	[0 to 1 / 0 / 1]
6-007-015	Feed Cover Sensor	ENG	[0 to 1 / 0 / 1]
6-007-016	Lift Up Sensor	ENG	[0 to 1 / 0 / 1]
6-007-023	Rear Edge Detection	ENG	[0 to 1 / 0 / 1]

6011	[1-Pass ADF INPUT Check]		
6-011-001	Original Length 1 (B5 Sensor)	ENG	[0 to 1 / 0 / 1]
6-011-002	Original Length 2 (A4 Sensor)	ENG	[0 to 1 / 0 / 1]
6-011-003	Original Length 3 (LG Sensor)	ENG	[0 to 1 / 0 / 1]
6-011-004	Original Width 1	ENG	[0 to 1 / 0 / 1]
6-011-005	Original Width 2	ENG	[0 to 1 / 0 / 1]
6-011-006	Original Width 3	ENG	[0 to 1 / 0 / 1]
6-011-007	Original Width 4	ENG	[0 to 1 / 0 / 1]

6011	[1-Pass ADF INPUT Check]		
6-011-008	Original Width 5	ENG	[0 to 1 / 0 / 1]
6-011-009	Original Detection	ENG	[0 to 1 / 0 / 1]
6-011-010	Separation Sensor	ENG	[0 to 1 / 0 / 1]
6-011-011	Skew Correction	ENG	[0 to 1 / 0 / 1]
6-011-012	Scan Entrance Sensor	ENG	[0 to 1 / 0 / 1]
6-011-013	Registration Sensor	ENG	[0 to 1 / 0 / 1]
6-011-014	Exit Sensor	ENG	[0 to 1 / 0 / 1]
6-011-015	Feed Cover Sensor	ENG	[0 to 1 / 0 / 1]
6-011-016	Lift Up Sensor	ENG	[0 to 1 / 0 / 1]
6-011-018	Pick-Up Roller HP Sensor	ENG	[0 to 1 / 0 / 1]
6-011-021	Bottom Plate HP Sensor	ENG	[0 to 1 / 0 / 1]
6-011-022	Bottom Plate Position Sensor	ENG	[0 to 1 / 0 / 1]
6-011-023	Original Length 4 (LT/A4 Tail Sensor)	ENG	[0 to 1 / 0 / 1]

Finisher

6123	[INPUT Check: 2K/3K FIN]		
6-123-001	Entrance Sensor	ENG	[0 to 1 / 0 / 1]
6-123-002	Horizontal Transport Sensor	ENG	[0 to 1 / 0 / 1]
6-123-003	Switchback Transport Sensor	ENG	[0 to 1 / 0 / 1]
6-123-004	Proof Tray Exit Sensor	ENG	[0 to 1 / 0 / 1]
6-123-005	Shift Tray Exit Sensor	ENG	[0 to 1 / 0 / 1]
6-123-006	Booklet Stapler Exit Sensor	ENG	[0 to 1 / 0 / 1]
6-123-007	Paper Exit Open/Close Guide HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-008	Punch HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-009	Punch Move HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-010	S-to-S Registration Detection HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-011	Lower Junction Solenoid HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-012	Jogger HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-013	Positioning Roller HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-014	Feed-out HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-015	Stapler Moving HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-016	Booklet Stapler HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-017	Booklet Jogger HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-018	Booklet Jog Solenoid HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-019	Booklet Standard Fence HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-020	Booklet Stapler HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-022	Folder Blade Cam HP Sensor	ENG	[0 to 1 / 0 / 1]

6123	[INPUT Check: 2K/3K FIN]		
6-123-023	Folder Blade HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-024	Shift Roller HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-025	Shift Jogger HP Sensor: Front	ENG	[0 to 1 / 0 / 1]
6-123-026	Shift Jogger HP Sensor: Rear	ENG	[0 to 1 / 0 / 1]
6-123-027	Shift Jogger Retraction HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-028	Drag Roller Vibrating HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-029	LE Guide HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-030	TE Stack Plate HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-031	Staple Tray Paper Sensor	ENG	[0 to 1 / 0 / 1]
6-123-032	ITB Paper Sensor	ENG	[0 to 1 / 0 / 1]
6-123-033	Booklet Stapler Transport Paper Sn: Upper	ENG	[0 to 1 / 0 / 1]
6-123-034	Booklet Stapler Transport Paper Sn: Lower	ENG	[0 to 1 / 0 / 1]
6-123-035	Paper Height Sensor: Shift	ENG	[0 to 1 / 0 / 1]
6-123-036	Corner Stapler Paper Height Sensor 1	ENG	[0 to 1 / 0 / 1]
6-123-037	Corner Stapler Paper Height Sensor 2	ENG	[0 to 1 / 0 / 1]
6-123-038	Proof Tray Full Sensor	ENG	[0 to 1 / 0 / 1]
6-123-039	Booklet Stapler Full Sensor 1	ENG	[0 to 1 / 0 / 1]
6-123-040	Booklet Stapler Full Sensor 2	ENG	[0 to 1 / 0 / 1]
6-123-041	S-to-S Registration Detection Sensor	ENG	[0 to 1 / 0 / 1]
6-123-042	Punch RPS Sensor	ENG	[0 to 1 / 0 / 1]
6-123-043	Corner Stapler Leading Edge Detection Sensor	ENG	[0 to 1 / 0 / 1]
6-123-044	Corner Stapler Staple End Sensor	ENG	[0 to 1 / 0 / 1]
6-123-045	Booklet Stapler Staple End Sensor: Front	ENG	[0 to 1 / 0 / 1]
6-123-046	Booklet Stapler Staple End Sensor: Rear	ENG	[0 to 1 / 0 / 1]
6-123-047	Shift Tray Lower Limit Sensor 1	ENG	[0 to 1 / 0 / 1]
6-123-048	Shift Tray Lower Limit Sensor 2	ENG	[0 to 1 / 0 / 1]
6-123-049	Shift Tray Lower Limit Sensor 3	ENG	[0 to 1 / 0 / 1]
6-123-050	Shift Tray Lower Limit Sensor 4	ENG	[0 to 1 / 0 / 1]
6-123-051	Shift Tray Lower Limit Sensor 5	ENG	[0 to 1 / 0 / 1]
6-123-052	Punch Chad Full Sensor	ENG	[0 to 1 / 0 / 1]
6-123-053	Punch Set Detection	ENG	[0 to 1 / 0 / 1]
6-123-054	Shift Jogger Set Detection	ENG	[0 to 1 / 0 / 1]
6-123-055	Booklet Stapler Set Detection	ENG	[0 to 1 / 0 / 1]
6-123-056	Front Door SW	ENG	[0 to 1 / 0 / 1]
6-123-057	Dynamic Roller Open/Close Guide Plate Sensor	ENG	[0 to 1 / 0 / 1]
6-123-058	Tray Upper Limit SW	ENG	[0 to 1 / 0 / 1]
6-123-059	Paper Exit Open/Close Guide Plate Limit SW	ENG	[0 to 1 / 0 / 1]

6123	[INPUT Check: 2K/3K FIN]		
6-123-060	Punch Selection DIPSW 1	ENG	[0 to 1 / 0 / 1]
6-123-061	Punch Selection DIPSW 2	ENG	[0 to 1 / 0 / 1]
6-123-065	Paper Guide HP Sensor	ENG	[0 to 1 / 0 / 1]
6-123-066	Shift Jogger HP Sensor: Front	ENG	[0 to 1 / 0 / 1]
6-123-067	Shift Jogger HP Sensor: Rear	ENG	[0 to 1 / 0 / 1]
6-123-068	Shift Jogger Retraction HP Sensor: Upper	ENG	[0 to 1 / 0 / 1]
6-123-069	Shift Jogger Retraction HP Sensor: Lower	ENG	[0 to 1 / 0 / 1]

6135	[INPUT Check: FrontFIN]		
6-135-001	Entrance Sensor	ENG	[0 to 1 / 0 / 1]
6-135-002	Carry Sensor	ENG	[0 to 1 / 0 / 1]
6-135-003	Exit Sensor	ENG	[0 to 1 / 0 / 1]
6-135-004	Staple Tray Paper Sensor	ENG	[0 to 1 / 0 / 1]
6-135-005	Front Jogger HP Sensor	ENG	[0 to 1 / 0 / 1]
6-135-006	Rear Jogger HP Sensor	ENG	[0 to 1 / 0 / 1]
6-135-007	Sft Roller HP Sensor	ENG	[0 to 1 / 0 / 1]
6-135-008	Hitroll HP Sensor	ENG	[0 to 1 / 0 / 1]
6-135-009	Ext Guide Plate HP Sensor	ENG	[0 to 1 / 0 / 1]
6-135-010	Staple Moving HP Sensor	ENG	[0 to 1 / 0 / 1]
6-135-011	Shift Tray Paper Sensor	ENG	[0 to 1 / 0 / 1]
6-135-012	Shift Tray Limit Sensor	ENG	[0 to 1 / 0 / 1]
6-135-013	Staple Rotation Sensor	ENG	[0 to 1 / 0 / 1]
6-135-014	Staple Near End Sensor	ENG	[0 to 1 / 0 / 1]
6-135-015	Self Priming Sensor	ENG	[0 to 1 / 0 / 1]
6-135-016	Stopper HP Sensor	ENG	[0 to 1 / 0 / 1]
6-135-017	Punch HP Sensor	ENG	[0 to 1 / 0 / 1]
6-135-018	Punch Pluse Count Sensor	ENG	[0 to 1 / 0 / 1]
6-135-019	Punch Chad Full Sensor	ENG	[0 to 1 / 0 / 1]
6-135-020	Punch Moving HP Sensor	ENG	[0 to 1 / 0 / 1]
6-135-021	Punch Registration Detection HP Sensor	ENG	[0 to 1 / 0 / 1]
6-135-022	Punch Registration Detection Sensor	ENG	[0 to 1 / 0 / 1]
6-135-023	Slide Door SW	ENG	[0 to 1 / 0 / 1]
6-135-024	Shift Tray Upper Limit SW	ENG	[0 to 1 / 0 / 1]

6161	[FIN (1K FIN) INPUT Check]		
6-161-001	Entrance Sensor	ENG	[0 to 1 / 0 / 1]
6-161-002	Upper Cover Open/Close Sensor	ENG	[0 to 1 / 0 / 1]

6161	[FIN (1K FIN) INPUT Check]		
6-161-003	Proof Tray Exit Sensor	ENG	[0 to 1 / 0 / 1]
6-161-004	Proof Tray Full Sensor	ENG	[0 to 1 / 0 / 1]
6-161-005	Shift HP Sensor	ENG	[0 to 1 / 0 / 1]
6-161-006	Exit Guide Plate Open/Close HP Sensor	ENG	[0 to 1 / 0 / 1]
6-161-007	Shift Paper Exit (Lift Tray Exit) Sensor	ENG	[0 to 1 / 0 / 1]
6-161-008	Positioning Roller HP Sensor	ENG	[0 to 1 / 0 / 1]
6-161-009	Lift Tray Paper Sensor	ENG	[0 to 1 / 0 / 1]
6-161-010	Jogger HP Sensor	ENG	[0 to 1 / 0 / 1]
6-161-011	Feed Out HP Sensor	ENG	[0 to 1 / 0 / 1]
6-161-012	Lift Tray Lower Limit Sensor (Upper)	ENG	[0 to 1 / 0 / 1]
6-161-013	Lift Tray Lower Limit Sensor (Lower)	ENG	[0 to 1 / 0 / 1]
6-161-014	Staple Tray Paper Sensor	ENG	[0 to 1 / 0 / 1]
6-161-015	Stapler Moving HP Sensor (with Staples)	ENG	[0 to 1 / 0 / 1]
6-161-016	Near End Sensor (Common: Corner/Bklt Stplr)	ENG	[0 to 1 / 0 / 1]
6-161-017	Self Priming Sensor (Common:Crnr/Bklt Stplr)	ENG	[0 to 1 / 0 / 1]
6-161-018	Driver HP Sensor (Corner/Booklet Stapler)	ENG	[0 to 1 / 0 / 1]
6-161-020	Clincher HP Sensor (Corner/Booklet Stapler)	ENG	[0 to 1 / 0 / 1]
6-161-022	Stapler Retraction Sensor	ENG	[0 to 1 / 0 / 1]
6-161-023	Stapler Moving HP Sensor (without Staples)	ENG	[0 to 1 / 0 / 1]
6-161-024	Stapler HP Sensor without Staples	ENG	[0 to 1 / 0 / 1]
6-161-025	Move Guide Plate HP Sensor	ENG	[0 to 1 / 0 / 1]
6-161-026	Punch HP Sensor	ENG	[0 to 1 / 0 / 1]
6-161-027	Punch RP Sensor	ENG	[0 to 1 / 0 / 1]
6-161-028	Punch Hopper Full Sensor	ENG	[0 to 1 / 0 / 1]
6-161-029	Punch Move HP Sensor	ENG	[0 to 1 / 0 / 1]
6-161-030	S-to-S Registration Detection HP Sensor	ENG	[0 to 1 / 0 / 1]
6-161-031	S-to-S Registration Detection Sensor	ENG	[0 to 1 / 0 / 1]
6-161-032	Punch Selection DIPSW 1	ENG	[0 to 1 / 0 / 1]
6-161-033	Punch Selection DIPSW 2	ENG	[0 to 1 / 0 / 1]
6-161-034	ITB Transport Sensor: Right	ENG	[0 to 1 / 0 / 1]
6-161-035	ITB Transport Sensor: Left	ENG	[0 to 1 / 0 / 1]
6-161-036	Stack Transport Sensor	ENG	[0 to 1 / 0 / 1]
6-161-037	Stack Trans Upper Pressure Release HP Sensor	ENG	[0 to 1 / 0 / 1]
6-161-038	Stack Trans Lower Pressure Release HP Sensor	ENG	[0 to 1 / 0 / 1]
6-161-039	Fold Blade HP Sensor	ENG	[0 to 1 / 0 / 1]
6-161-040	Fold Cam HP Sensor	ENG	[0 to 1 / 0 / 1]
6-161-041	TE Stopper Transport Sensor	ENG	[0 to 1 / 0 / 1]

6161	[FIN (1K FIN) INPUT Check]		
6-161-042	TE Stopper HP Sensor	ENG	[0 to 1 / 0 / 1]
6-161-043	Booklet Folder Exit Sensor	ENG	[0 to 1 / 0 / 1]
6-161-044	Booklet Folder Tray Full Sensor: Upper	ENG	[0 to 1 / 0 / 1]
6-161-045	Booklet Folder Tray Full Sensor: Lower	ENG	[0 to 1 / 0 / 1]
6-161-046	Door Open/Close SW	ENG	[0 to 1 / 0 / 1]
6-161-047	Lift Tray Upper Limit SW	ENG	[0 to 1 / 0 / 1]
6-161-048	Paper Guide HP Sensor	ENG	[0 to 1 / 0 / 1]

6184	[Input Check:NoStplBindFIN]		
6-184-001	Entrance Sensor	ENG	[0 to 1 / 0 / 0] 0: Sensor Off 1: Sensor On
6-184-002	Exit Sensor	ENG	[0 to 1 / 0 / 0] 0: Sensor Off 1: Sensor On
6-184-003	Horizontal Registration Detection Sensor	ENG	[0 to 1 / 0 / 0] 0: Sensor Off 1: Sensor On
6-184-004	Shift HP Sensor	ENG	[0 to 1 / 0 / 0] 0: Sensor Off 1: Sensor On
6-184-005	Junction Solenoid HP Sensor	ENG	[0 to 1 / 0 / 0] 0: Sensor Off 1: Sensor On
6-184-006	Exit Pressure Release HP Sensor	ENG	[0 to 1 / 0 / 0] 0: Sensor Off 1: Sensor On
6-184-007	Stapler HP Sensor	ENG	[0 to 1 / 0 / 0] 0: Sensor Off 1: Sensor On
6-184-008	Tray Full Detection Sensor 1	ENG	[0 to 1 / 0 / 0] 0: Paper overflow
6-184-009	Tray Full Detection Sensor 2	ENG	[0 to 1 / 0 / 0] 0: Paper overflow
6-184-010	Slide Door Open/Close Door SW	ENG	[0 to 1 / 0 / 0] 0: Close 1: Open

Multi-Fold Unit

6322	[INPUT Check]		
6-322-001	Registration Sensor	ENG	[0 to 1 / 0 / 1] 0: Sensor Off 1: Sensor On
6-322-002	Folding Junction HP Sensor	ENG	[0 to 1 / 0 / 1] 0: Sensor Off 1: Sensor On
6-322-003	1st 2-direction Paper Feed SN	ENG	[0 to 1 / 0 / 1] 0: Sensor Off 1: Sensor On
6-322-004	2nd 2-direction Paper Feed SN	ENG	[0 to 1 / 0 / 1] 0: Sensor Off 1: Sensor On
6-322-005	Crease Sensor	ENG	[0 to 1 / 0 / 1] 0: Sensor Off 1: Sensor On
6-322-006	Crease HP Sensor	ENG	[0 to 1 / 0 / 1] 0: Sensor Off 1: Sensor On
6-322-007	Top Tray Exit Sensor	ENG	[0 to 1 / 0 / 1] 0: Sensor Off 1: Sensor On
6-322-008	Top Tray Full Sensor 1	ENG	[0 to 1 / 0 / 1] 0: Sensor Off 1: Sensor On
6-322-009	Top Tray Full Sensor 2	ENG	[0 to 1 / 0 / 1] 0: Sensor Off 1: Sensor On
6-322-010	Bridge Exit	ENG	[0 to 1 / 0 / 1] 0: Sensor Off 1: Sensor On
6-322-011	Cover SW	ENG	[0 to 1 / 0 / 1] 0: Sensor Off 1: Sensor On
6-322-012	Exit Unit Open/Close SW	ENG	[0 to 1 / 0 / 1] 0: Sensor Off 1: Sensor On

Output Check Table

Main Machine, Paper Feed Tray

5804	[OUTPUT Check]		
5-804-001	Tray 1 Pickup Solenoid	ENG	[0 to 1 / 0 / 1]
5-804-002	Tray 2 Pickup Solenoid	ENG	[0 to 1 / 0 / 1]
5-804-003	Bypass Pickup Solenoid	ENG	[0 to 1 / 0 / 1]
5-804-004	Paper Exit Junction Gate Solenoid	ENG	[0 to 1 / 0 / 1]
5-804-005	Tray 1 Lift Motor:CW	ENG	[0 to 1 / 0 / 1]
5-804-006	Tray 1 Lift Motor:CCW	ENG	[0 to 1 / 0 / 1]
5-804-007	Tray 2 Lift Motor:CW	ENG	[0 to 1 / 0 / 1]
5-804-008	Tray 2 Lift Motor:CCW	ENG	[0 to 1 / 0 / 1]
5-804-009	Registration Motor:CCW:Std Speed	ENG	[0 to 1 / 0 / 1]
5-804-010	Registration Motor:CCW:Mid Speed	ENG	[0 to 1 / 0 / 1]
5-804-011	Registration Motor:CCW:Low Speed	ENG	[0 to 1 / 0 / 1]
5-804-012	Registration Motor:CCW:Std Speed:IncSpd	ENG	[0 to 1 / 0 / 1]
5-804-015	Registration Motor:CCW:Position Hold	ENG	[0 to 1 / 0 / 1]
5-804-016	Feed Motor:CW:Std Speed	ENG	[0 to 1 / 0 / 1]
5-804-017	Feed Motor:CW:Mid Speed	ENG	[0 to 1 / 0 / 1]
5-804-018	Feed Motor:CW:Low Speed	ENG	[0 to 1 / 0 / 1]
5-804-019	Feed Motor:CW:Std Speed:IncSpd	ENG	[0 to 1 / 0 / 1]
5-804-022	Feed Motor:CCW:Std Speed	ENG	[0 to 1 / 0 / 1]
5-804-023	Feed Motor:CCW:Mid Speed	ENG	[0 to 1 / 0 / 1]
5-804-024	Feed Motor:CCW:Low Speed	ENG	[0 to 1 / 0 / 1]
5-804-025	Feed Motor:CCW:Std Speed:IncSpd	ENG	[0 to 1 / 0 / 1]
5-804-028	Vertical Transport Motor:CW:Std Speed	ENG	[0 to 1 / 0 / 1]
5-804-029	Vertical Transport Motor:CW:Mid Speed	ENG	[0 to 1 / 0 / 1]
5-804-030	Vertical Transport Motor:CW:Low Speed	ENG	[0 to 1 / 0 / 1]
5-804-031	Vertical Transport Motor:CW:Std Speed:IncSpd	ENG	[0 to 1 / 0 / 1]
5-804-034	Vertical Transport Motor:Position Hold	ENG	[0 to 1 / 0 / 1]
5-804-041	Paper Exit Motor:CW:Std Speed	ENG	[0 to 1 / 0 / 1]
5-804-042	Paper Exit Motor:CW:Mid Speed	ENG	[0 to 1 / 0 / 1]
5-804-043	Paper Exit Motor:CW:Low Speed	ENG	[0 to 1 / 0 / 1]
5-804-044	Paper Exit Motor:CW:Std Speed:IncSpd	ENG	[0 to 1 / 0 / 1]
5-804-047	Inverter Motor:CW:Std Speed	ENG	[0 to 1 / 0 / 1]
5-804-048	Inverter Motor:CW:Mid Speed	ENG	[0 to 1 / 0 / 1]
5-804-049	Inverter Motor:CW:Low Speed	ENG	[0 to 1 / 0 / 1]
5-804-052	Inverter Motor:CW:Std Speed:Feed Speed	ENG	[0 to 1 / 0 / 1]

5804	[OUTPUT Check]		
5-804-054	Inverter Motor:CW:Low Speed:Feed Speed	ENG	[0 to 1 / 0 / 1]
5-804-055	Inverter Motor:CW:Mid Speed:Feed Speed	ENG	[0 to 1 / 0 / 1]
5-804-056	Inverter Motor:CCW:Std Speed	ENG	[0 to 1 / 0 / 1]
5-804-057	Inverter Motor:CCW:Mid Speed	ENG	[0 to 1 / 0 / 1]
5-804-058	Inverter Motor:CCW:Low Speed	ENG	[0 to 1 / 0 / 1]
5-804-061	Inverter Motor:CCW:Std Speed:IncSpd	ENG	[0 to 1 / 0 / 1]
5-804-062	Inverter Motor:CCW:Mid Speed:IncSpd	ENG	[0 to 1 / 0 / 1]
5-804-063	Inverter Motor:CCW:Low Speed:IncSpd	ENG	[0 to 1 / 0 / 1]
5-804-065	Duplex Entrance Motor:CW:Std Speed	ENG	[0 to 1 / 0 / 1]
5-804-066	Duplex Entrance Motor:CW:Mid Speed	ENG	[0 to 1 / 0 / 1]
5-804-067	Duplex Entrance Motor:CW:Low Speed	ENG	[0 to 1 / 0 / 1]
5-804-068	Duplex Entrance Motor:CW:Std Speed:FeedSpeed	ENG	[0 to 1 / 0 / 1]
5-804-069	Duplex Entrance Motor:CW:Low Speed:FeedSpeed	ENG	[0 to 1 / 0 / 1]
5-804-070	Duplex Entrance Motor:CW:Std Speed:IncSpd	ENG	[0 to 1 / 0 / 1]
5-804-071	Duplex Bypass Motor:CW:Std Speed	ENG	[0 to 1 / 0 / 1]
5-804-072	Duplex Bypass Motor:CW:Mid Speed	ENG	[0 to 1 / 0 / 1]
5-804-073	Duplex Bypass Motor:CW:Low Speed	ENG	[0 to 1 / 0 / 1]
5-804-074	Duplex Bypass Motor:CW:Std Speed:Feed Speed	ENG	[0 to 1 / 0 / 1]
5-804-075	Duplex Bypass Motor:CW:Low Speed:Feed Speed	ENG	[0 to 1 / 0 / 1]
5-804-077	Duplex Bypass Motor:CCW:Std Speed	ENG	[0 to 1 / 0 / 1]
5-804-078	Duplex Bypass Motor:CCW:Mid Speed	ENG	[0 to 1 / 0 / 1]
5-804-079	Duplex Bypass Motor:CCW:Low Speed	ENG	[0 to 1 / 0 / 1]
5-804-080	Duplex Bypass Motor:CCW:Std Speed:Feed Speed	ENG	[0 to 1 / 0 / 1]
5-804-081	Duplex Bypass Motor:CCW:Low Speed:Feed Speed	ENG	
5-804-082	Duplex Bypass Motor:CW:Std Speed:IncSpd	ENG	[0 to 1 / 0 / 1]
5-804-083	Duplex Bypass Motor:Position Hold	ENG	[0 to 1 / 0 / 1]
5-804-092	Fusing/Fusing Exit Motor:CCW:Std Speed	ENG	[0 to 1 / 0 / 1] ***See Important below the table**
5-804-093	Fusing/Fusing Exit Motor:CCW:Mid Speed	ENG	[0 to 1 / 0 / 1] ***See Important below the table**
5-804-094	Fusing/Fusing Exit Motor:CCW:Low Speed	ENG	[0 to 1 / 0 / 1] ***See Important below the table**
5-804-098	Fusing/Fusing Exit Motor:CW:Low Speed	ENG	[0 to 1 / 0 / 1] ***See Important below the table**
5-804-104	Polygon Motor: L	ENG	[0 to 1 / 0 / 1]
5-804-105	Polygon Motor: M	ENG	[0 to 1 / 0 / 1]

5804	[OUTPUT Check]		
5-804-106	Polygon Motor: H	ENG	[0 to 1 / 0 / 1]
5-804-110	Fusing Fan:Middle Speed	ENG	[0 to 1 / 0 / 1]
5-804-111	Fusing Fan:Low Speed	ENG	[0 to 1 / 0 / 1]
5-804-112		ENG	[0 to 1 / 0 / 1]
5-804-113	PSU Cooling Fan	ENG	[0 to 1 / 0 / 1]
5-804-114	Toner Bottle Cooling Fan	ENG	[0 to 1 / 0 / 1]
5-804-115	Main Exhaust Fan:Half Speed	ENG	[0 to 1 / 0 / 1]
5-804-116	Main Exhaust Fan:Full Speed	ENG	[0 to 1 / 0 / 1]
5-804-118	Paper Exit Cooling Fan:Half Speed	ENG	[0 to 1 / 0 / 1]
5-804-119	Paper Exit Cooling Fan:Full Speed	ENG	[0 to 1 / 0 / 1]
5-804-120	Development Motor:Std Speed	ENG	[0 to 1 / 0 / 1]
5-804-121	Development Motor:Mid Speed	ENG	[0 to 1 / 0 / 1]
5-804-122	Development Motor:Low Speed	ENG	[0 to 1 / 0 / 1]
5-804-124	Drum Motor:Std Speed	ENG	[0 to 1 / 0 / 1]
5-804-125	Drum Motor:Mid Speed	ENG	[0 to 1 / 0 / 1]
5-804-126	Drum Motor:Low Speed	ENG	[0 to 1 / 0 / 1]
5-804-140	Transfer Contact Motor:CW	ENG	[0 to 1 / 0 / 1]
5-804-141	Transfer Contact Motor:CCW	ENG	[0 to 1 / 0 / 1]
5-804-162	Toner Bottle Motor	ENG	[0 to 1 / 0 / 1]
5-804-163	Bridge Relay/Left Paper Feed Motor:Std Speed	ENG	[0 to 1 / 0 / 1]
5-804-164	Bridge Relay/Left Paper Feed Motor:Mid Speed	ENG	[0 to 1 / 0 / 1]
5-804-165	Bridge Relay/Left Paper Feed Motor:Low Speed	ENG	[0 to 1 / 0 / 1]
5-804-166	BridgeRelay/LefExit Motor:Std Speed:IncSpd	ENG	[0 to 1 / 0 / 1]
5-804-169	BridgeRelay/LeftExit Junction Gate Solenoid	ENG	[0 to 1 / 0 / 1]
5-804-170	<Shift Tray> Lift Motor:CW	ENG	[0 to 1 / 0 / 1]
5-804-171	<Shift Tray> Lift Motor:CCW	ENG	[0 to 1 / 0 / 1]
5-804-179	HVP/ChargeDC/(-):PWM	ENG	[0 to 1 / 0 / 1]
5-804-187	HVP/Development DC/(-):PWM	ENG	[0 to 1 / 0 / 1]
5-804-194	HVP/Separation DC/(-):PWM	ENG	[0 to 1 / 0 / 1]
5-804-199	HVP/PTR DC/(+):PWM	ENG	[0 to 1 / 0 / 1]
5-804-200	HVP/PTR DC/(-):PWM	ENG	[0 to 1 / 0 / 1]
5-804-202	Scanner Lamp	ENG	[0 to 1 / 0 / 1]
5-804-206	Transfer Open/Close LED	ENG	[0 to 1 / 0 / 1]
5-804-209	ID Sensor	ENG	[0 to 1 / 0 / 1]
5-804-211	ID Tag Power	ENG	[0 to 1 / 0 / 1]
5-804-241	Bank: Tray3: Feed Mt: Standard Speed	ENG	[0 to 1 / 0 / 1]
5-804-242	Bank: Tray4: Feed Mt: Standard Speed	ENG	[0 to 1 / 0 / 1]

5804	[OUTPUT Check]		
5-804-243	Bank: Tray5: Feed Mt: Standard Speed	ENG	[0 to 1 / 0 / 1]
5-804-244	Bank: Tray3: Transport Mt: Standard Speed	ENG	[0 to 1 / 0 / 1]
5-804-245	Bank: Tray4: Transport Mt: Standard Speed	ENG	[0 to 1 / 0 / 1]
5-804-246	Bank: Tray5: Transport Mt: Standard Speed	ENG	[0 to 1 / 0 / 1]
5-804-247	Bank: Tray3: PU Solenoid	ENG	[0 to 1 / 0 / 1]
5-804-248	Bank: Tray4: PU Solenoid	ENG	[0 to 1 / 0 / 1]
5-804-249	Bank: Tray5: PU Solenoid	ENG	[0 to 1 / 0 / 1]
5-804-251	OPC Quenching LCD	ENG	[0 to 1 / 0 / 1]
5-804-253	Anti-Condensation Heater Relay	ENG	[0 to 1 / 0 / 1]

Important: Use the procedure below to do the output checks for the fusing exit motor in SP5-804-092 to 098. If you do not follow this procedure, a kink will form in the fusing belt sleeve, and the fusing sleeve belt unit will need to be replaced.

1. Do one of the following:

- Open the right cover of the paper bank
- Remove one of the toner bottles
- Pull out the waste toner bottle half-way
- Remove the fusing unit

2. Enter SP mode.

3. Do the following out output checks:

- SP5-804-092 (Fusing Motor:CW:Standard Speed)
- SP5-804-093 (Fusing Motor:CW:Middle Speed)
- SP5-804-094 (Fusing Motor:CW:Low Speed)
- SP5-804-098 (Fusing Motor:CCW:Low Speed)

4. Without exiting SP mode, turn the main power switch off and then on again.

Important: If you exit SP mode before you turn the main power switch off, the fusing exit motor will stay off when the machine warms up. Heat will be concentrated in one area of the fusing belt sleeve and cause a kink to form. If this happens, you will need to replace the fusing sleeve belt unit.

5. Do the reverse of what you did in step 1 (for example, reattach the fusing unit).

ADF

6008	[ADF OUTPUT Check]		
6-008-003	Feed Motor Forward	ENG	[0 to 1 / 0 / 1]
6-008-004	Feed Motor Reverse	ENG	[0 to 1 / 0 / 1]
6-008-005	Relay Motor Forward	ENG	[0 to 1 / 0 / 1]
6-008-006	Relay Motor Reverse	ENG	[0 to 1 / 0 / 1]
6-008-011	Inverter Solenoid	ENG	[0 to 1 / 0 / 1]
6-008-012	Stamp	ENG	[0 to 1 / 0 / 1]
6-008-013	Fan Motor	ENG	[0 to 1 / 0 / 1]

6008	[ADF OUTPUT Check]		
6-008-014	Feed Clutch	ENG	[0 to 1 / 0 / 1]
6-008-015	Feed Solenoid	ENG	[0 to 1 / 0 / 1]

6012	[1-Pass ADF OUTPUT Check]		
6-012-001	Pick-Up Motor Forward	ENG	[0 to 1 / 0 / 1] 0:Off 1:On
6-012-003	Feed Motor Forward	ENG	[0 to 1 / 0 / 1] 0:Off 1:On
6-012-005	Relay Motor Forward	ENG	[0 to 1 / 0 / 1] 0:Off 1:On
6-012-009	Exit Motor Forward	ENG	[0 to 1 / 0 / 1] 0:Off 1:On
6-012-010	Bottom Plate Motor For/Rev	ENG	[0 to 1 / 0 / 1] 0:Off 1:On
6-012-012	Stamp	ENG	[0 to 1 / 0 / 1] 0:Off 1:On
6-012-015	Pull-Out Motor Forward	ENG	[0 to 1 / 0 / 1] 0:Off 1:On
6-012-016	Middle Motor Forward	ENG	[0 to 1 / 0 / 1] 0:Off 1:On

Finisher

6124	[OUTPUT Check: 2K/3K FIN]		
6-124-001	Entrance Transport Motor	ENG	[0 to 1 / 0 / 1]
6-124-002	Horizontal Transport Motor	ENG	[0 to 1 / 0 / 1]
6-124-003	Pre-Stack Transport Motor	ENG	[0 to 1 / 0 / 1]
6-124-004	ITB Transport Motor	ENG	[0 to 1 / 0 / 1]
6-124-005	Paper Exit Motor	ENG	[0 to 1 / 0 / 1]
6-124-006	Upper Junction Solenoid	ENG	[0 to 1 / 0 / 1]

6124	[OUTPUT Check: 2K/3K FIN]		
6-124-007	TE Stack Plate Motor	ENG	[0 to 1 / 0 / 1]
6-124-008	Paper Exit Open/Close Guide Plate Motor	ENG	[0 to 1 / 0 / 1]
6-124-009	Punching Motor	ENG	[0 to 1 / 0 / 1]
6-124-010	Punch Move Motor	ENG	[0 to 1 / 0 / 1]
6-124-011	S-to-S Registration Detection Move Motor	ENG	[0 to 1 / 0 / 1]
6-124-012	Lower Junction Solenoid Motor	ENG	[0 to 1 / 0 / 1]
6-124-013	Jogger Motor	ENG	[0 to 1 / 0 / 1]
6-124-014	Positioning Roller Rotation Motor	ENG	[0 to 1 / 0 / 1]
6-124-015	Feed-out Motor	ENG	[0 to 1 / 0 / 1]
6-124-016	Booklet Stapler Move Motor	ENG	[0 to 1 / 0 / 1]
6-124-017	Corner Stapler Motor	ENG	[0 to 1 / 0 / 1]
6-124-018	Booklet Stapler Jogger Motor	ENG	[0 to 1 / 0 / 1]
6-124-019	Booklet Stapler Jog Solenoid Move Motor	ENG	[0 to 1 / 0 / 1]
6-124-020	Booklet Stapler Standard Fence Motor	ENG	[0 to 1 / 0 / 1]
6-124-021	Booklet Stapler Motor	ENG	[0 to 1 / 0 / 1]
6-124-022	Dynamic Roller Transport Motor	ENG	[0 to 1 / 0 / 1]
6-124-023	Folder Transport Motor	ENG	[0 to 1 / 0 / 1]
6-124-025	Square-fold Motor	ENG	[0 to 1 / 0 / 1]
6-124-026	Tray Lift Motor	ENG	[0 to 1 / 0 / 1]
6-124-027	Shift Motor	ENG	[0 to 1 / 0 / 1]
6-124-028	Front Shift Jogger Motor	ENG	[0 to 1 / 0 / 1]
6-124-029	Rear Shift Jogger Motor	ENG	[0 to 1 / 0 / 1]
6-124-030	Shift Jogger Retraction Motor	ENG	[0 to 1 / 0 / 1]
6-124-031	Drag Roller Vibrating Motor	ENG	[0 to 1 / 0 / 1]
6-124-032	LE Guide Motor	ENG	[0 to 1 / 0 / 1]
6-124-033	Navigation LED (All)	ENG	[0 to 1 / 0 / 1]
6-124-037	Positioning Roller Transport Motor	ENG	[0 to 1 / 0 / 1]
6-124-038	Paper Guide Motor	ENG	[0 to 1 / 0 / 1]

6136	[OUTPUT Check: FrontFIN]		
6-136-001	Entrance Motor	ENG	[0 to 1 / 0 / 1]
6-136-002	Carry Motor	ENG	[0 to 1 / 0 / 1]
6-136-003	Exit Motor	ENG	[0 to 1 / 0 / 1]
6-136-004	Front Jogger Motor	ENG	[0 to 1 / 0 / 1]
6-136-005	Rear Jogger Motor	ENG	[0 to 1 / 0 / 1]
6-136-006	Shift Motor	ENG	[0 to 1 / 0 / 1]
6-136-007	Hitroll Motor	ENG	[0 to 1 / 0 / 1]

6136	[OUTPUT Check: FrontFIN]		
6-136-008	Exit Guide Plate Motor	ENG	[0 to 1 / 0 / 1]
6-136-009	Staple Moving Motor	ENG	[0 to 1 / 0 / 1]
6-136-010	Tray Motor	ENG	[0 to 1 / 0 / 1]
6-136-011	Staple Motor	ENG	[0 to 1 / 0 / 1]
6-136-012	Stopper Motor	ENG	[0 to 1 / 0 / 1]
6-136-013	Punch Motor	ENG	[0 to 1 / 0 / 1]
6-136-014	Punch Moving Motor	ENG	[0 to 1 / 0 / 1]
6-136-015	Punch Registration Moving Motor	ENG	[0 to 1 / 0 / 1]

6162	[FIN (1K FIN) OUTPUT Check]		
6-162-001	Entrance Transport Motor	ENG	[0 to 1 / 0 / 1]
6-162-002	Proof Transport Motor	ENG	[0 to 1 / 0 / 1]
6-162-003	Paper Feed/Positioning & Move Roller Motor	ENG	[0 to 1 / 0 / 1]
6-162-004	Junction Solenoid	ENG	[0 to 1 / 0 / 1]
6-162-005	Shift Motor	ENG	[0 to 1 / 0 / 1]
6-162-006	Jogger Motor	ENG	[0 to 1 / 0 / 1]
6-162-007	Exit Guide Plate Open/Close Motor	ENG	[0 to 1 / 0 / 1]
6-162-008	Feed-out Motor	ENG	[0 to 1 / 0 / 1]
6-162-009	Tray Lift Motor	ENG	[0 to 1 / 0 / 1]
6-162-010	Paper Guide Motor	ENG	[0 to 1 / 0 / 1]
6-162-011	Positioning Roller Motor	ENG	[0 to 1 / 0 / 1]
6-162-012	Stapler Shift Motor	ENG	[0 to 1 / 0 / 1]
6-162-013	Stapler Motor	ENG	[0 to 1 / 0 / 1]
6-162-014	Stapler Moving Motor (without Staples)	ENG	[0 to 1 / 0 / 1]
6-162-015	Stapler Motor (without Staples)	ENG	[0 to 1 / 0 / 1]
6-162-016	Move Guide Plate Motor	ENG	[0 to 1 / 0 / 1]
6-162-017	Punch Motor	ENG	[0 to 1 / 0 / 1]
6-162-018	Punch Move Motor	ENG	[0 to 1 / 0 / 1]
6-162-019	S-to-S Registration Detection Move Motor	ENG	[0 to 1 / 0 / 1]
6-162-020	Stack Transport Motor: Upper	ENG	[0 to 1 / 0 / 1]
6-162-021	Stck Trns Uppr Prss Rls/Stndrd Fence Rtrct M	ENG	[0 to 1 / 0 / 1]
6-162-022	Stack Lower Pressure Release Motor	ENG	[0 to 1 / 0 / 1]
6-162-023	Folder Transport Motor	ENG	[0 to 1 / 0 / 1]
6-162-024	TE Stopper Motor	ENG	[0 to 1 / 0 / 1]
6-162-025	Folder Blade Motor	ENG	[0 to 1 / 0 / 1]
6-162-026	Navigation LED (All)	ENG	[0 to 1 / 0 / 1]

6185	[Output Check:NoStplBindFIN]		
6-185-001	Transport Motor	ENG	[0 to 1 / 0 / 0]
6-185-002	Shift Motor	ENG	[0 to 1 / 0 / 0]
6-185-003	Junction Solenoid Motor	ENG	[0 to 1 / 0 / 0]
6-185-004	Exit Pressure Release Motor	ENG	[0 to 1 / 0 / 0]
6-185-005	Stapler Motor	ENG	[0 to 1 / 0 / 0]

Multi-Fold Unit

6323	[OUTPUT Check]		
6-323-001	Transport Motor	ENG	[0 to 1 / 0 / 1]
6-323-002	Registration Motor	ENG	[0 to 1 / 0 / 1]
6-323-003	Folding Motor	ENG	[0 to 1 / 0 / 1]
6-323-004	2nd 2-direct Paper Feed Motor	ENG	[0 to 1 / 0 / 1]
6-323-005	JG/Crease Motor	ENG	[0 to 1 / 0 / 1]
6-323-006	Junction Solenoid	ENG	[0 to 1 / 0 / 1]
6-323-007	Navigation LED (All)	ENG	[0 to 1 / 0 / 1]

Test Pattern Printing

Printing Test pattern: SP2-109

Some of these test patterns are used for copy image adjustments but most are used primarily for design testing.

Note

- Do not operate the machine until the test pattern is printed out completely. Otherwise, SC will occur.

1. Enter the SP mode then select **SP2-109-003**.
2. Select test pattern for print from the list then press [OK].
3. When changing density of test pattern, select density with SP2-109-006.

   Note

   - If select "0" with SP2-109-006, the color adjusted so will not show up in the test pattern.
4. To print, touch "Copy Window", then set settings within the following window for test print (paper size etc…).
5. Press "Start" key to start test print.
6. After checking test pattern, touch "SP Mode" on the LCD to return to SP mode display.
7. Reset all settings to the default values.
8. Exit SP mode.

No.	Pattern	No.	Pattern
0	None	13	4dot Ind. Pttrn (4dot independent Pattern)
1	1dot Vertical Line	14	Trimming Area
2	2dot Vertical Line	15	Hounds tooth H
3	1dot Horizontal Line	16	Hounds tooth V
4	2dot Horizontal Line	17	Black Band H (Horizontal)
5	Grid Vert (Grid Vert ical Line)	18	Black Band V (Vertical)
6	Grid Horizontal (Grid Horizontal Line)	19	Checker Flag Pattern
7	Grid Pattern Small	20	Grayscale V (Vertical)
8	Grid Pattern Large	21	Grayscale H (Horizontal)
9	Argyle Pattern Small	22	2 Beam Density Pttrn
10	Argyle P:L (Argyle Pattern Large)	23	Full Dot Pattern
11	1dot Ind. Pttrn (1dot independent Pattern)	24	All White Pattern
12	2dot Ind. Pttrn (2dot independent Pattern)		

4. Software Configuration

Printing Features

Auto PDL Detection Function

Overview

The Auto PDL Detection function gives the MFP the ability to determine the PDL of a job or of specific parts of a job. This can be especially useful in cases where the PDL is not specified or if the job contains multiple PDLs. This is only possible if the job was not created using a driver.

Conditions for detection of the PDL

The MFP will only attempt to detect a job's PDL if all of the following conditions are met.

- No @PJL ENTER LANGUAGE command is contained in the job
- No submission protocol options (lpr, ftp, rcp, or rsh options) have been used to specify the PDL
- User Tools > Printer > System > Printer Language = Auto

Note

- The printer is unable to detect PCL6 or RPCS. However these are almost always created using a driver and therefore contain the PJL command specifying the PDL.

PDL detection by the printer system, PCL interpreter and PS interpreter

There are 3 components in the printer which can perform Auto PDL Detection:

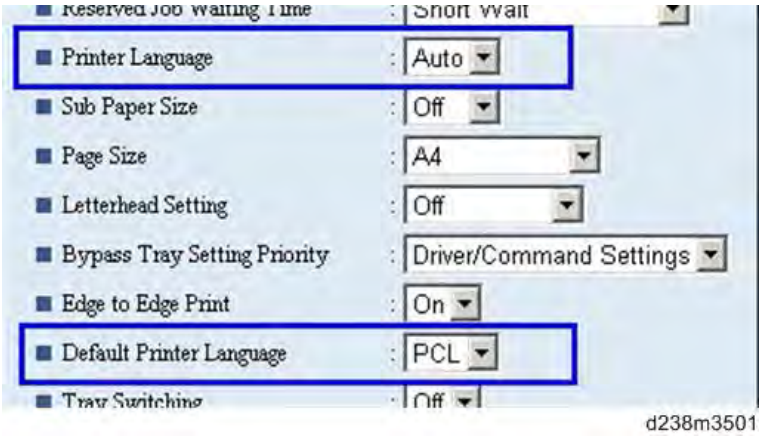
1. **Printer system:**
   Uses a set of triggers unique to PCL5, PS or PDF. Up to 2KB from the start of the job can be searched for triggers.
2. **PCL interpreter:**
   It can detect PS triggers in PCL data. If a PS trigger is detected, the PCL interpreter will abort processing and return the unprocessed part of the job back to the printer system. Up to 256 bytes from the start of each page can be searched for triggers.
3. **PS interpreter:**
   It can detect PCL5 triggers in PS data. If a PCL trigger is detected, the PS interpreter will abort processing and return the unprocessed part of the job back to the printer system. The entire page (regardless of the number of bytes) is searched for triggers.

Note

- 2. and 3. can be disabled using Printer Bit Switch 2-3=1.
- If the "Printer Language" is configured to anything other than Auto, all detection will be disabled.
- An interpreter submits a job page by page to the rasterizer. Therefore, when an interpreter detects a trigger mid-job, the previous pages will have already been submitted and will be output using the previously detected PDL.

- If the PDL cannot be detected by the printer system, then the PDL defaults to the one configured in "Configuration > Printer Basic Settings > Default Printer Language".

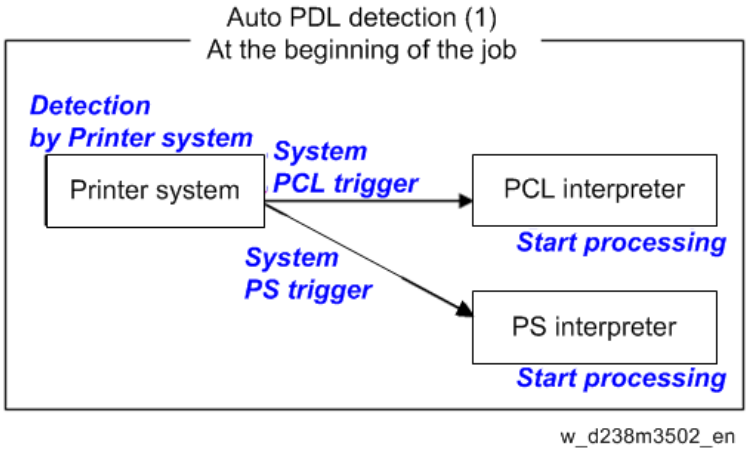
The Printer Language setting and Default Printer Language setting in WIM:



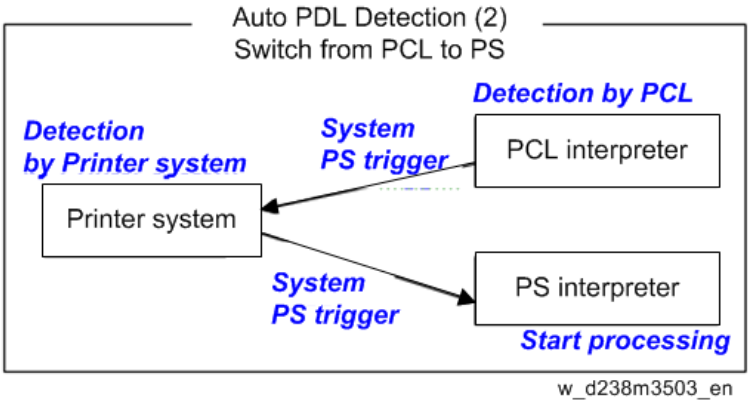
PDL selection and switching

3 types of PDL selection/switching are performed:

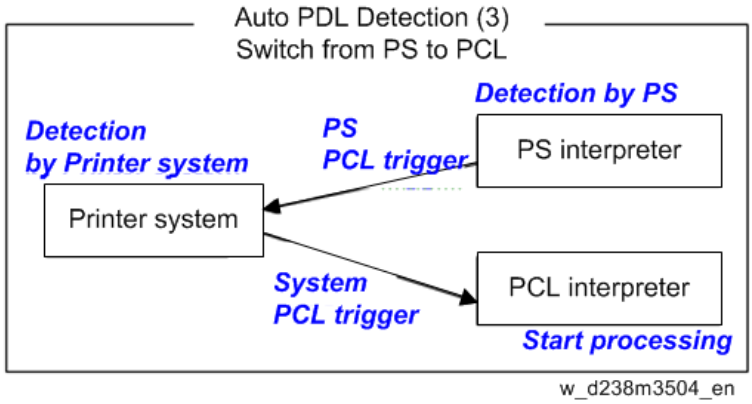
1. PDL selection (PCL5 or PS (including PDF)) at the beginning of the job: performed by the printer system



2. PDL switching from PCL5 to PS: performed by the PCL interpreter and the printer system



3. PDL switching from PS to PCL5: performed by the PS interpreter and the printer system



Triggers

Printer system

PCL5 triggers	[ESC]E [FF]
PS triggers	%!PS-Adobe-3.1 "%!" "dict begin" "bind def" "findfont" "showpage" "/statusdict" "0 startjob" [EOT] "}" + space character + "def" "userdict" (*)
PDF triggers	%PDF- %!PS-Adobe-M.nPDF- (*M, n=numeric)

* "userdict" is excluded by configuring Printer Bit Switch 5-3=1.

Note

- Up to 2KB from the start of the job can be searched for triggers.
- "%%" can be added to the PS triggers by configuring Printer Bit Switch 5-3=1
- If a job is identified as PDF, it will be sent to the PS interpreter to be processed as a regular PS job.

PS interpreter

PCL5 trigger	[ESC]E and 2 or more continuous PCL commands

Note

- Up to 256 bytes from the start of each page can be searched for triggers.

Some possible problems

Garbled output:

If a string of characters (or binary data) is mistaken as a trigger and an incorrect PDL is applied, the output will be garbled.

Incorrect printer settings:

Printer settings, for example the paper size, is incorrectly applied. This can happen when the printer settings at the beginning of the job are initialized before a PDL switch occurred and no settings were configured for the rest of the job.

Printer Bit Switch description

Bit Switch 2-3

This controls Auto PDL Detection by the PCL interpreter and PS interpreter.

BitSW 2-3=0 (default):

If PDL switching is applied to the job, all of the printer system, PCL interpreter and PS interpreter will search for switching criteria (triggers).

BitSW 2-3=1:

Only the printer system will search for switching criteria (triggers). PCL/PS interpreters will not.

Bit Switch 5-3

This affects the PDL switching criteria (triggers) used by the printer system.

BitSW 5-3=0 (default):

"%%" is not used as a printer system PS trigger. "%%" will not call the PS interpreter.

BitSW 5-3=1:

"%%" is used as a printer system PS trigger.

The reason that "%%" is not included as a trigger by default, is that a string of text in the body of the job such as the below, could result in a false positive. This would trigger a switch and result garbled output.

%%%%%%%%%%%%%%%%%%%%%%%%%%

However some customers prefer that "%%" be included as a switching criteria. BitSW5-3=1 should be used in such a case.

Note

- A side effect of BitSW5-3=1 is that "userdict" will no longer be used as a PS trigger.

Bit Switch 9-0

These determine whether Auto PDL Detection for print jobs transmitted via USB/parallel will wait 10 seconds to make sure the first 2KB of the job has been sent.

The Printer system portion of the Auto PDL Detection function is only performed on the first 2KB of a job and can wait up to 10 seconds for that first 2KB to arrive. As the printer is unable to detect the end of jobs submitted over a USB/Parallel connection, it might be preferable to not wait 10 seconds if jobs of less than 2KB are going to be printed. Enabling/disabling this waiting time is the purpose of BitSw 9-0.

BitSw 9-0=0 (default):

The printer system will not wait 10 seconds for the first 2KB of data to arrive.

BitSw 9-0=1:

The printer system will wait up to 10 seconds for the first 2KB of data to arrive.

Print Images Rotation

Printer Bit Switch description

Bit Switch 5-6

This change the way an MFP/LP rotates PCL, PS, PDF, or RPCS print images.

BitSW 5-6=0 (default):

A uniform binding edge (short or long edge) will be applied to every page of every job. Pages will always be rotated as if they were to be bound on that edge.

BitSW 5-6=1:

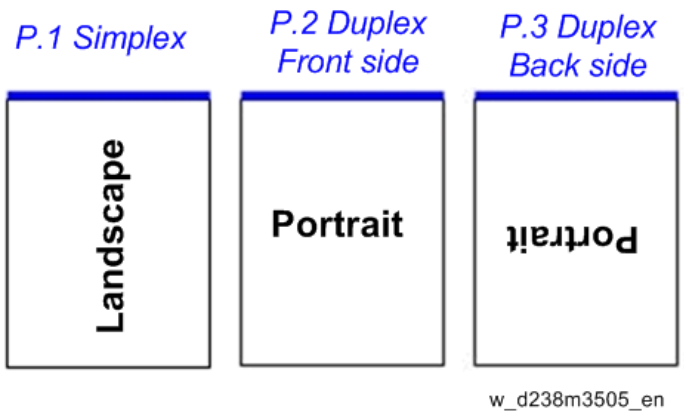
A uniform binding edge (short or long edge) will only be applied if the job is stapled, punched, or Z-folded. Otherwise, the bound edge might differ from page to page.

Example:

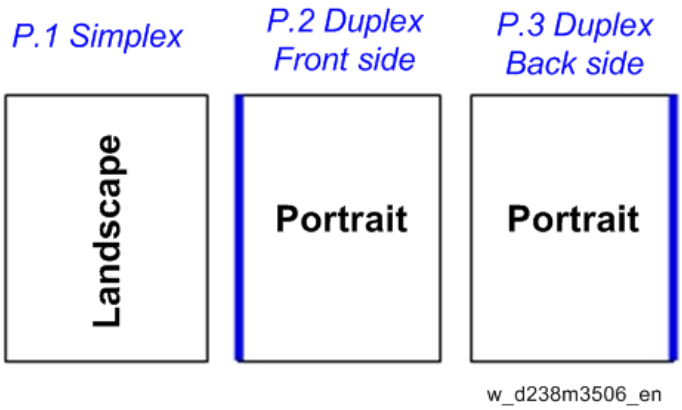
A 3-page job. Page 1 has the PCL simplex command. Page 2 and 3 have the PCL duplex long-edge bind commands.

No finishing options (staple, punch, z-fold) are used.

Bit Switch #5-6=0:



Bit Switch #5-6=1:



Note

- Used in conjunction with Bit Switch #5-6, Orientation Auto Detect for PS/PDF jobs might cause unexpected results.

PJL USTATUS

Printer Bit Switch description

Bit Switch 9-4

These control the way PJL USTATUS returns page count totals in cases where multiple copies of a job are being printed.

BitSw 9-4=0 (default):

This change the way an MFP/LP rotates PCL, PS, PDF, or RPCS print images.

1. The page count for a single copy is returned after the first copy is printed.
2. The page count for the rest of the copies, excluding the first copy, is returned after all copies have been printed.
3. This emulates an older HP PCL firmware spec. It is only needed for compatibility with legacy software.

BitSw 9-4=1:

The page count for all copies is output after all copies have been printed.

This emulates more recent HP PCL firmware specs.

For example, consider 3 copies of a 3 page job:

9-4 = 0

@PJL USTATUS JOB

START

NAME="TEST_page1-3"

@PJL USTATUS PAGE

1

@PJL USTATUS PAGE

2

4.Software Configuration

@PJL USTATUS PAGE
3
@PJL USTATUS JOB
END
NAME="TEST_page1-3"
PAGES=3
<comment> The page count of the first copy is returned.</comment>
@PJL USTATUS PAGE
1
@PJL USTATUS PAGE
2
@PJL USTATUS PAGE
3
@PJL USTATUS PAGE
4
@PJL USTATUS PAGE
5
@PJL USTATUS PAGE
6
<comment> The page count of the remaining two copies is returned.</comment>
9-4 = 1
@PJL USTATUS JOB
START
NAME="Microsoft Word - TEST_page1-3"
@PJL USTATUS PAGE
1
@PJL USTATUS PAGE
2
@PJL USTATUS PAGE
3
@PJL USTATUS PAGE
4
@PJL USTATUS PAGE
5
@PJL USTATUS PAGE
6@PJL USTATUS PAGE
7
@PJL USTATUS PAGE
8

@PJL USTATUS PAGE
9
@PJL USTATUS JOB
END
NAME="Microsoft Word - TEST_page1-3"
PAGES=9
<comment> The page count of all three copies is returned.</comment>

Behavior of USB Printer Detection

An MFP/LP connected via USB sends its product name and unique serial number. With the data, the machine determines whether requires a printer driver for the USB device to be installed.
SP5-844-005 allows you to change how to determine the MFP/LP requires a printer driver installation:

- OFF
  If SP5-844-005 is set to OFF, the unique serial number of the device is sent to the computer. As a result, if the device is swapped out for a device of the same product, pop-up messages will appear, because the serial numbers between the two are different.
- Level 1
  If SP5-844-005 is set to Level 1, a common serial number for the product such as “RICOH MP 305+” series is sent to the computer. As a result, if the device is swapped out for a device of the same product, pop-up messages will not appear because the devices are recognized as having the same serial number.
- Level 2
  If SP5-844-005 is set to Level 2, a common serial number for all GW/GW+ models is sent to the computer. As a result, if a GW/GW+ device is swapped out for a different GW/GW+ device, pop-up messages will not appear because the devices are both recognized as being based on GW/GW+.

Scanner Features

Display settings of recently used scan destination

Configuring the scanner interface so that the most recently used scan destination is cleared.

Whether the MFP clears the most recently used scan destination, can be configured using Scanner SP 1-012-001. By default, this is cleared to avoid subsequent users scanning to it by mistake.

Scanner SP 1-012-001

1 (default): Clear

0: Do not clear

This will cause all of the following to be cleared after the scanning is complete:

- Destination
- Sender
- Email subject
- Email message
- File name

Scanner SP 1-012-001=1 (default):

The information in the list above will be cleared after scanning is finished.

Exceptions:

- User Auth.:
  If SP 1-012-001 = 0 and if User Auth. (excluding User Code authentication) is enabled, the most recently used scan destination will only be retained until the user logs out.
- Scanner Auto Reset timer:
  Even if SP 1-012-001 = 0 the most recently used scan destination can still be cleared by the Scanner Auto Reset timer. If the Scanner Auto Reset timer is shorter than the System Auto Reset timer, then the most recently used scan destination will be cleared when the Scanner Auto Reset timer elapses.

The Setting of SMTP authentication in Scan to Email

Scan to Email fails with the error message "Transmission has failed ". The SMTP username and password are correct. How can I make Scan to Email pass ?

Change SP 5-860-022 "SMTP Auth. From Field Replacement" to On. By doing this, Scan to Email will pass the SMTP authentication.

Note

- Using this option to solve the above problem, the device email address will appear in the email's "From" field. The email address of the user who sent the email will appear in the "Reply-to" field.

Explanation

This is an SMTP authentication issue that aborts transmission of an already started Scan to Email. Currently this has only been reproduced using MS-Exchange server.

MS-Exchange requires that all of the following match:

1. The sender's address in the "MAIL FROM" field. This is also known as the "envelope sender" or "MIME sender". It is an SMTP command sent at the beginning of the email transmission process.
2. The sender's address in the mail header "From:" field. This appears as "From" in email clients. It is a part of the email itself.
3. The email address corresponding to the SMTP username used to login into the SMTP server.

When the MFP logins into the SMTP server, the email address of the username 3) will be compared to 1) and 2). If these comparisons fail, authentication will also fail. Exchange server will stop the transmission procedure, and the "Transmission has failed" message will be returned to the sender.

Typical example

NG case:

SP5-860-022 is Off:

1. The "MAIL FROM" field = device (Fig.1)
2. The mail header "From:" field = user (Fig.2)
3. The SMTP username = device (Fig.1)

When the SMTP server compares 2) and 3) the Exchange Server will stop the transmission procedure.

OK case:

SP5-860 can be used to make the values in the above example, match.

In this example, if SP5-860-022 is On, the user's email address in the mail header '2)' will be replaced by the Administrator's email address. (see Fig.3)

To solve the problem, the Administrator's address must be the same as the device's address.

If this is done:

1. The "Mail From: field = device
2. The mail header "From:" field = administrator
3. The SMTP username = device

1,2 and 3 must match and the authentication should be successful.

Note

- The user's email address will still be inserted into the reply-to field.

The device SMTP user name, password, and email address are configurable in [User Tools] > [Machine Features] > [System Settings] > [File Transfer] > [SMTP Authentication]

User email addresses are configurable in the user configuration of the Address Book.

The administrator email address is configurable in [User Tools] > [Machine Features] > [System Settings] > [File Transfer] > [Administrator's Email Address]

The Qualification Switching of Scan to Folder

Determining which account Scan to Folder uses to access a scan destination and the effects of System SP 5-846-021.

This method depends on how the destination is accessed, whether authentication is being used, and SP 5-846-021.

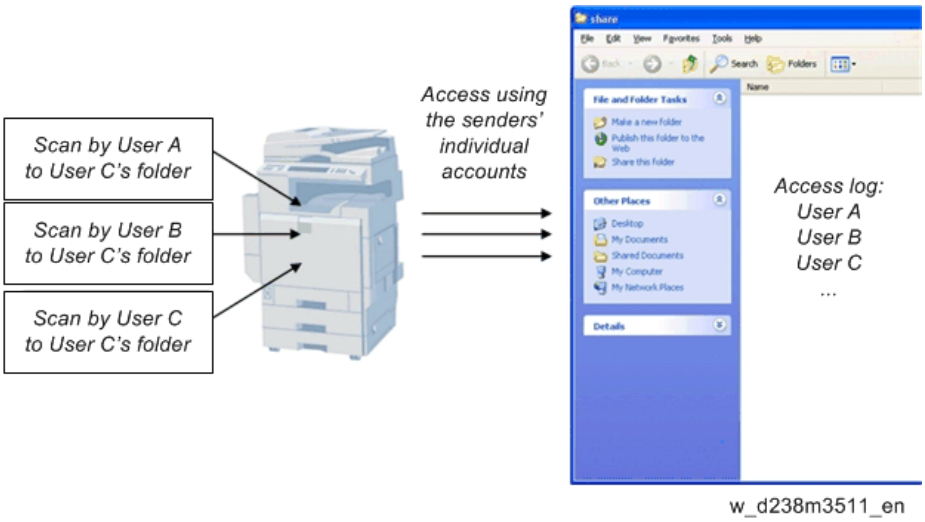
Cases:

Case	Destination selection	User auth.	Account used to access the folder
A	Manual entry	Either enabled or disabled	The user's account *
B	Destination list	disabled	The recipient's account (as configured in the Address Book's Folder Authentication setting)
C		enabled	If SP 5-846-021 = 0 (default): The authenticated user's account 1: The recipient's account (as configured in the Address Book's Folder Authentication setting)

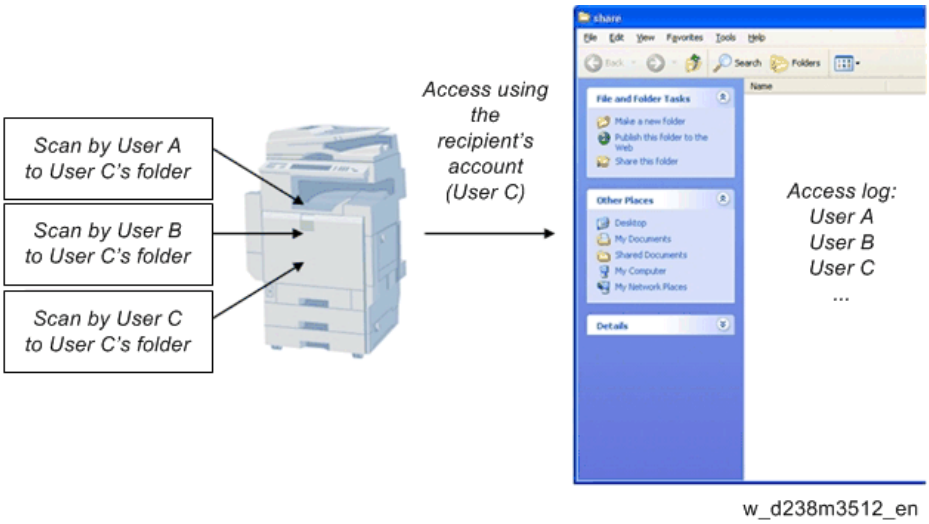
* The "user's account" will be either the one entered during scanning (see the Manual Entry screen capture) or if User Auth. is enabled, the account configured in the user's Folder Authentication setting will be used.

The desintation's access logs:

Case A or Case C with SP=0: The access logs can be used to determine which user sent the scan.



Case B or Case C with SP=1: All access will be logged as the same user.



w_d238m3512_en

Smart Operation Panel 2nd Generation

Field Service Manual

Ver 1.0

Initial Release: Nov, 2016
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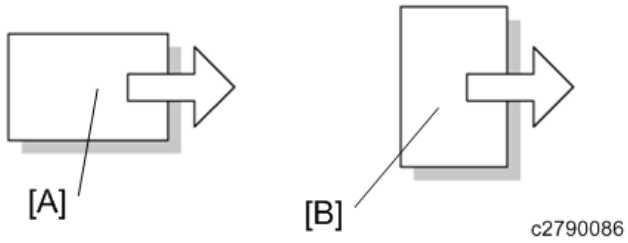
Symbols, Abbreviations

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

Symbol	What it means
	Clip ring
	Screw
	Connector
	Clamp
	E-ring
	Flat Flexible Cable
	Timing Belt
SEF	Short Edge Feed
LEF	Long Edge Feed
K	Black
C	Cyan
M	Magenta
Y	Yellow
B/W, BW	Black and White
FC	Full color



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

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1. Replacement and Adjustment

Smart Operation Panel

Operation Panel Unit

Important

- Turn off the main power switch of the MFP and disconnect the power cord.
- After replacing, make sure that all disconnected harnesses are connected up again and secured in their clamps.

1. Remove the operation panel unit from the MFP.

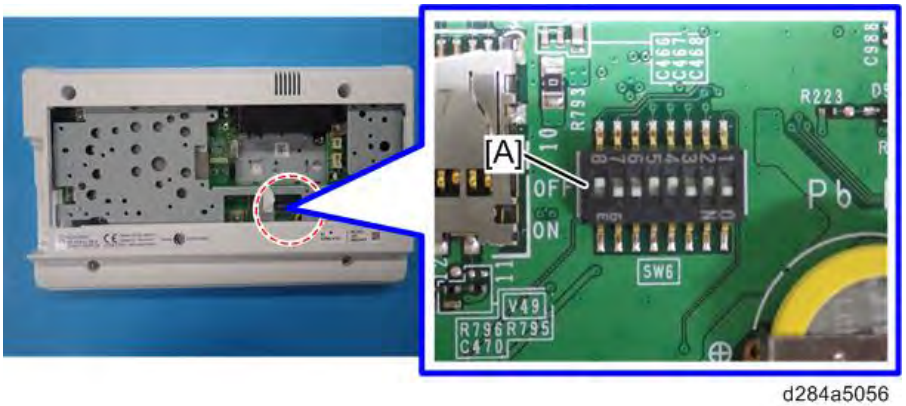
Note

- For details about how to remove the operation panel unit, refer to the service manual for the MFP.

2. Remove the hinges [A] [B] from the operation panel.

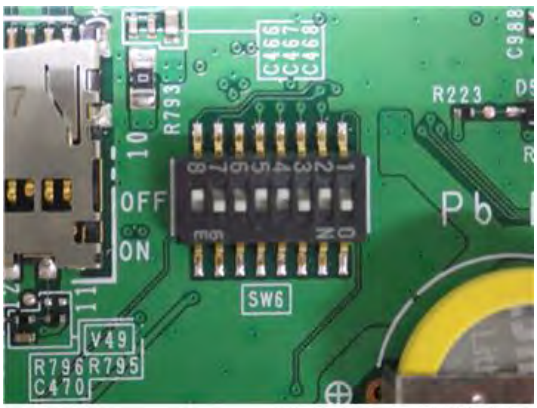
Note

- By factory default, the following switches of the DIP switch [A] on the micro computer board are set to ON: No.1, No.3, No.6 and No.7. When installing the operation panel unit, make sure that the DIP switch setting is correct for the MFP on which you are installing the panel.



- The correct DIP switch setting depends on the MFP. Note the DIP switch settings of the old operation panel unit before replacing, and apply the same settings to the new Smart Operation Panel. Below is

example for DIP switch settings when the following switches are set to ON: No.1, No.3, No.6 and No.7 (This is the factory default setting of a service part)



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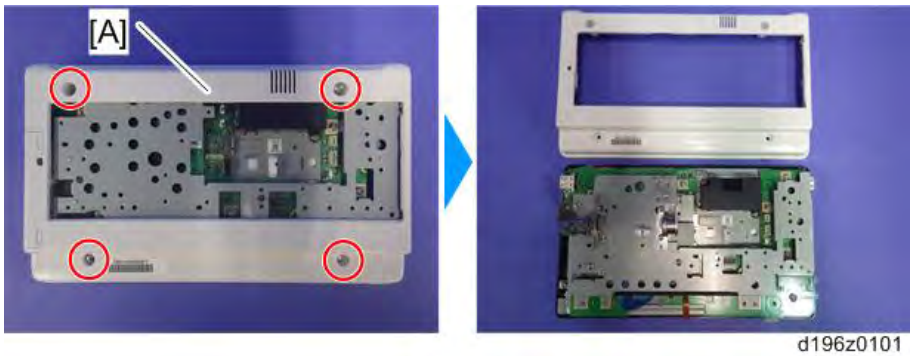
- If the DIP switch setting is wrong, SC672 will be displayed.
- The DIP switch No.1 turns ON/OFF the SC reduction function. Change the setting when needed.
  - 0 (OFF): The SC is displayed on the operation panel when SC672/SC673 occur.
  - 1 (ON): If the error is caused by the software defect when SC672/SC673 occur, automatically reboot is performed and the SC is reset. If the error is caused by the hardware defect when SC672/SC673 occur, the SC is displayed on the operation panel.
- After replacing the operation panel unit, make sure that the latest version of the firmware is installed on the Smart Operation Panel. Update it if necessary (Updating the Smart Operation Panel).

Micro Computer Board

1. Operation panel unit (Operation Panel Unit)

2. Bottom cover [A] (×4)



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Note

- There are four hooks inside the operation panel unit. Before removing the operation panel bottom

cover, check the photos below.

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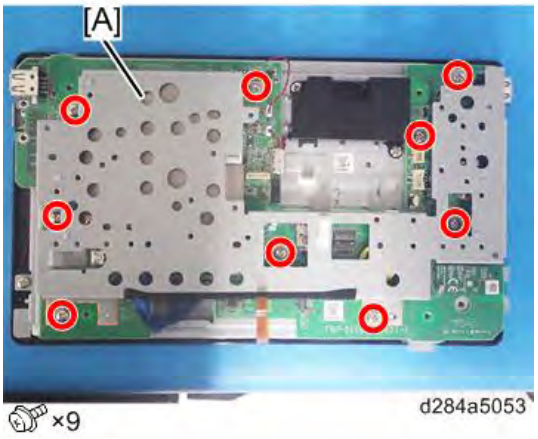
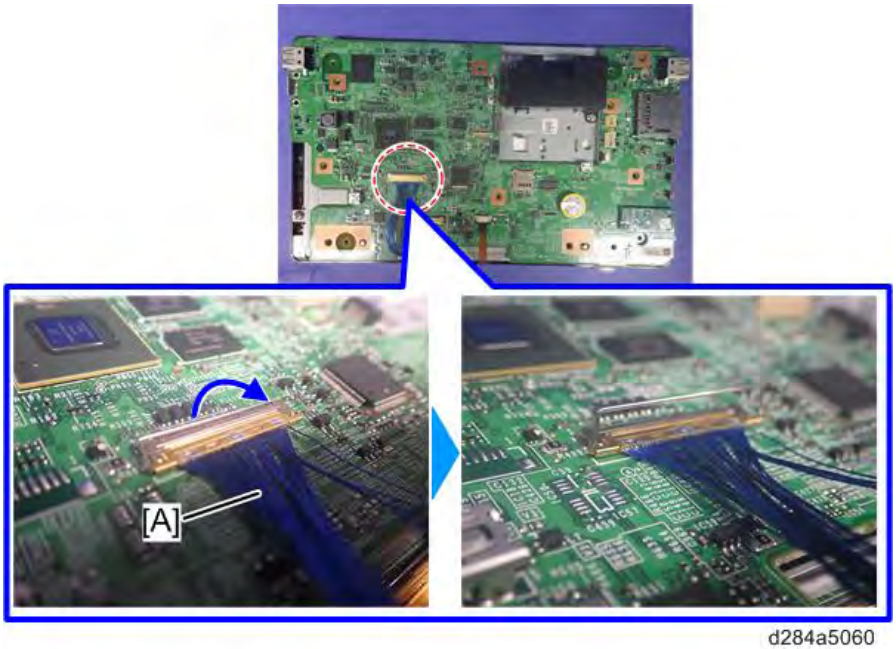
3. Base bracket [A]



4. Lift the fastener of the LCD I/F cable [A] on the micro computer board side.



5. Remove the LCD I/F cable [A] from the micro computer board.

6. Remove the FFC [A] from the micro computer board.

Note

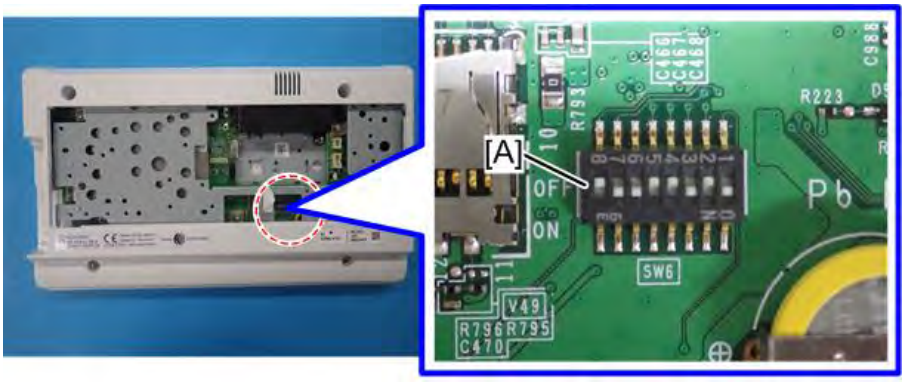
- Pull out the black part to unlock the connector, and then remove the FFC.

7. Micro computer board [A]

Note

- By factory default, the following switches of the DIP switch [A] on the micro computer board are set to ON: No.1, No.3, No.6 and No.7. When installing the operation panel unit, make sure that the DIP switch

setting is correct for the MFP on which you are installing the panel.



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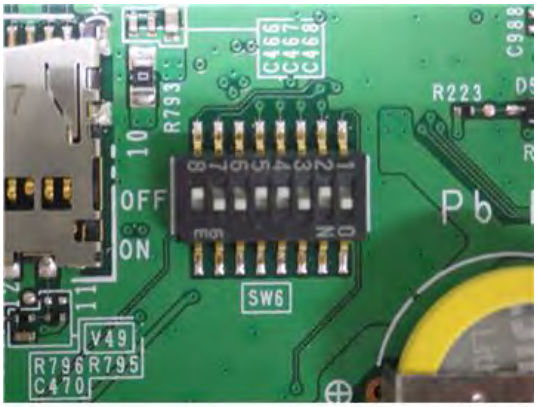
- The correct DIP switch setting depends on the MFP. Note the DIP switch settings of the old operation panel unit before replacing, and apply the same settings to the new Smart Operation Panel.
  Below is example for DIP switch settings when the following switches are set to ON: No.1, No.3, No.6 and No.7 (This is the factory default setting of a service part)



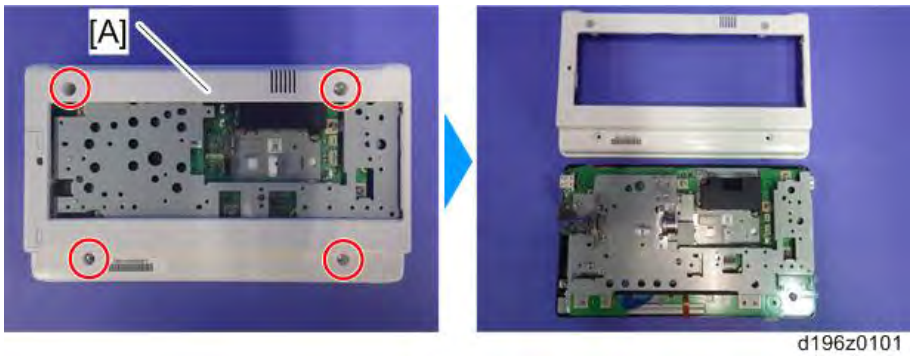
d284a5062

- If the DIP switch setting is wrong, SC672 will be displayed.
- The DIP switch No.1 turns ON/OFF the SC reduction function. Change the setting when needed.
  - 0 (OFF): The SC is displayed on the operation panel when SC672/SC673 occur.
  - 1 (ON): If the error is caused by the software defect when SC672/SC673 occur, automatically reboot is performed and the SC is reset. If the error is caused by the hardware defect when SC672/SC673 occur, the SC is displayed on the operation panel.
- After replacing the micro computer board, perform the following checks:
  - LED Check (LED Check)
  - Key Check (Key Check)

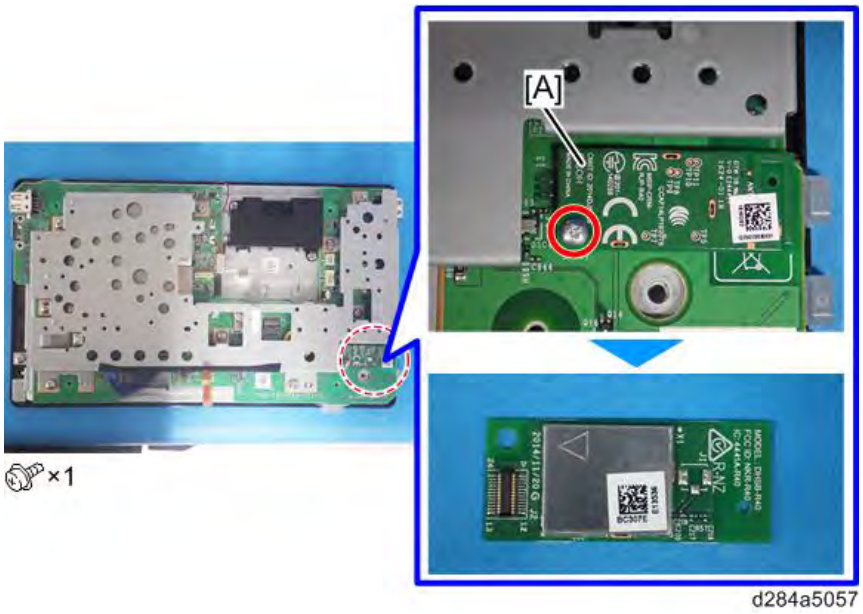
Wi-Fi Module

1. Operation panel unit (Operation Panel Unit)

2. Bottom cover [A] (×4)



3. Wi-Fi module [A]



Note

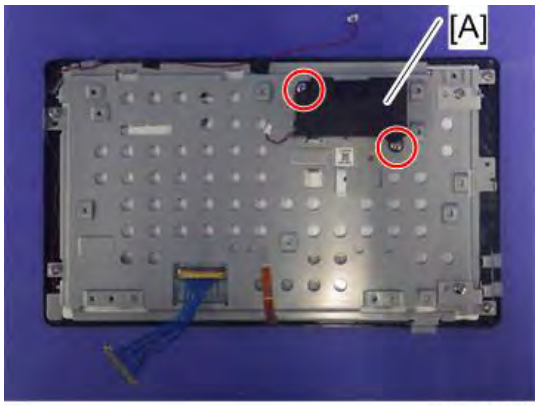
- After replacing the Wi-Fi module, perform the following checks:
  - Wireless LAN Check (Wireless LAN Check)
  - Bluetooth Check (Bluetooth Check)

LCD

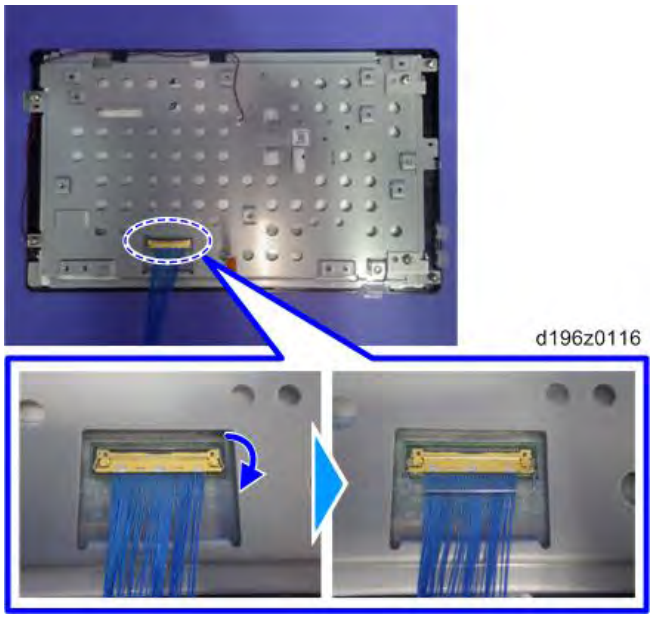
1. Operation panel unit (Operation Panel Unit)

2. Micro computer board (Micro Computer Board)

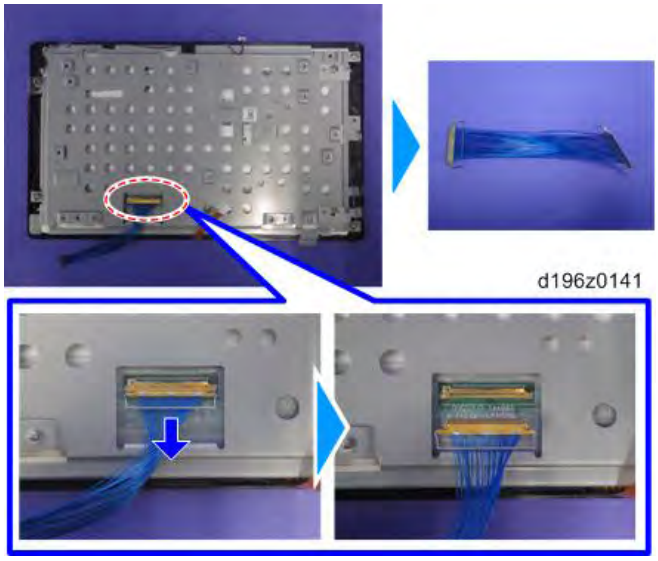
3. Speaker [A] (×2)



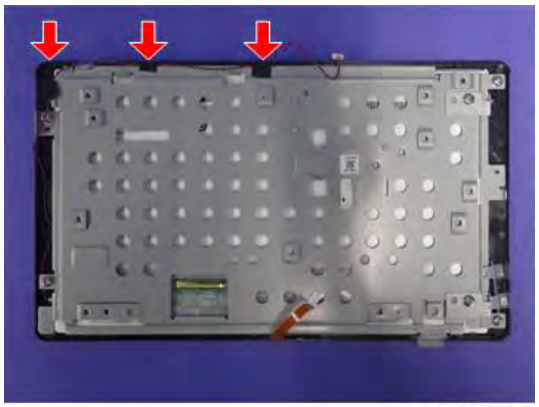
4. Lift the fastener of the LCD I/F cable.



5. LCD I/F cable (cable ×1)

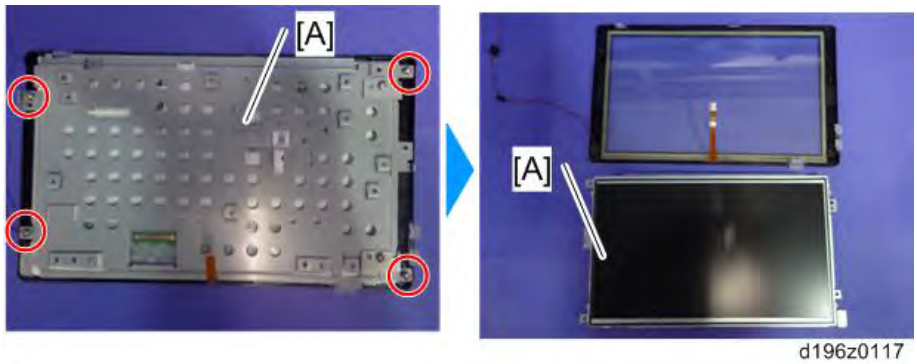


6. Remove the tapes for fixing the microphone harness (tape ×3).



d196z0142

7. LCD [A] (×4)



d196z0117

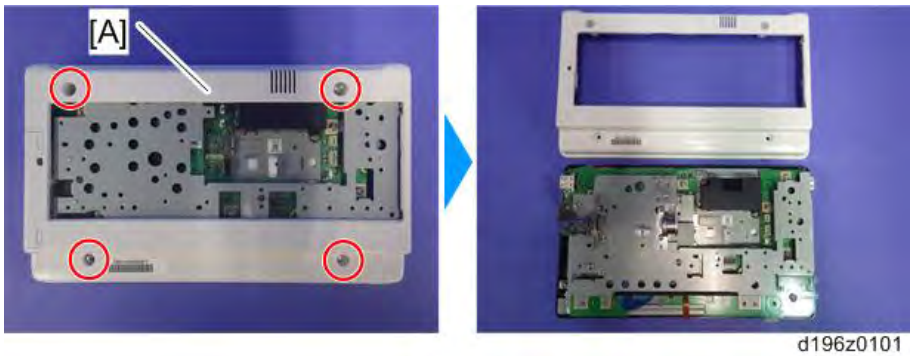
Note

- After replacing the LCD, perform the following checks.
  - LCD Check (LCD Check)
  - TouchPanel Check (TouchPanel Check)
- Perform "TouchPanel Calibration" (TouchPanel Calibration) and "MultiTouch Calibration" (MultiTouch Calibration) of the Self Check function.

Speaker

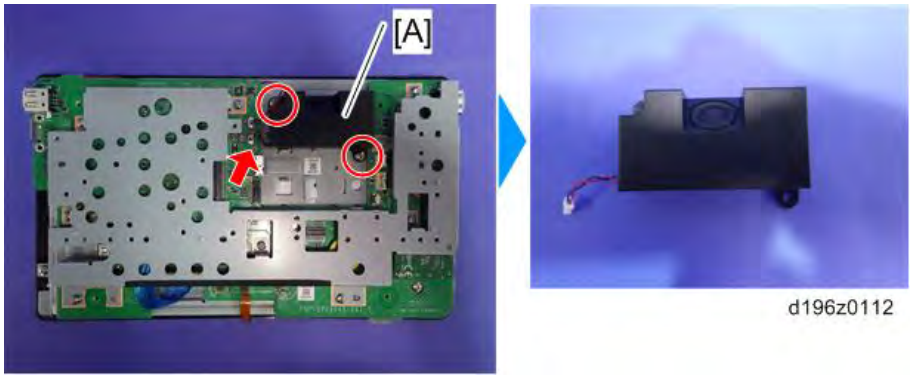
1. Operation panel unit (Operation Panel Unit)

2. Bottom cover [A] (×4)



d196z0101

3. Speaker [A] (×2, ×1)



Note

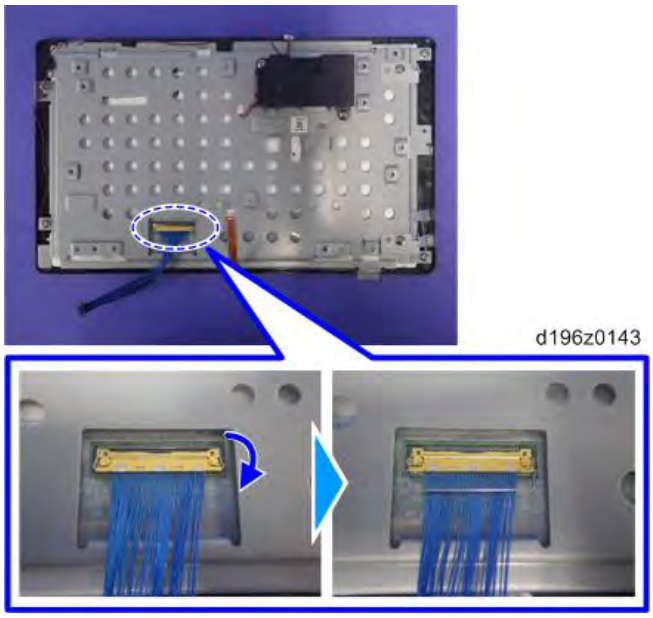
- After replacing the speaker, perform the following check.
  - Speaker Check (Speaker Check)

Microphone

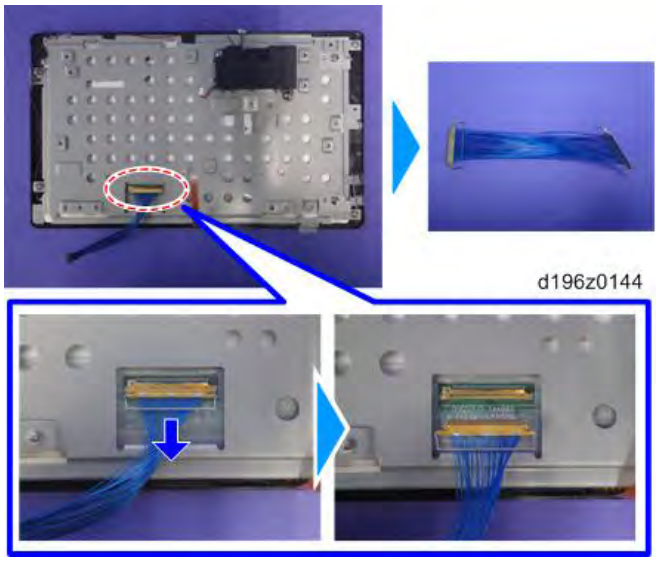
1. Operation panel unit (Operation Panel Unit)

2. Micro computer board (Micro Computer Board)

3. Lift up the securing wire of the LCD I/F cable.

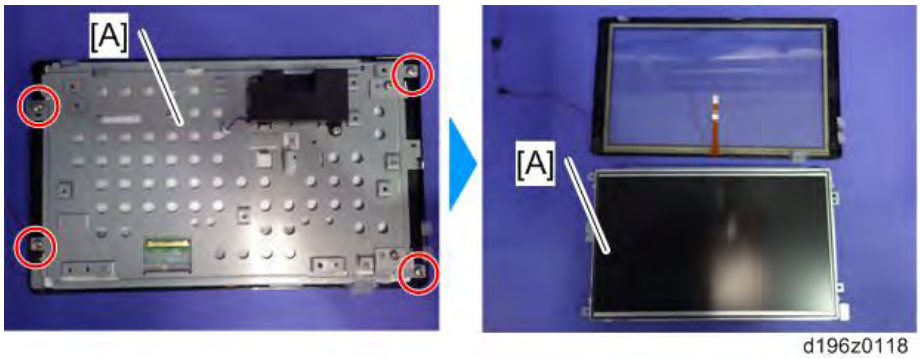


4. LCD I/F cable (cable ×1)

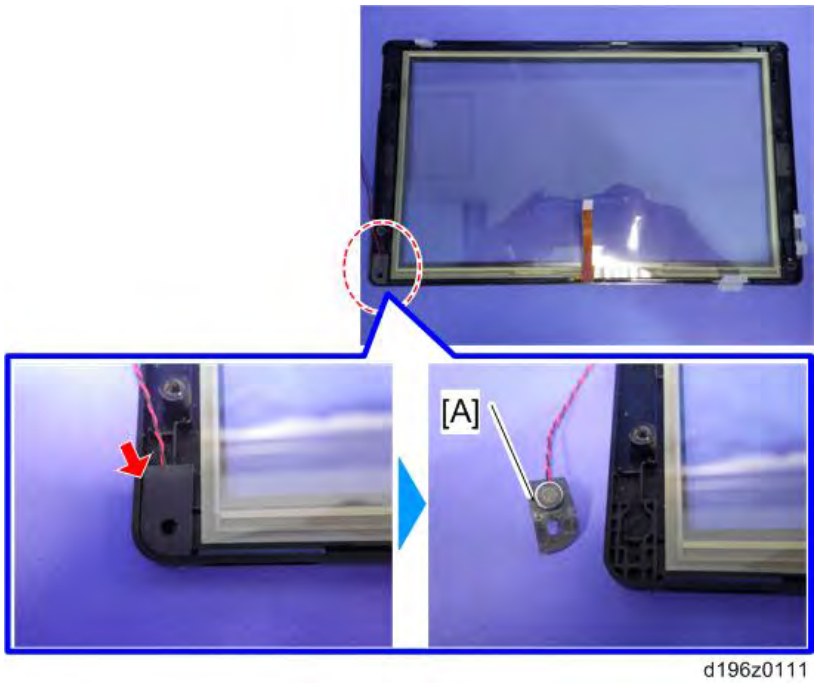


5. Remove the tapes for fixing the microphone harness (tape ×3).

6. LCD [A] (×4)



7. Microphone [A] (cushioning ×1)



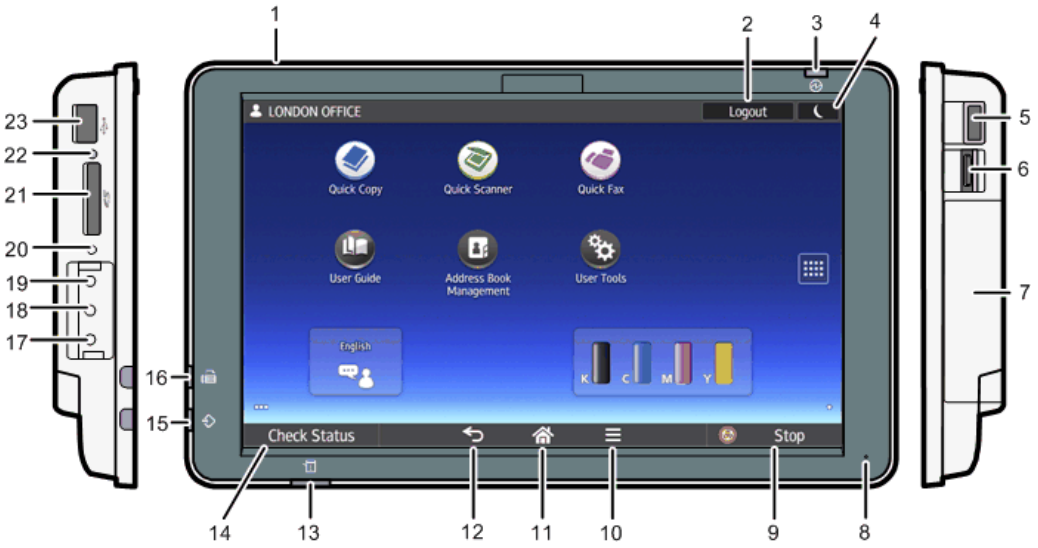
2. Mechanism

Overview

System Components

Hardware Specifications

Components



No.	Name	No.	Name
1	Speaker	13	[Check Status] indicator
2	[Login/Logout] key	14	[Check Status] key
3	Main power indicator	15	Data In indicator (facsimile and printer modes)
4	[Energy Saver] key	16	Fax indicator
5	USB slot for digital cameras	17	Extended Feature key (EX3)
6	HDMI slot	18	Extended Feature key (EX2)
7	USB slot for NFC card readers	19	Extended Feature key (EX1)
8	Microphone	20	Control panel reboot key
9	[Stop] key	21	SD card slot
10	[Menu] key	22	Media access lamp
11	[Home] key	23	USB slot
12	[Back] key		

Basic Specifications

Category	Specification
LCD panel	• Size

Category	Specification
	10.1 inch panel • Resolution WSVGA (1024x600) • Bit width RGB666 (18 bit color) • Brightness 200cd/m^2 (typ.) • Backlight LED Backlight (life: 15,000 hours)
CPU	ARM Cortex-A9 Dual Core 1GHz (SoC: MCIMX6D5EYM10AC)
Touch panel	Low load touch panel (recognizes touches to two points)
Memory	• Volatile Memory RAM (DDR3-1066), 2G • Non-Volatile Memory eMMC NAND, 8GB Note • Uses a 16GB product in SLC Mode. • Program area and data area for the operating system and applications.
External interfaces	• USB Memory USB2.0 Host Type-A • SD Card SD card slot 1ch (SD*^{1}/SDHC*^{2}) *1 Up to 2GB *2 Up to 32GB • USB expansion USB2.0 Host Type-A (for camera, USB keyboard, USB card reader) • USB expansion USB2.0 Host Type-miniB (for NFC expansion) • HDMI HDMI 1.4 (for large screens available as custom order)
Internal interfaces	• Extended Features microSD card slot Note • When a media is inserted in the microSD card slot, its capacity is shown in the control panel service mode (Screen Features > Device > microSD

Category	Specification
	card) and the SMC (in the report for the Smart Operation Panel).
Network	• Wireless LAN 802.11b/g/n • Bluetooth Bluetooth4.0
Audio input/output	Monaural speaker 1ch (output: 1 to 2 W), Microphone
RTC accuracy	±52.56 seconds per month (using external crystal oscillator, 20 ppm)
Hard keys	• Extended Feature keys (EX1, EX2, and EX3) Use for startup in extended mode etc. • Control panel reboot key Use to reboot the control panel when it freezes.
LED types	• Main power indicator (blue) Lights when the power is on. Flashes slowly in Sleep mode. • [Check Status] indicator lamp (red/blue) Lights when an error occurs. • Data In indicator (blue) Flashes when the machine receives data from a printer driver or LAN-Fax driver. • Fax indicator (blue) Flashes while sending or receiving a fax. Lights when there is a received fax document in the fax memory. • Media access lamp (blue) Lights when there is an SD card inserted in the SD card slot.
Maximum power consumption	4 W or less (excluding external interfaces and internal feature expansions)
Power consumption in Sleep mode	0.35 W or less (When in Sleep mode, power is not supplied to USB devices connected to the USB slots.)

Specification comparison with the previous model

Item	This model	Previous model
Appearance	 d196a2016	 d196a2017
Control panel size (Width × Height)	267 × 160 mm	345 × 161 mm
CPU operating frequency	1 GHz	533 MHz
RAM size	2 GB	1 GB

2.Mechanism

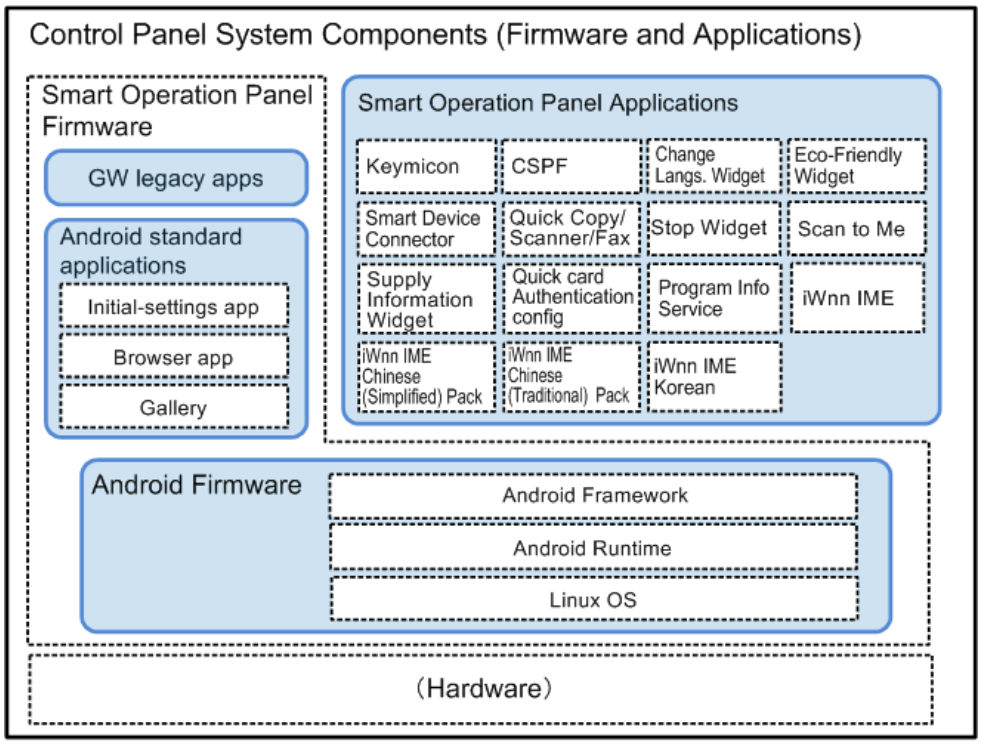
Item	This model	Previous model
LCD panel size	10.1 inch	10.1 inch
Android OS	Version. 4.2	Version. 2.3
Types of the following keys • [Home] key • [Stop] key • [Check Status] key • [Back] key • [Menu] key	Soft keys	Hard keys
LED types	Four types • Main power indicator • [Check Status] indicator • Data In indicator • Media access lamp	Seven types • Main power indicator • [Check Status] indicator • Data In indicator • Media access lamp • [Home] key • [Menu] key • [Back] key
Wireless LAN interface	IEEE802.11bgn	IEEE802.11bgn
Types of external interfaces	• USB port (type A/mini) • USB media slot • SD card slot	• USB port (mini) • USB media slot • SD card slot
Bluetooth	Available	Not available

Available languages

Japanese, English, French, German, Italian, Spanish, Dutch, Norwegian, Danish, Swedish, Polish, Portuguese, Hungarian, Czech, Finnish, Simplified Chinese, Traditional Chinese, Russian, Greek, Korean, Catalan, Turkish, Brazilian Portuguese

Software Specifications

A software package consisting of the Android Firmware and the manufacturer’s own pre-installed applications is installed on the Smart Operation Panel.



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The following three types of software are installed on the Smart Operation Panel.

1. Android Firmware (Android OS)
2. Pre-installed applications
3. Applications that can be installed additionally

Android Firmware (Android OS)

The Android Firmware (Android OS) consists of the following modules that are called “stacks”.

- Linux kernel
- Android Runtime
- Library
- Application Framework

Pre-installed applications

On the Smart Operation Panel, applications such as the GW applications (Copy/Printer/Document Server/Scanner/Fax), Control Panel Browser, the standard keyboard, Installer, Gallery, Self Check are pre-installed. Unlike those installed on the controller board of the MFP, GW applications that are installed on the Smart Operation Panel are for controlling operation and display of the Smart Operation Panel.
Pre-installed applications are provided as part of the control panel firmware (Cheetah System) together with the Android firmware. When you update the control panel firmware using the recovery mode or another method, the pre-installed applications will also be updated.

Applications that can be installed

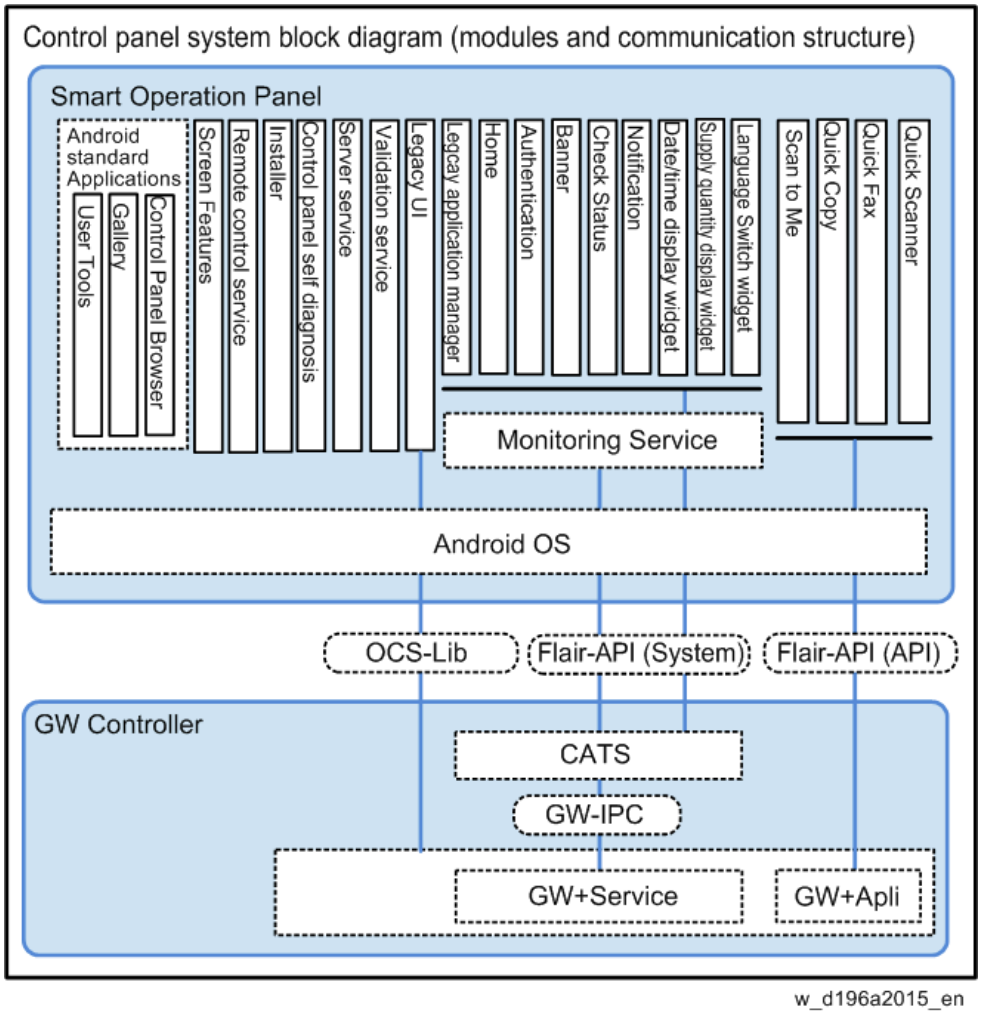
On the Smart Operation Panel, applications can be installed in addition to the pre-installed applications. Applications that can be installed include optional applications that customers can purchase, applications that are

installed only on machines sold in specific regions, and custom-made applications.
On an MFP, applications such as Simple UI applications (Quick Copy, Quick Fax, and Quick Scanner) and Scan to Me are installed.

Communication specifications

The Smart Operation Panel and the GW controller are connected by a USB 2.0 cable. They communicate with each other via the Android OS on the Smart Operation Panel, using protocols called “OCS Library” and “Flair-API (System/Application)”.

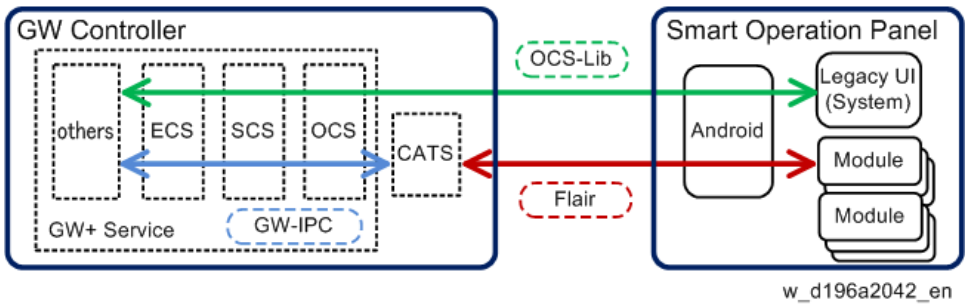
System block diagram



Overview of Components

Communication module/signal name	Details
OCS Library	OSC stands for Operating Control Service. It is a module that controls the control panel. The set of signals used by this module to control the control panel are called the OCS Library. It is used during communication between the Legacy UI (system) module on the Smart Operation Panel and the GW module for the following processes.

Communication module/signal name	Details
	• Deciding on the display format suitable for a particular model of the control panel, so that the intended image data can be converted to actual image data. • Converting touch panel operations to commands.
Flair-API (System/Application)	Flair is the manufacturer's own communication interface between software modules. The interface uses a generic WebAPI. It is divided into two parts: a part that communicates directly with applications such as the application manager, Home, Authentication, Banner, Check Status, and Widgets, and a part that monitors applications. It communicates with the GW controller via the CATS module.
CATS	CATS stands for Cheetah Application Total System. It is a module in the GW controller. Because the Smart Operation Panel uses the Android OS, the contents and protocols of communication are not the same as those of the conventional control panel. CATS serves as an intermediary between the GW controller and the Smart Operation Panel. It also controls the power status of the control panel. CATS communicates with the Smart Operation Panel using the Flair-API, and communicates with the GW module using the GW-API.
GW-IPC	The name of the interface used among modules in the GW controller. The role is the same as that of the Flair-API.



Note

- API stands for Application Programming Interface. An API is an interface that software modules use in order to communicate with each other.

Application Specifications

The pre-installed applications and applications that can be additionally installed on the Smart Operation Panel can be classified into the following 3 categories.

- System applications
  Applications that operate in conjunction with multiple functions (operating regardless of the application)
- Program applications

Applications that provide a single additional function

- Widget applications

  Applications that provide a widget

The following table explains the function of each application.

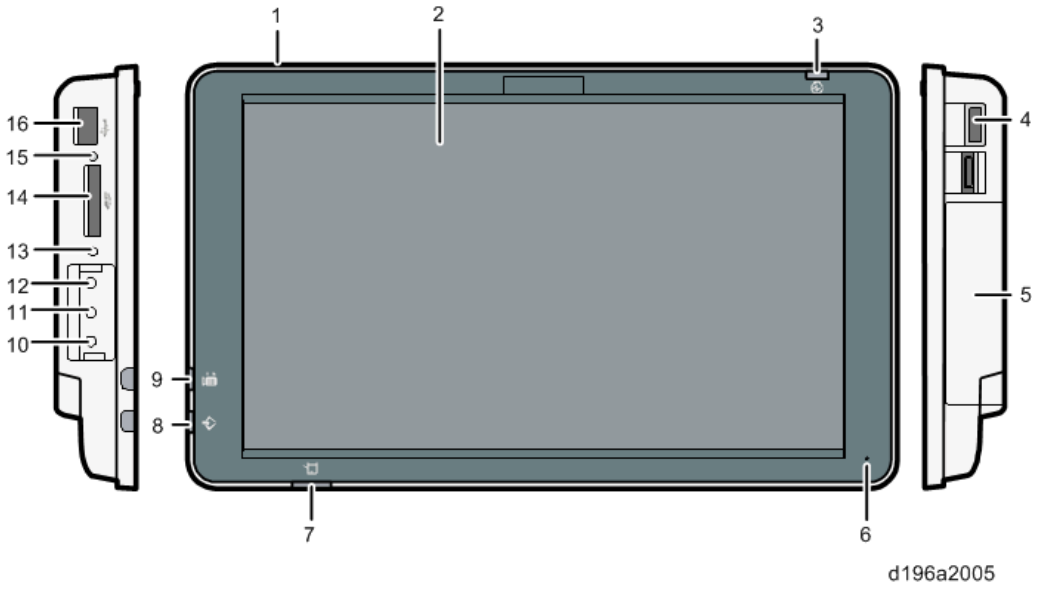
Application	Functions
Settings	Provides the Android OS's standard settings.
Screen Features	Provides the manufacturer's own settings.
Authentication	Monitors login to/logout from the MFP, and transmits authentication information to other services and applications.
Monitoring service	Monitors the status of the MFP. This service is used by widgets and applications including Banner, Check Status, Authentication, and Home.
Launcher (Legacy Application Manager)	This application provides an application switching function when there is no Home application.
Installer	Provides the installer UI. Internal operation is controlled by the Package Installer application.
Server service	Provides server functions for application installation.
Remote control	Works together with the server service and provides the functions and displays of RFU and import/export of settings, including the UI.
Manual	Provides connection to the server where manuals are stored (HTTP server). Manuals are displayed using the Web Browser application.
Splash screen	Provides the image that is displayed immediately after the MFP is turned ON.
Startup animation	Provides the startup animation for the operation screen.
Validation	Performs validation when the machine is started in CC certified mode. * CC stands for Common Criteria. It is the evaluation criteria for IT security (ISO15408).
LUI system	LUI stands for Legacy User Interface. The conventional control panel display is displayed by this application. Model-specific settings are included in this application
Package Installer	Provides installation and update functions for applications. Also provides the screen for uninstallation.
Self Check	Provides a self-check function for the control panel hardware. See Panel Self Check for contents of the self-check.
Initialization	Initializes settings of the MFP or the control panel.
Web Browser	Android OS's standard Browser application
Gallery	Reads images from SD cards or other media, and sets them as wallpaper or live wallpaper.
Standard keyboard	Android OS's standard operation panel that is called up when the user enters characters or numbers.

Application	Functions
Home screen	Provides the Home screen. Also provides screen customization and application switching.
Banner	Displays balloon messages in the banner area at the bottom of the panel display.
OCS emulator	This application serves as an intermediary between the control panel and the controller board. (The emulator allows the controller board to work the same way regardless of the type of control panel.)
Simple UI applications	Simple (Quick) applications. • Quick Copy Provides the Quick Copy function. • Quick Fax Provides the Quick Fax function. • Quick Scanner Provides the Quick Scanner function.
Widgets	Resident applications that display information on the screen as configured. • Date/time indicator Displays the date and time. • Supply information Displays toner status. • Change Languages Provides the language switching function. • Eco-friendly Displays detailed information about the eco functions. • Fax Received File Displays the fax reception status. • Stop Provides a [Stop] key on the application screen. Used by functions such as Quick Copy and Scan to Me. • System Message Displays system messages.
IME (excluding the standard keyboard)	Multiple settings can be configured (the user can select one when using the keyboard). • iWnn IME Chinese (Simplified) Pack Chinese (simplified) language pack for iWnnIME • iWnn IME Chinese (Traditional) Pack Chinese (traditional) language pack for iWnnIME • iWnn IME Korean Pack Korean language pack for iWnnIME
ICCardDispatcher	Host application for NFC (Near Field Communication). Transmits card

Application	Functions
	information to authentication applications.
Quick Card Authentication	Provides simple authentication using an IC card.
Standard IC card plugin	A plugin for using IC cards. Examples of IC cards are the FeliCa (Lite) and Mifare card systems.
Bluetooth Service	Provides configurations for standard Bluetooth on the Android OS.
Bluetooth Authentication Plugin	This plugin is required to use Bluetooth authentication.
Copy	Copy application with a new UI. This application is not available for MP C 306Z/406Z series.
Fax	Fax application with a new UI. This application is not available for MP C 306Z/406Z series.
Scan	Scan application with a new UI. This application is not available for MP C 306Z/406Z series.
Printer	Printer application with a new UI. This application is not available for MP C 306Z/406Z series.
Quick Print Release	Ability to view and print stored documents. This application is not available for MP C 306Z/406Z series.
Print/Scan (Memory Storage Device)	"Media Print" and "Scan to Media" have been integrated into this application. This application is not available for MP C 306Z/406Z series.
Web Browser NX	Provides an operating environment for solution applications' functions and configuration.
Proximity Card Reader Support Plugin	Provides support for USB card readers.

Panel Components/Screen Layout

Components of the Control Panel

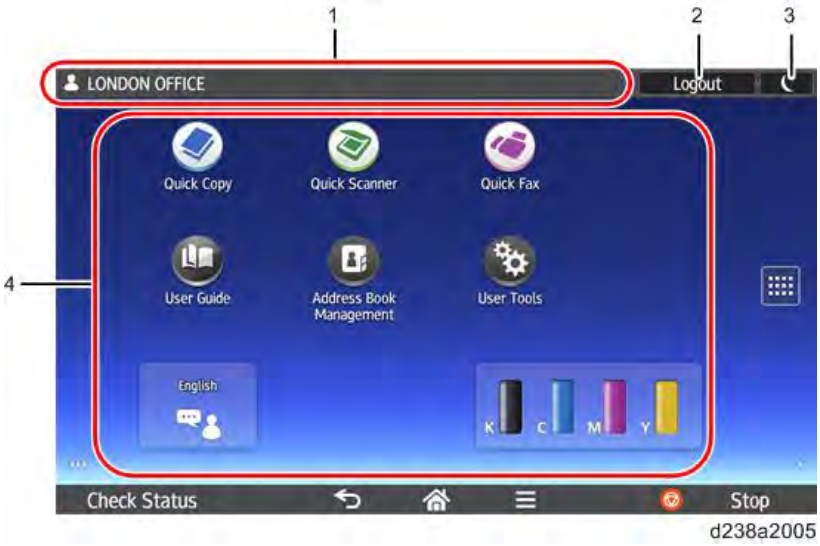


No.	Name	Description
1	Speaker	There is currently no function that uses this.
2	Display panel	Displays icons for functions and applications. Displays the operation screens, operation keys and other information.
3	Main power indicator	Indicates power OFF/ON status.
4	USB slot for digital cameras	A digital camera can be connected here.
5	USB slot for NFC card readers	A near field communication (NFC) device can be connected here.
6	Microphone	There is currently no function that uses this.
7	[Check Status] indicator	Indicates system status.
8	Data In indicator	Flashes when the machine receives data from a printer driver or LAN-Fax driver.
9	Fax indicator	Indicates fax status. • During communication: Flashes • When fax documents have been received using Substitute Reception: Lights • When the machine has received a confidential fax document: Lights
10	Extended Feature key (EX3)	Used for system maintenance, such as control panel self-check.
11	Extended Feature key	Used for system maintenance, such as control panel self-check.

No.	Name	Description
	(EX2)	
12	Extended Feature key (EX1)	Used for system maintenance, such as control panel self-check.
13	Control panel reboot key	Used when rebooting the control panel.
14	SD card slot	Insert an SD card here.
15	Media access lamp	Lights when an external media is inserted into the SD card slot or the USB slot.
16	USB slot	Insert a USB memory device here.

Panel display

Screen Layout

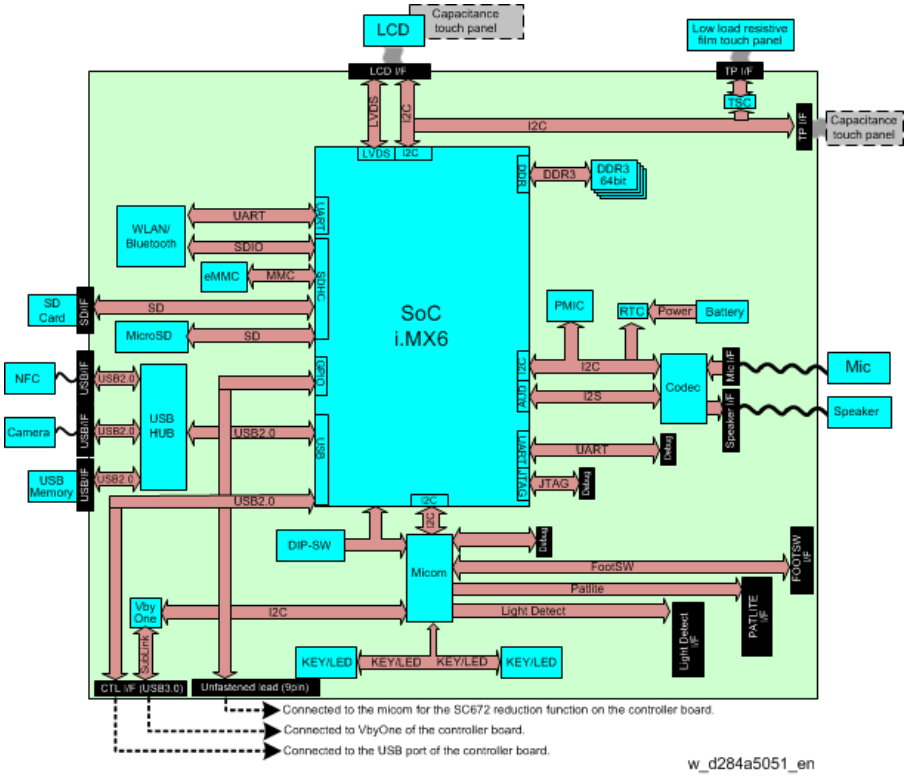


No.	Name	Description
1	Login information area	Login information is displayed.
2	[Login/Logout] key	Displayed when authentication is enabled. The login screen appears if you press [Login]. [Logout] is displayed if you have already logged in. You will be logged out when you press [Logout].
3	[Energy Saver] key	Enters Sleep mode.
4	Icon display area	Application icons, widgets, and system messages are displayed.

Soft keys displayed on the screen

No.	Name	Description
1	Function keys	Users can assign shortcuts for each application. Up to three applications can be assigned as shortcuts. When an application is assigned as a function key, users can call the application from any screen. The function keys are disabled by default. Users must enable this function to be able to allocate applications to function keys.
2	System messages key	System messages are displayed in this area. If there are multiple messages to be displayed, they are displayed in rotation. Tapping the message opens a dialog which shows all the messages.
3	[Application List] key	Displays the list of installed applications.
4	[Stop] key	Stops the scanning of a document, fax transmission, or printing to paper.
5	[Menu] key	Displays the menu screen of the application in use. May not be available depending on the application.
6	[Home] key	Displays the Home screen.
7	[Back] key	Use this to go back to the previous screen when the Screen Features screen or the screen of an application is displayed.
8	[Check Status] key	You can check the status of the MFP, each function, and the current job. You can also check the job history and maintenance information of the MFP.

Electrical Components

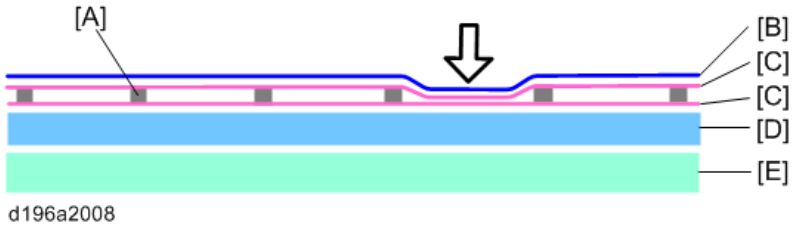


Touch panel

The touch panel of this machine uses a 4-wire resistive film method (low load resistive film analog 4-wire method). It can detect two points for flick/drag/pinch-in/pinch-out operations. Resistive touch panel has been adopted in order to allow operation with a prosthetic hand.

Basic Structure

An analog 4-wire resistive film touch panel has 2 layers. Two materials (mainly film or glass) with transparent conductive film (ITO) are attached such that the transparent conductive film layers face each other.
When the film is pressed with a finger or a pen, the transparent conductive films contact each other and the touch panel operation is recognized.
Insulators (spacing dots) secure space between the two transparent conductive film layers to prevent short-circuiting.
Because the transparent conductive film has a uniform resistance characteristic, the resistance value reflects the distance of contact.



[A]: Spacing dot

[B]: PET film

[C]: Transparent conductive film

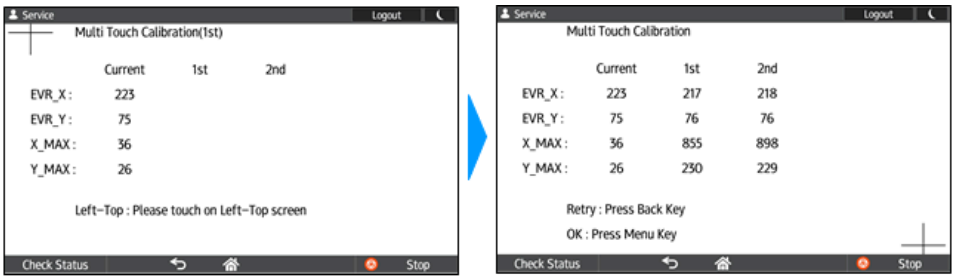
[D]: Base glass

[E]: LCD panel

Self-Check (multi-touch calibration) mechanism

With the Multi-touch calibration in the self-check function, the touch panel is automatically calibrated using the results of touches to the top left and bottom right positions.

The values of “EVR_X”, “EVR_Y”, “X_MAX”, and “Y_MAX” are used for internal processing. They do not indicate the positions or distance of the touched points. There is no problem unless there is a huge difference between the values of the first calibration and the second calibration.



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Controlling the Power Supply

Exiting Energy Saving Modes

Because this model of Smart Operation Panel has no hardware keys, the MFP exits from energy saving mode when the user does one of the following:

- Touches the display panel
- Lifts the ADF
- Sets an original in the ADF

Screen Startup Mode

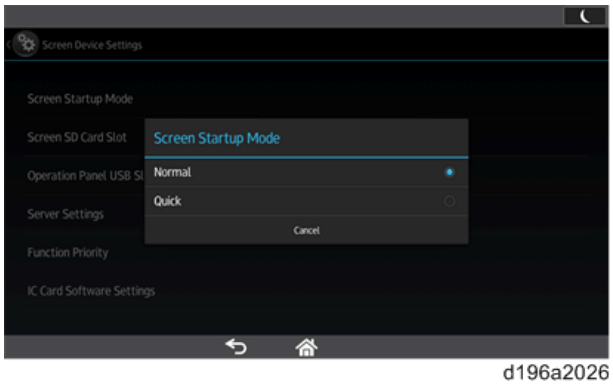
Startup Modes

There are two screen startup modes. The factory default setting is Normal.

1. Normal
   This is the standard startup mode. When the main power of the MFP is turned ON, the control panel starts up using less power compared to Quick mode.
2. Quick
   By preparing for the next startup when the machine shuts down, the control panel starts up faster than in Normal mode.

Changing the Screen Startup Mode

Screen Startup Mode can be changed in Screen Features.
Select [Screen Features] > [SYSTEM] > [Screen Device Settings] > [Screen Startup Mode], and then select [Normal] or [Quick].



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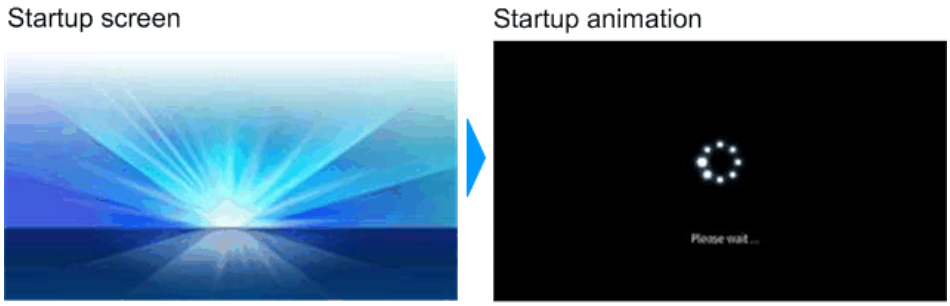
Note

- In the following cases, the control panel starts up in Normal mode even if [Quick] is selected.
- The power cord has been disconnected from the power outlet after the last shutdown.
- The MFP is turned ON after being turned OFF due to reasons such as a power failure.
- The MFP was not properly shut down the last time it was turned OFF.

How the Control Panel Starts Up

In Normal mode

The startup screen is displayed on the display panel, followed by the startup animation.



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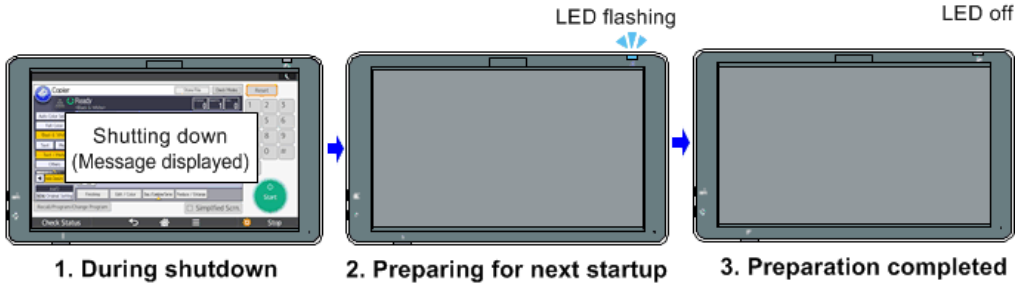
In Quick mode

The [Home] screen is displayed immediately after the main power of the MFP is turned ON. The startup screen displayed when starting in Normal mode is not displayed.

How the Screen Shuts Down When Quick mode Is Selected

When Quick mode is selected, the MFP prepares for the next startup when it shuts down The main power indicator flashes during preparation for the next startup. The indicator turns off when preparation is completed.



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If the MFP is turned ON during shutdown, the preparation for the next startup continues. When preparation for the next startup is completed, the control panel starts up in Quick mode.

Note

- When Quick mode is selected, the control panel starts up faster than in Normal mode but shutdown takes longer than in Normal mode.

Shutdown Functions

The shutdown functions and their uses are as follows.

Shutdown mode	Use	Operation
Normal Shutdown	Same as shutdown by users.	Turn the main power switch off.
Forced shutdown	When normal shutdown does not complete even though you waited a long time.	Hold the main power switch 6 seconds or

		longer.
Shutdown for parts replacement	• When you have to disconnect the power cord from the power outlet, such as when replacing parts. • When you want to start the machine normally and then enter recovery mode, without changing the Startup mode in Screen Features. (For updating control panel firmware)	Turn the main power switch off while holding down [Stop].
Shutdown for software update	When you are going to turn on the MFP within 5 minutes for updating the MFP firmware or package. (Use shutdown for parts replacement if you are updating the control panel firmware.)	Turn the main power switch off while holding down the [EX1] key.

Normal Shutdown

The MFP is equipped with a function to shut down safely in order to:

- Prevent damage to the file systems in the HDD and the NAND flash memory.
- Prevent paper from being left inside the body of the MFP (except when paper is jammed).

If the main power switch is a rocker switch, the shutdown process begins when the rocker switch is moved to the OFF position.

If the main power switch is a push switch, the shutdown process begins when the switch is pressed. To make a forced shutdown, press and hold the push switch for 6 seconds. However, if you force a shutdown during the shutdown process, data being processed may be lost. Forced shutdown is to be used to shut down the MFP without disconnecting the power cord when the shutdown process cannot be completed.

Other Shutdown Functions

This MFP has two additional shutdown functions to facilitate maintenance.

Shutting down the MFP for parts replacement (Starting up in Normal mode when Quick mode is selected)

When Quick mode is selected, the MFP prepares for the next startup when it shuts down. This causes the shutdown process to take longer than when Normal mode is selected.

If you need to disconnect the power cord after shutdown in order to replace parts or for other reasons, you can use the following procedure to shut down the MFP just like you do in Normal mode. This shortens the time it takes to shut down the MFP.

- Procedure
  Turn the main power switch OFF while holding down the [Stop] key on the control panel. Continue to hold down the [Stop] key until the shutdown screen is displayed.

Shutting down the MFP for software updates (Shutting down the MFP with the control panel in Sleep mode)

If you are going to turn ON the MFP within 5 minutes, you can use the following procedure to shut down the MFP

with the control panel in Sleep mode.

- Procedure

  Turn the main power switch OFF while holding down the [EX1] key. Continue to hold down the [EX1] key until the shutdown screen is displayed.

Note

- You must turn ON the MFP within 5 minutes.
- If more than 5 minutes has elapsed after shutting down the MFP using the above procedure, the machine starts up in Normal mode even if Quick mode is selected.

3. System Maintenance

System Maintenance

Maintenance Modes

Service program (SP) modes for the Smart Operation Panel are as follows:

Mode	Use	Notes
SP Mode (MFP)	SP modes for the MFP (controller, engine)	The numeric keys are required to enter this mode. Display the soft keys of the GW application or of the SP mode.
Service mode (control panel)	SP modes for the Smart Operation Panel. • Changing SP mode settings in the Screen Features menu. • Installing and updating applications that can be installed	Same as above
Recovery mode	Maintenance modes for the Android OS • Updating firmware • Initializing all data	-

Login to/Logout from Control Panel Service Mode

Login

In the same way as you log in to the SP Mode on the MFP, you use the soft keys to enter a combination of numbers in order to login to the service mode of the control panel.

Note

- You cannot log in to the service mode of the control panel when one of the following screens is displayed.
- Stop All Jobs
- User Tools
- Address Book Management

Use the numeric keys on one of the following screens.

- Soft keys on the GW application screen
- Soft keys for the control panel’s service mode (displayed by pressing both the [EX3] key and [Check Status] at the same time)

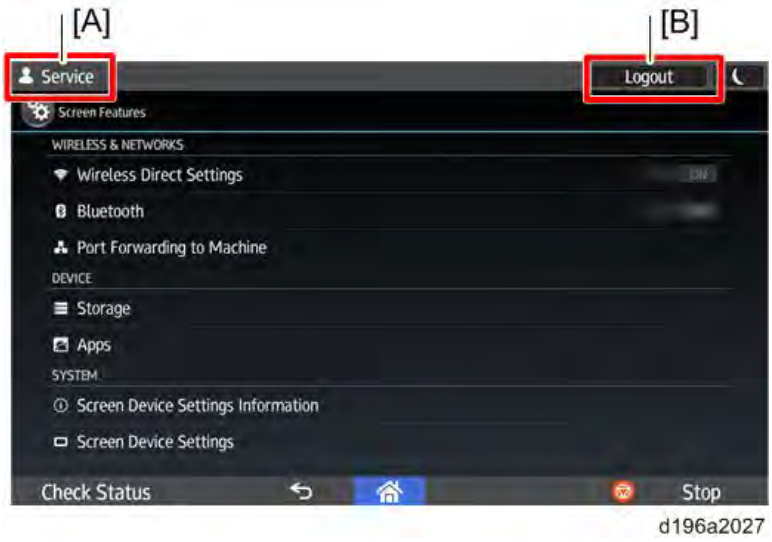
Note

- To exit the soft keys, press [EXIT] on the screen.

Login Status Indicator

When you log in to the control panel's service mode, the Screen Features screen is displayed.

- "Service" is displayed in the login information area [A].
- [Logout] is displayed in the Login key area [B] to allow logout from the service mode.



Logout

Press [Logout] to log out from the control panel's service mode.

Note

- You need to logout manually because the Auto Logout function does not work.

Depending on the authentication settings of the MFP, the following screen is displayed after you log out.

Authentication settings		
Administrator authentication: OFF User authentication: OFF	Administrator authentication: ON User authentication: OFF	Administrator authentication: ON User authentication: ON
Screen of the function selected in [Function Priority]	Screen of the function selected in [Function Priority]	[Home] screen

When Entry to Service Mode Is Prohibited by the Administrator

The administrator of the MFP can prohibit entry into the control panel's service mode by enabling [Service Mode Lock] in [System Settings].

When [Service Mode Lock] is enabled, the machine does not enter the service mode even if you enter the number combination for the control panel's service mode. There will be no error messages or beeping sounds to indicate login failure.

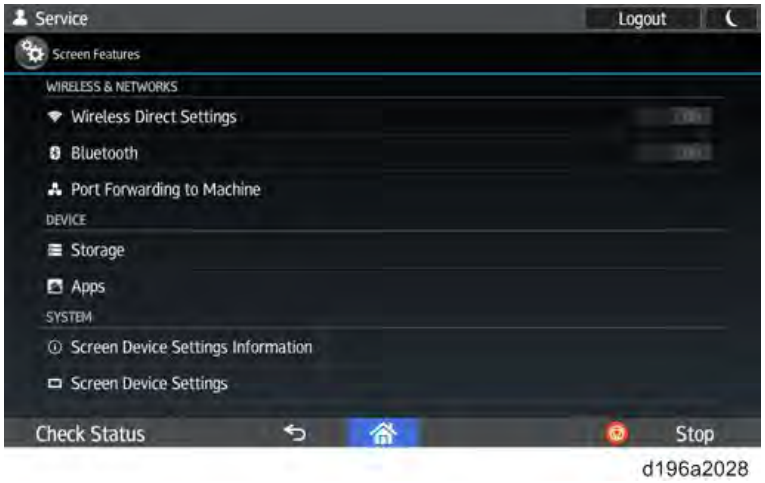
Note

- The machine can enter the recovery mode even if [Service Mode Lock] is enabled.

Service Mode Menu

There are three menus of settings.

- WIRELESS & NETWORKS
- DEVICE
- SYSTEM



WIRELESS & NETWORKS

Menu level			Description
1st level	2nd level	3rd level	
Wireless Direct Settings	Group Owner Mode		You can only view the setting.
	Connection Password		You can only view the setting.
	DHCP Server IP Address		You can only view the setting.
	DHCP IP Address Range		You can only view the setting.
	Select Channel		You can only view the setting.
	PEER DEVICES		View and configure devices that can be connected.
	REMEMBERED GROUPS		Displays groups that have been previously connected.
Bluetooth	ON/OFF		You can only view the setting.
	SEARCH FOR DEVICES		Scans for Bluetooth devices in the vicinity.
	(name of this device)		You can only view the setting.
	PAIRED DEVICES		View and configure paired devices.
	AVAILABLE DEVICES		View and configure available devices.
Port Forwarding to Machine	Port Forwarding Settings	Port Forwarding Cinfig 1-20	Requests sent to the wireless LAN unit of the Smart Operation Panel can be forwarded to the controller of the MFP. You can enable or

Menu level			Description
1st level	2nd level	3rd level	
			disable ports to forward these requests.
MTU Settings	PathMTU(Enable/Disable)		Enables/disables the PathMTU size set in [MTU Size]. When you change this setting, the control panel restarts.
	MTU Size		Sets the size of PathMTU. Default: 1500.

DEVICE

Menu level			Description
1st level	2nd level	3rd level	
Storage	INTERNAL STORAGE	Total space	Displays the total size of the internal storage.
		Available	Displays the available space of the internal storage.
		Apps (app data & media content)	Displays the size of applications in the internal storage.
	SD CARD *1	Total space	Displays the total size of the SD card.
		Available	Displays the available space of the SD card.
		Apps (app data & media content)	Displays the size of applications in the SD card.
		Erase SD card	Erase data written to the SD card.
Apps	Install	Install from SD Card	Install or update applications from an SD card.
		Install from Server	Enter a product key to install or update applications from the server.
		Activate Applications	Activate applications that have been installed from the server.
		Update Applications	Update applications that have been installed.
		Uninstall	Uninstall applications.
		Check Server Connect	Check if you can connect to the Server.

*1 Displayed only when an SD card is inserted into the SD card slot of the control panel.

SYSTEM

Menu level			Description
1st level	2nd level	3rd level	
Screen Device Settings Information	Status		Displays the following: • Wi-Fi MAC address • Bluetooth address

Menu level			Description
1st level	2nd level	3rd level	
			• Interface Settings • Wi-Fi settings (ON/OFF)
	Legal information	Open source licenses	Displays the open source license information.
	Software Version List		Displays the versions of control panel firmware and installed applications. When saving the software version list on an SD card, insert an SD card into the SD card slot of the control panel, and then press [Save to SD Card].
Screen Device Settings	Server Settings	Port number	Input a port number for communication with the import/export and RFU server. The input number is used for both HTTP and HTTPS connections. (Normally, input a number within 55101-55111.)
	Application Settings		Displays a list of installed applications. If you press [Settings] for an application, the setting screen for the CE is displayed. The screen does not change if the application has no setting items.
	Authentication priority mode	Authentication priority mode	This setting gives priority to the recovery time from energy saving modes when an IC card authentication device is connected. When this setting is selected, the MFP does not enter Engine OFF mode, and always recovers from Silent mode.
		Start time(hhmm)	You can specify the start time of Authentication priority mode. Note: This can be changed only when [Authentication priority mode] is deselected.
		Expiration time(hours)	You can specify the period of validity of Authentication priority mode. Note: This can be changed only when [Authentication priority mode] is deselected.
	Screen device always-connection		This setting prevents the control panel from entering Sleep mode, so that Bluetooth and

Menu level			Description
1st level	2nd level	3rd level	
	Setting		other communication devices remain connected. When this setting is selected, the control panel does not enter Sleep mode. Only the LCD (display panel) turns OFF.
	Panel Self Check		Starts self-diagnosis of the control panel. (Panel Self Check)

Panel Self Check

The following are available as self-diagnostics functions of the control panel:

- LED Check
- Key Check
- LCD Check
- Speaker Check
- TouchPanel Check
- TouchPanel Calibration
- MultiTouch Calibration
- Wireless LAN Check
- Bluetooth Check

Note

- The [Self Check] menu is displayed in either English or Japanese. The language can be changed using [Change Language] in the Home screen.
- If an unavailable language is selected, English will be displayed.
- With some diagnostic items, press [Back] [A] at the bottom of the screen to return to the top menu of

[Self Check].

LED Check

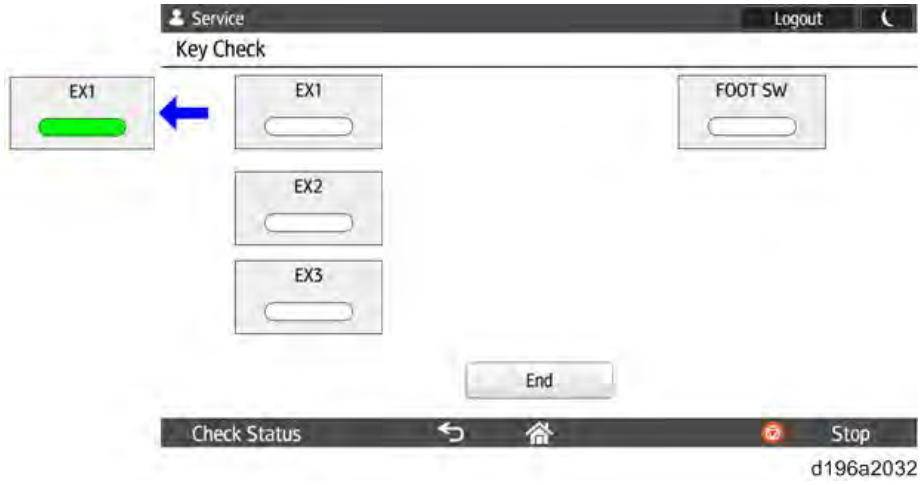
Select the [All Light On] check box, and make sure the following LEDs light:

- Data In indicator (facsimile and printer modes)
- Fax indicator
- [Check Status] indicator (flashes in red and orange alternately)

When the check is completed, press [Back] to return to the top menu of [Self Check].

Key Check

Check if the Extended Feature keys on the left side of the control panel (EX1, EX2, EX3 from top to bottom) are functioning normally. If they are functioning normally, the key will turn green when pressed.
[FOOT SW] is not used.



When the check is completed, press [End] to return to the top menu of [Self Check].

LCD Check

Visually inspect the color of the LCD. The displayed colors are white/black/red/green/blue. The LCD changes to

the next color when you press it.

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The check is completed when all colors have been displayed. The screen returns to the top menu of [Self Check].

Speaker Check

Tests the speaker by playing the reference sound.

1. Select the frequency (220Hz, 440Hz, 880Hz, 1760Hz, or 2000Hz).
2. Press [START/STOP] to play the sound.
3. Touch the volume bar, and play the sound at minimum and maximum volumes.
4. Press [START/STOP] to stop the sound.

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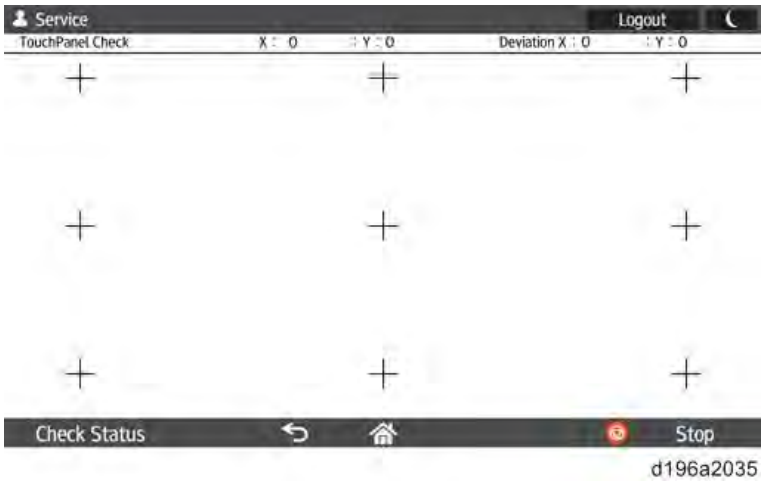
When the check is completed, press [Back] to return to the top menu of [Self Check].

TouchPanel Check

For each of the nine reference points on the screen, the distance between the detected position and the nearest reference point is displayed.



When the check is completed, press [Back] to return to the top menu of [Self Check].

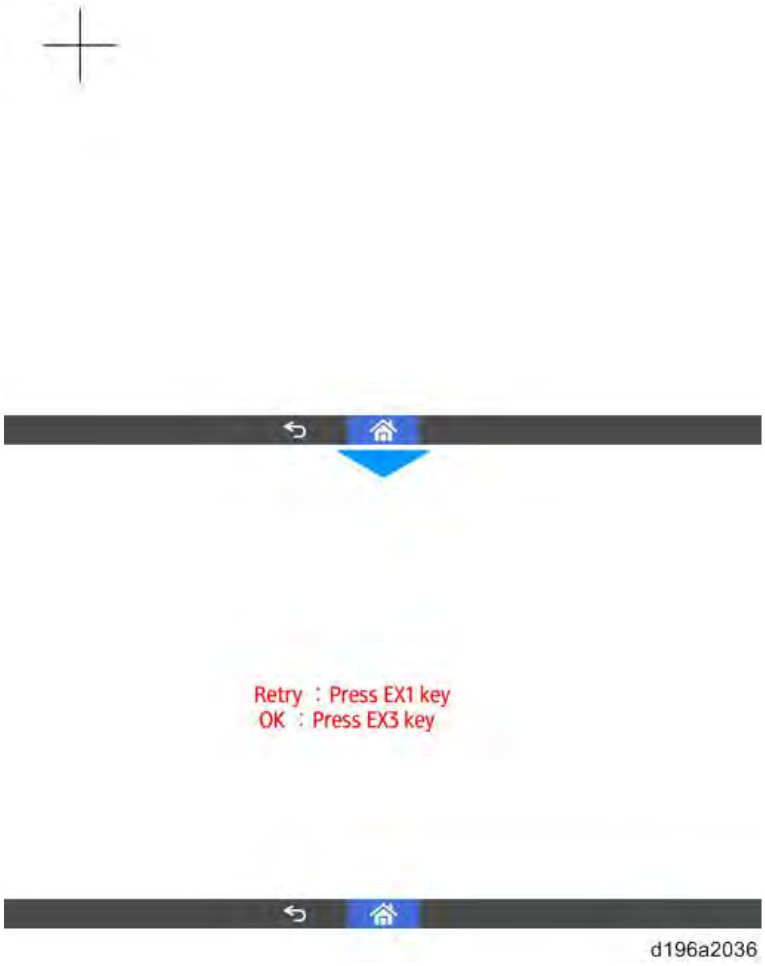
TouchPanel Calibration

Calibrate the touch panel by touching the center of each of the five “+” signs.

The five “+” signs are displayed in the order of top left, bottom right, bottom left, center, and top right.

After you have touched the five “+” signs, the display switches to the [Retry/OK] screen.

- If you want to calibrate again, press [EX1].
- If you want to confirm that the calibration results are OK, press the [EX3] key to return to the top menu of [Self Check].



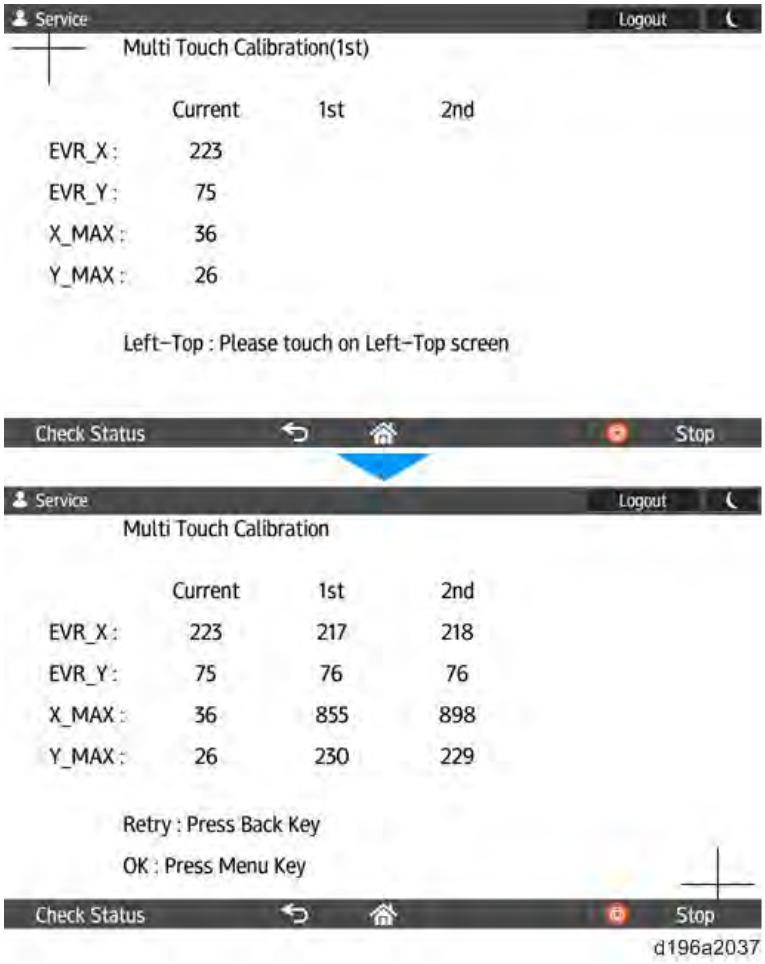
MultiTouch Calibration

Calibrate the touch panel for multi-tap input methods such as pinch-in/pinch-out.

Touch the center of both “+” signs. The two “+” signs are displayed in the order of top left and bottom right.

Repeat the procedure. The touch panel will be calibrated.

- If you want to adjust it again, press the [EX1] key.
- If you want to confirm that the calibration results are OK, press the [EX3] key to return to the top menu of [Self Check].



The “Back Key” in the message is actually the [EX1] key and the “Menu Key” in the message is actually the [EX3] key.

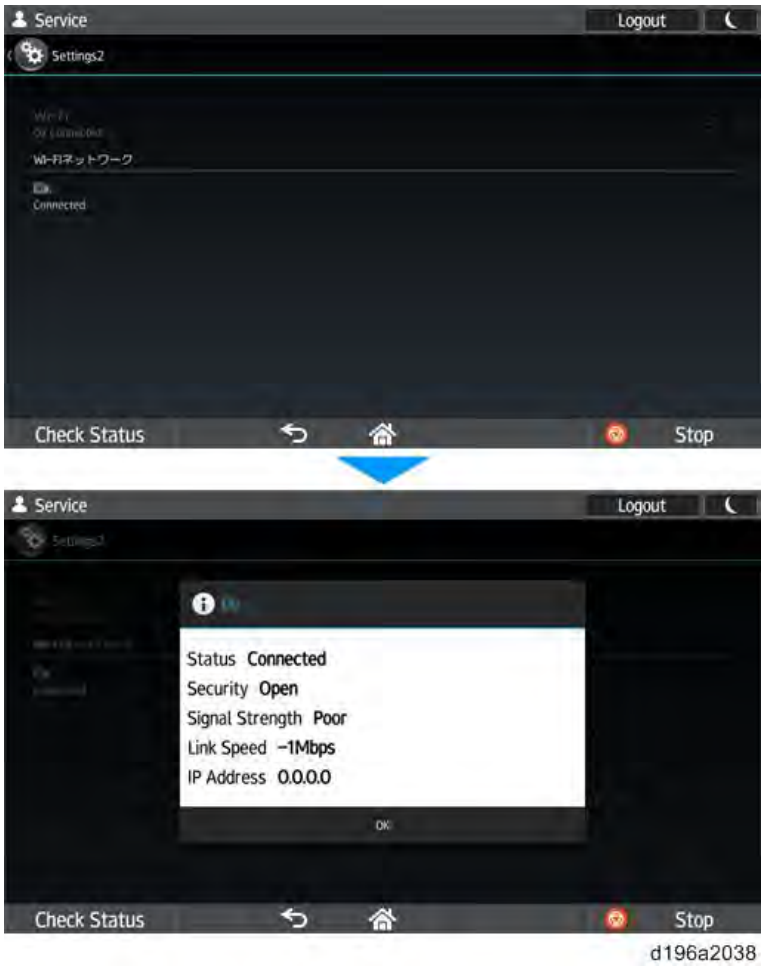
Note

- The values of “EVR_X”, “EVR_Y”, “X_MAX”, and “Y_MAX” are for internal processing and do not indicate the positions or distance of the points touched. There is no problem unless there is a huge difference between the values of the first calibration and the second calibration.

Wireless LAN Check

Checks the condition of the wireless LAN connection.

When you select the connected access point, the signal strength, IP address and other information are displayed.



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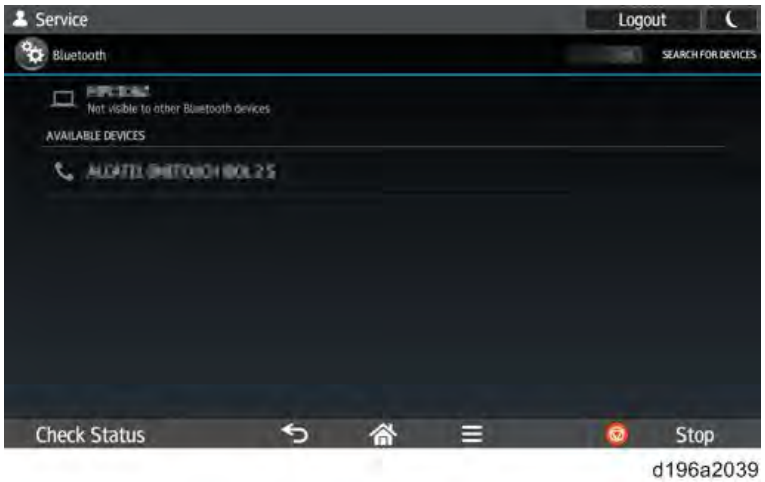
When the check is completed, press [Back] to return to the top menu of [Self Check].

Bluetooth Check

Check and configure the Bluetooth device connection.



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When the check is completed, press [Back] to return to the top menu of [Self Check].

Note

- You cannot switch Bluetooth to [ON] or [OFF] from the [Self Check] menu. Before checking the Bluetooth device connection, specify [ON] for [Bluetooth] in [Screen Features] > [WIRELESS & NETWORKS] > [Bluetooth].

Recovery Mode

The recovery mode menu is as follows. Ask your manager for details on how to enter Recovery mode.

Menu	Description
reboot system now	Reboots the Android OS.
apply update from sdcard	Updates the Cheetah System firmware by specifying the folder path.
wipe data/factory reset	Deletes all installed applications and all settings on the Cheetah.
wipe cache partition	Deletes all data that is stored on the cache partition. Currently, Cheetah does not use the cache partition, so nothing happens when this menu item is accessed.
wipe free area partition	Deletes all data that is stored on the free partition. Cheetah stores the version history on the free partition. When this menu item is selected, it will then disappear.
wipe LegacyUI area	Deletes Legacy UI.
micon update from sdcard	Updates Keymicon by specifying the folder path.

Note

- If [Update Firmware] is set to [Prohibit] in [System Settings] of the MFP, the control panel cannot enter the recovery mode.
- Ask your manager for information on how to enter the recovery Mode.

Special Key Combinations

This section describes special key combinations for operations which required combinations of hardware keys on the previous models.

Function	Operation for previous models	Operation for Smart Operation Panel
SSP (Super Service) mode login	Login to SP mode, and then press an SP mode item while holding down the [#] key.	Login to SP mode, and then press an SP mode item while holding down the EX3 key.
Resetting User Tools	In the User Tools screen, press a User Tools category while holding down the [#] key. Available for: System Settings, Copier/Document Server Features, and Scanner Features.	In the User Tools screen, press a User Tools category while holding down the EX3 key. Available for: System Settings, Copier/Document Server Features, and Scanner Features.
System Reset	Hold down the [*] and [#] keys simultaneously for 10 seconds. Resets the controller software.	Hold down the EX3 key and [#] simultaneously for 10 seconds. Resets the controller software of the main

Function	Operation for previous models	Operation for Smart Operation Panel
		machine.
Application Reset	Hold down the [7] and [9] keys simultaneously for 10 seconds. Resets a single application.	Hold down the EX3 key and [9] simultaneously for 10 seconds. Resets a single application.
Resetting User Code Authentication	Press the [Reset] key and [Clear] key simultaneously. Returns to the User Code entry screen.	Hold down [Reset] for 2 seconds. Returns to the User Code entry screen.

Software Update

Updating the Smart Operation Panel

There are four methods to update the Smart Operation Panel. The method is different depending on what you want to update.

1. Installation/update from an SD card
2. Package update
3. Installation/update from the eDC Server
4. Installation/update from Application Site

Update method	Features	Control panel firmware	Applications
Installation/update from an SD card	Update using an SD card. • This is the only method to install an older version of currently installed software. • Enter the recovery mode to update the control panel firmware. • Use the installation screen in the control panel's service mode to update applications. • You can install or update multiple applications at once. • You can also uninstall an application.	Yes	Yes
Package update	Uses the Package update function of the GW+ controller to update the software. • The software is updated in the following order: controller firmware, applications, and then the control panel firmware. • The procedure for updating the control panel firmware is the same as when updating from an SD card using Recovery mode.	Yes	Yes
Installation/update from the eDC Server	Downloads applications from the eDC Server for installation or update. This method is mainly for paid applications. A product key is required when an application is installed for the first time.	No	Yes
Installation/update from Application Site	Installation and Updating of applications and firmware update can be done from Application Site. When administrator authentication is enabled, an administrator	Yes*[1]	Yes

Update method	Features	Control panel firmware	Applications
	privilege is required to start Application Site. If you log in to the operation panel service mode, however, you can use it with CE privilege.		

*1 Update can only be done by using a package file.

The following three methods can be used for updating the firmware.

- Update from an SD card (recovery mode)
- Package update
- Installation/update from Application Site

The following four methods can be used for updating an application.

- Installation/update from an SD card
- Package update
- Installation/update from the eDC Server
- Installation/update from Application Site

Installation/update from an SD card

Updating the Smart Operation Panel Firmware

Enter the recovery mode to update the firmware of the Smart Operation Panel.

Note

- When [Quick] is selected for [Screen Startup Mode], the control panel cannot enter the recovery mode. Change the startup mode to [Normal]. When update is completed, restore the startup mode setting because the setting affects startup time.
- Shut down the MFP with [Normal] selected for [Screen Startup Mode], or shut it down using the special shutdown procedure used for maintenance.
- If [Prohibit] is selected for [Update Firmware] in [System Settings], the machine cannot enter Recovery mode. Ask the administrator of the MFP to change the setting.

Creating an SD card for firmware update

1. Download the update module “Cheetah System” from the Firmware Download Center.
2. Execute the downloaded file.
   A file named “part number + suffix.zip” will be created.

   Note

   - Do not unzip the created file.
3. Copy the “part number + suffix.zip” file to the root directory of the SD card.

Updating the firmware (for the Cheetah System)

1. Turn OFF the MFP.

Note

- Shut down the MFP with [Normal] selected for [Screen Startup Mode], or shut it down using the special shutdown procedure used for maintenance.

2. Insert the SD card into the SD card slot of the control panel and start up the MFP in Recovery mode.

Note

- Ask your manager for details on how to enter the recovery mode.
- In the recovery mode, key functions are shown on the screen. However, the key functions for moving/selecting directories are different for executing an update. Check the key functions while operating.
- Keys

  When moving/selecting directories

  When executing an update

  [EX1]

  Moves the cursor up.

  Executes updating.

  [EX2]

  Moves the cursor down.

  Cancels updating.

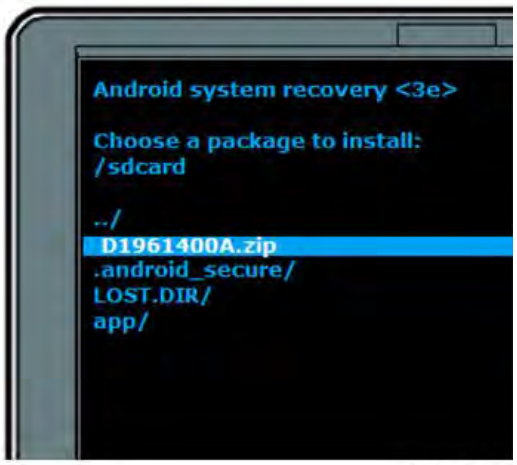
  [EX3]

  Selects the item.

3. Select “apply update from sdcard” in the “Android system recovery” screen, and then press the [EX3] key.

4. The contents of the SD card is displayed. Select “part number + suffix.zip” with the [EX1] or [EX2] key, and then press the [EX3] key.

Example: “D1961400A.zip”



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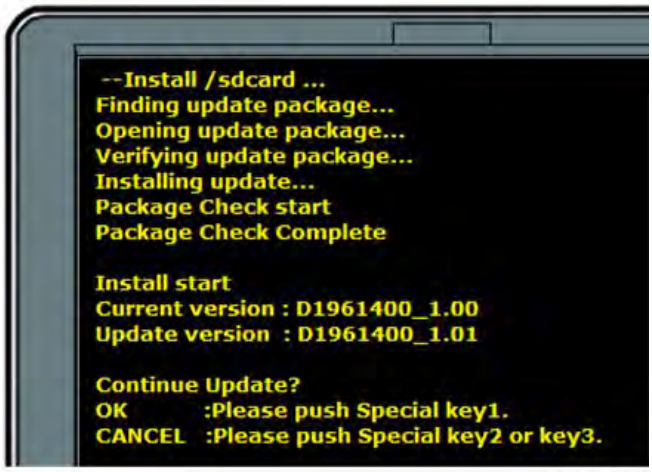
5. The installation screen is displayed.



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6. The version of the firmware installed in the control panel is displayed as “Current version” and the version of the firmware saved on the SD card is displayed as “Update version”. Make sure that you have the correct version.

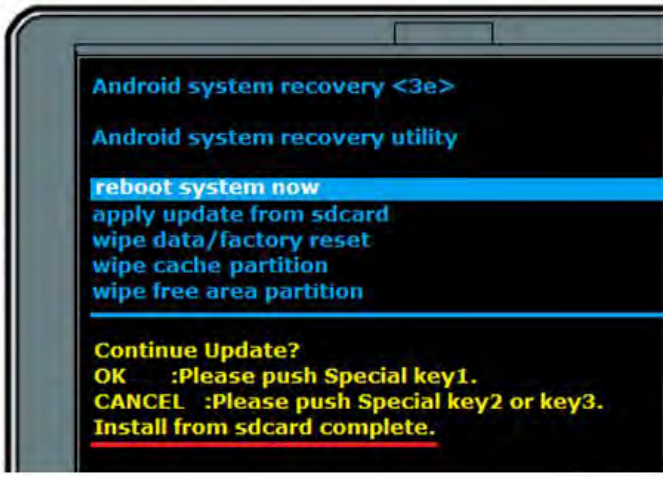
7. When “Continue Update?” is displayed, press [OK] ([EX1] key).
The update process starts.

Note

- To cancel the firmware update, press the [EX2] or [EX3] key.

8. When “Install from sdcard complete.” is displayed, select “reboot system now” and then press the [EX1] key

to reboot the system.



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Installing/Updating an Application

Creating an SD card for update

1. Download the update modules from the Firmware Download Center.
2. Unzip the downloaded file.
3. Create a folder named “romdata” in the root directory of the SD card.
4. Put the unzipped file in the “romdata” folder.

Update procedure

1. Log in to the control panel in service mode.
2. Insert the SD card into the SD card slot of the control panel.
3. Select [Apps] > [Install] > [Install from SD Card].
4. Select the application you want to install or update, and then press [Install]
5. The installation or update results are displayed.
6. Check that the application is correctly installed or updated, and then press [reboot operation panel].

Package Update

This method uses the package update function to update the control panel firmware and/or applications. The package update function is provided by the controller.

Update is done in the following order:

1. Controller firmware
2. Applications
3. Control panel firmware

If the control panel firmware has to be updated, the control panel starts in the recovery mode and the firmware is automatically updated.

The control panel restarts when updating is completed. The result notification is processed after the control panel restarts.

When Installation/Update Is Prohibited

If [Prohibit] is selected for [Update Firmware] in [System Settings], the execution key is grayed out and installation/update cannot be executed.

When trying to update from a PC, updating fails and the result is recorded as “Failed”.

Installation/update from the eDC Server

Downloads applications from the eDC Server, and installs or updates them.

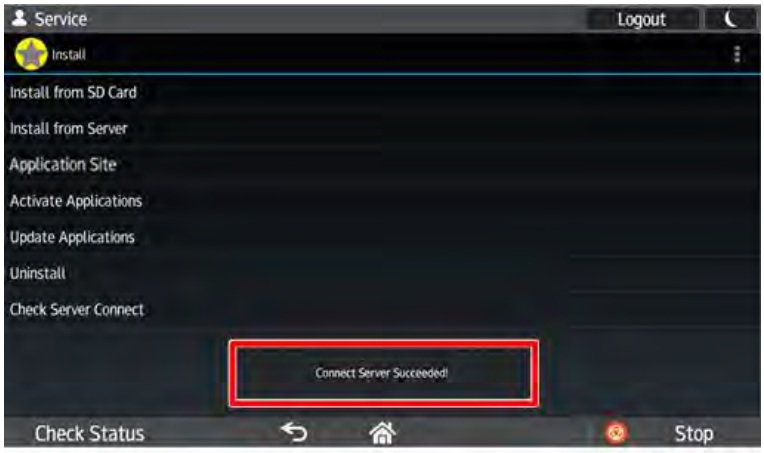
This method is mainly for paid applications. A product key is required when an application is installed for the first time.

Note

- Installation/activation/update of applications from the server can only be done in the service mode.

Check Server Connect

1. Log in to the control panel’s service mode.
2. Select [Apps] > [Install].
3. Press [Check Server Connect] and make sure that “Connect Server Succeeded!” is displayed.



Note

- The server address is stored in the firmware of the Smart Operation Panel.
- To connect to the server, the network settings of the MFP must be configured correctly. For the required configuration, see the Field Service Manual of the MFP.
- If server connection fails, see Troubleshooting for error codes.

Installation

1. Log in to the control panel’s service mode.
2. Select [Apps] > [Install].
3. Select [Install from Server].

4. Enter the product key and press [Execute].

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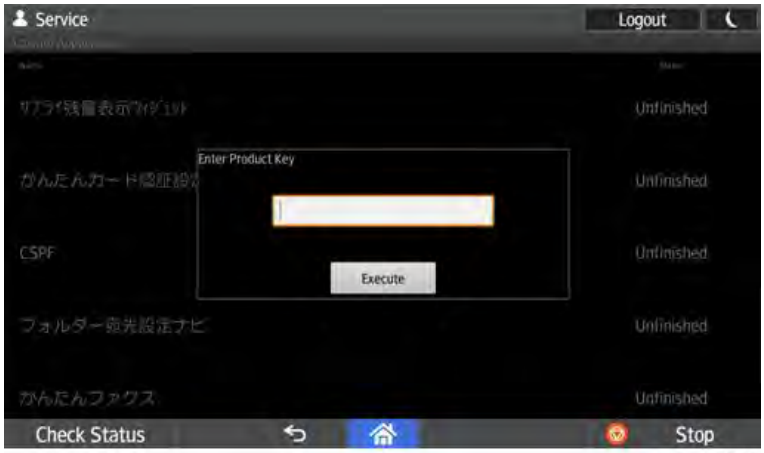
5. Follow the instructions shown on the screen.

Note

- An application cannot be installed unless it is digitally signed by Ricoh.

Activation

1. Log in to the control panel's service mode.
2. Select [Apps] > [Install].
3. Select [Activate Applications].
4. Select the application to be activated, and then enter the activation key and press [Execute].



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5. Follow the instructions shown on the screen.

Note

- Only charged applications have to be activated.

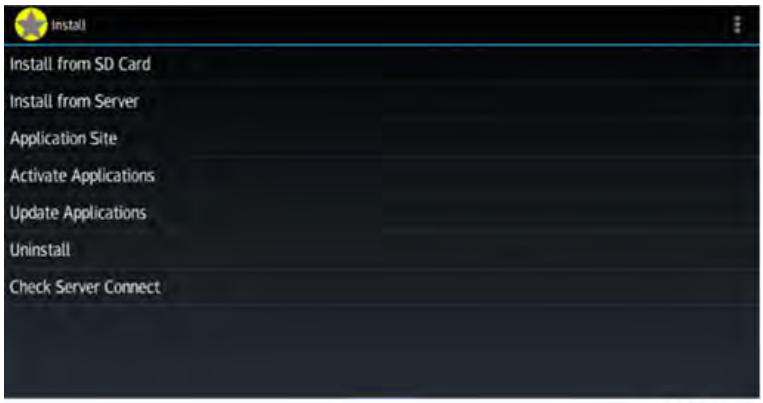
Update

1. Log in to the control panel's service mode.
2. Select [Apps] > [Install].
3. Select [Update Applications].
4. Select the application to be updated, and then press [Check Update Status].

5. Follow the instructions shown on the screen.

Application Site

"Application Site" has been added to Screen Service mode. Field engineers can start up Application Site to install or update applications or firmware without needing user administrator credentials.



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This menu item opens Application Site by using the Web Browser NX app.

4. Troubleshooting

Troubleshooting

Software Update Errors

Errors that occur during application update from an SD card

Error message / screen display	Explanation	Solution
Insert a correct SD card.	-	• Remove the SD card and insert it again. • Make sure that the directory of the SD card is correct. You must create the "app" folder in the root directory of the SD card and put the zip file in the "app" folder.
You are trying to install the same application with a different part number. Is it OK to continue?	Displayed when you attempt to update an application that is the same but has a different part number.	Check the file, and select [OK] or [Cancel].
Some applications could not be installed.	Displayed in the following cases. • You attempted to update a module (application) in use. • The application is corrupted.	Restart the control panel and repeat the update procedure.
- (The application you want to update is not displayed in the list of applications.)	-	• Make sure that the directory of the SD card is correct. You must create the "app" folder in the root directory of the SD card and put the zip file in the "app" folder. • Check the application file in the SD card.

Errors that occur during update from the eDC Server

Error code	Explanation
101	Server connection error
102	Signature verification error

Error code	Explanation
103	License error (for example, the product key was keyed in wrongly)
215	Dependency check error Displayed when the control panel firmware version does not meet the installation requirement of the application. Example: The firmware version of the control panel is 1.02 and you attempted to install an application that requires firmware version 1.03.
20X	Other errors

Example of an error code display

Note

- An additional 3-digit code may be displayed to indicate the details.
  Example: 101-805

Errors that occur during remote (batch file) update

When the update is completed, a result report file (install_result_yyyymmddhhmm.txt) is created in the same folder as the batch file.

The result report file shows the IP address of the MFP and whether the update process was successful or not.

“yyyymmddhhmm” shows the date and time according to the clock of the MFP.

Result	Explanation
Succeed	Updated the machine successfully.
Failed	Failed to update the machine. An error code follows.
Not connected	Failed to connect to the machine.
Can't get result	Failed to obtain the result (occurs only with firmware updates).

Example of a result report file

- Name: install_result_201512041005.txt
- Contents:
  192.168.0.100: Successful

192.168.0.102: Failed error:XX (XX indicates an error code.)

192.168.0.103: Not connected

Error codes

The meanings of error codes recorded after "error:" in the result file are as follows:

Error codes recorded during firmware update

Error code	Explanation	Access Log
-2	Invalid file	Recorded
-3	The target application cannot be found.	Recorded
-501	Installation has already been requested.	Recorded (*1)
-602	Invalid signature	Recorded
-603	Updating is prohibited.	Recorded
-604	Failed to put the application offline.	Not recorded
-610	Authentication failed.	Not recorded
-699	Unknown error	Recorded (*2)
-701	Version of the micro computer firmware is invalid.	Recorded
-709	File structure error (invalid file)	Recorded
-710	Writing failure	Recorded

Error codes recorded during application update

Error code	Explanation	Access Log
-2	Invalid file	Recorded
-3	The target application cannot be found.	Recorded
-4	The storage capacity is not enough.	Recorded
-12	The version of the Android application cannot be installed.	Recorded
-602	Invalid signature	Recorded
-603	Updating is prohibited.	Recorded
-604	Failed to put the application offline.	Not recorded
-610	Authentication failed.	Not recorded
-699	Unknown error	Recorded (*2)

*1 The error code recorded in the Access Log will be "223: machine-busy".

*2 If the error occurs during preparation for configuration change, it will not be recorded in the Access Log.

Note

- If the preparation for configuration change (putting the application offline, authentication, file size check) cannot be carried out, an error code is displayed on the screen. However, it is not recorded in the Access Log as a firmware update/installation error.

Error codes recorded in the Access Log

Error code	Error name	Explanation	Solution
49	fwu-prohibit	Firmware update is prohibited.	Enable firmware update, and repeat the procedure.
60	other:E60	The HDD cannot be used.	• Turn the main power OFF and ON, and then repeat the procedure. • If the HDD is damaged, replace it.
62	other:E62	The structure of the application or control panel firmware in the package is invalid.	Prepare a valid package file.
221	terminate-fail	Failed to terminate an application when attempting to update or uninstall it.	• If a job is under way in the target application, wait until the job is finished, and then repeat the procedure. • Turn the main power OFF and ON, and then repeat the procedure.
222	signature-invalid	Failed to verify the signature attached to the application or firmware.	Repeat the procedure using a valid signature.
223	machine-busy	Failed to execute installation because another function was being used on the MFP.	• Wait a while and repeat the procedure. • Turn the main power OFF and ON, and then repeat the procedure.
224	capacity-lack	The storage capacity is not enough.	• Reduce the number of applications to be installed. • Uninstall unnecessary applications.
225	download-fail	The product ID is incorrect.	Use a correct product key.
226	dependency-check-fail	The control panel does not meet the installation requirements of the application.	Check the installation requirements of the application. Update the control panel as necessary.
227	license-invalid	There are no remaining licenses. The product key that you are trying to use has already been activated for another device.	Use an unused product key to activate the application.
		An invalid product key was used to issue the license.	Update the application using an activated product key.
		The number of licenses issued has exceeded the limit.	Deactivate the application, and then activate it again.

Error code	Error name	Explanation	Solution
		The license has expired. The product key being used is no longer valid.	Use an unused product key to activate the application.
		The license contract is invalid.	Use a valid product key to activate the application.
228	file-not-found *	The target firmware file cannot be found.	• Turn the main power OFF and ON, and then repeat the procedure. • Check the file in the SD card. • Check the SD card slot. If there is a problem with the hardware, replace the control panel PCB.
229	file-invalid *	The target update file is invalid. Occurs in the following cases. • Failed to decompress the file. • Failed to obtain application information. • Failed to read the public key for signature verification.	Repeat the procedure using a valid file.
230	wrong-folder-structure *	The folder directory of the control panel firmware is invalid.	Repeat the procedure using a valid directory.
231	write-fail *	• Failed to write data when updating the control panel firmware. • There is a problem with the hardware.	Turn the main power OFF and ON, and then repeat the procedure. If updating fails again, replace the control panel.
232	deactivate-fail	The application could not be uninstalled because deactivation failed. • Failed to connect to the server. • The license has not been issued.	• Check whether the network is configured correctly. • If the server is under maintenance, wait a while and repeat the procedure. • Check the activation status of the application. If it has not been activated, activate it.
233	uninstall-fail	Failed to uninstall an application.	Turn the main power OFF and ON, and then repeat the procedure. If updating fails again, replace the control panel.
234	fixed-app	You attempted to uninstall an application that cannot be uninstalled.	Cancel uninstallation.
235	install-fail	The target file is invalid, and the Android	• Repeat the procedure using a valid

Error code	Error name	Explanation	Solution
		OS returns an error.	file. • If the same application has already been installed, uninstall it and then repeat the procedure.
236	sdk-incompatible	The Android SDK version required by the application is not installed on the control panel.	Check that the Android SDK version required by the application is installed on the control panel.
237	server-disconnect	Failed to connect to the eDC server.	• Check the network connection (SSL) settings. • Check the proxy settings. • If the server is under maintenance, wait a while and repeat the procedure.
255	panel-system *	Software malfunction.	Turn the main power OFF and ON, and then repeat the procedure.

* These errors are not expected to occur.

Errors That Occur When the Control Panel Downloads Data from the Controller at Startup

Some of the graphic data used in the control panel display is model-specific. Model-specific components are stored in the controller board of the MFP.

During startup, the control panel checks if it is necessary to update the model-specific data. If it is necessary, the control panel downloads the data from the MFP controller board and installs it in the control panel.

During update, a dialog appears to inform you that the settings are being changed. When the update process is completed, a dialog indicates whether update was successful or not.

Error code	Explanation
E1	An error has occurred when downloading data from the controller board of the MFP.
E2	An error has occurred when installing data on the control panel. An additional error code is displayed after "E2".

SPDF DF3100
Machine Code: D3B0
Field Service Manual

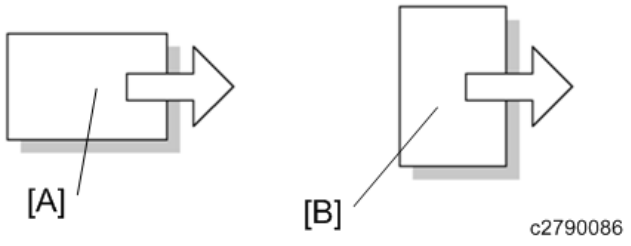
May, 2016

Symbols, Abbreviations and Trademarks

Symbols, Abbreviations

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

Symbol	What it means
	Clip ring
	Screw
	Connector
	Clamp
	E-ring
	Flat Flexible Cable
	Timing Belt
SEF	Short Edge Feed [A]
LEF	Long Edge Feed [B]
K	Black
C	Cyan
M	Magenta
Y	Yellow
B/W, BW	Black and White
FC	Full color



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- Windows® Internet Explorer® 7
- Windows® Internet Explorer® 8

The proper names of the Windows operating systems are as follows:

- The product names of Windows Vista are as follows:

  Microsoft® Windows Vista® Ultimate

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  Microsoft® Windows Vista® Home Premium

  Microsoft® Windows Vista® Home Basic

  Microsoft® Windows Vista® Enterprise
- The product names of Windows 7 are as follows:

  Microsoft® Windows® 7 Home Premium

  Microsoft® Windows® 7 Professional

  Microsoft® Windows® 7 Ultimate

  Microsoft® Windows® 7 Enterprise
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  Microsoft® Windows® 8.1

  Microsoft® Windows® 8.1 Pro

  Microsoft® Windows® 8.1 Enterprise
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Microsoft® Windows® 10 Enterprise

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  Microsoft® Windows Server® 2003 Enterprise Edition
- The product names of Windows Server 2003 R2 are as follows:

  Microsoft® Windows Server® 2003 R2 Standard Edition

  Microsoft® Windows Server® 2003 R2 Enterprise Edition
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  Microsoft® Windows Server® 2008 Standard

  Microsoft® Windows Server® 2008 Enterprise
- The product names of Windows Server 2008 R2 are as follows:

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  Microsoft® Windows Server® 2008 R2 Enterprise
- The product names of Windows Server 2012 are as follows:

  Microsoft® Windows Server® 2012 Foundation

  Microsoft® Windows Server® 2012 Essentials

  Microsoft® Windows Server® 2012 Standard
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  Microsoft® Windows Server® 2012 R2 Foundation

  Microsoft® Windows Server® 2012 R2 Essentials

  Microsoft® Windows Server® 2012 R2 Standard

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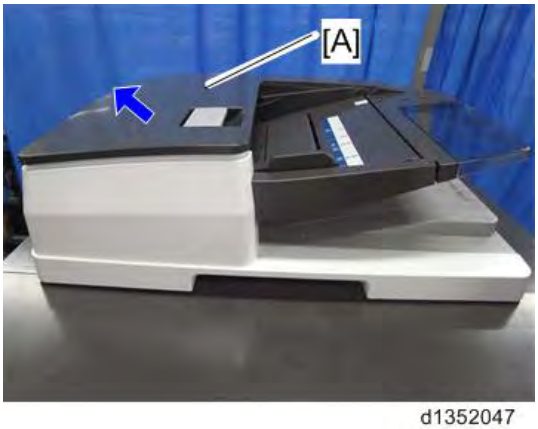
1. Replacement and Adjustment

Exterior Covers

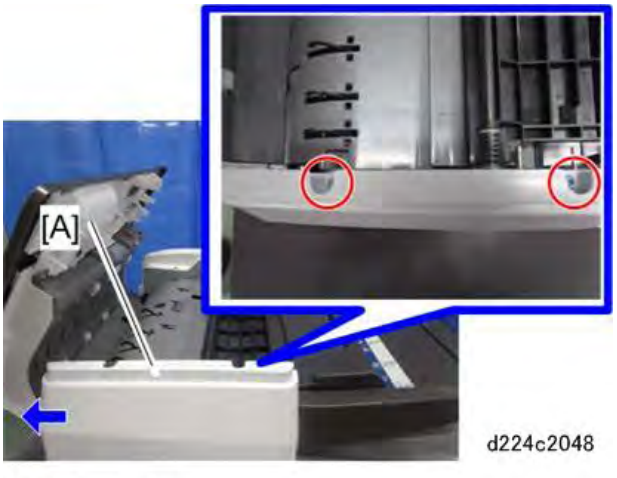
ADF Front Cover

1. Open the feed cover [A].



d1352047

2. Slide the ADF front cover [A] to the left.



d224c2048

x2 x2

Note

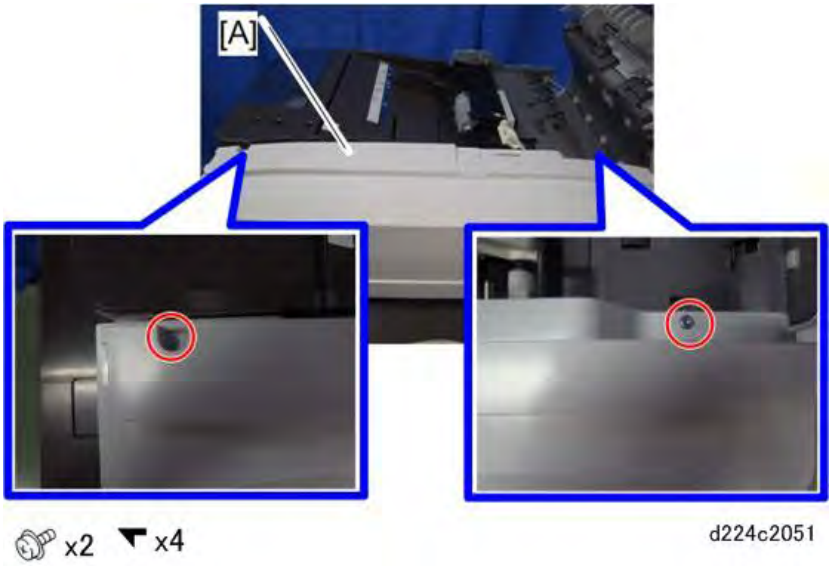
- Check the position of the hooks in the photo below before removing.

ADF Rear Cover

1. Open the feed cover.
2. Cover [A].

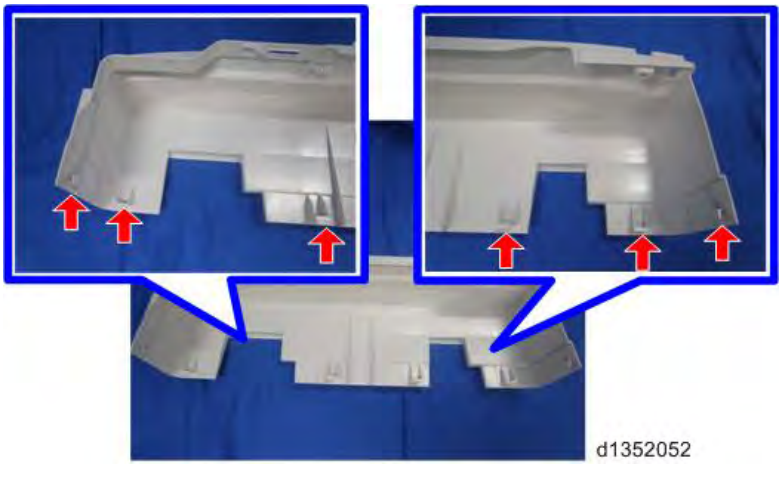
x1

3. Lift off the rear cover [A].



Note

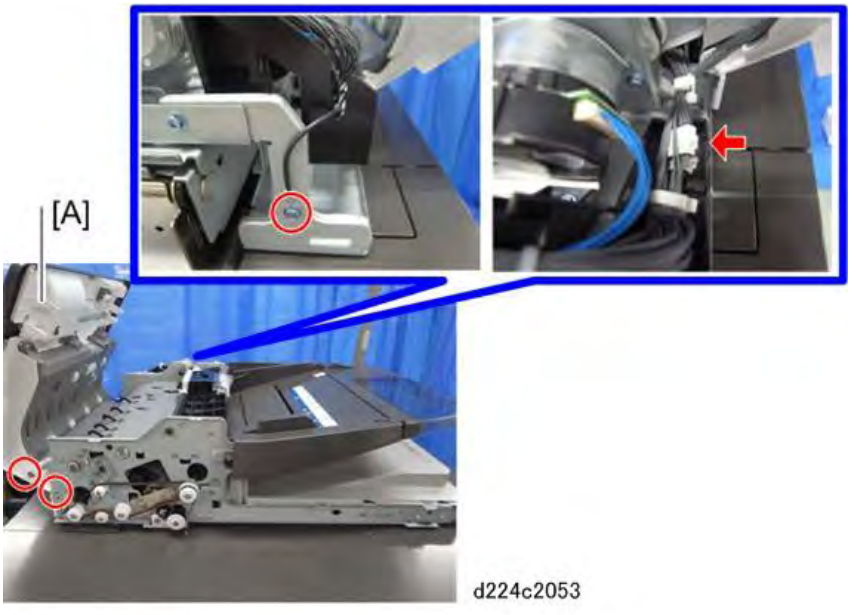
- Check the position of the hooks before removing.



Feed Cover

1. ADF front cover (page 7)
2. ADF rear cover (page 8)

3. Feed cover [A].

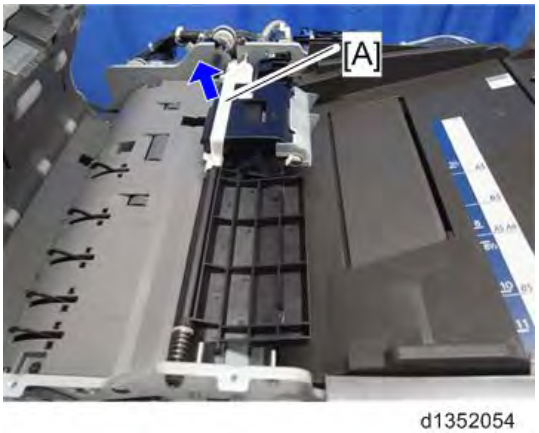


x3 x1

Feed Unit

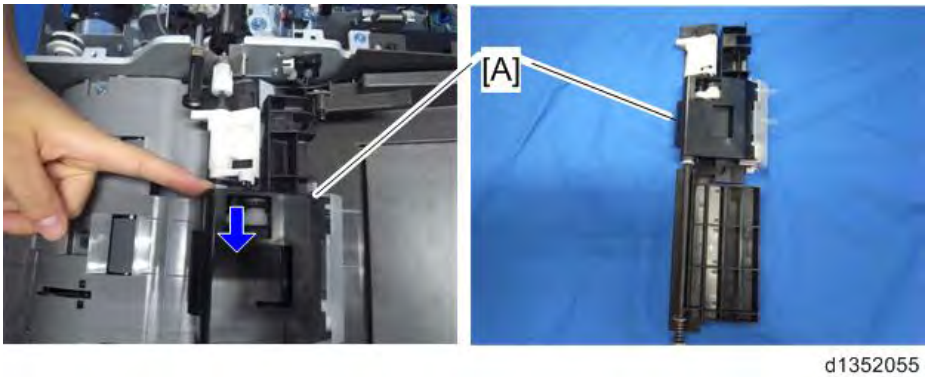
Original Feed Unit

1. Open the feed cover.
2. Remove the snap-fit [A].



d1352054

3. Original feed unit [A] (Pull the original feed unit, remove the back side of the shaft. Then, remove the bushing in the foreground.)

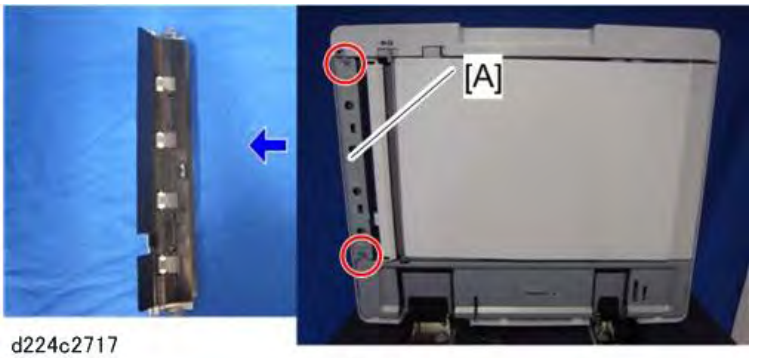


d1352055

Sensors, Feeler, and Switches

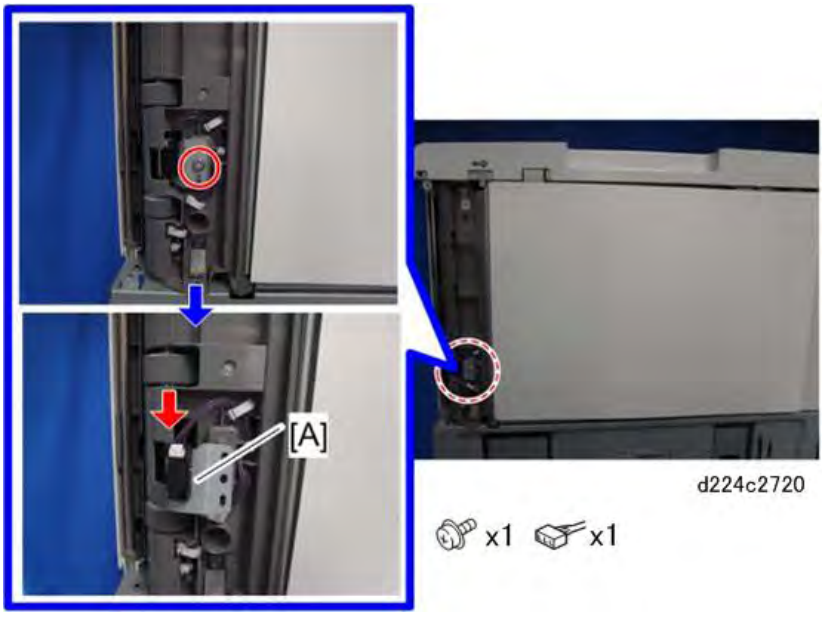
Original Registration Sensor

1. Entrance lower guide [A].

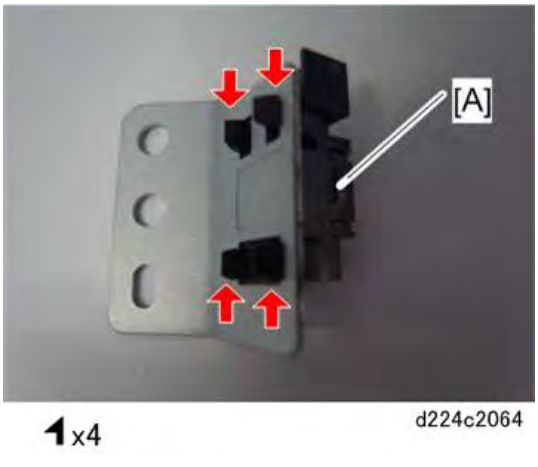


2. Scanning guide plate [A].

3. Original registration sensor [A] along with the bracket.

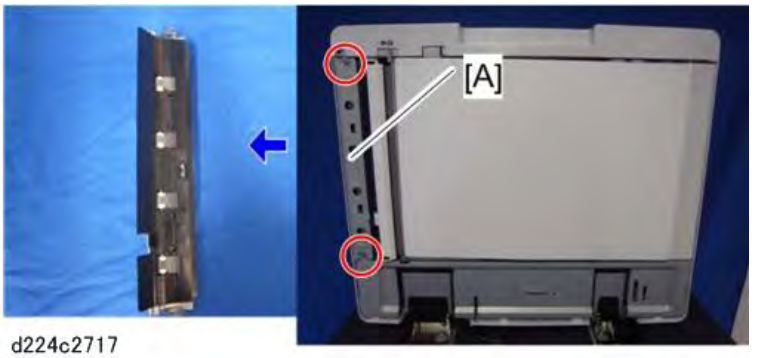


4. Original Registration Sensor [A].



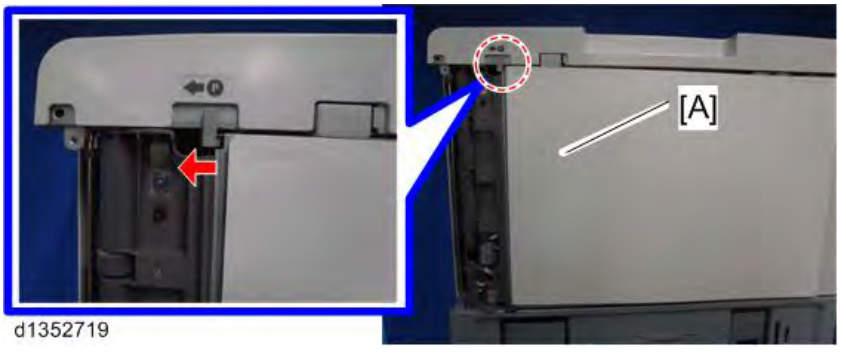
Original Exit Sensor

1. Entrance lower guide [A].

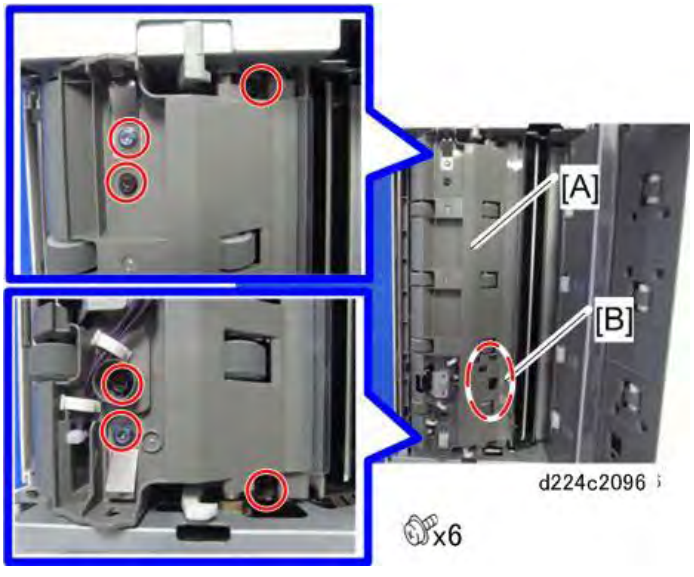


2. Scanning guide plate [A].

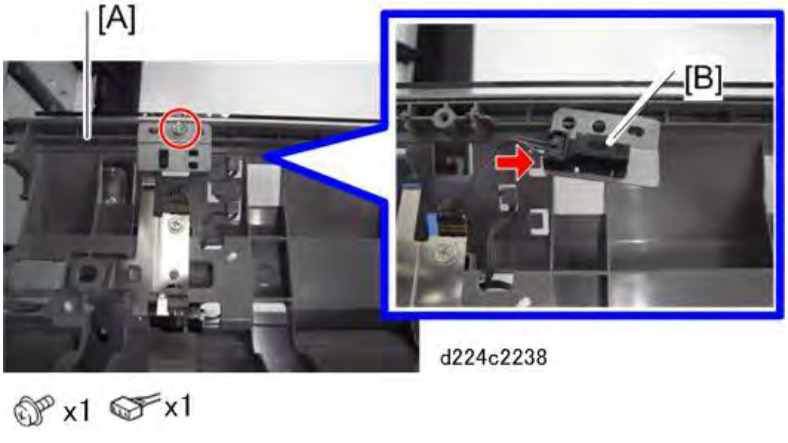
3. Open the white cover [A].



4. **Remove the original exit sensor [B], which is mounted on the upper guide [A].**

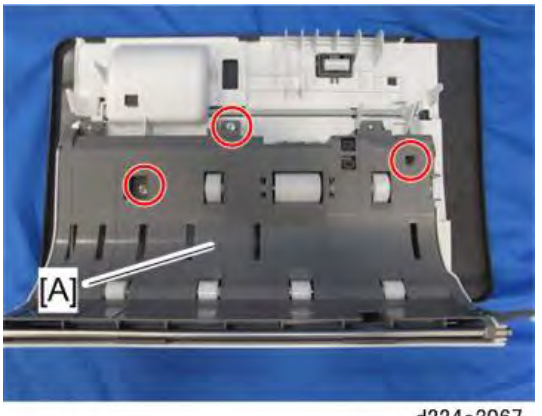


5. **Remove the original exit sensor [B] from the upper guide [A].**



Separation Sensor, Skew Correction Sensor

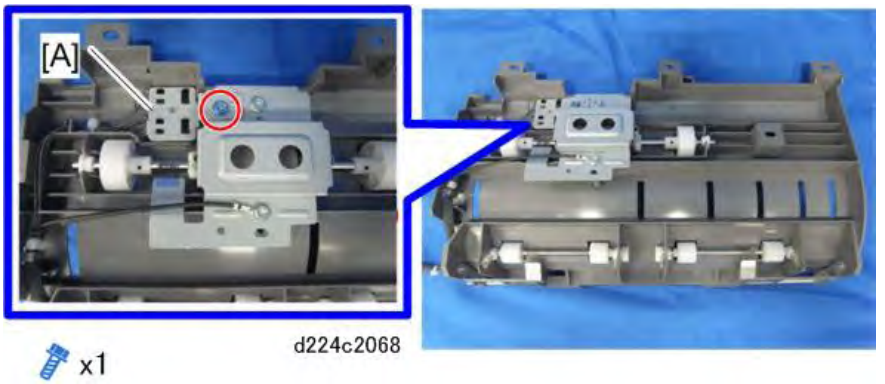
1. Feed upper guide [A] in the feed cover.



d224c2067

x3

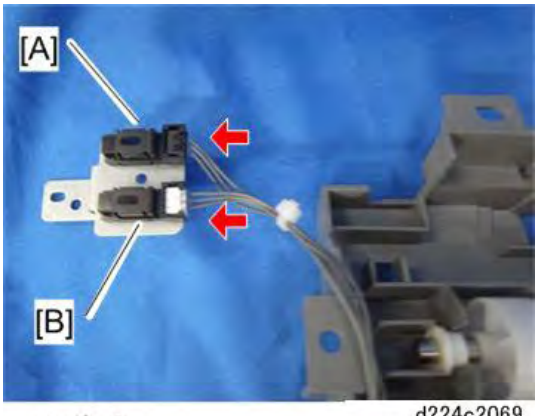
2. Remove the sensors along with the bracket [A].



d224c2068

x1

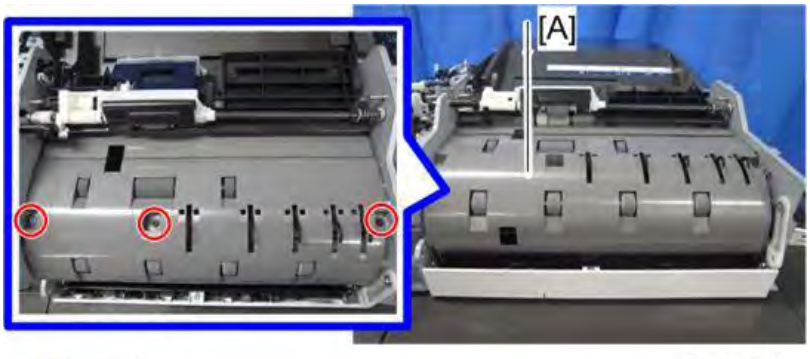
3. Separation Sensor [A] and Skew Correction Sensor [B].



x2 d224c2069

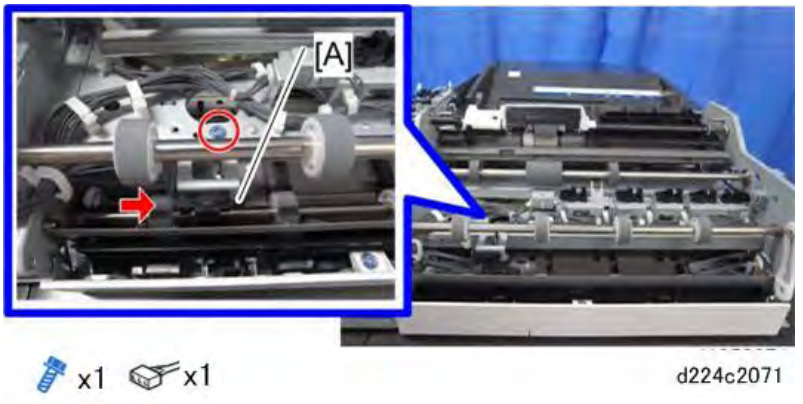
Original Width Sensor, Interval Sensor

1. Feed cover (page 9)
2. Guide plate [A].

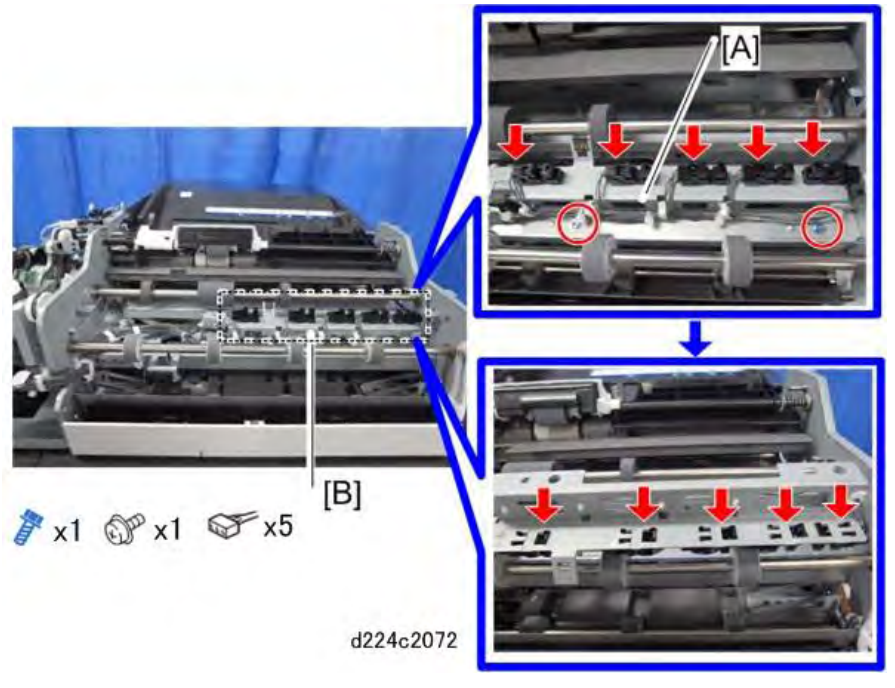


x1 x2 d224c2070

3. Interval sensor [A].

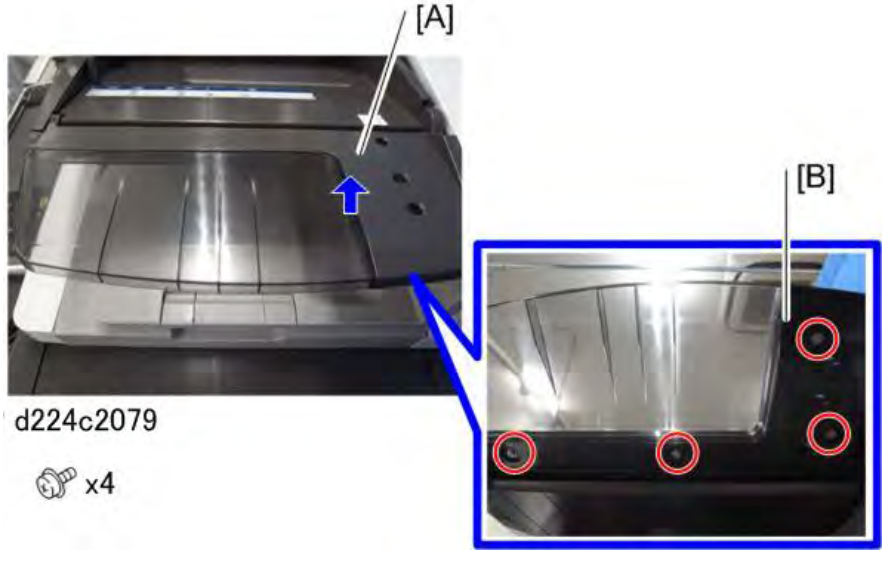


4. Remove the original width sensor guide plate [A].
5. Remove the five original width sensors [B].



Original Length Sensors

1. Raise the document tray [A], then remove the lower cover [B].

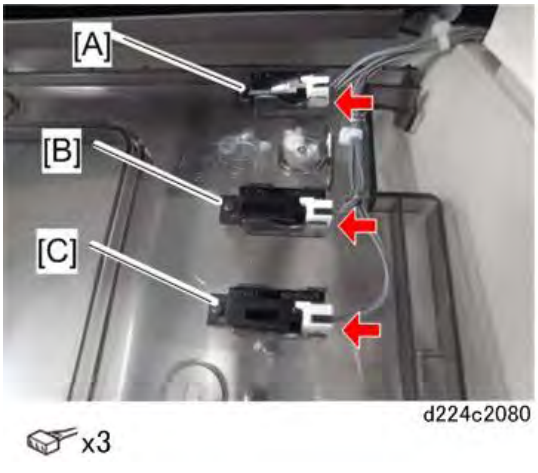


2. Original Length Sensors

   [A] B5

   [B] A4

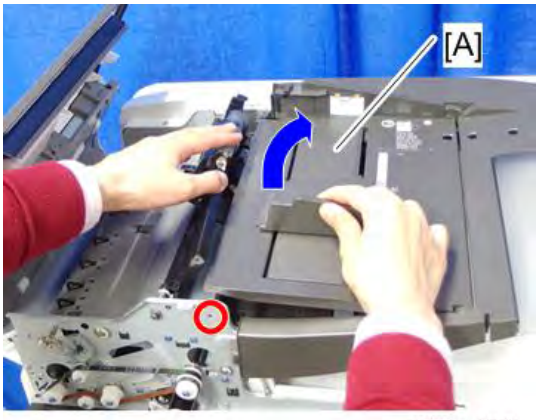
   [C] LG



A4 LEF, LT LEF Sensor

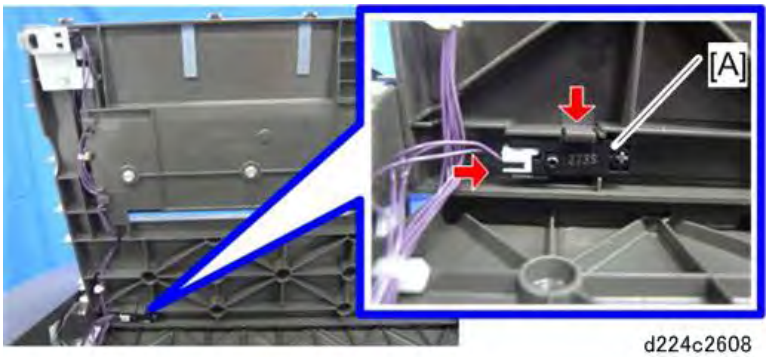
1. ADF front cover (page 7)

2. Remove the screw and raise the original tray [A].



d238m1367

3. A4 LEF/LT LEF Sensor [A].



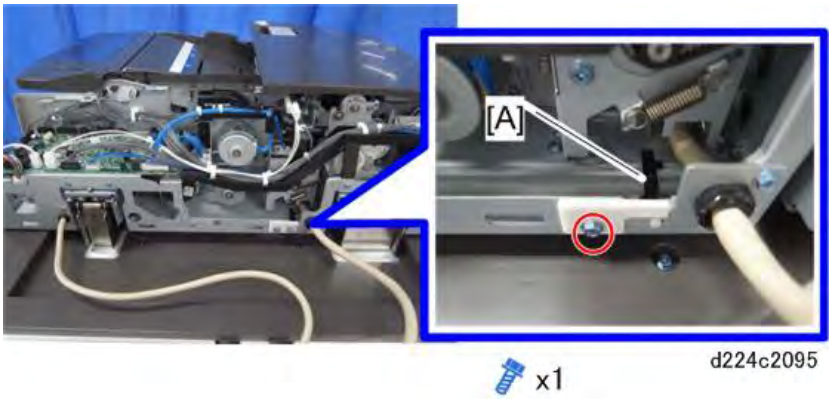
d224c2608

1 x1 x1

APS Feeler

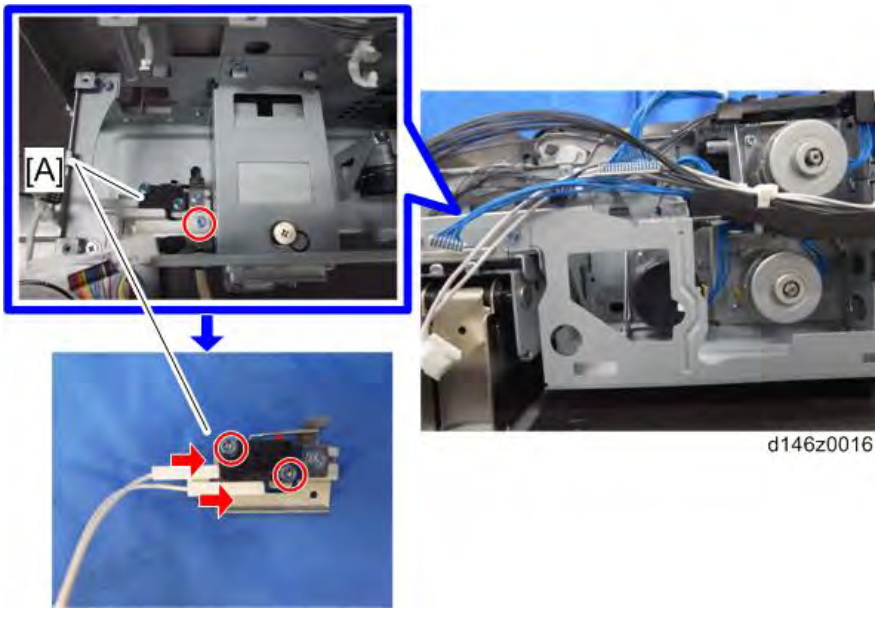
1. ADF rear cover (page 8)

2. APS Feeler [A].



ADF Lift Interlock Switch, Lift Sensor

1. ADF Controller Board (page 40)
2. ADF lift interlock switch [A] along with the bracket (x 3, x 2)

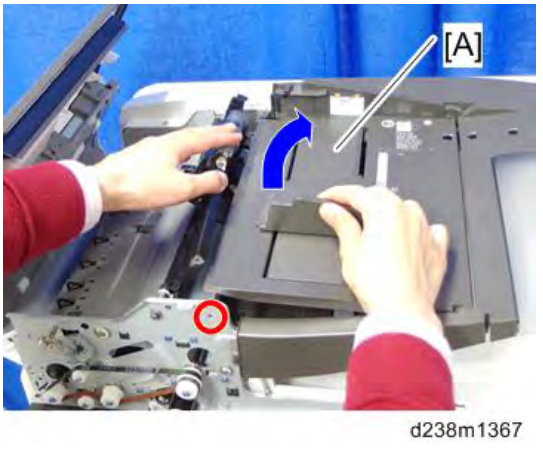


3. Lift Sensor [A] along with the bracket.

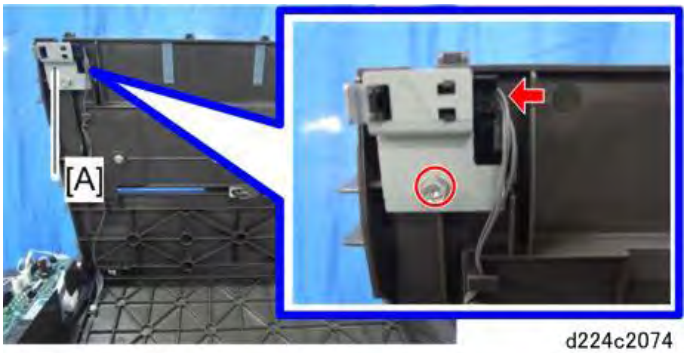
x1 x1

Original Set Sensor

1. ADF front cover (page 7)
2. Remove the screw and raise the original tray [A].



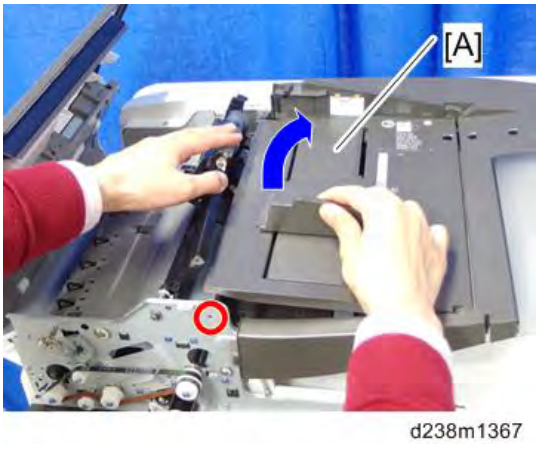
3. Original set sensor [A].



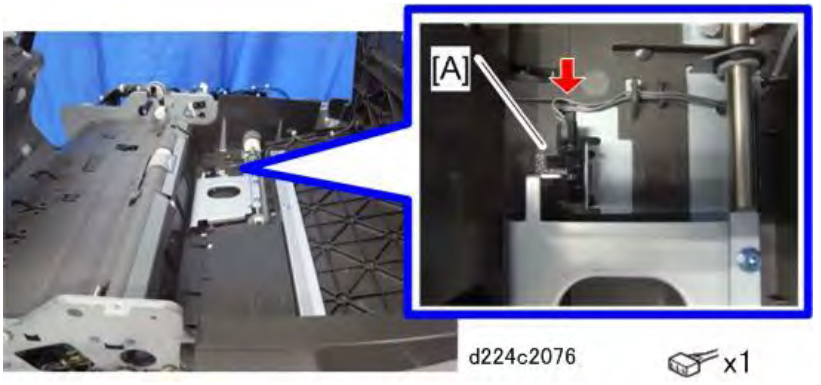
x1 x1

Bottom Plate HP Sensor

1. Original feed unit (page 11)
2. ADF front cover (page 7)
3. Remove the screw and raise the original tray [A].

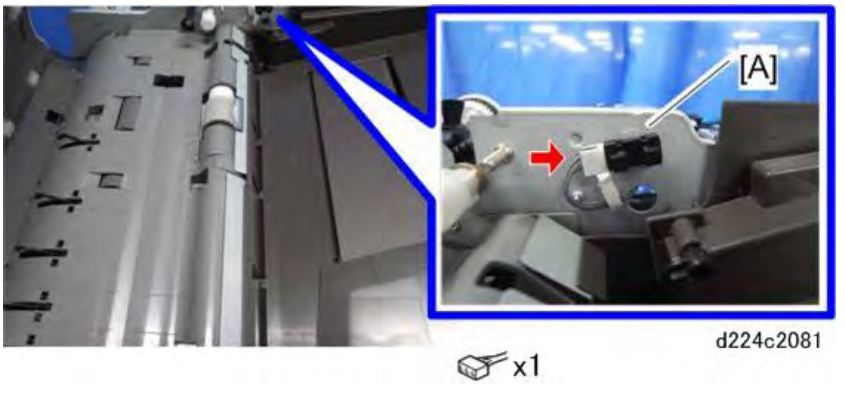


4. Bottom plate HP sensor [A].



Bottom Plate Position Sensor

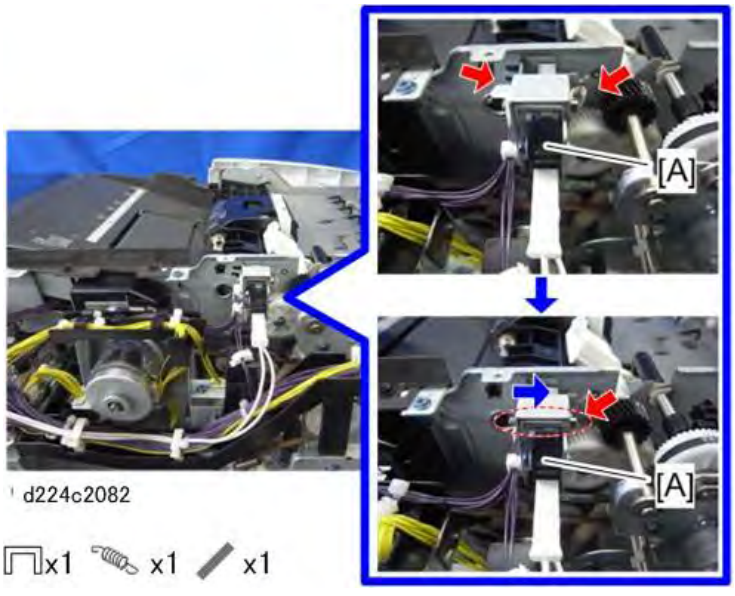
1. ADF rear cover (page 8)
2. Original feed unit (page 11)
3. Bottom plate position sensor [A].



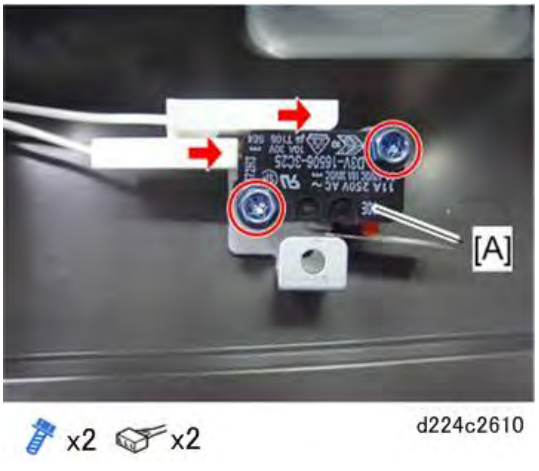
ADF Feed Cover Interlock Switch, Pick-up Roller HP Sensor

1. ADF rear cover (page 8)

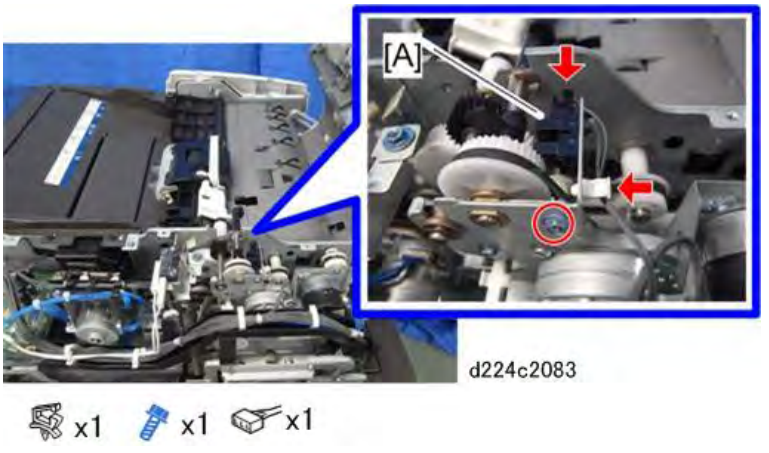
2. **Remove the ADF feed cover interlock switch [A] from the retaining bracket.**



3. **ADF feed cover interlock switch [A].**



4. **Pick-up roller HP sensor [A] along with the bracket.**

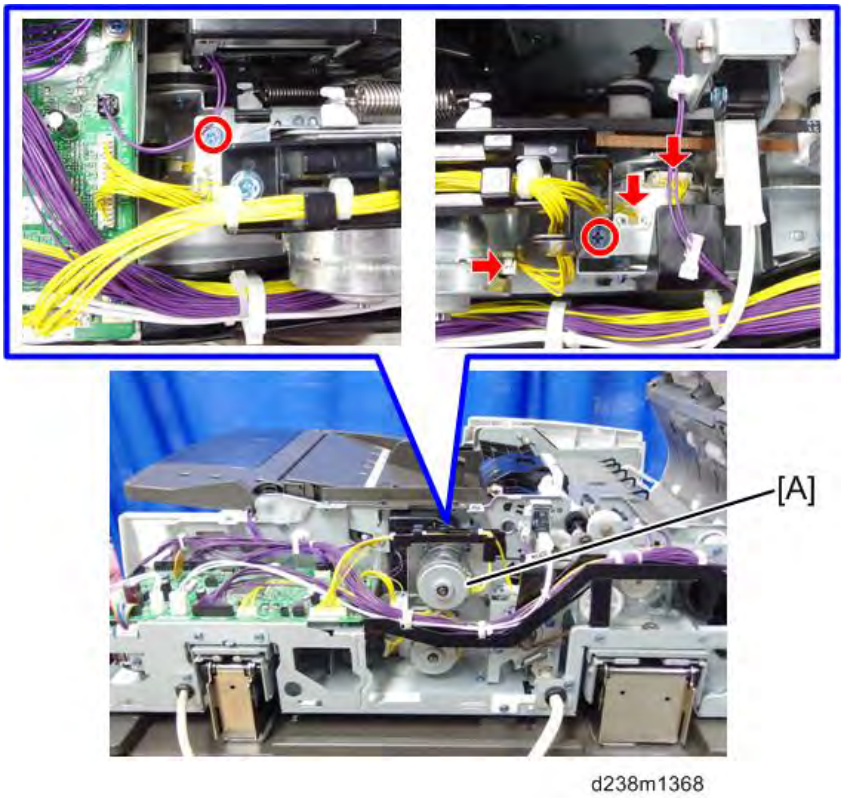


x1 x1 x1

Motors

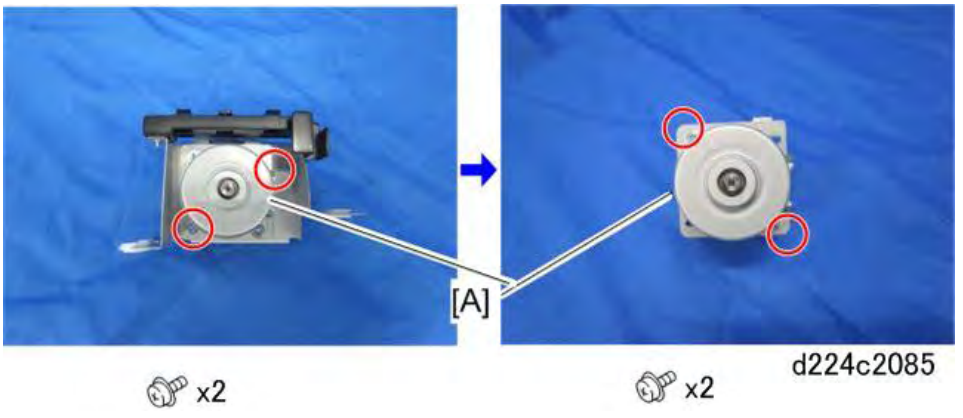
ADF Entrance Motor

1. ADF rear cover (page 8)
2. ADF entrance motor [A] along with the frame.



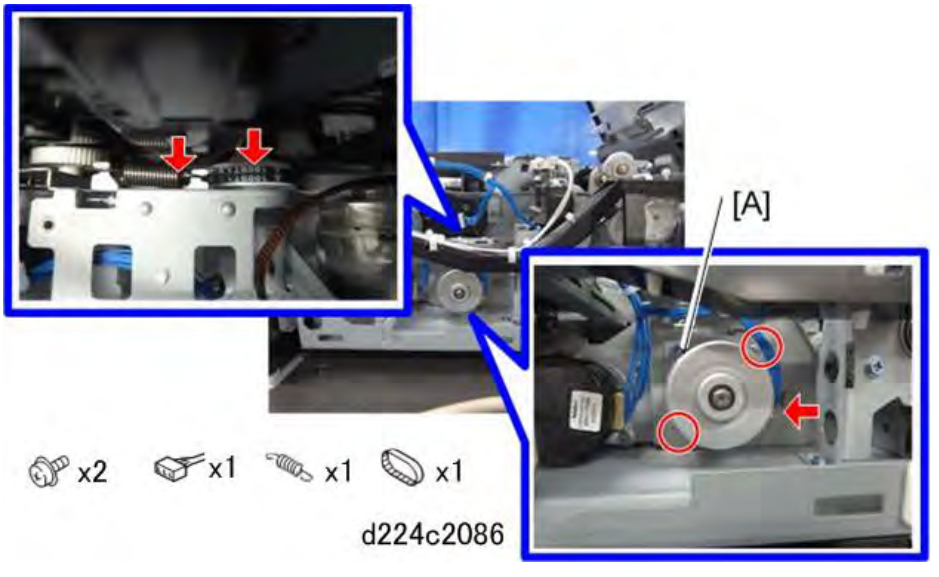
d238m1368

3. ADF entrance motor [A].

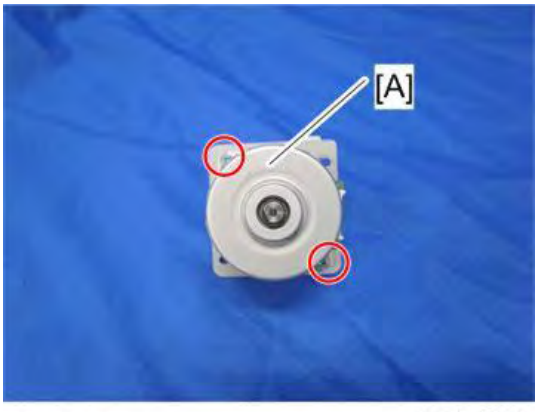


ADF Scanning Motor

1. ADF entrance motor along with the frame (page 27)
2. ADF scanning motor [A] along with the bracket.



3. ADF scanning motor [A].



x2 d224c2089

ADF Exit Motor

1. Remove the rear cover. (page 8)
2. The exit motor is on the back of the machine behind the vertical stay.

d223c3746

3. Remove the ADF control board.

x1 x15 x4 d223c3747

4. **Remove the anti-static plate.**

x4

d223c3748

5. **Unfasten the motor.**

x2

d223c3749

6. Disconnect the drive belt.

x1 d223c3750

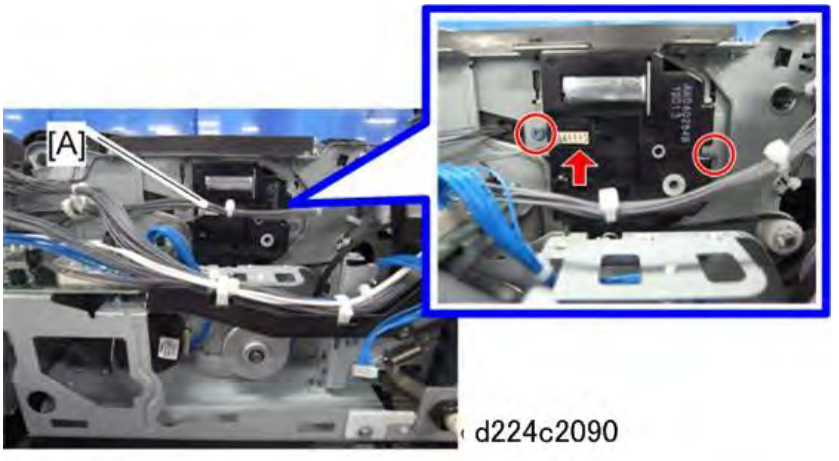
7. Disconnect the motor and remove it.

x1 d223c3751

ADF Bottom Plate Lift Motor

1. ADF entrance motor along with the frame. (page 27)

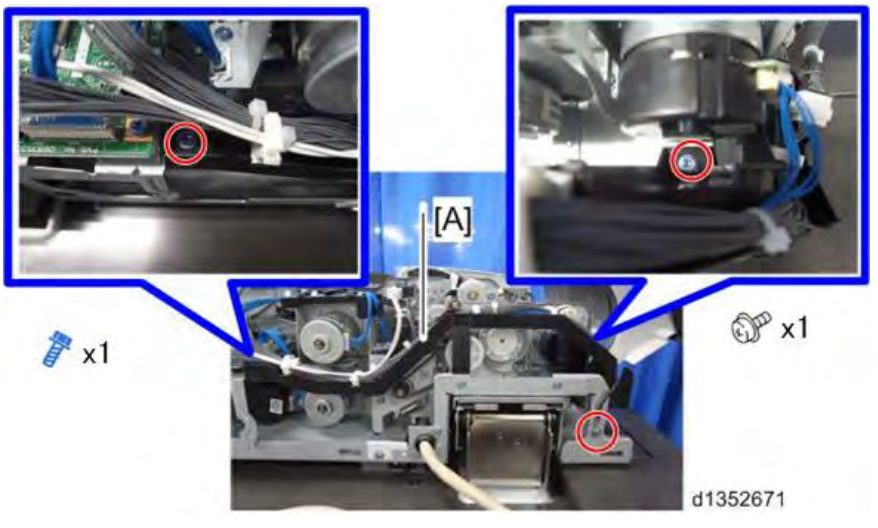
2. ADF bottom plate lift motor [A].



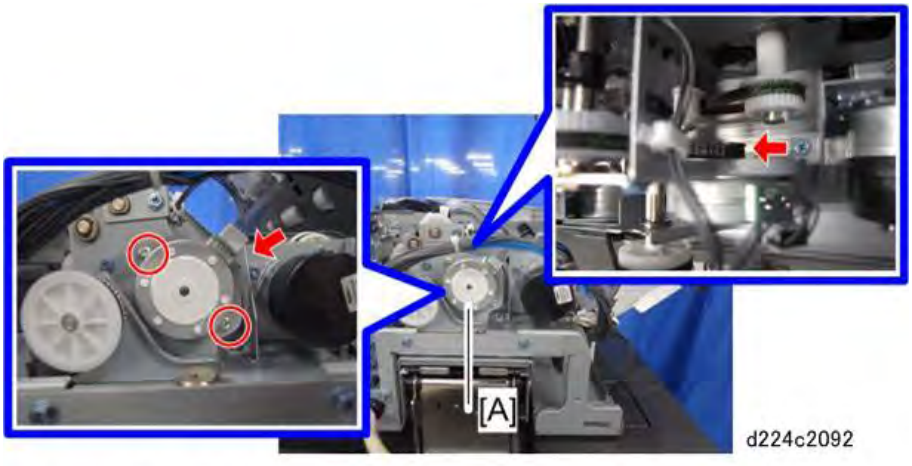
x2 x1

ADF Pick-up Roller Lift Motor, ADF Transport Motor

1. ADF rear cover (page 8)
2. Frame (black) [A].

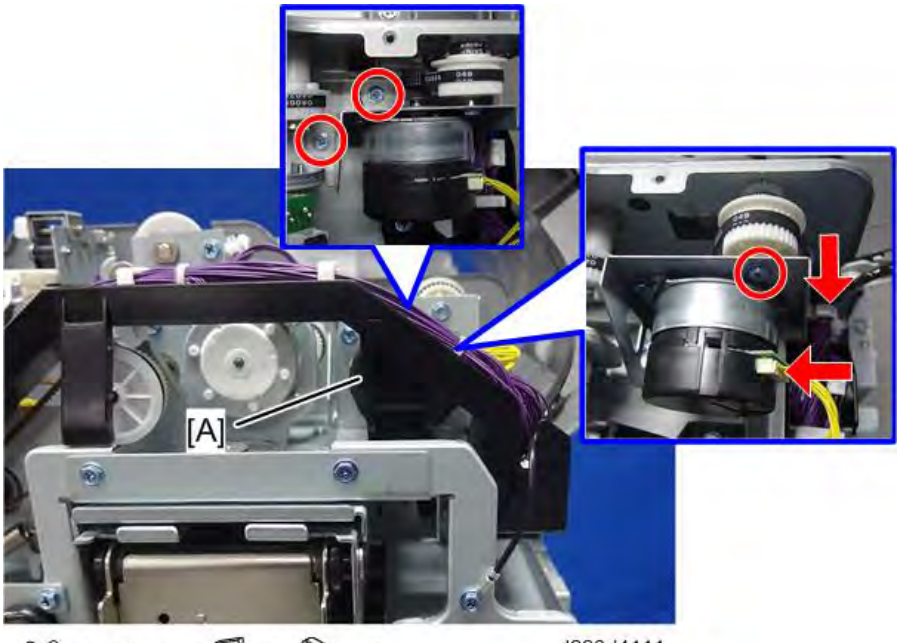


3. ADF pick-up roller lift motor [A].



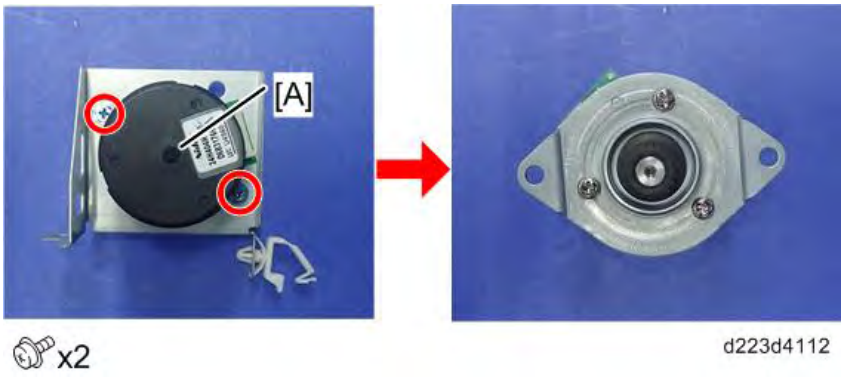
x2 x1 x1

4. ADF transport motor [A] along with the bracket.



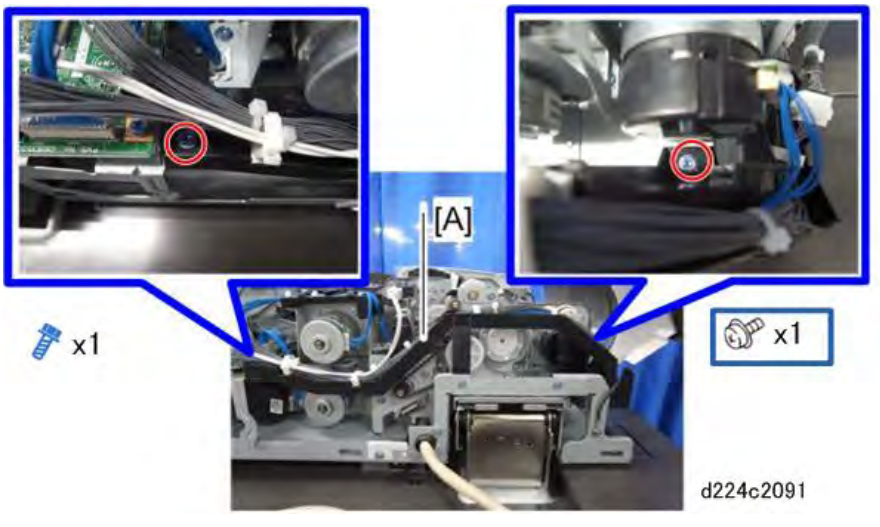
x3 x1 x1 x1

5. ADF transport motor [A].



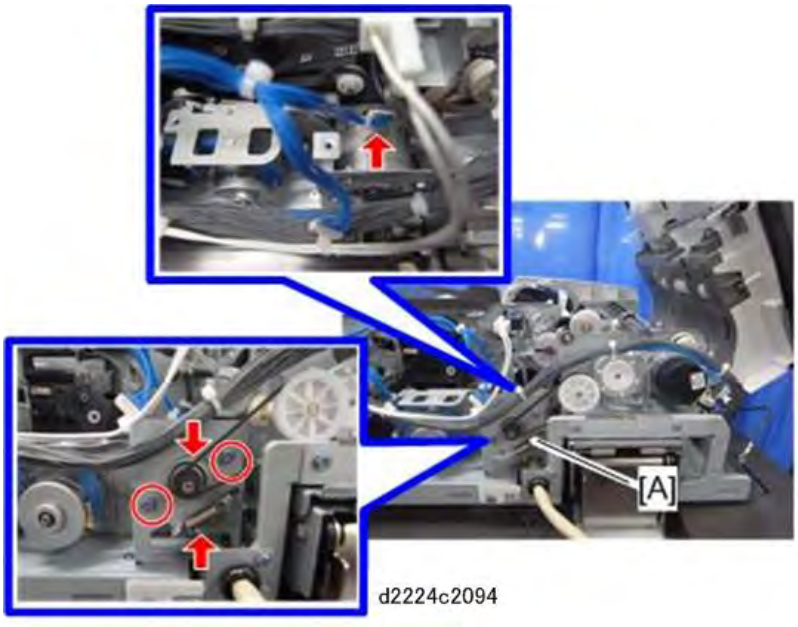
ADF Feed Motor

1. ADF rear cover (page 8)
2. Remove the fixing screws of the frame (black) [A].



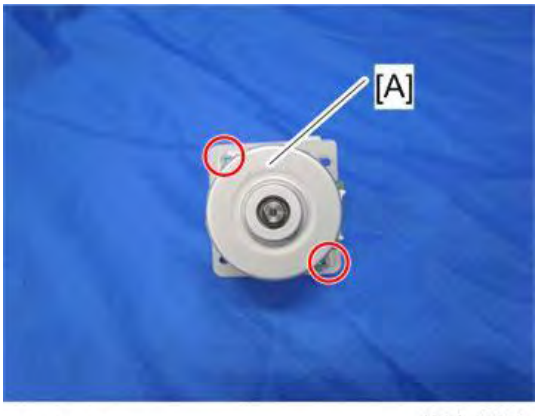
3. ADF entrance motor along with the frame (page 27)

4. ADF feed motor [A] along with the bracket.



x2 x1 x1 x1

5. ADF feed motor [A].

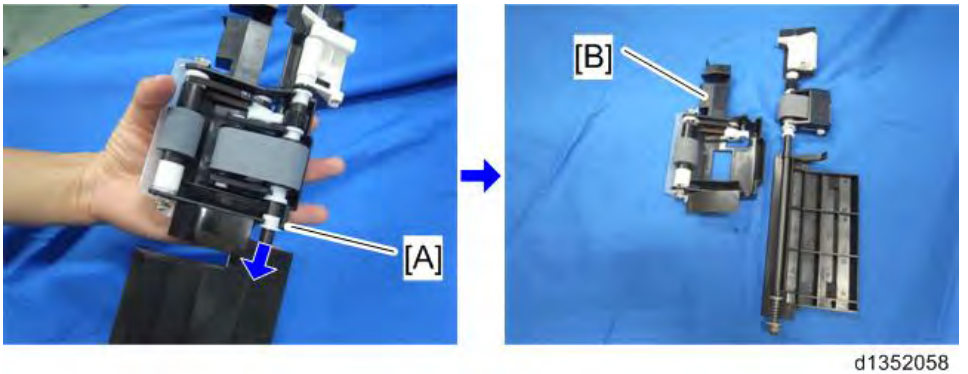


x2

Rollers and Belts

Pick-up Roller, Transport Belt

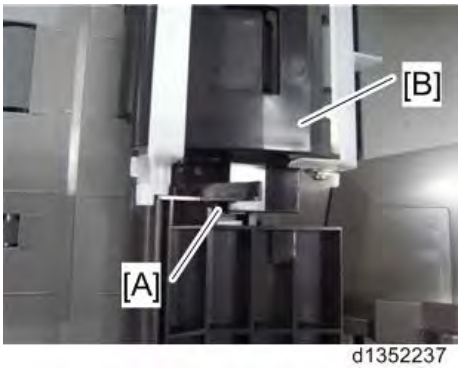
1. **Remove original feed unit. (page 11)**
2. **Slide bushing [A], and then remove the pick-up roller unit [B].**



d1352058

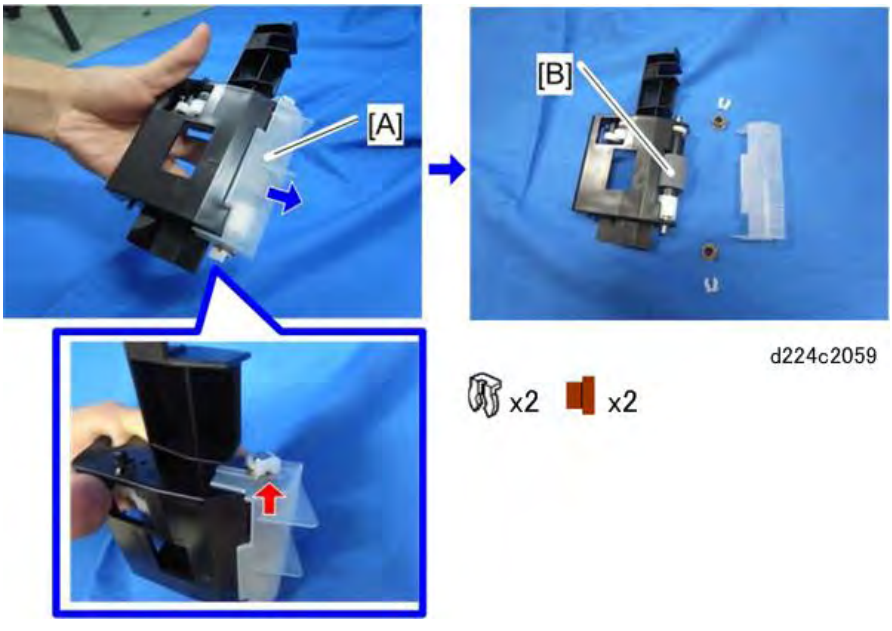
Note

- At re-assembly, make sure that the tab on the front guide plate [A] is above the pick-up roller [B].

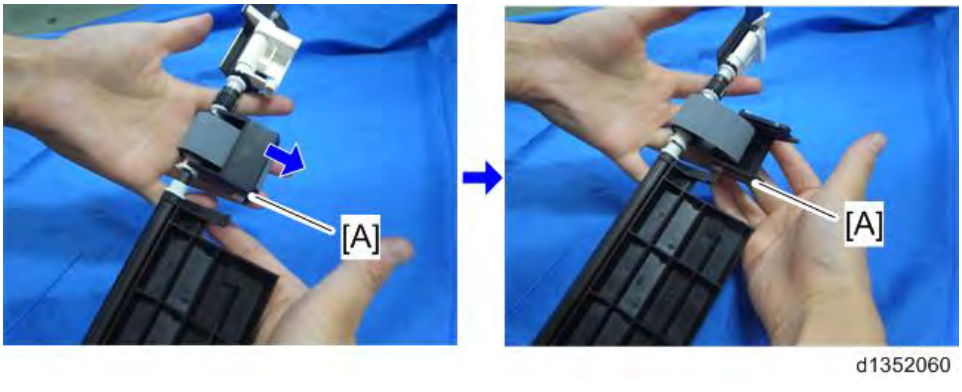


d1352237

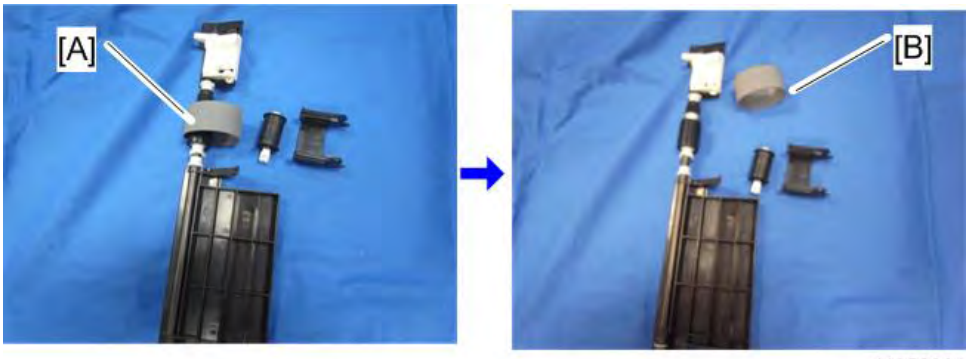
3. Pick-up roller cover [A] and pick-up roller [B].



4. Lift the left and right sides of the feed belt holder [A], then remove it.



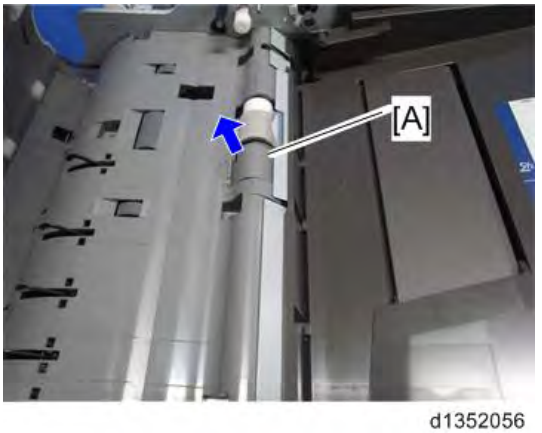
5. Remove the feed belt [B] from the feed belt holder [A].



d1352061

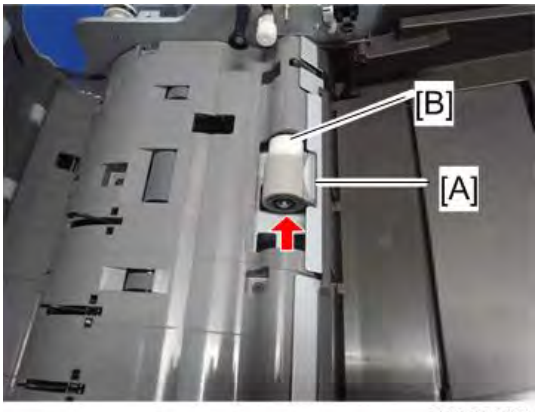
ADF Separation Roller

1. Open the feed cover.
2. Original feed unit (page 11)
3. ADF separation roller cover [A].



d1352056

4. ADF separation roller [A] and torque limiter clutch [B] (snaps off)

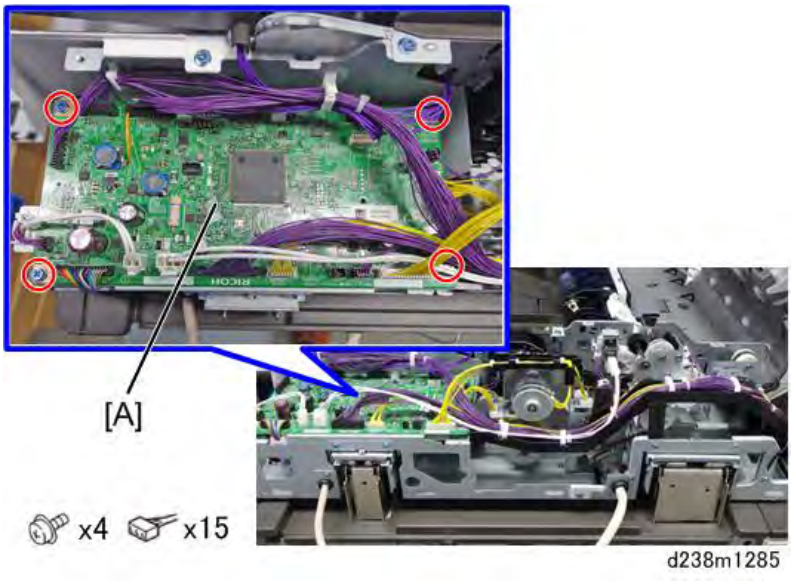


d1352057

Boards

ADF Controller Board

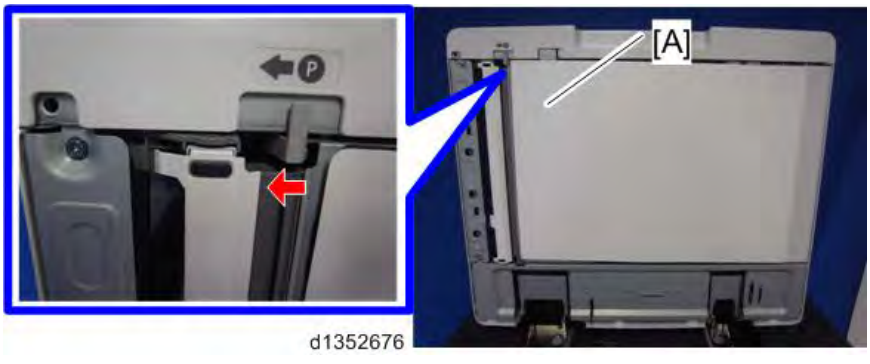
1. ADF rear cover (page 8)
2. ADF controller board [A].



CIS Unit

CIS Unit

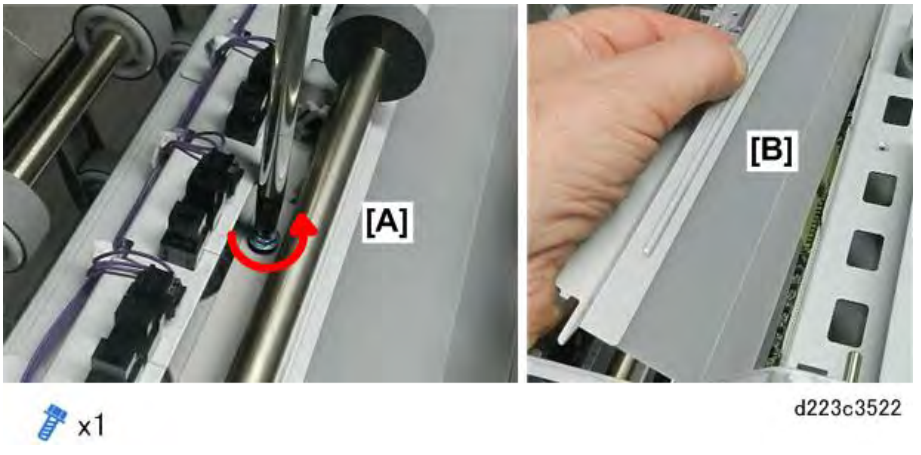
1. Original Feed Unit (page 11)
2. ADF Separation Roller (page 38)
3. ADF front cover (page 7)
4. Raise the ADF and open the white cover [A]. This will prevent scratching the CIS glass when the unit is removed.



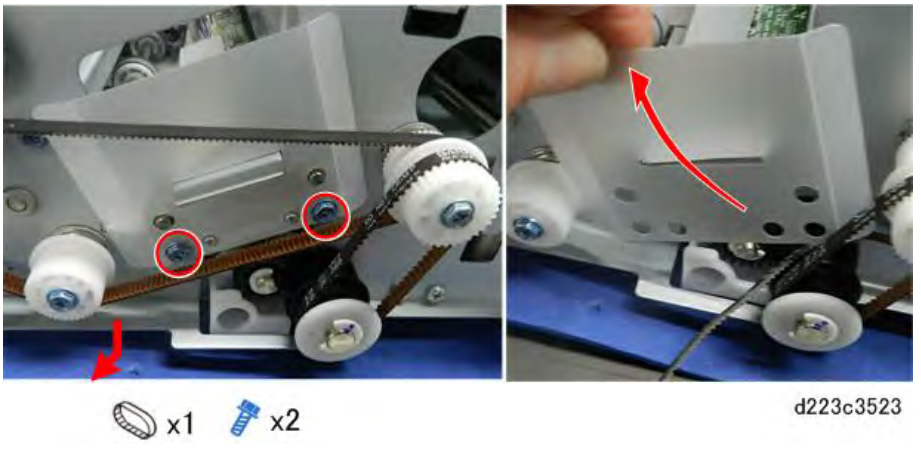
5. Guide plate (large) [A]

6. Guide plate (small) [A].

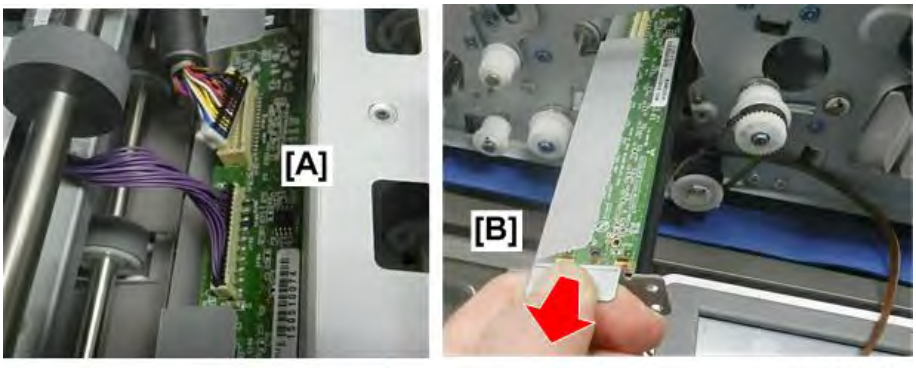
7. Unfasten the guide plate [A].
8. Remove the guide plate with Mylar [B] attached.



9. At the front, disconnect the timing belt.
10. Unfasten the Mylar plate and then remove it.



11. Disconnect the CIS unit [A].
12. Slowly, pull the CIS unit [B] out of the ADF.



13. Lay the CIS unit on a flat, clean surface, with the glass side facing up.

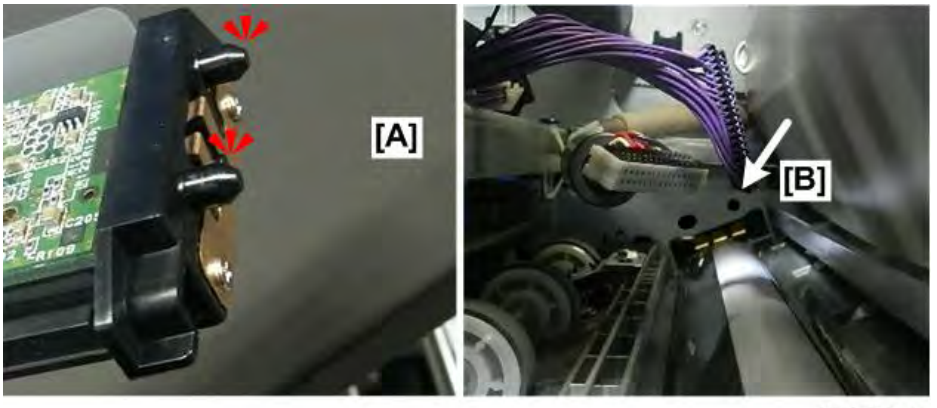
Reinstallation

1. Before reinstallation, clean the surface of the CIS lens with a lens cloth.

Important

- Never clean the surface of the CIS with tissue or any type of organic solvent.

2. Two pegs on the rear end of the CIS [A] fit into two holes [B] at the back of the ADF unit.



d223c3526

3. To re-install the CIS, set the CIS in its channel so it is perfectly flat.
4. Slowly, push it to the rear until the pegs slide into the holes.

d223c3528

5. Follow the correct arrangement of the drive belt when you re-attach it.

d223c3527

6. **If you have replaced the CIS unit, do these SP three codes in the following order:**
   - SP4-730-001 (FROM ADF Factory Setting: CIS Parameter)

     Writes the initial value of the scan parameter in FROM.
   - SP4-730-004 (FROM Data Update)

     Writes the SP value of the scan parameter in FROM.
   - SP4-730-002 (FROM Main Factory Setting Execution ON/OFF)

     Copies the parameters written in FROM to the engine board in the MFP.

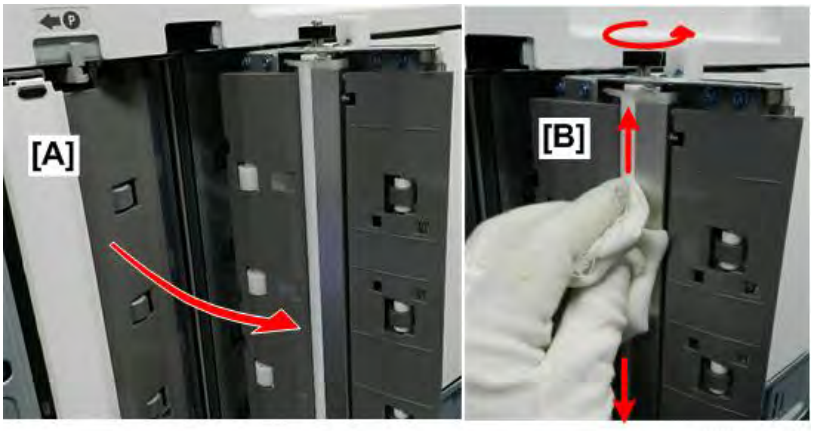
CIS White Roller Cleaning

Frequently inspect the CIS white roller. A dirty or incorrectly installed white roller will cause the machine to issue SC152-00 (White Level Error: Back Side).

1. **Open the ADF.**
2. **At the upper left corner, release the white plate.**

3. **Swing the roller assembly away from the ADF [A].**

4. **White rotating the white roller by its gear, use a dry, clean cloth to wipe the surface of the roller clean [B].**



Adjustment after ADF Replacement

Important

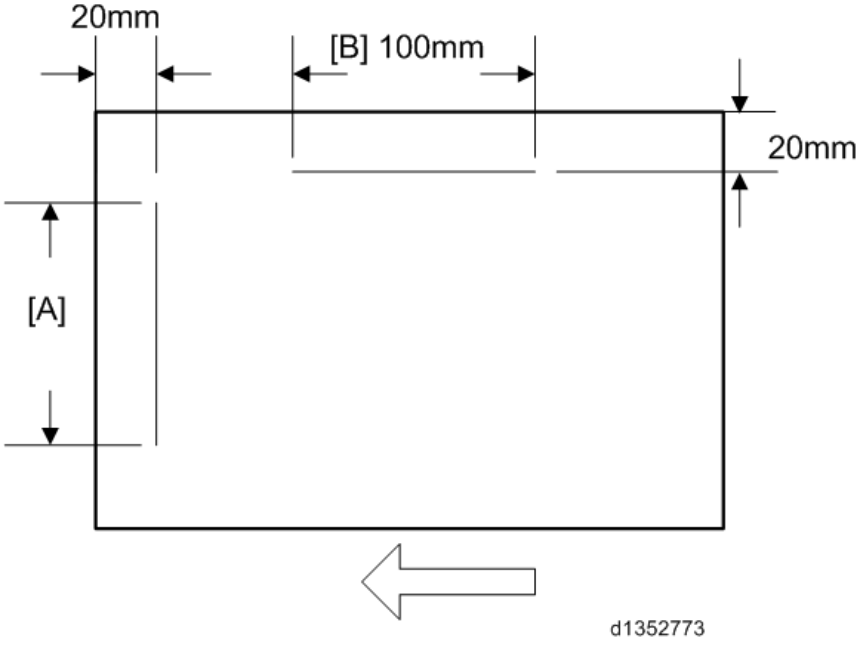
- If the ADF is being replaced, do SP4-730-001, SP4-730-004 and SP4-730-002 (in that order) after the new ADF has been installed.

Checking the vertical registration

SP6-006-001 (ADF Adjustment Side-to-Side Regist: Front)

SP6-006-002 (ADF Adjustment Side-to-Side Regist: Rear)

1. **Create an original as shown in the following picture.**



The large white arrow indicates the direction of feed.

2. **Copy the original and make sure that the position of the line [A] is within 0±1mm**
3. **If not within the standard, adjust with the SP modes.**

Checking the horizontal registration

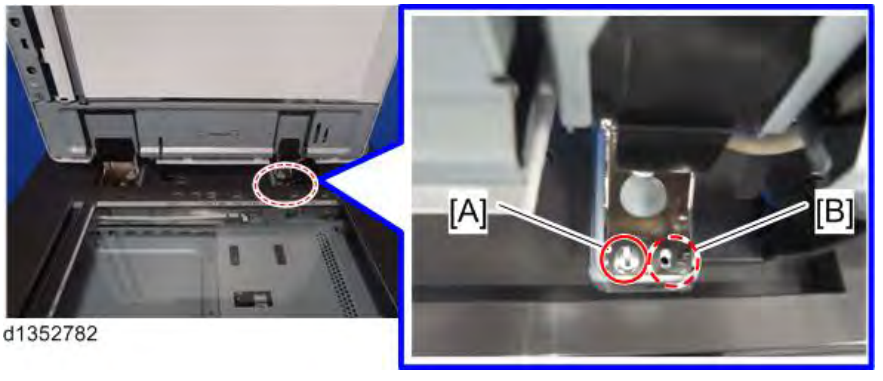
SP6-006-010 (ADF Adjustment L-Edge Regist (1-Pass): Front)

SP6-006-011 (ADF Adjustment L-Edge Regist (1-Pass): Rear)

1. Copy the original and make sure that the position of the line [B] is within 0±2mm.
2. If not within the standard, adjust with the SP modes.

Checking skew

1. Make sure that the difference between both end positions of the line [A] that you wrote on the original (see above) is within 0±2mm.
2. If not within the standard, change the position of the fixing screw [A] to the long hole [B] at the right hinge.



d1352782

Checking magnification

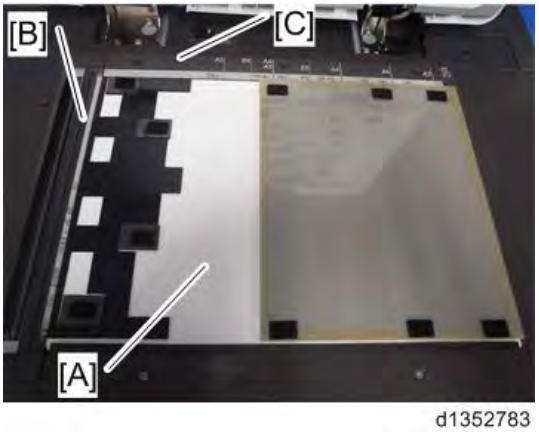
1. Copy the original and make sure that the length of the line [B] that you wrote on the original (see above) is within 100±1mm.
2. If not within the standard, adjust with the SP mode.
    - SP6-017-001 (DF Magnification Adj.)

Platen Adjustment

1. Open the ADF and remove the white cover [A].

d1352781

2. Put the white cover [A] in the correct position on the exposure glass, aligning it with the glass cover [B] and the rear scale [C].



d1352783

3. **Close the ADF [A] slowly and attach the ADF to the white cover [B] with the hook and loop fastener.**

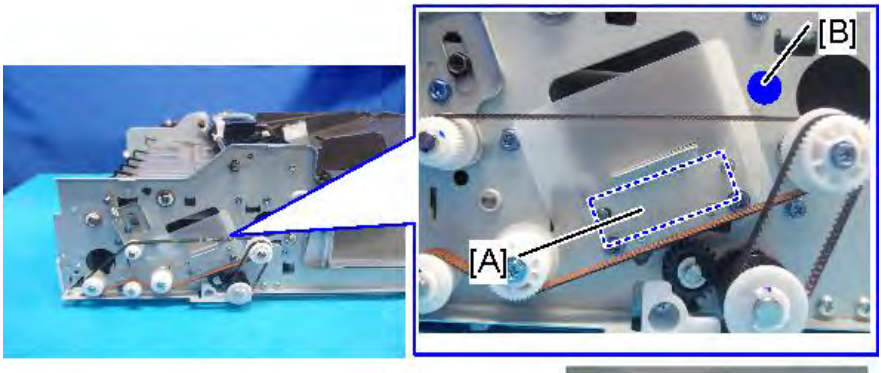
2. Detailed Descriptions

SPDF DF3100 (D3B0)

Changes from the Previous Machine

1. CIS mis-installation prevention

To prevent installing the wrong kind of CIS in the DF3100, a blue label [A] is attached to the CIS. Check that the color on this label is the same as the marking [B], to prevent installing the wrong CIS.



d238m0790

Note

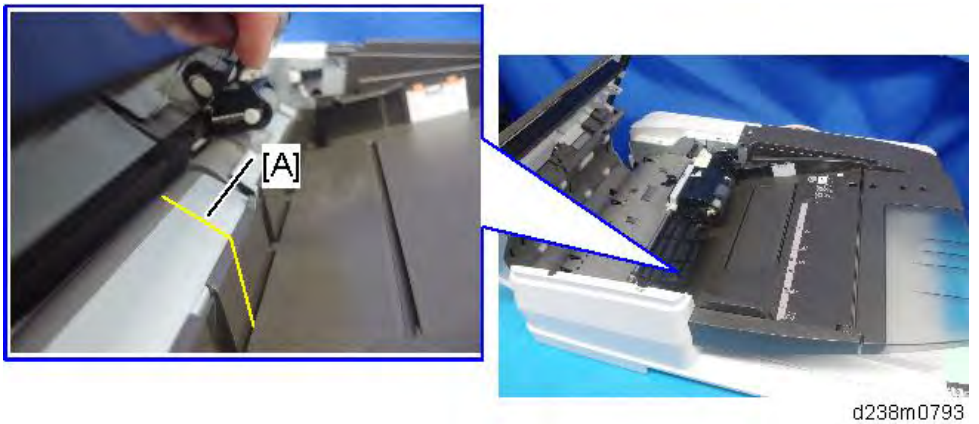
- [A] (Blue label): CIS for DF3100
- [B] (Orange label): CIS for other machines

d238m0791

- If the wrong CIS is installed, JAM001 will occur if sheet-through scanning is done. When JAM001 continues three times, SC151 or SC152 will occur.

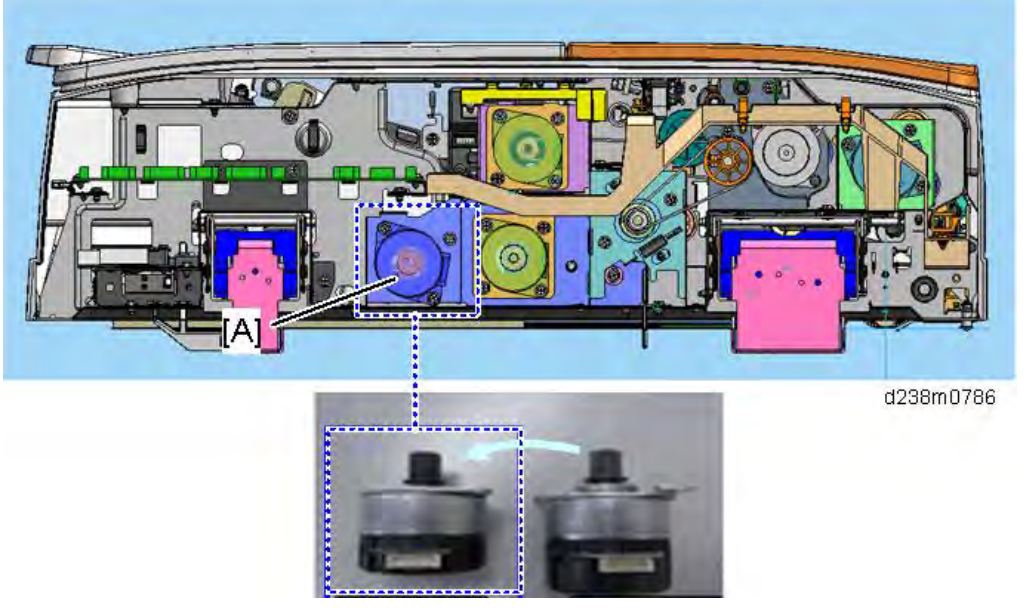
2. Back curl "U" folding prevention

To prevent the originals from folding when picking up paper that is curled upward, the slope of the paper feed guide [A] has been changed.



3. Smaller original exit motor

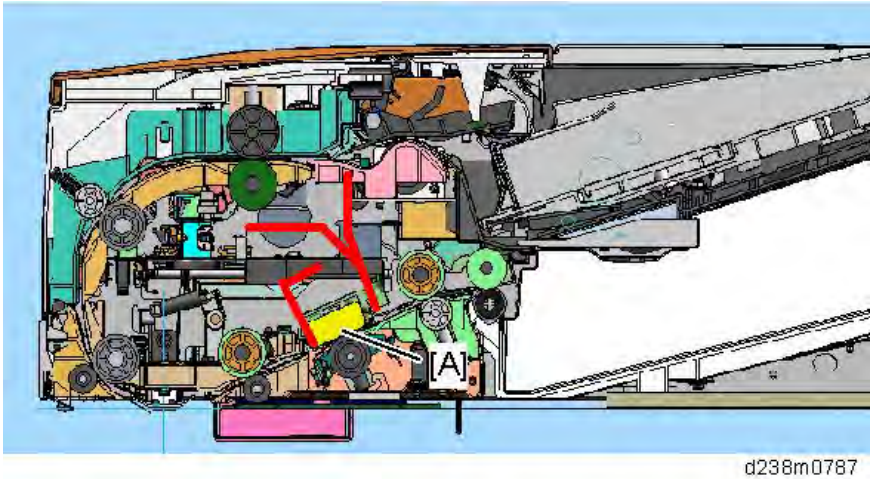
Changed the original exit motor to a next generation motor [A] with a smaller size.



4. Addition of fire prevention enclosure

To prevent fire spreading from the CIS [A] and the DF main board, a fire prevention enclosure (shown by the red lines) has been added.

- CIS [A]



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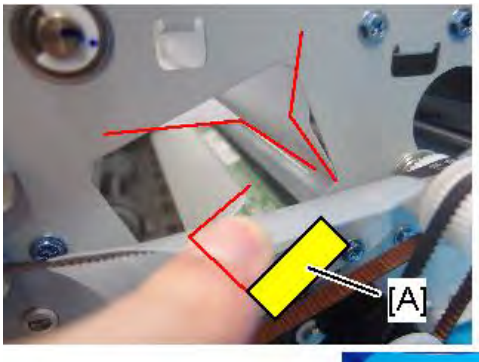

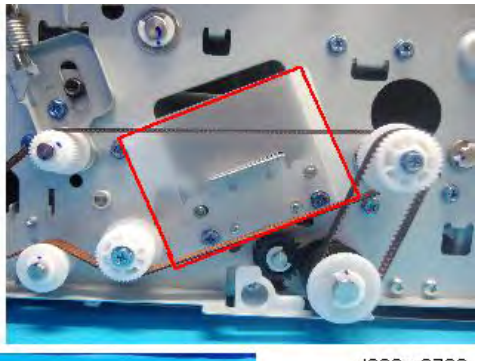

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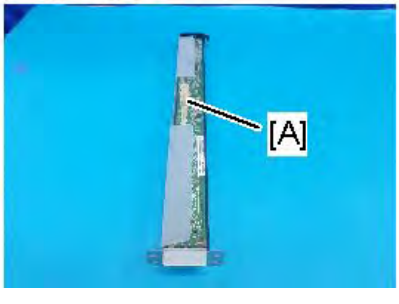
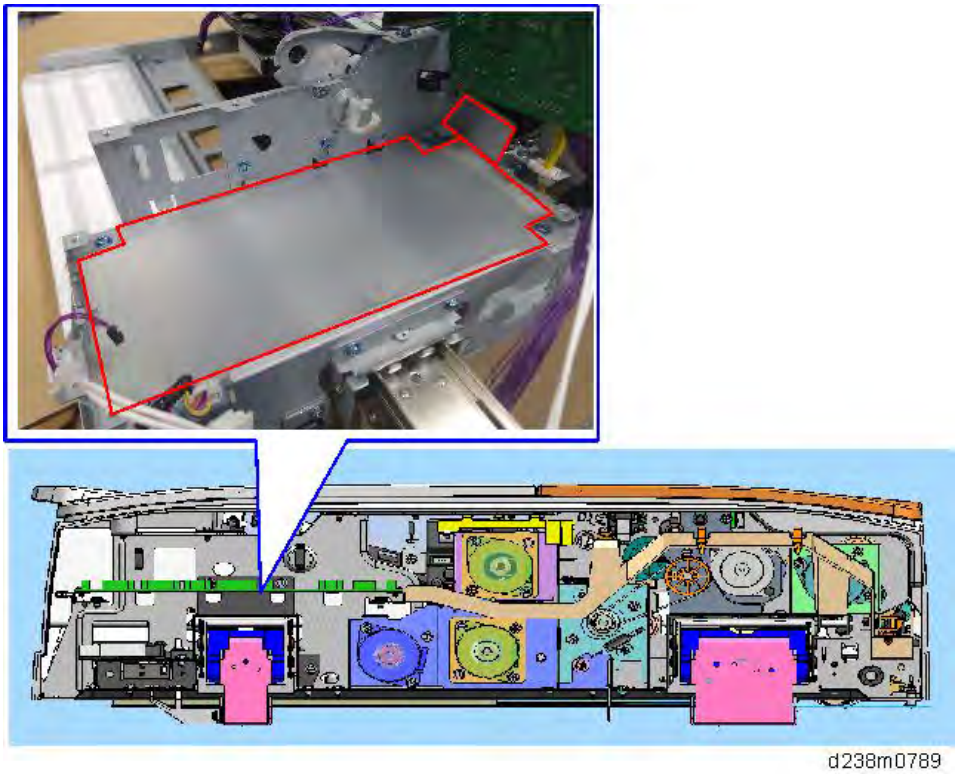


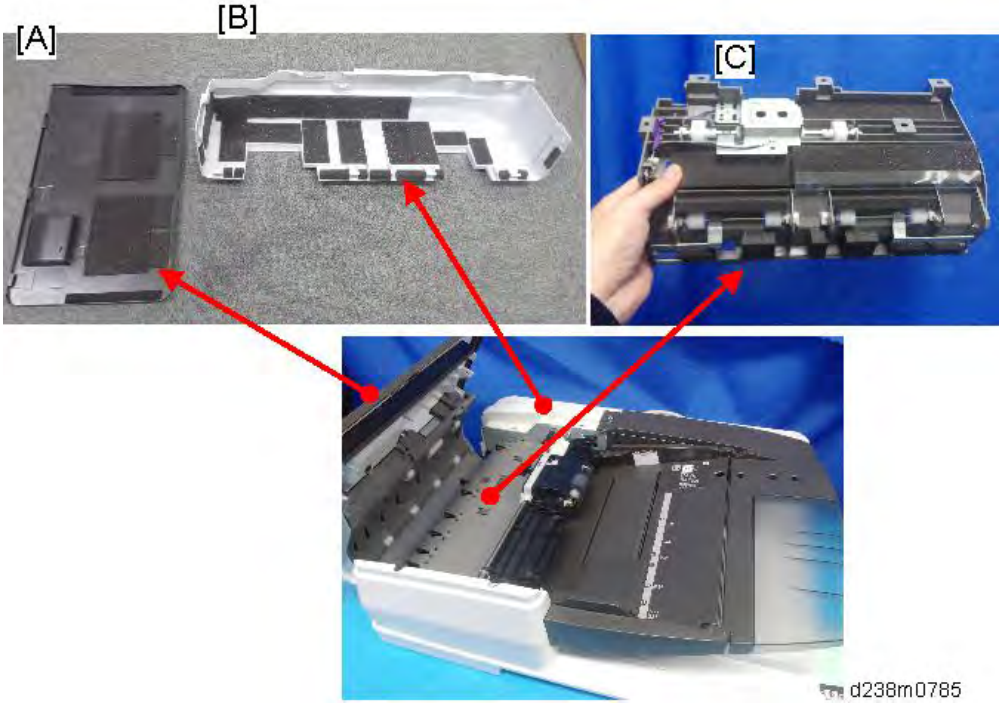
ADF control board



5. Addition of cushioning to the outer cover

Cushioning has been added to the DF cover to reduce noise.

[A]: DF top cover, [B]: DF rear cover, [C]: Original transport guide



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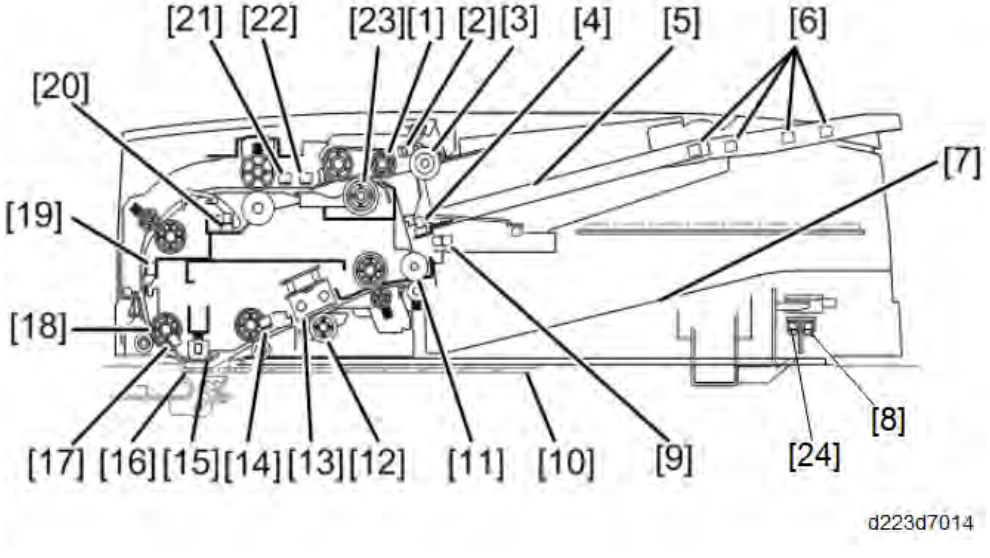
Parts Layout

Cross-Section of the ADF Unit



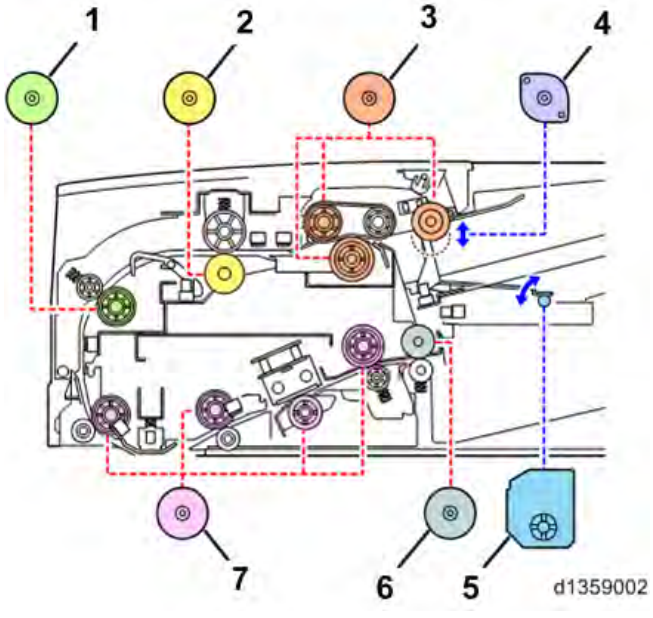
No,	Part	No.	Part
1	Feed Belt	13	CIS
2	Bottom Plate Position Sensor	14	Original Exit Sensor
3	Pick-up Roller	15	Scanning guide plate
4	Original Set Sensor	16	Sheet-through exposure glass
5	Original Tray	17	Original Registration Sensor
6	Original Length Sensors	18	Scanning Entrance Roller
7	Output Tray	19	Interval Sensor
8	Lift Sensor	20	Original Width Sensors
9	Bottom Plate HP Sensor	21	Skew Correction Sensor
10	Exposure Glass	22	Separation Sensor
11	Exit Roller	23	ADF Separation Roller
12	CIS White Roller	24	ADF Lift Interlock Switch

Scanning Sequence

- **Original Pick-up**. The pick-up roller picks up the leading edge of original.
- **Original Feed and Separation**. The feed belt and reverse roller feed the originals and prevent double-feeds.
- **Original size detection**. 9 original size sensors, 5 for width and 4 for length, detect the original size on the original tray.
- **Original Scanning**. A color CIS unit scans the reverse side of the originals (both sides are scanned in one pass).

Mechanism

Motors



No.	Part
1	Relay Motor
2	Entrance Motor
3	Feed Motor
4	Pick-up Motor
5	Tray Lift Motor
6	Exit Motor
7	Transport Motor

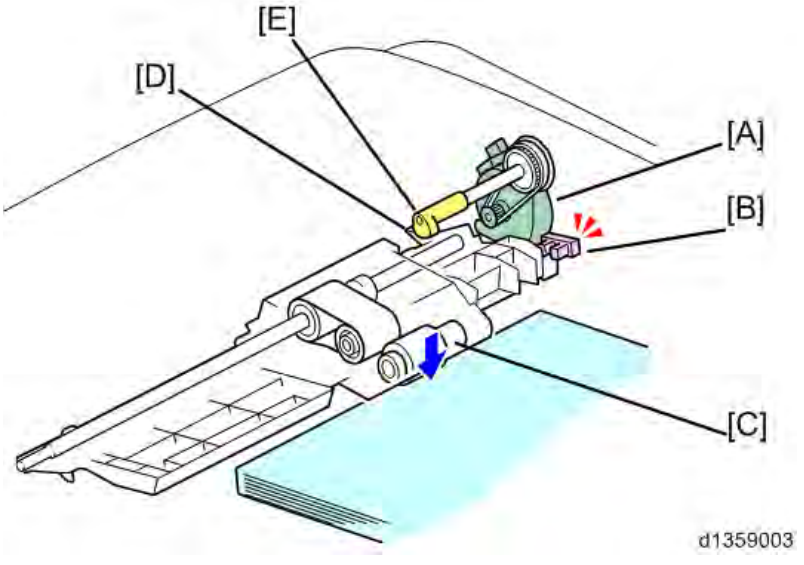
Original Pick-up

Paper Feed

When an original is placed on the original tray, its leading edge raises the feeler of the original set sensor and the sensor detects the original.

Pick-up Roller

- When there is no original on the original tray, the pick-up roller [C] swings up to the limit of its vertical movement.
- To lower the pick-up roller, the pick-up roller motor [A] rotates the lift cam [E] which lowers the pick-up arm [D] and the pick-up roller.
- When the pick-up roller is lowered, the pick-up roller motor [A] switches on.
- When the actuator switches off the bottom plate position sensor [B], the pick-up roller motor goes off, and then the lift cam [E] holds the roller up.



Pick-up Roller Down Timing

The pick-up roller lowers:

- When an original (or stack of originals) is set on the original table.
- When the trailing edge of the original passes the sensor (but, it does not lower for the last original).
- For A4/LT LEF when the leading edge reaches the registration sensor.

Pick-up Motor On/Off Timing

The pick-up motor switches ON:

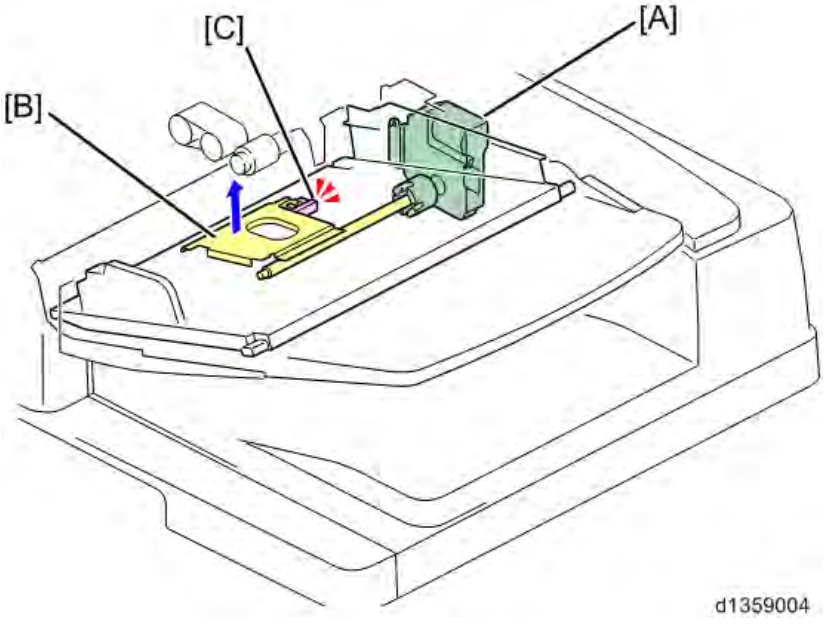
- When the original set sensor detects the leading edge of the original.
- Just after the machine is turned on

The pick-up motor switches OFF:

- When the original feed cover is open.
- When an original jams in the ADF paper path.

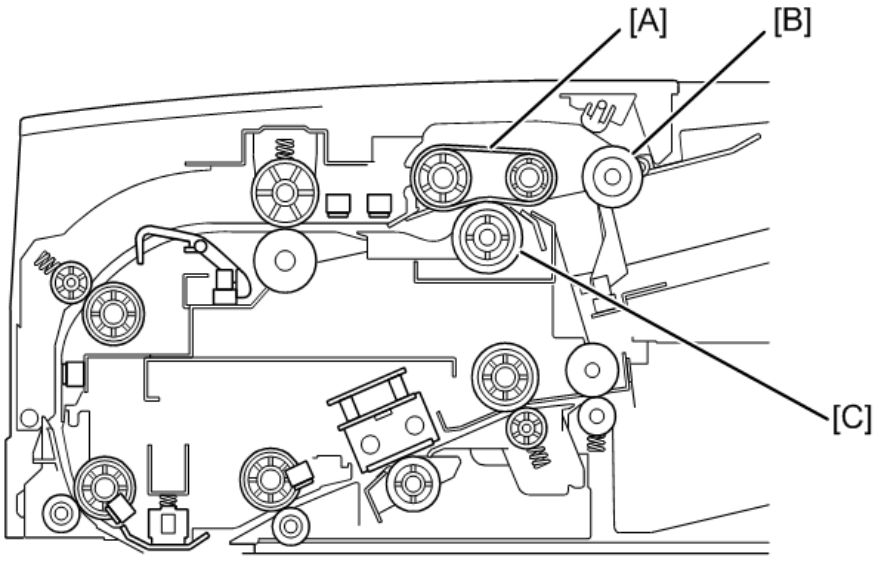
Bottom Plate Lift

- When an original is set on the original tray, after the pick-up roller drops, the bottom plate position sensor goes off, and then the plate lift motor [A] goes on and raises lift lever [B] which raises the bottom plate.
- The actuator above the pick-roller holder switches on the bottom plate position sensor (see the previous diagram), and this turns the plate lift motor [A] off so the stack is positioned at the correct feed position.
- During scanning with the ADF, when the top of the stack becomes too low, the pick-up roller drops low enough to turn the bottom plate position sensor off, which switches the lift motor [A] on again and raises the stack until once again it is at the paper feed position.
- This mechanism performs continuously and keeps the top of the stack at the correct feed height for original stacks of up to 220 sheets (81.4 g/m2).
- At the end of the job, the original table descends under its own weight as far as the bottom plate HP sensor [C].



Original Feed and Separation Mechanism

- A feed belt [A] and ADF separation roller [C] comprise the FRR original separation mechanism.
- If more than one original feeds between the nip of the feed roller and ADF separation roller, when the pick-up roller [B] picks up the front edge of the original, the rotation of the ADF separation roller [C] reverses immediately.
- This sends the bottom sheet back into the tray while the sheet above continues to feed normally.

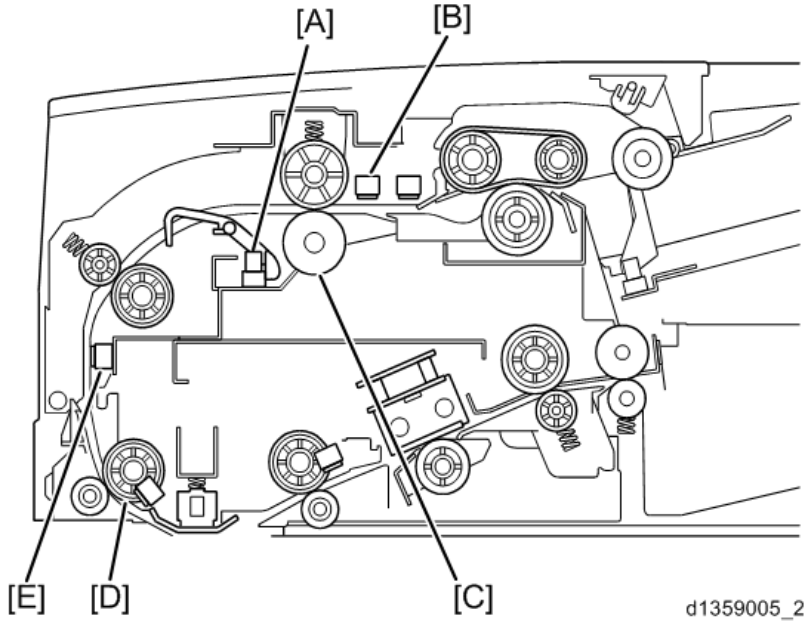


d1359005

- When more than one original feeds, this increases torque above the limit of the spring loaded torque limiter which reverses the rotation of the ADF separation roller against the rotation of the feed belt above.
- The bottom sheet reverse feeds while the sheet above continues to feed into the paper path.

Skew Correction Mechanism

- After the original feeds, the skew correction sensor detects its leading edge, and stops the rotation of the feed motor for a prescribed number of pulses.
- The leading edge hits and straightens against the stationary roller to correct skew.
- If the original is small (B6, A5, B5, HLT) (or when duplex scanning regardless of paper size), when the interval sensor [E] detects the leading edge of the original, it stops the pre-scanning roller [D] for a prescribed number of pulses, long enough for the original to buckle against the stationary roller and correct skew.

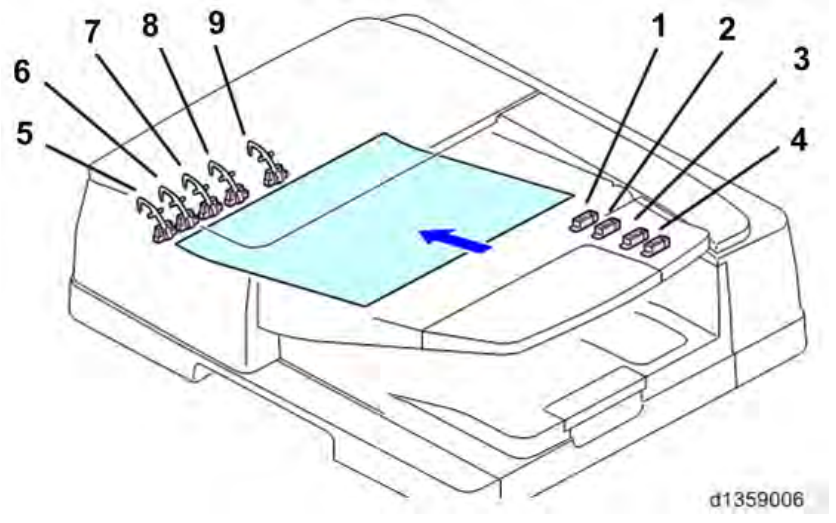


No.	Part
A	Original Width Sensors
B	Skew Correction Sensor
C	Entrance Roller
D	Scanning Entrance Roller
E	Interval Sensor

- You can turn on **SP6020-001** (ADF Contact Mode In/Out) to enable skew correction at both the entrance roller above as well as the pre-scanning roller below for all paper sizes but this may slow down the speed of original feeding.

Original Size Detection

- When the leading edge of the original reaches the interval sensor, the machine determines the width from the readings of the 5 original width sensors.
- The length of the original is determined by the readings of the 3 original length sensors under the original table and one sensor on the bottom plate.
- These two arrays of sensors are used to determine the size of the originals.



No.	Part
1	Original Length Sensor A4/LT LEF
2	Original Length Sensor B5
3	Original Length Sensor A4
4	Original Length Sensor LG
5	Original Width Sensor 5
6	Original Width Sensor 4
7	Original Width Sensor 3
8	Original Width Sensor 2
9	Original Width Sensor 1

Size (W x L)	Width Sensors					Length Sensors			
	1	2	3	4	5	A4 LEF	B5	A4	LG
A3(297x420)	ON	ON	ON	ON	ON	ON	ON	ON	ON
B4(257x364)	ON	ON	ON	---	---	ON	ON	ON	ON
A4 SEF (210x297)	ON	ON	---	---	---	ON	ON	ON	-
A4 LEF (297x210)	ON	ON	ON	ON	ON	---	---	---	---

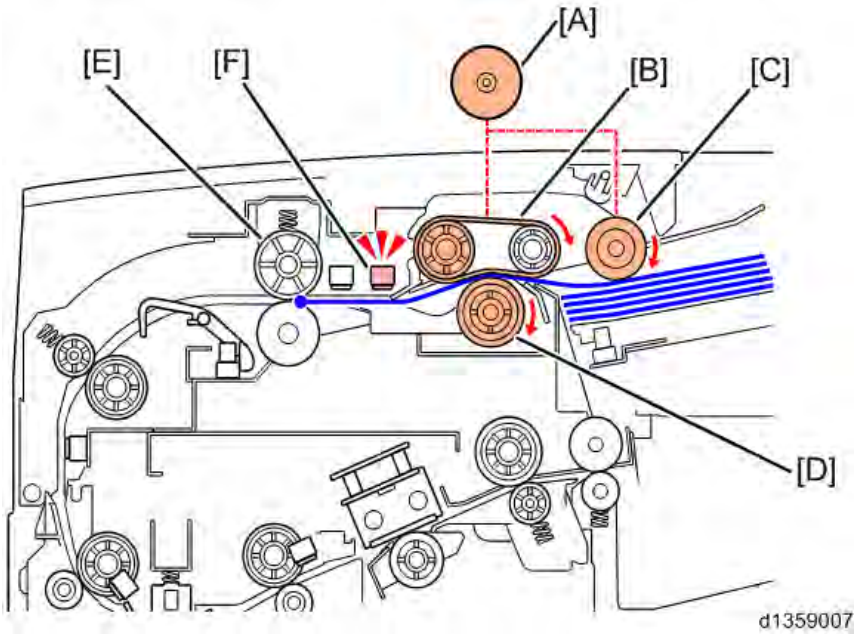
Size (W x L)	Width Sensors					Length Sensors			
	1	2	3	4	5	A4 LEF	B5	A4	LG
A4 SEF (210x297)	ON	---	---	---	---	ON	ON	---	---
A4 LEF (297x210)	ON	ON	ON	---	---	---	---	---	---
A4 SEF (210x297)	---	---	---	---	---	---	---	---	---
A4 LEF (297x210)	ON	---	---	---	---	---	---	---	---
DLT SEF (11"x17")	ON	ON	ON	ON	---	ON	ON	ON	ON
DLT SEF (11"x17")	ON	ON	ON	ON	---	ON	ON	ON	ON
8 1/2"x11" SEF (LT)	ON	ON	---	---	---	ON	ON	---	---
11"x8 1/2" LEF (LT)	ON	ON	ON	ON	---	---	---	---	---

Note

- 11"x17" and 11"x15" are detected as the same size, so you need to select one or the other with **SP6016-001** (Original Size Determination Priority) to choose whichever you are using.

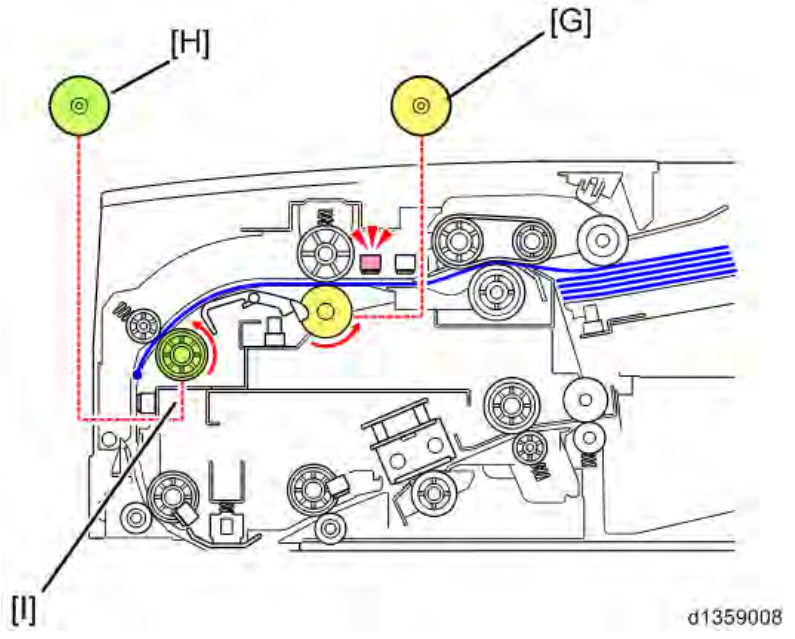
Original Transport

- At the beginning of the job, the original feed motor switches on and rotates the pick-up roller, feed belt, and reverse roller to feed the original into the original feed path.
- The original is fed to the entrance roller as it leaves the original tray. Original skew is corrected at the entrance roller.



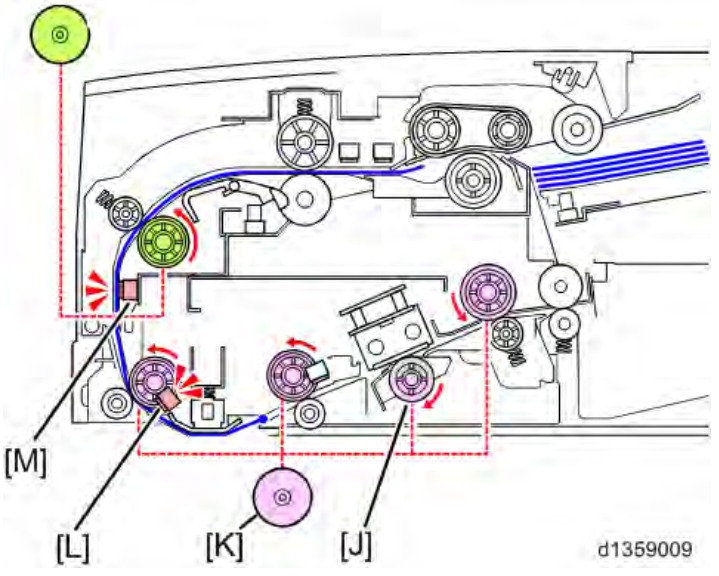
No.	Part
A	Feed Motor
B	Feed Belt
C	Pick-up Roller
D	ADF Separation Roller
E	Entrance Roller
F	Separation Sensor

- After skew is corrected at the entrance roller, the entrance motor [G] and transport motor [H] rotate the rollers in the original path and feed the original to the scanning section below.

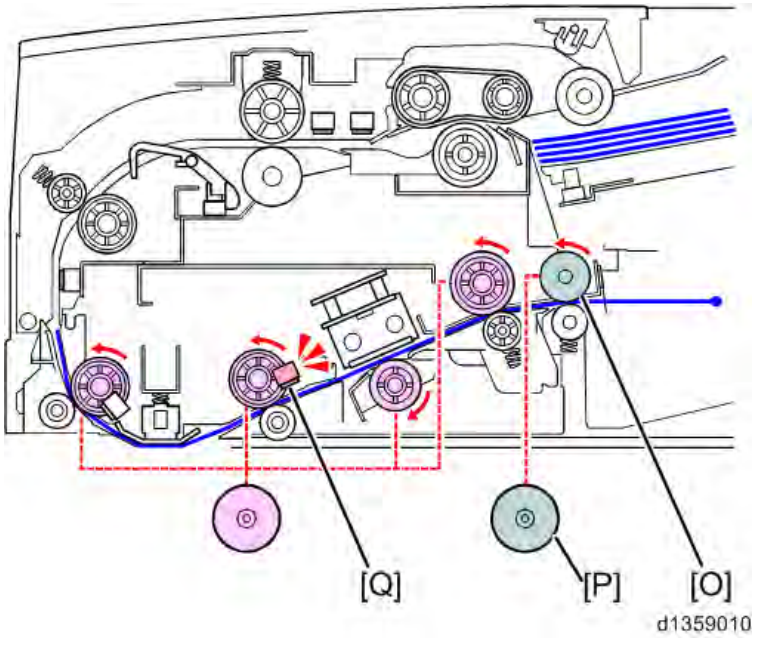


No.	Part
G	Entrance Motor
H	Relay Motor
I	Transport Roller

- When the interval sensor [M] detects the original, the transport motor [K] turns on and rotates the white roller [J] and feeds the original through the scan unit.
- After rotation of the entrance roller, the entrance motor speeds up slightly to reduce the gap between the trailing edge of the original in the scanning unit and the leading edge of the next original in the path.
- If this were allowed to continue, the differences in roller rotation speed could cause the originals to bend or buckle in the original path around the pre-scanning roller.
- To avoid this, when the interval sensor detects the leading edge of an original it slows the rotation of the scanning belt and the speed of the original in the nip of the pre-scanning roller slows.

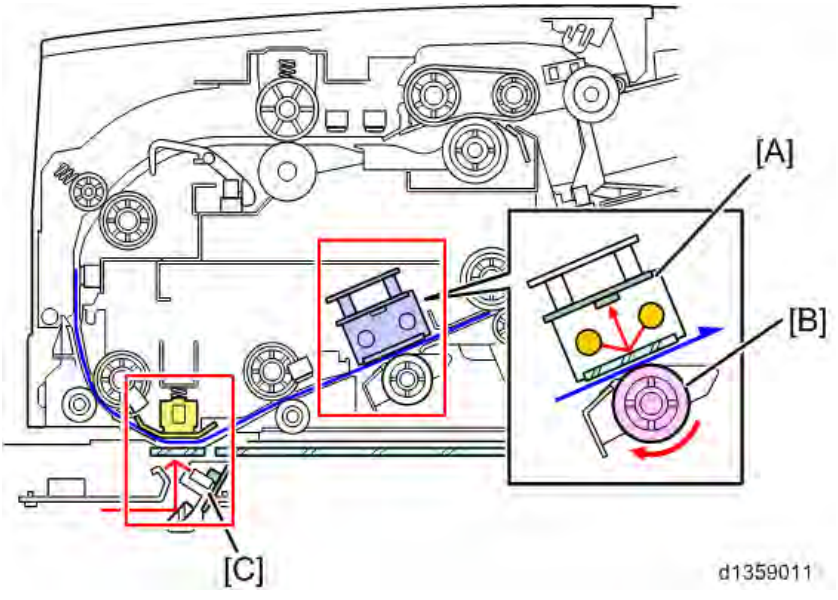


- When the original exit sensor [Q] detects the leading edge of the original, the exit motor [P] switches on and rotates the exit roller [O] which feeds the original out onto the original output tray.



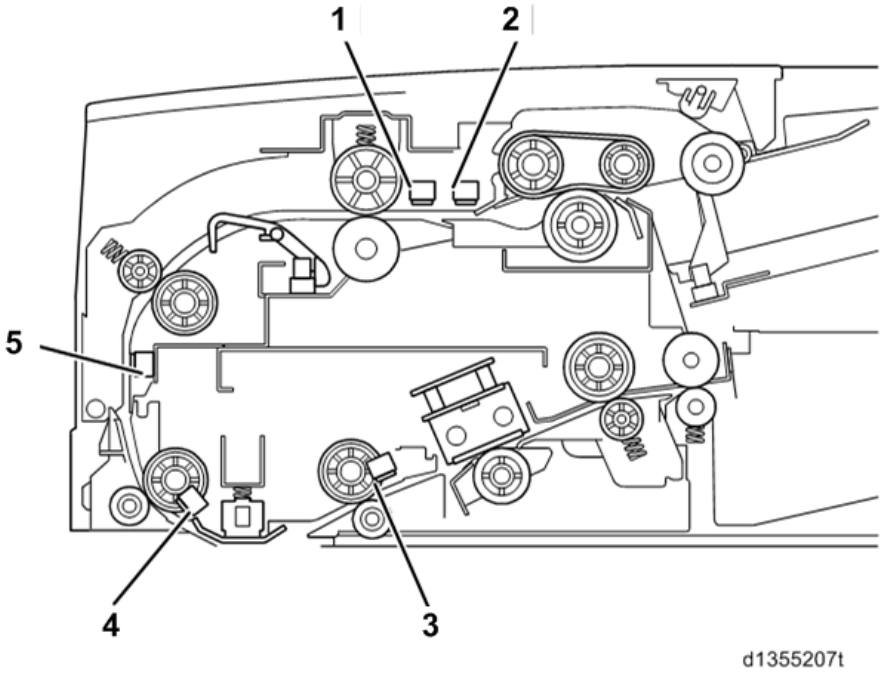
Original Scanning

This machine has a color CIS (Contact Image Sensor) so that it scan both sides of an original at the same time.



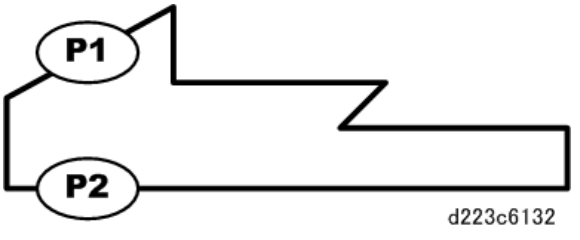
No.	Part
A	ADF
B	White Roller
C	Scanner LEDs (Exposure Lamps)

Jam Detection



No.	Part
1	Skew Correction Sensor
2	Separation Sensor
3	Original Exit Sensor
4	Registration Sensor
5	Interval Sensor

Jams are detected by the 5 sensors listed above. The detection conditions are shown in the table below.



Jam Display	Jam Name	Detection Condition

<table>
<tr><td>P1</td><td colspan="5">Separation sensor late jam</td><td>Feed motor on but leading edge failed to arrive after motor on long enough to feed 224 mm.</td></tr>
<tr><td>P1</td><td colspan="5">Skew correction sensor late jam</td><td>Leading edge failed to arrive after separation sensor detection and enough time elapsed for the original to feed 46 mm.</td></tr>
<tr><td>P1</td><td colspan="5">Interval sensor late jam</td><td>Leading edge failed to arrive after entrance motor started and remained on long enough for the original to feed 172 mm.</td></tr>
<tr><td>P!</td><td colspan="5">Registration sensor late jam</td><td>Original failed to arrive after it was detected by the interval sensor and enough time elapsed for the original to feed 96 mm.</td></tr>
<tr><td>P2</td><td colspan="5">Original exit sensor late jam</td><td>Original failed to arrive after it was detected by the registration sensor and enough time elapsed for it to feed 130 mm.</td></tr>
<tr><td rowspan="7">P1</td><td colspan="5">Separation sensor lag jam</td><td>After the entrance roller started to pull the original out of the original tray after initial feeding, the original failed to move based on the calculations below.</td></tr>
<tr><td>A4/LT</td><td>L1</td><td>L2</td><td>L3</td><td>Std.</td></tr>
<tr><td>Not</td><td>Not</td><td>Not</td><td>Not</td><td>226.8</td></tr>
<tr><td>Detected</td><td>Not</td><td>Not</td><td>Not</td><td>253.8</td></tr>
<tr><td>-</td><td>Detected</td><td>Not</td><td>Not</td><td>291</td></tr>
<tr><td>-</td><td>-</td><td>Detected</td><td>Not</td><td>320</td></tr>
<tr><td>-</td><td>-</td><td>-</td><td>Detected</td><td>432</td></tr>
<tr><td></td><td colspan="6">However, in some cases the operator may have specified another length longer than the standard value and that value will be used as standard (Std.).</td></tr>
</table>

P1	Skew correction sensor lag jam	After the separation sensor detected the trailing edge, the trailing edge was still detected after enough time had elapsed for the original to feed 46 mm.
P!	Interval sensor lag jam	After the transport motor turned on, the trailing edge of the original was not detected after enough time had elapsed for the original to feed 82 mm.
P2	Registration sensor lag jam	After the interval sensor detected the trailing edge, the trailing edge was still detected after enough time had elapsed for the original to feed 93 mm.
P2	Original exit sensor late lag	After the registration sensor detected the trailing edge, the trailing edge was still detected after enough time had elapsed for the original to feed 130 mm.

ADF SC Errors

SC	Error Name	Probable Cause
700-01*	ADF bottom plate lift motor error	• No output from bottom plate position sensor • No output from bottom plate HP sensor • Bottom plate motor not operating • ADF main board problem

SC	Error Name	Probable Cause
700-02*	ADF original pick-up motor error	• No signal from the pickup HP sensor because sensor harness, connector loose, broken, defective. • Pick-up HP sensor defective • Pick-up motor harness, connector, is loose, broken, defective. • Pick-up motor defective. • ADF main board defective
700-04*	ADF feed motor error	• Paper jammed in paper path • Motor overload due to blockage • Motor harness loose, broken, defective • Motor bracket, motor installed incorrectly • Feed motor defective
700-05*	ADF entrance motor error	• Paper jammed in paper path • Motor overload due to blockage • Motor harness loose, broken, defective • Motor bracket, motor installed incorrectly • Entrance motor defective
700-06*	ADF transport motor error	• Paper jammed in paper path • Motor overload due to blockage • Motor harness loose, broken, defective • Motor bracket, motor installed incorrectly • Transport motor defective
700-07*	ADF Scanning Motor	• Paper jammed in paper path • Motor overload due to blockage • Motor harness loose, broken, defective • Motor bracket, motor installed incorrectly • Scanning motor defective

SC	Error Name	Probable Cause
700-09*	ADF exit motor error	• Paper jammed in paper path • Motor overload due to blockage • Motor harness loose, broken, defective • Motor bracket, motor installed incorrectly • Exit motor defective
702-04	ADF protection circuit error 4	• Defective motor or harness on the interlock circuit.
702-05	ADF protection circuit error 5	• Interlock power circuit harness, switch is loose, broken, defective. • Motor harness, connector is loose, broken, or defective. • Motor is defective.
151-00	Black level error: Back side	• CIS defective
152-00	White level error: Back side	• ADF CIS device defective • CIS white roller background or white plate damaged • CIS dirty or installed incorrectly
154-00	Scanner communication error: Back side	• Harness between the ADF PCB and CIS is loose, broken, defective • ASIC in CIS is defective • FROM in CIS is defective

*The machine issues a jam alert for first two occurrences, and then issues the SC code at the third occurrence. To recover, cycle the machine off/on.

SP6-901-001 (Setting to give priority to stackability)

To improve the alignment of the delivered originals, select to give priority to stackability in the following SP. This will reduce the originals' delivery speed and improve their stackability.

- **SP6-901-001** (Setting to give priority to stackability): for DF3100

  0: Higher throughput (default)

  1: Higher stackability

Finisher SR3210 /
Booklet Finisher SR3220
Machine Code: D3B8/D3B9
Field Service Manual

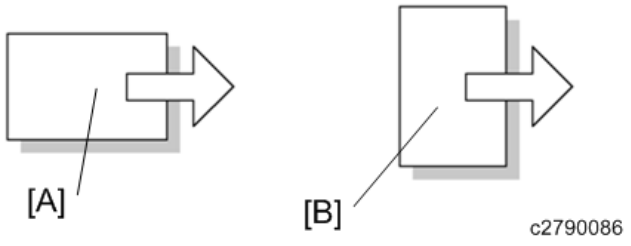
May, 2016

Symbols, Abbreviations and Trademarks

Symbols, Abbreviations

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

Symbol	What it means
	Clip ring
	Screw
	Connector
	Clamp
	E-ring
	Flat Flexible Cable
	Timing Belt
SEF	Short Edge Feed [A]
LEF	Long Edge Feed [B]
K	Black
C	Cyan
M	Magenta
Y	Yellow
B/W, BW	Black and White
FC	Full color



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- Windows® Internet Explorer® 7
- Windows® Internet Explorer® 8

The proper names of the Windows operating systems are as follows:

- The product names of Windows Vista are as follows:

  Microsoft® Windows Vista® Ultimate

  Microsoft® Windows Vista® Business

  Microsoft® Windows Vista® Home Premium

  Microsoft® Windows Vista® Home Basic

  Microsoft® Windows Vista® Enterprise
- The product names of Windows 7 are as follows:

  Microsoft® Windows® 7 Home Premium

  Microsoft® Windows® 7 Professional

  Microsoft® Windows® 7 Ultimate

  Microsoft® Windows® 7 Enterprise
- The product names of Windows 8 are as follows:

  Microsoft® Windows® 8

  Microsoft® Windows® 8 Pro

  Microsoft® Windows® 8 Enterprise
- The product names of Windows 8.1 are as follows:

  Microsoft® Windows® 8.1

  Microsoft® Windows® 8.1 Pro

  Microsoft® Windows® 8.1 Enterprise
- The product names of Windows 10 are as follows:

Microsoft® Windows® 10 Home Premium

Microsoft® Windows® 10 Pro

Microsoft® Windows® 10 Enterprise

Microsoft® Windows® 10 Education

- The product names of Windows Server 2003 are as follows:

  Microsoft® Windows Server® 2003 Standard Edition

  Microsoft® Windows Server® 2003 Enterprise Edition
- The product names of Windows Server 2003 R2 are as follows:

  Microsoft® Windows Server® 2003 R2 Standard Edition

  Microsoft® Windows Server® 2003 R2 Enterprise Edition
- The product names of Windows Server 2008 are as follows:

  Microsoft® Windows Server® 2008 Standard

  Microsoft® Windows Server® 2008 Enterprise
- The product names of Windows Server 2008 R2 are as follows:

  Microsoft® Windows Server® 2008 R2 Standard

  Microsoft® Windows Server® 2008 R2 Enterprise
- The product names of Windows Server 2012 are as follows:

  Microsoft® Windows Server® 2012 Foundation

  Microsoft® Windows Server® 2012 Essentials

  Microsoft® Windows Server® 2012 Standard
- The product names of Windows Server 2012 R2 are as follows:

  Microsoft® Windows Server® 2012 R2 Foundation

  Microsoft® Windows Server® 2012 R2 Essentials

  Microsoft® Windows Server® 2012 R2 Standard

Other product names used herein are for identification purposes only and might be trademarks of their respective companies. We disclaim any and all rights to those marks.

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1. Replacement and Adjustment

Exterior Parts

Front Cover

1. Open the front cover [A].

d6873230

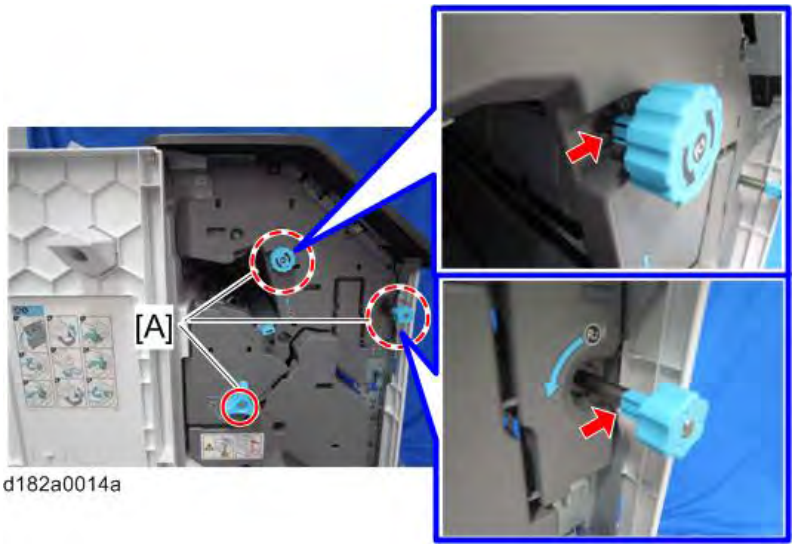
2. Front cover [A] (×1)

d687a0006

Inner Cover

1. Open the front cover (page 9 "Front Cover")

2. **Remove the three knobs [A] (hook×1 for each).**
    - Use a flathead screwdriver to release the hooks.



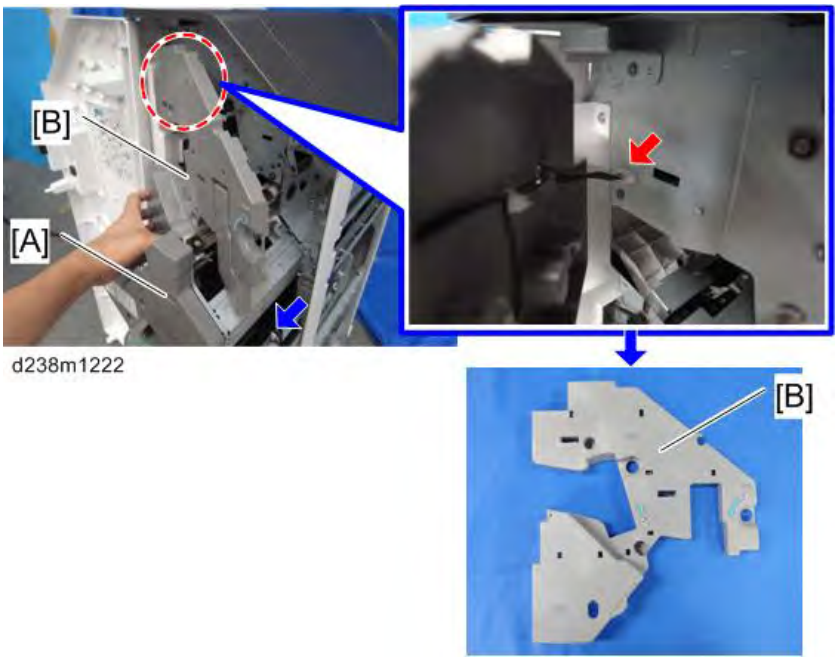
d182a0014a

3. **Remove the three screws on the inner cover [A] (×3).**

d182a0042

4. **Pull the booklet stapler unit [A].**

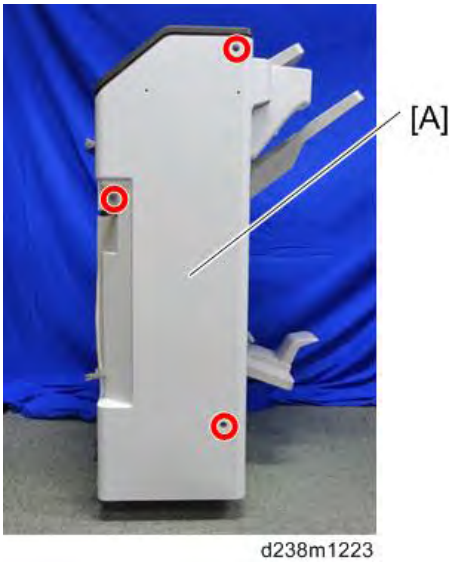
5. Inner cover [B] (×1)



d238m1222

Rear Cover

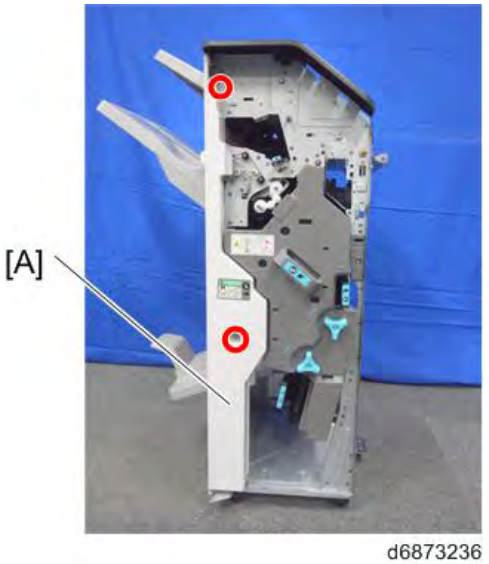
1. Rear cover [A] (×3)



d238m1223

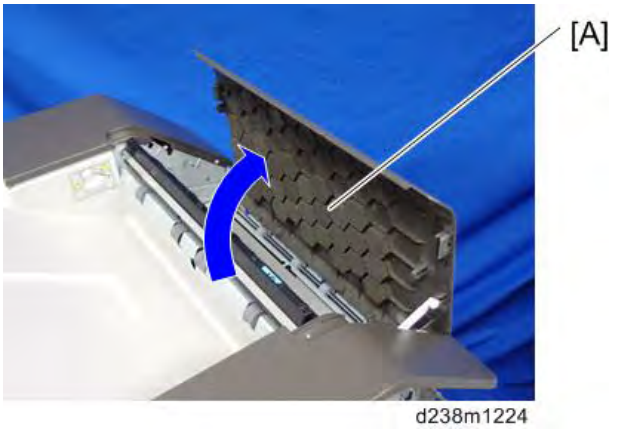
Front Left Cover

1. Front cover (page 9)
2. Inner cover (page 9)
3. Paper exit guide cover (front) (page 15 "Paper Exit Guide Cover")
4. Front left cover [A] (×2)

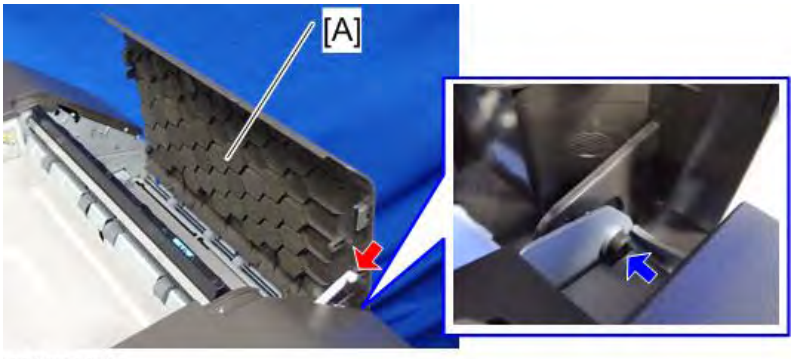


Upper Cover

1. Open the upper cover [A].



2. Upper cover [A] (×1, tab ×1)



d238m1125

Note

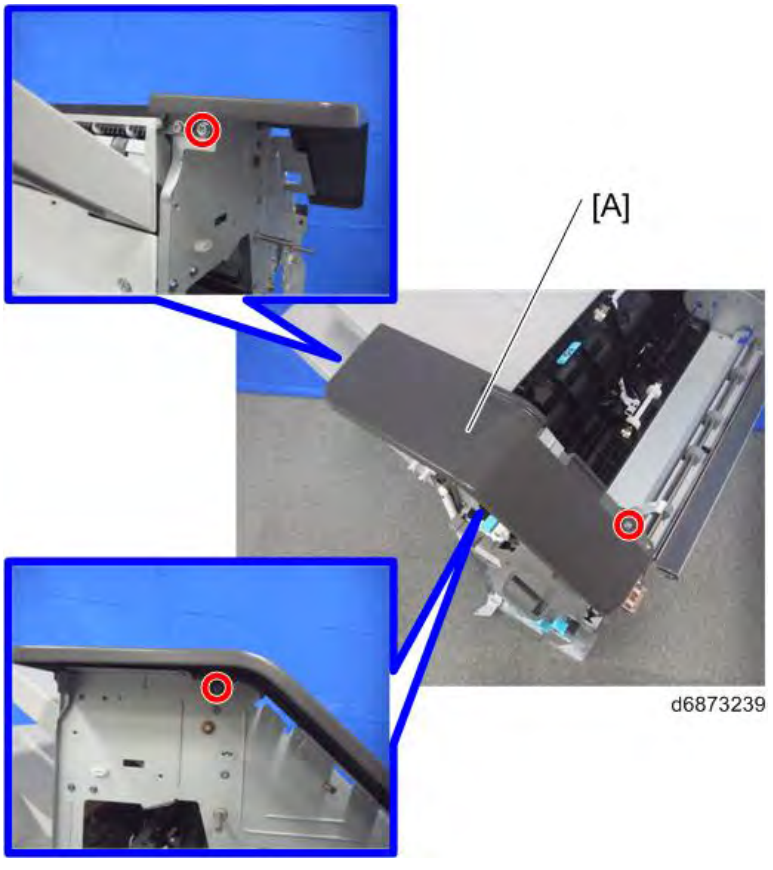
- When reattaching the upper cover, attach the clips so that their tabs face upward.

d238m1226

Upper Front Cover

1. Front left cover (page 12)
2. Upper cover (page 12)

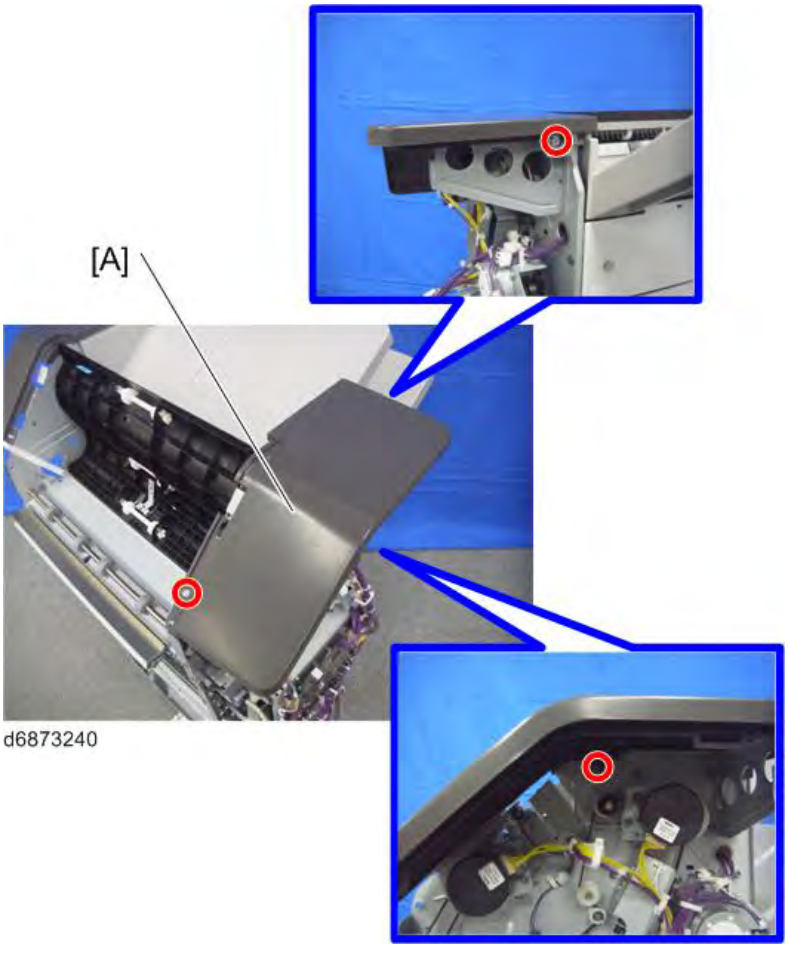
3. Upper front cover [A] (×3)



Upper Rear Cover

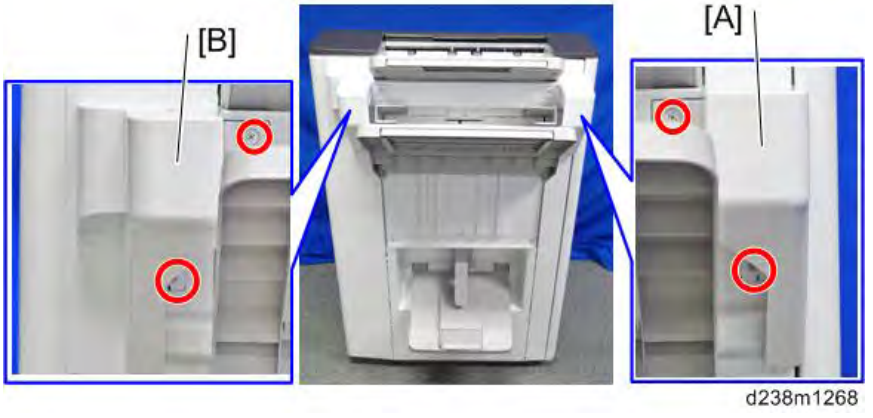
1. Rear cover (page 11)
2. Paper exit guide cover (page 15)
3. Upper left cover (page 16)
4. Upper cover (page 12)

5. Upper rear cover [A] (×3)

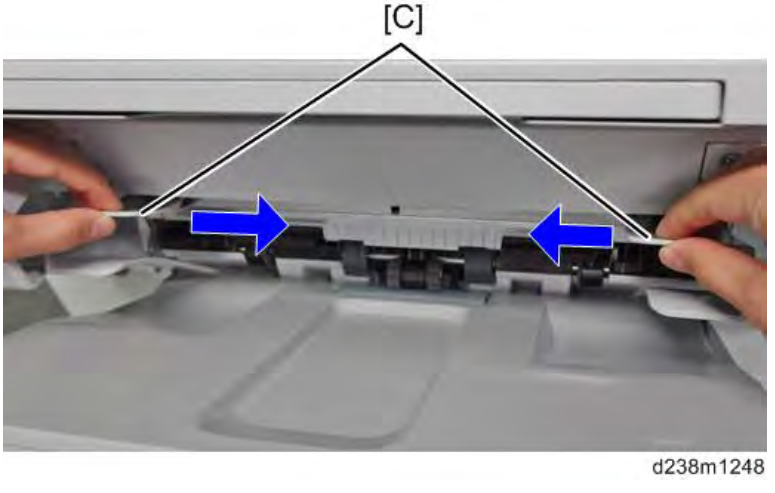


Paper Exit Guide Cover

1. Paper exit guide cover (front) [A]
2. Paper exit guide cover (rear) [B] (×4)

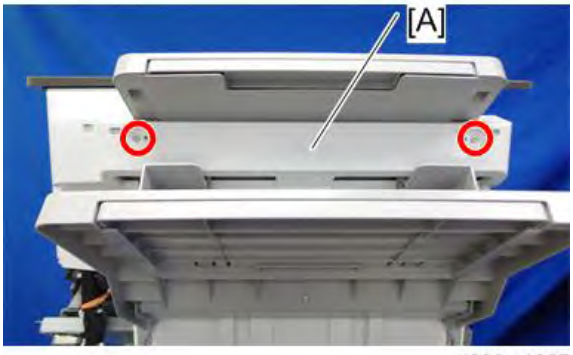


If the view of the screw hole is obstructed by the paper exit guides [C], hold the paper exit guides on the sides and move them inward.



Upper Left Cover

1. **Paper exit guide cover (page 15)**
2. **Upper left cover [A] (×2)**



d238m1227

Proof Tray

1. Upper front cover (page 13)
2. Upper rear cover (page 14)
3. Proof tray [A] (×2)

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Shift Tray

1. Shift tray [A] (×1)

d6873242

Booklet Tray (SR3220)

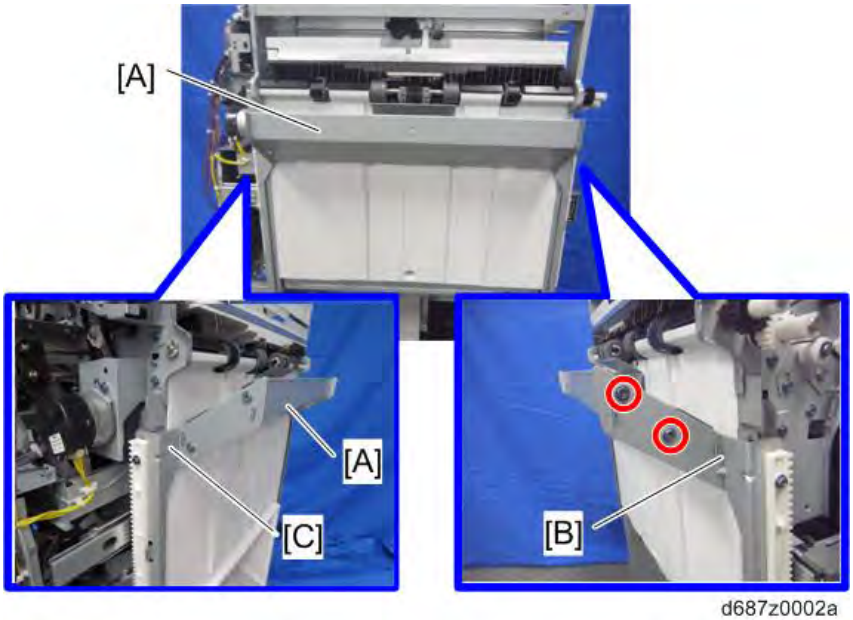
1. Booklet tray [A]

d6873243

Left Center Cover

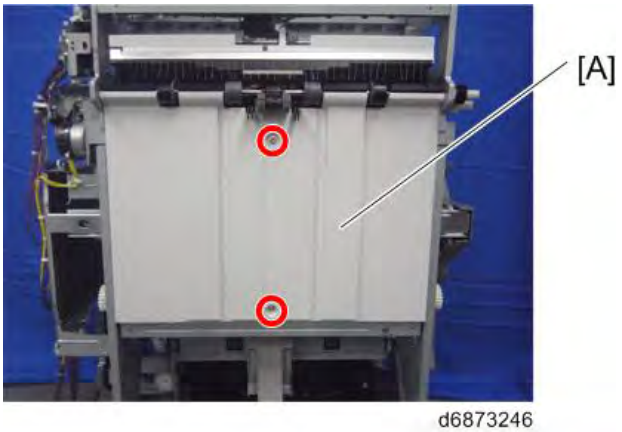
1. Front cover (page 9)
2. Rear cover (page 11)
3. Shift tray (page 18)
4. Shift tray front bracket [B] (×2)

5. Shift tray bracket [A] with the shift tray rear bracket [C]



d687z0002a

6. Left center cover [A] (×2)



d6873246

Left Lower Cover

For SR3220

1. Booklet tray (page 18)

2. **Left lower cover [A] (×2)**

d6873247

For SR3210

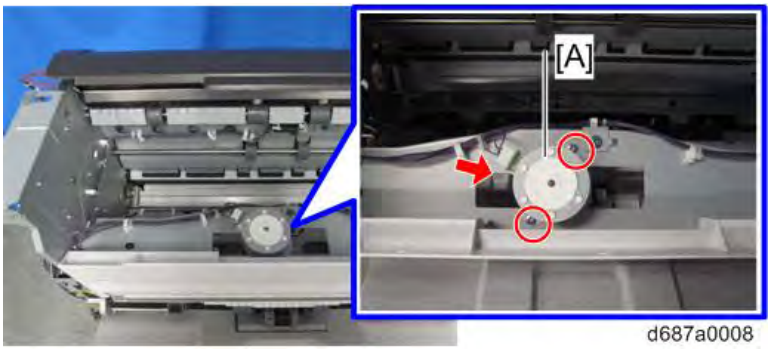
1. **Left lower cover [A] (×2)**

d238m1249

Main Unit

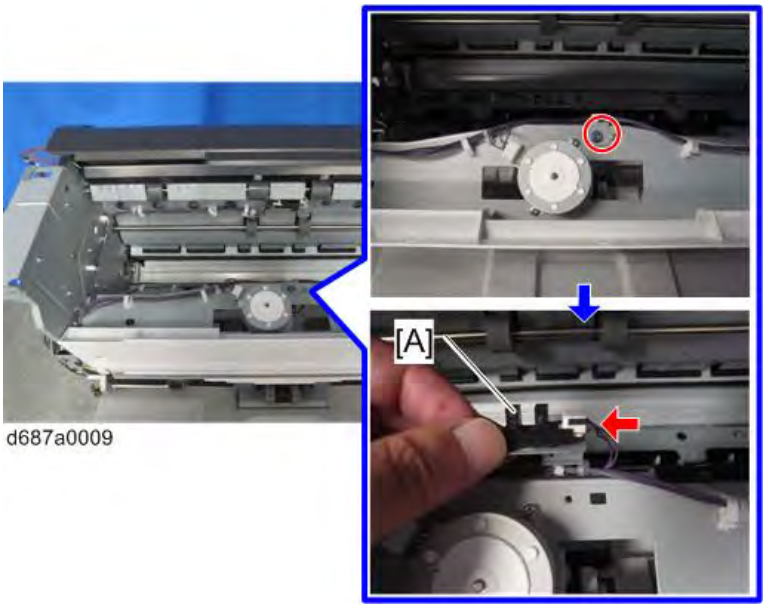
Paper Exit Guide Plate Open/Close Motor

1. Proof tray (page 17)
2. Paper exit guide plate open/close motor [A] (×2, ×1)



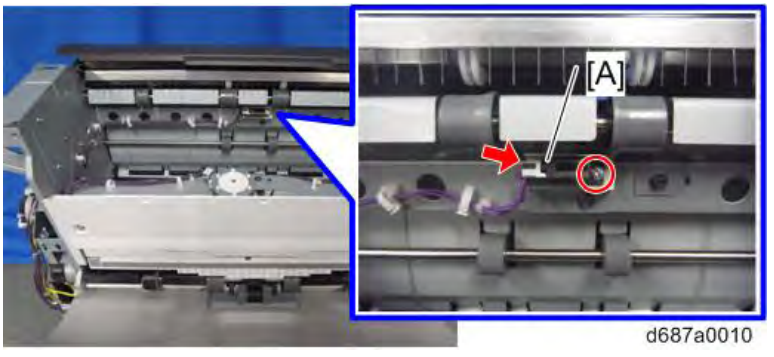
Paper Exit Guide Plate Open/Close HP Sensor

1. Proof tray (page 17)
2. Paper exit guide plate HP sensor [A] (×1, x1)



Proof Tray Full Sensor

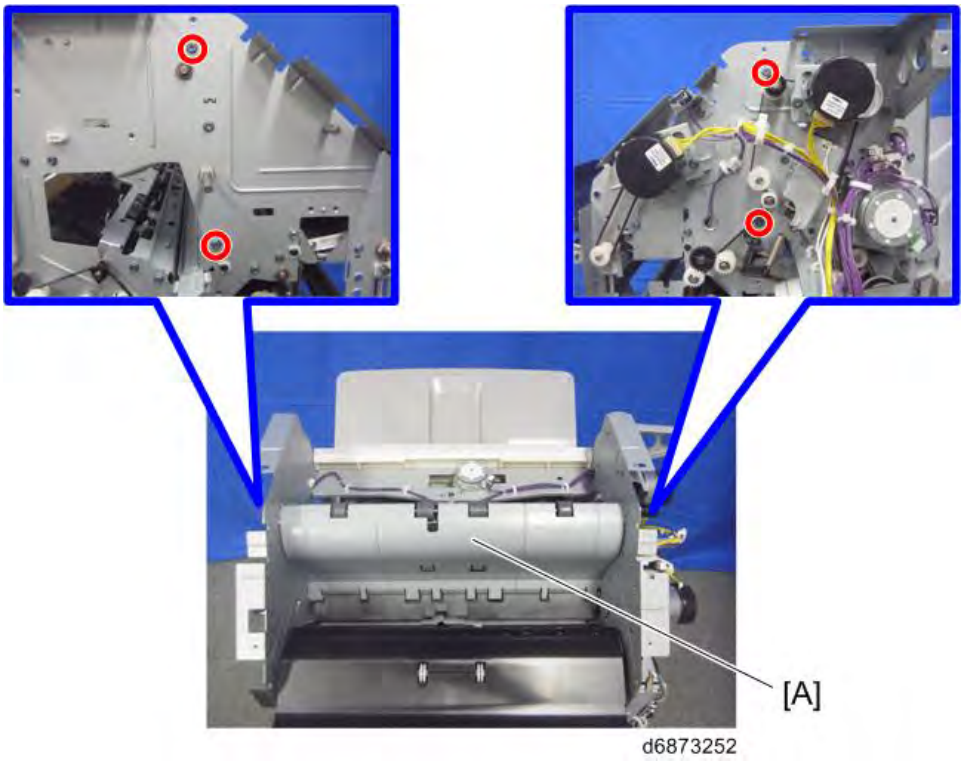
1. Proof tray (page 17)
2. Proof tray full sensor [A] (×1, ×1)



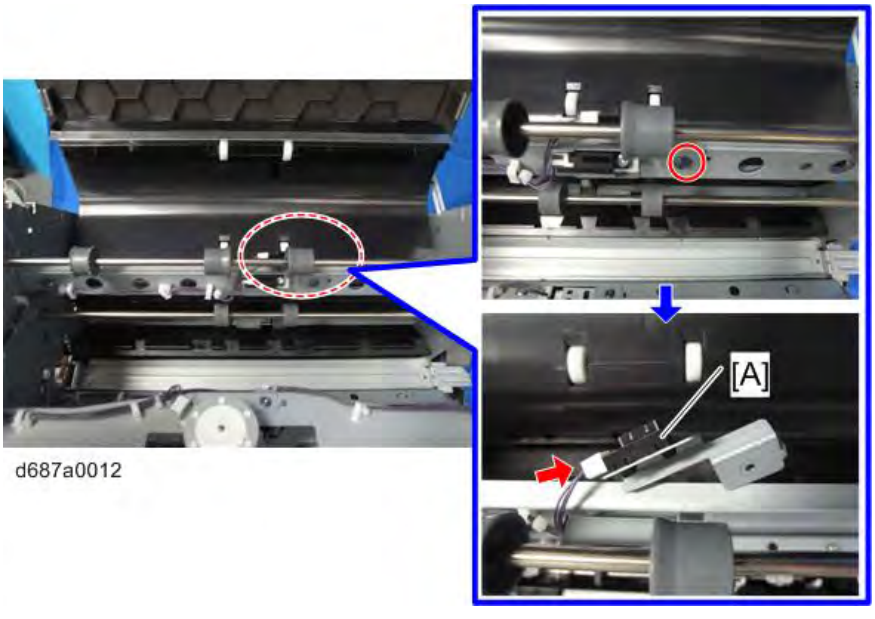
Proof Tray Paper Exit Sensor

1. Inner cover (page 9)
2. Proof tray (page 17)

3. Proof transport bracket [A] (×4)

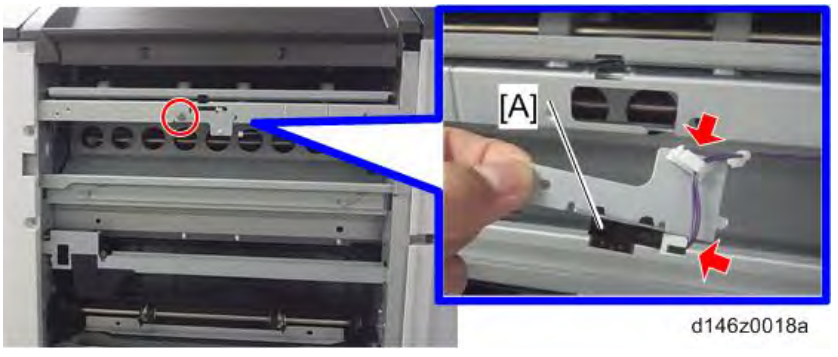


4. Proof tray paper exit sensor [A] (×1, ×1)



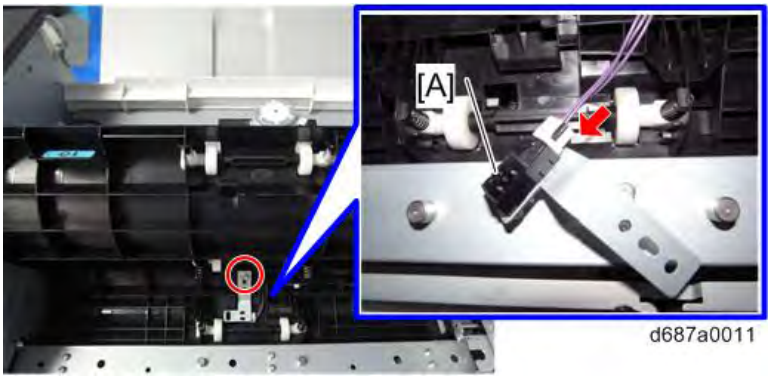
Entrance Sensor

1. Entrance sensor [A] (×1, ×1, ×1)



Intermediate Transport Sensor Right

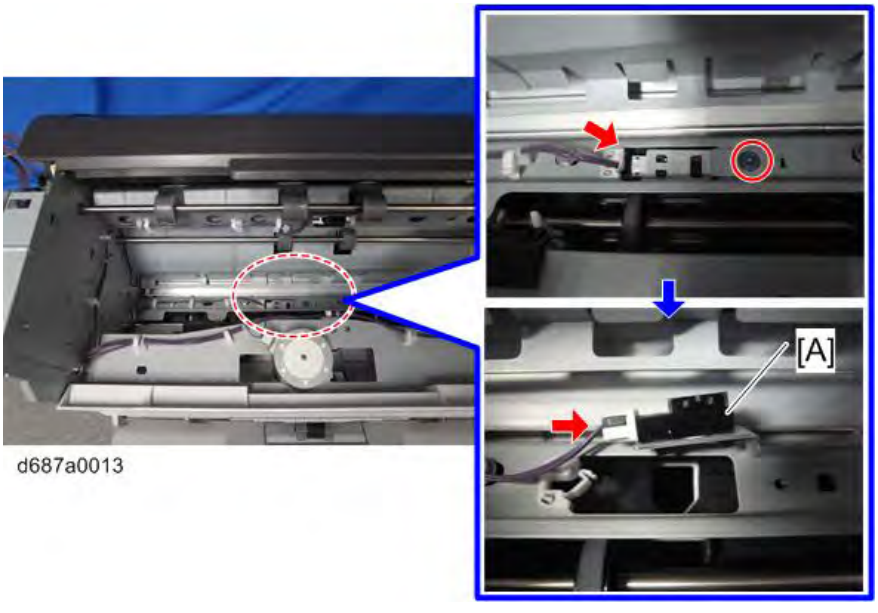
1. Upper cover (page 12)
2. Intermediate transport sensor right [A] (×1, ×1,)



Intermediate Transport Sensor Left

1. Proof tray (page 17)

2. Intermediate transport sensor left [A] (×1, ×1, ×1)

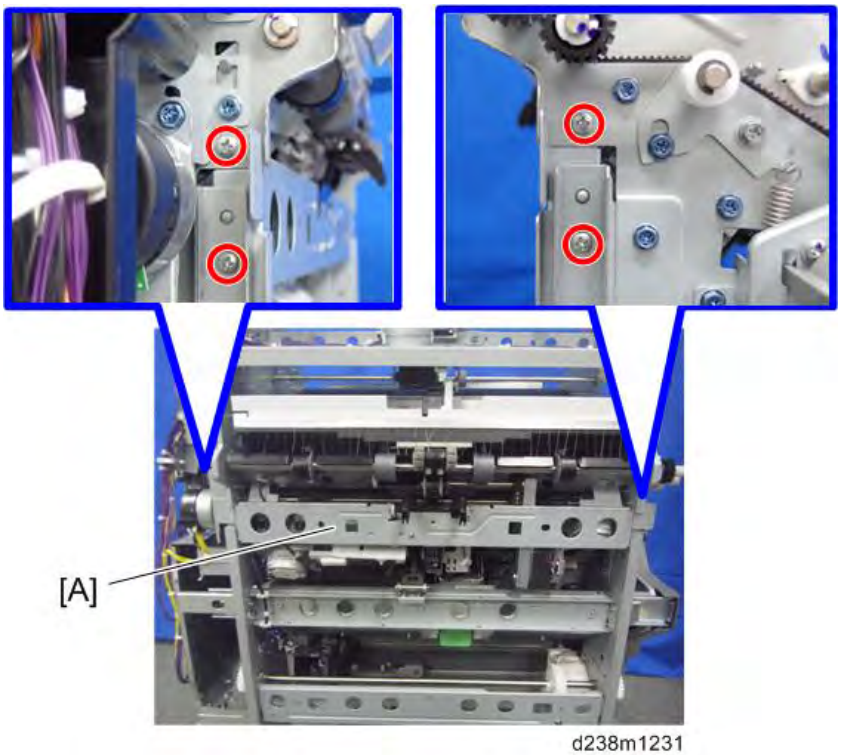


d687a0013

Shift Tray Paper Surface Sensor

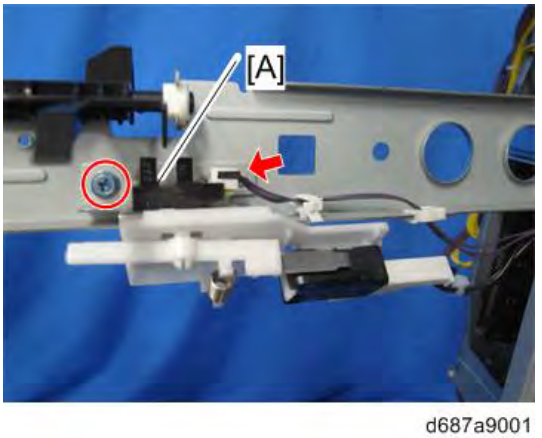
1. Left center cover (page 18)

2. Bracket [A] (×4)



d238m1231

3. Shift tray paper surface sensor [A] (×1, ×1)

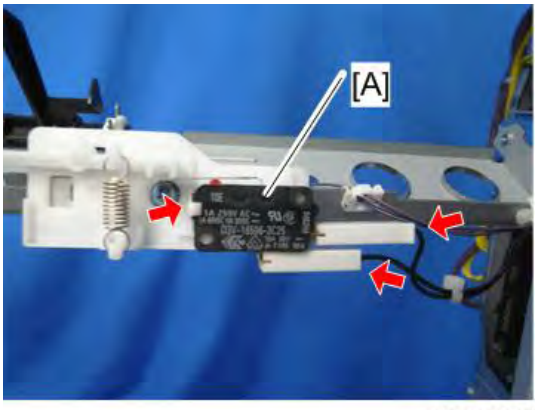


d687a9001

Shift Tray Upper Limit Switch

1. Bracket of the shift tray (page 25 "Shift Tray Paper Surface Sensor")

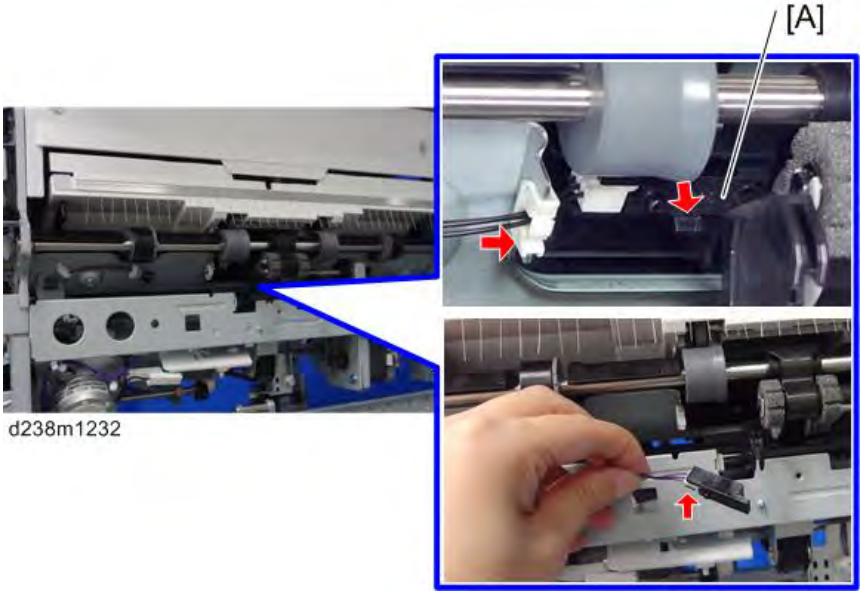
2. Shift tray upper limit switch [A] (x2, hook × 1)



d687a9002

Shift Tray Paper Exit Sensor

1. Left center cover (page 18)
2. Shift tray paper exit sensor [A] (hook ×1, x1, ×1)

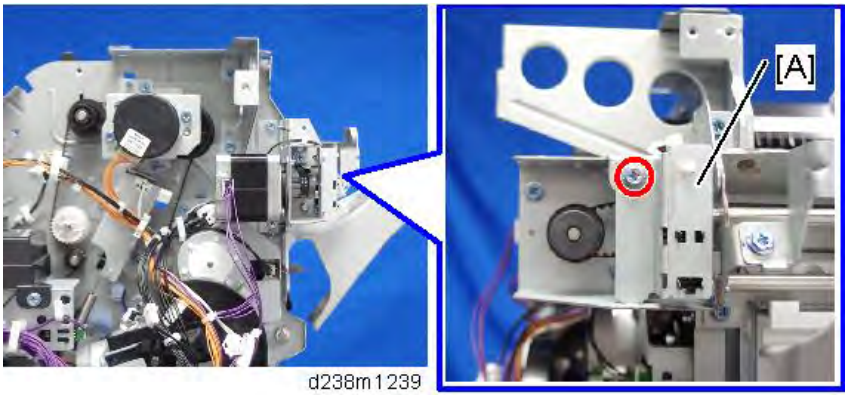


d238m1232

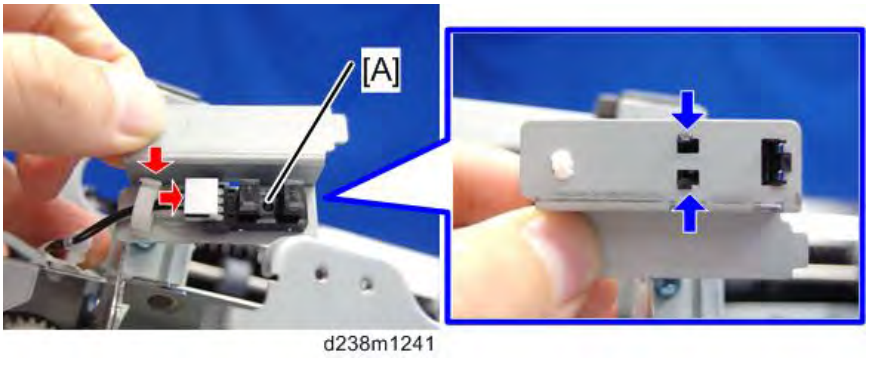
Paper Exit Guide HP Sensor

1. Upper left cover (page 16)

2. Paper exit guide HP sensor with bracket [A] (×1)



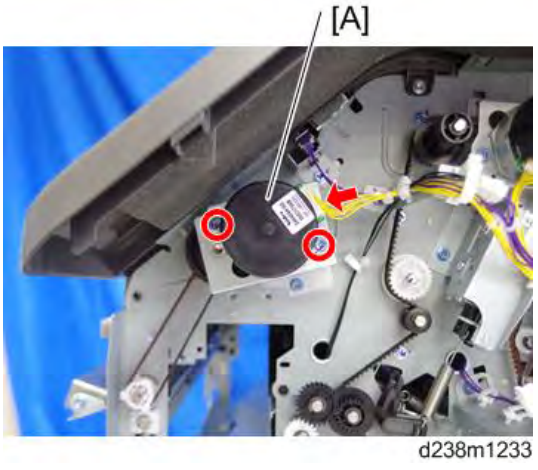
3. Paper exit guide HP sensor [A] (×1, hook ×2)



Entrance Transport Motor

1. Rear cover (page 11)

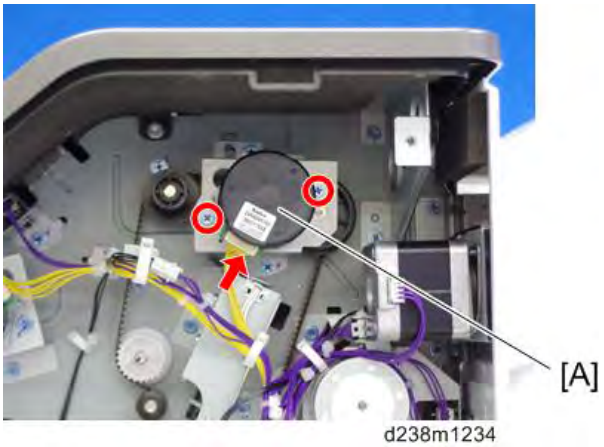
2. Entrance transport motor [A] (×2, ×1)



d238m1233

Proof Transport Motor

1. Rear cover (page 11)
2. Proof transport motor [A] (×2, ×1)



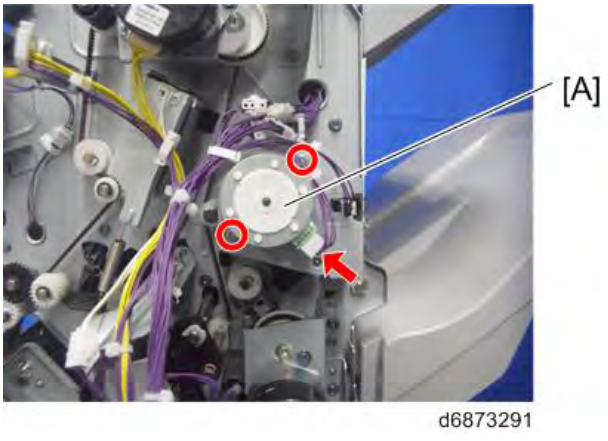
d238m1234

Positioning Roller Motor

For SR3220

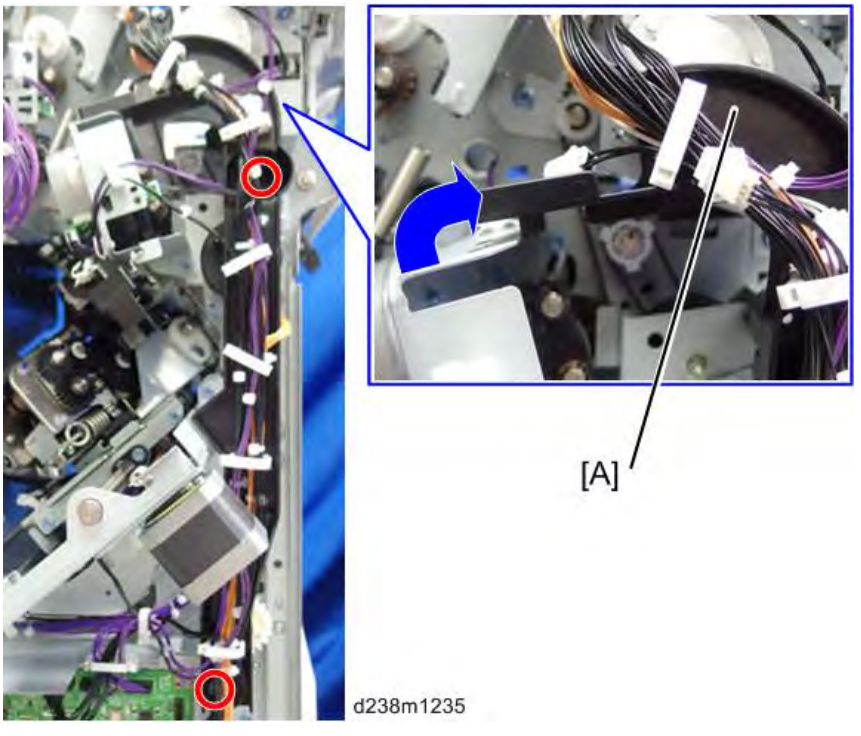
1. Rear cover (page 11)

2. **Positioning roller motor [A] (×2, ×1)**

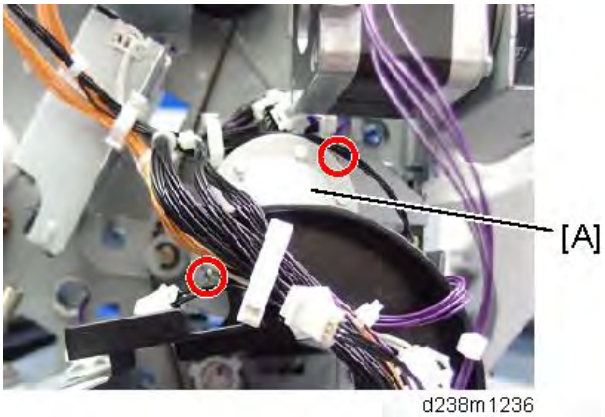


For SR3210

1. **Rear cover (page 11)**
2. **Move the harness guide [A] to the right. (×2)**



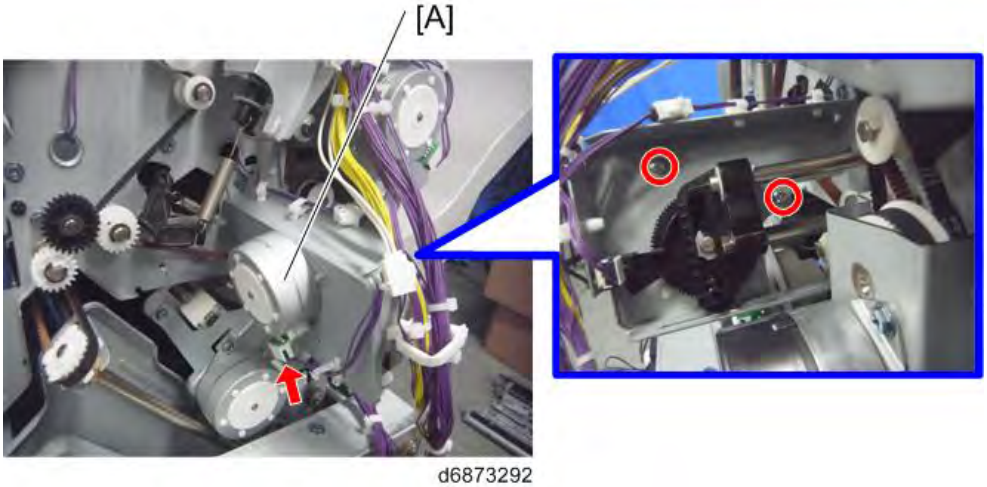
3. Positioning roller motor [A] (×2, ×1)



d238m1236

Shift Motor

1. Rear cover (page 11)
2. Paper exit guide cover (rear) (page 15 "Paper Exit Guide Cover")
3. Shift motor [A] (×2, x1)



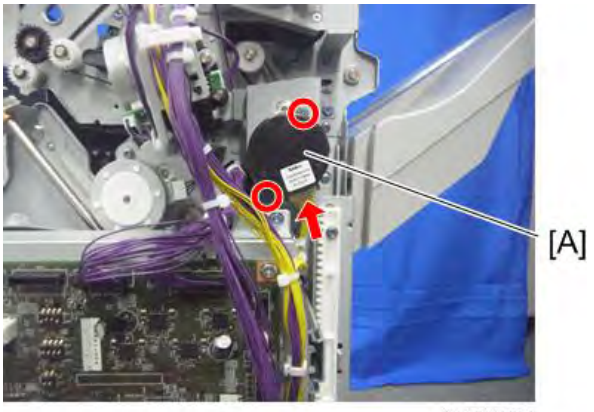
d6873292

Paper Exit Transport Motor

For SR3220

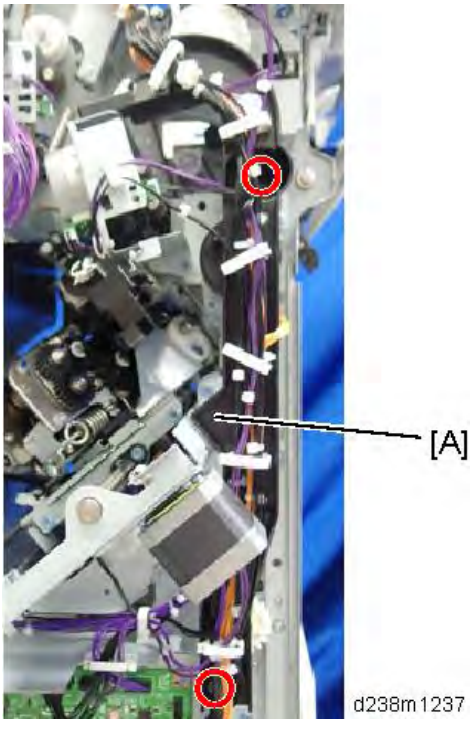
1. Rear cover (page 11)

2. **Paper exit transport motor [A] (×2, ×1)**

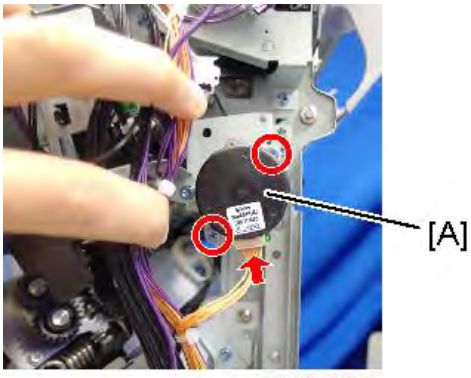


For SR3210

1. **Rear cover (page 11)**
2. **Harness guide [A] (×2, ×6)**



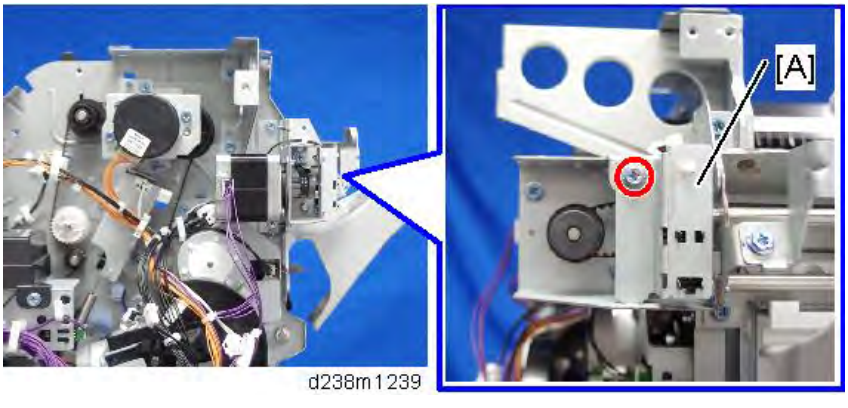
3. Paper exit transport motor [A] (×2, ×1)



d238m1238

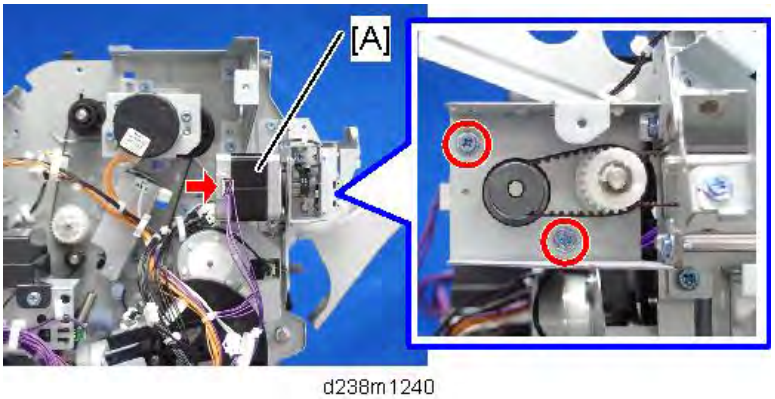
Paper Exit Guide Drive Motor

1. Upper left cover (page 16)
2. Paper exit guide HP sensor bracket [A] (×1)



d238m1239

3. Paper exit guide drive motor [A] (×2, ×1)

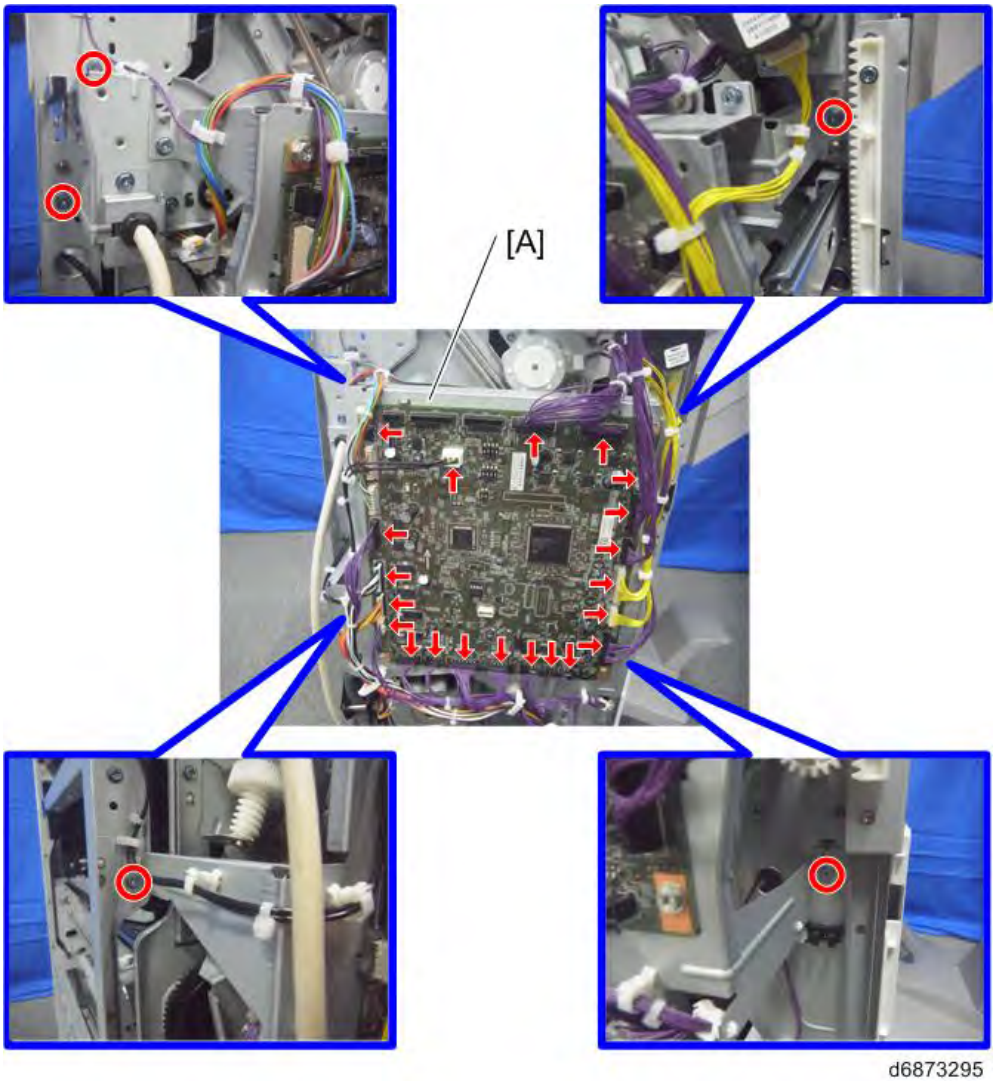


d238m1240

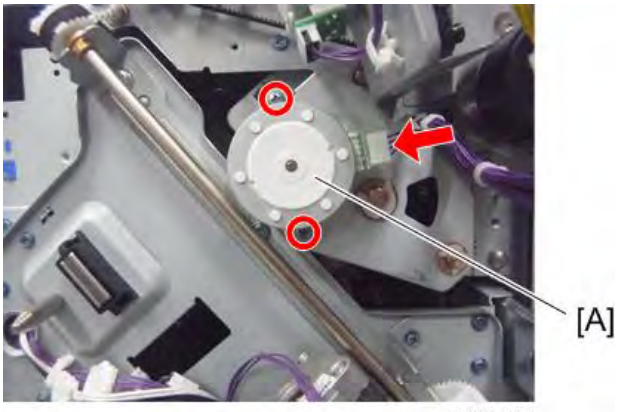
Paper Bundle Transport Upper Motor (SR3220)

1. Rear cover (page 11)
2. Feeler [A] (×1)

3. Controller board bracket [A] (×5, ×21, ×17, ground plate×1)

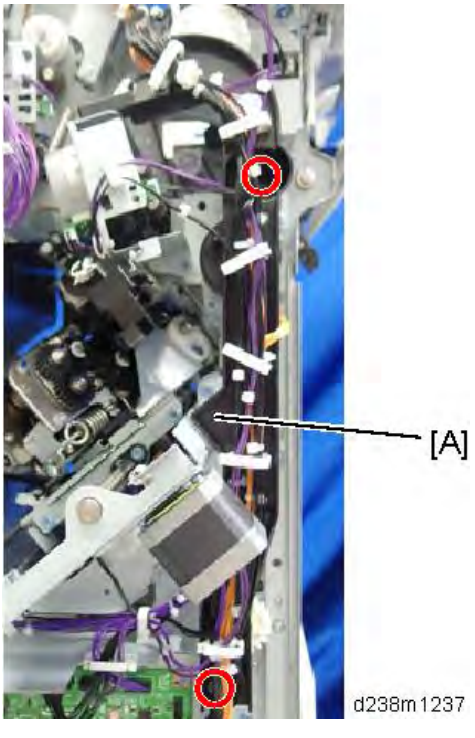


4. Paper bundle transport upper motor [A] (×2, ×1)

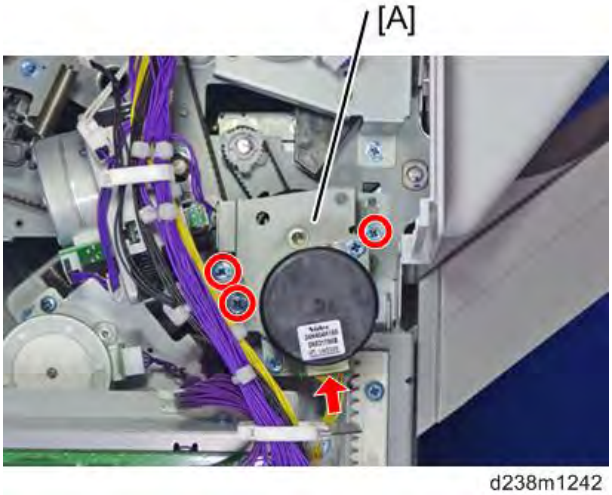


Stapler Tray

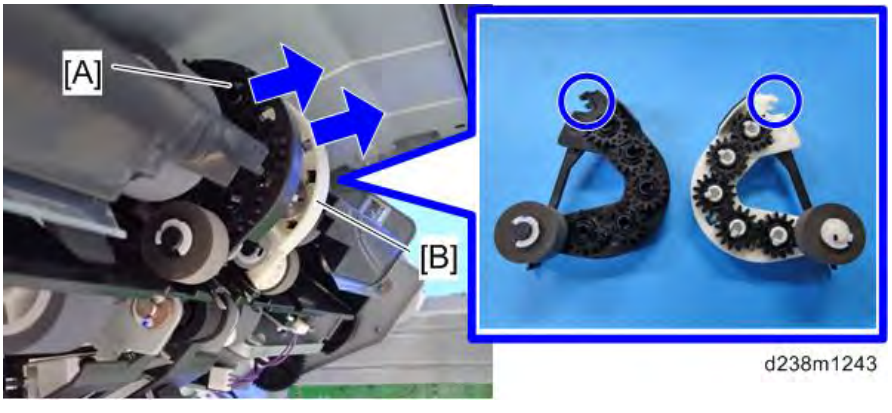
1. Inner cover (page 9)
2. Front left cover (page 12)
3. Booklet stapler unit (page 60)
4. Harness guide [A] (×2, ×6) (SR3210 only)



5. **Paper exit transport motor bracket [A] (×3, ×1)**



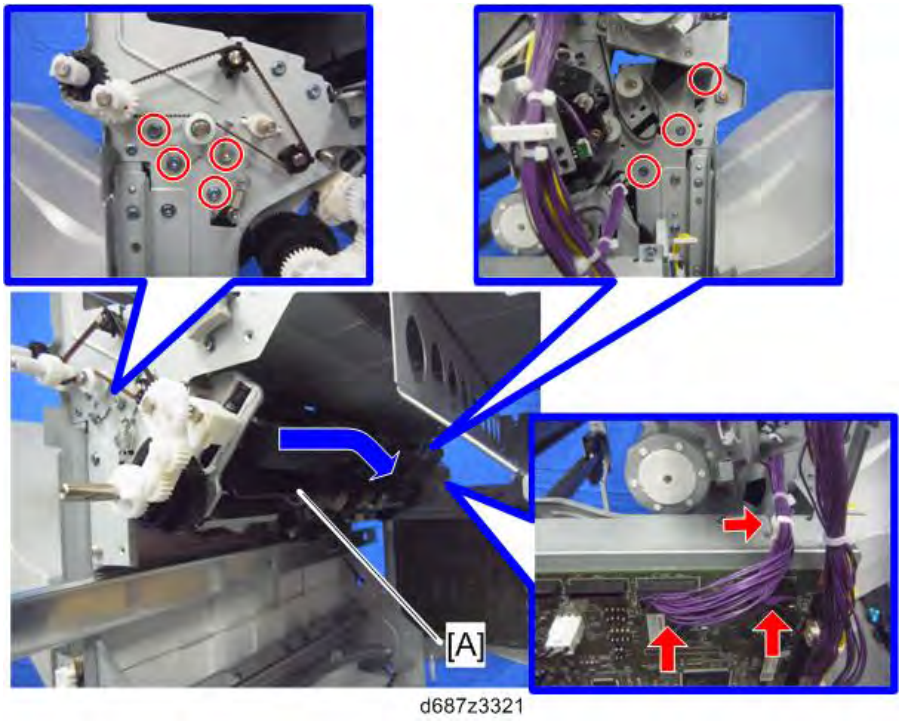
6. **Reverse roller (front) [A], reverse roller (rear) [B]**



Note

- Be careful not to damage the shape of the hook enclosed by the blue circle when removing the reverse rollers.

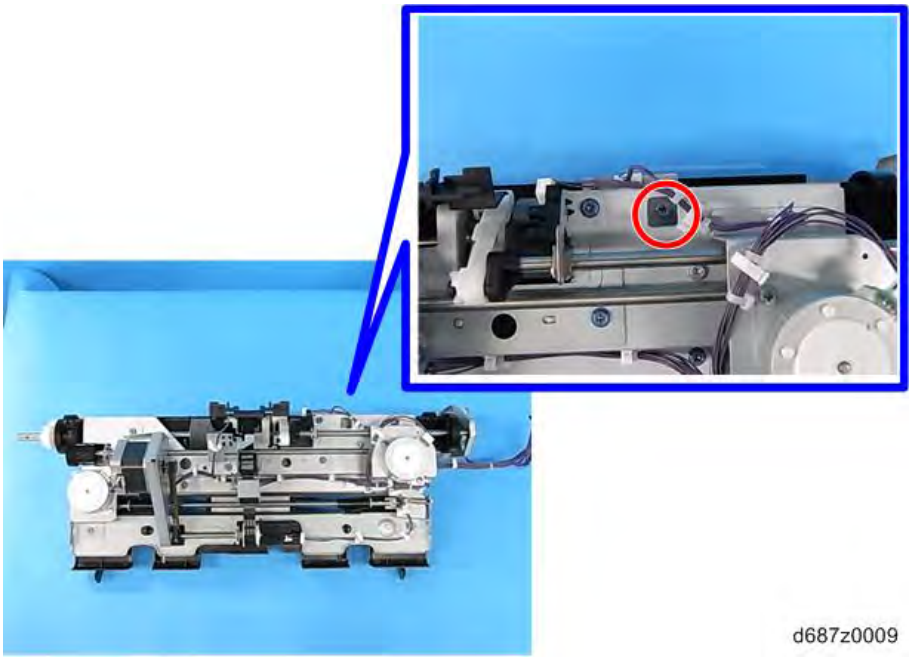
7. Stapler tray [A] (×7, ×2, ×1)



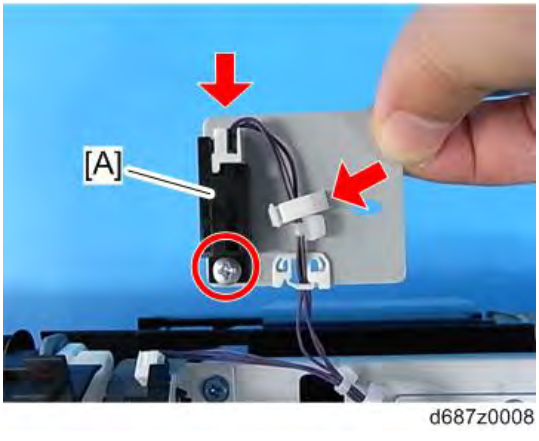
Stapler Tray Paper Sensor

1. Stapler tray (page 36)

2. Stapler tray paper sensor bracket (×1)



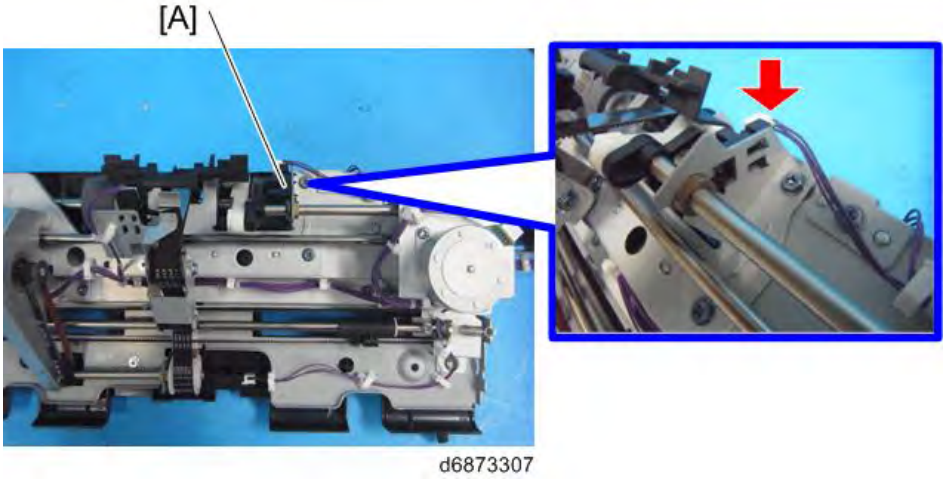
3. Stapler tray paper sensor [A] (×1, ×1, ×1)



Paper Bundle Transport Upper Pressure Release HP sensor

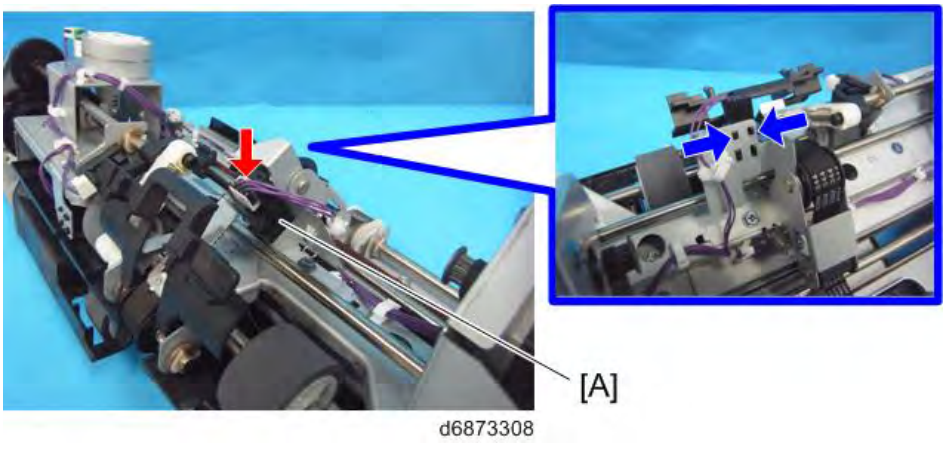
1. Stapler tray (page 36)

2. Paper bundle transport upper pressure release HP sensor [A] (×1)



Feedout Pawl HP Sensor

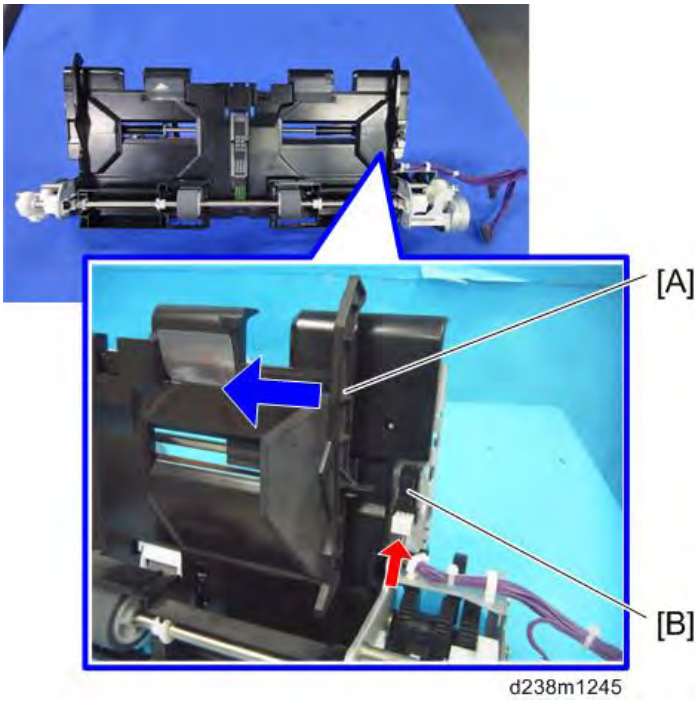
1. Stapler tray (page 36)
2. Feedout pawl HP sensor [A] (×1)



Jogger HP Sensor

1. Stapler tray (page 36)

2. Separate the jogger fence [A] from the jogger HP sensor [B].



3. Jogger HP sensor (×1)

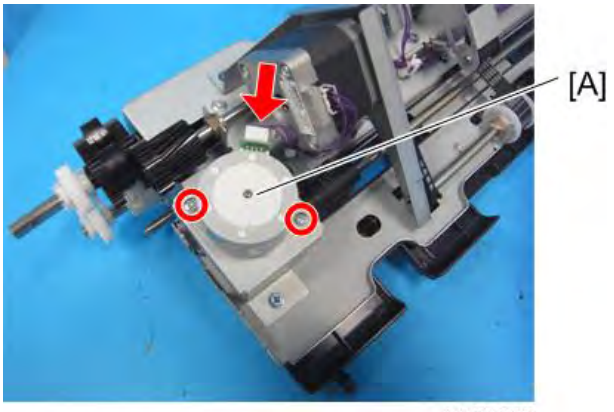
Note

- Release and remove the tab with a small driver, etc.

Jogger Motor

1. Stapler tray (page 36)

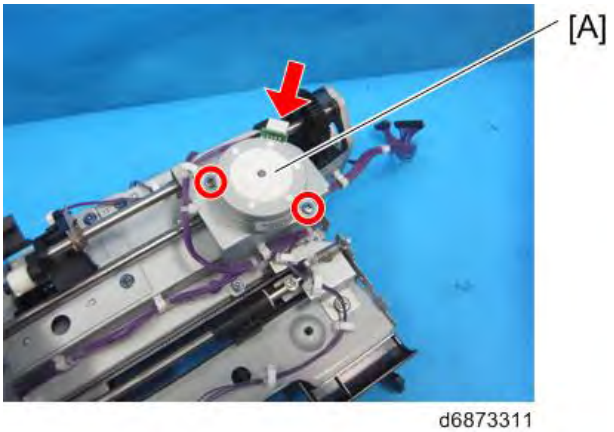
2. Jogger motor [A] (×2, ×1)



d6873310

Paper Bundle Transport Upper Pressure Release Motor

1. Stapler tray (page 36)
2. Paper bundle transport upper pressure release motor [A] (×2, ×1)

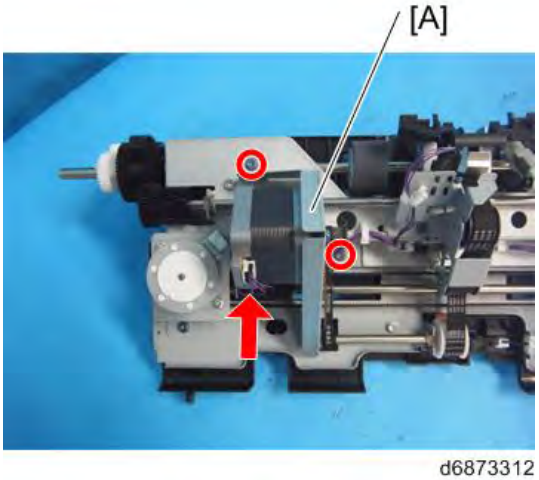


d6873311

Feedout Pawl Motor

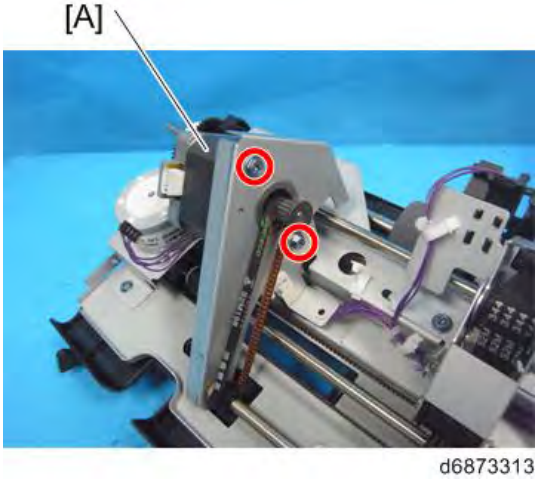
1. Stapler tray (page 36)

2. **Feedout Pawl motor bracket [A] (×2, ×1, ×2)**



d6873312

3. **Feedout Pawl motor [A] (×2)**

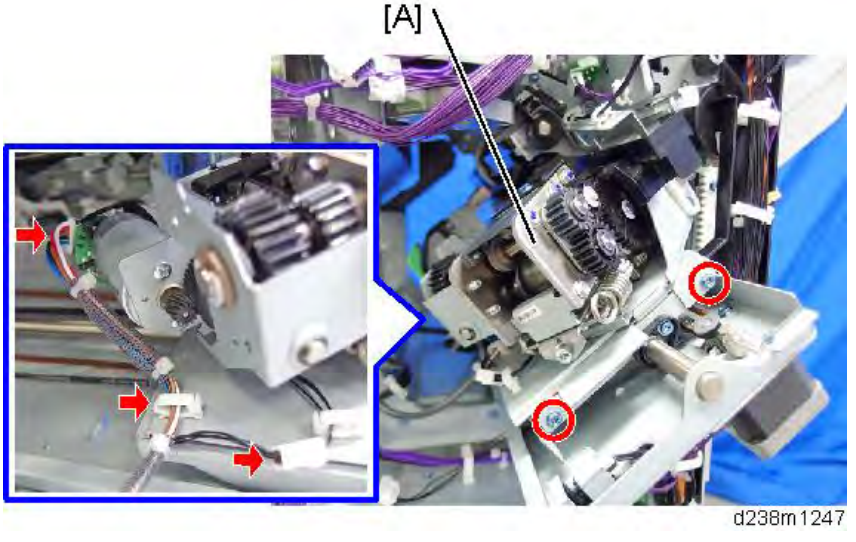


d6873313

Stapleless Stapler Unit/Stapler Unit (SR3210)

Stapleless Stapler Unit

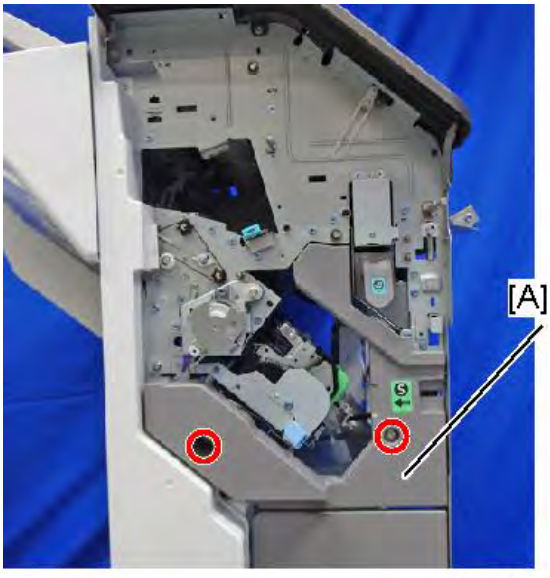
1. Rear cover (page 11)
2. Stapleless stapler unit [A] (×2, ×1, ×2)



Stapler Unit

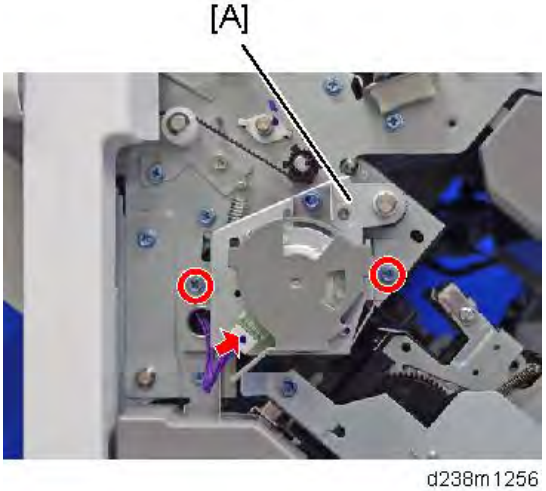
1. Inner cover (page 9)

2. **Inner middle cover [A] (×2)**



d238m1257

3. **Paper Guide Drive Motor with Bracket [A] (×2, ×1)**

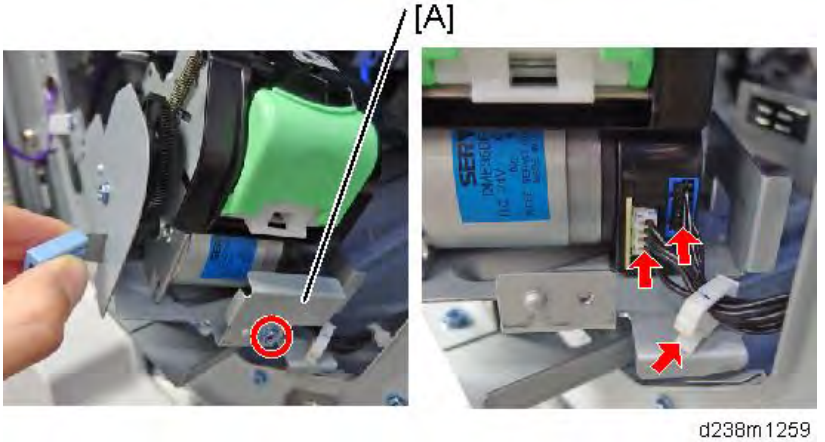


d238m1256

4. **Unhook the spring of the stapler unit.**

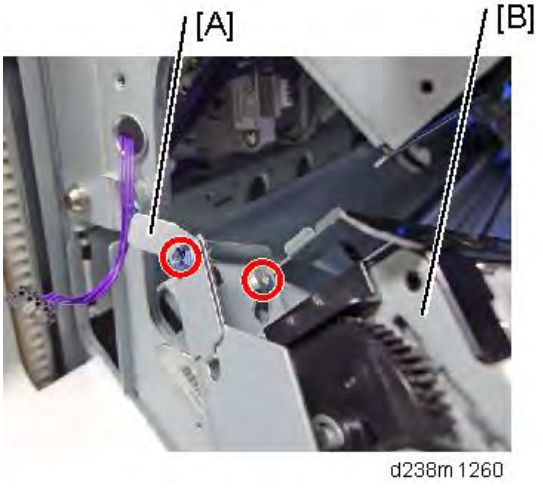
d238m1258

5. **Bracket [A] and harnesses (×1, ×1, ×2)**

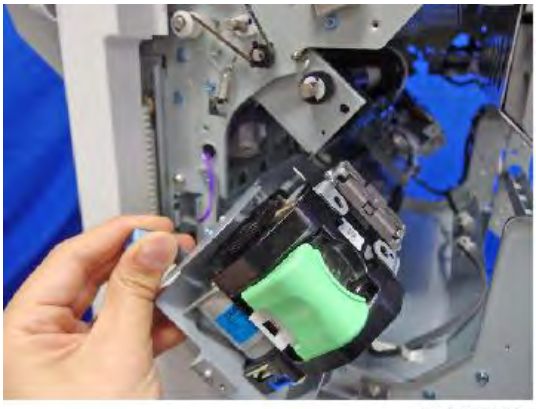


d238m1259

6. **Bracket [A], Stapler unit [B] (×2)**



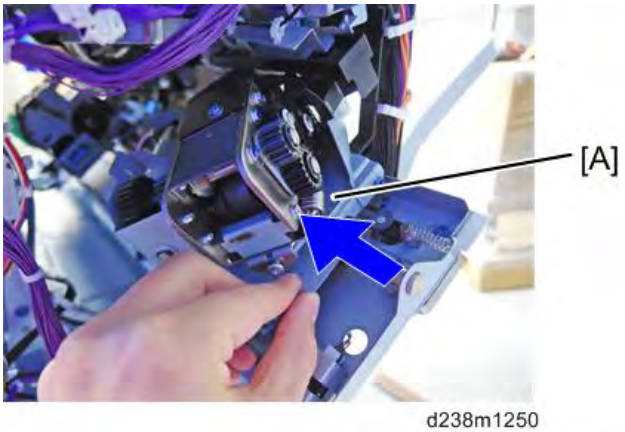
d238m1260



d238m1261

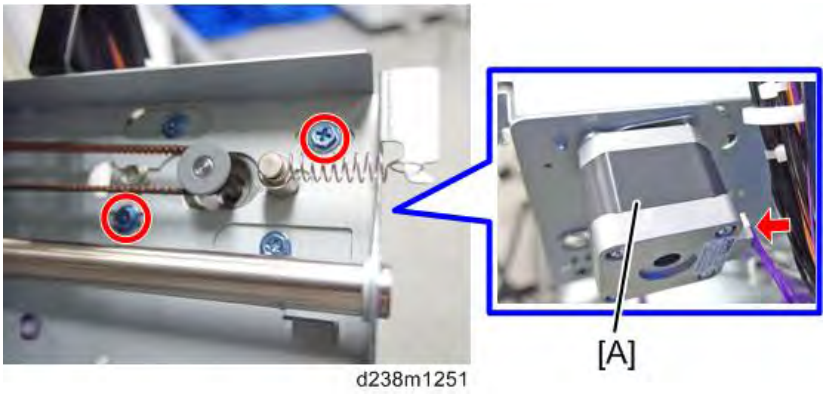
Stapleless Stapler Transfer Motor

1. Move the stapleless stapler [A] to the recess.



d238m1250

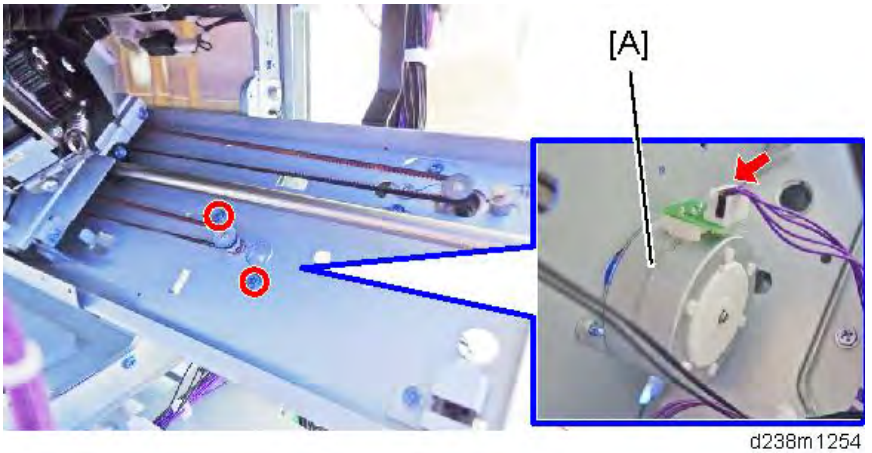
2. Stapleless stapler transfer motor [A] (×2, ×1)



d238m1251

Stapler Transfer Motor

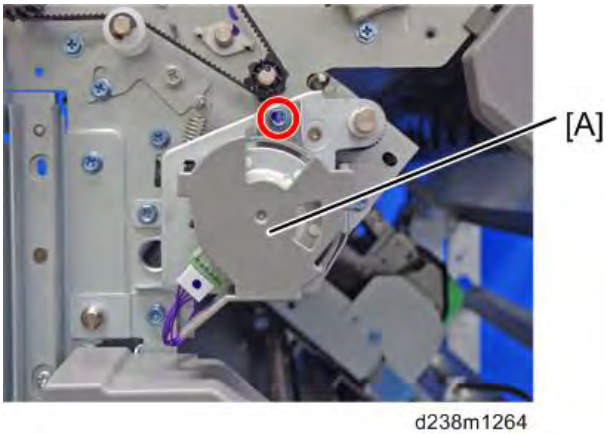
1. Move the stapleless stapler to the recess. (page 47 "Stapleless Stapler Transfer Motor")
2. Stapler transfer motor [A] (×2, ×1)



d238m1254

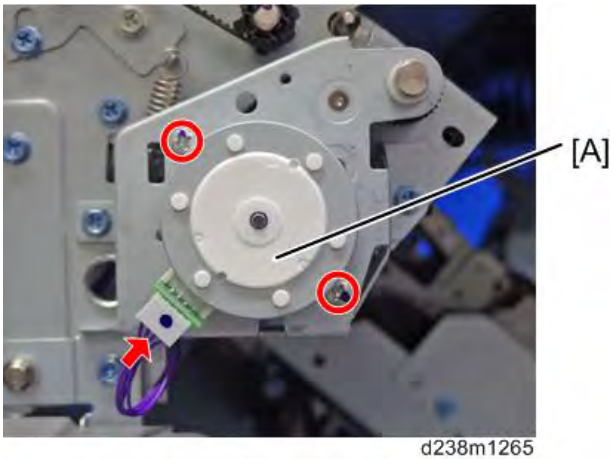
Paper Guide Drive Motor

1. Inner cover (page 9)
2. Bracket [A] (×1)



d238m1264

3. Paper guide drive motor [A] (×2, ×1)



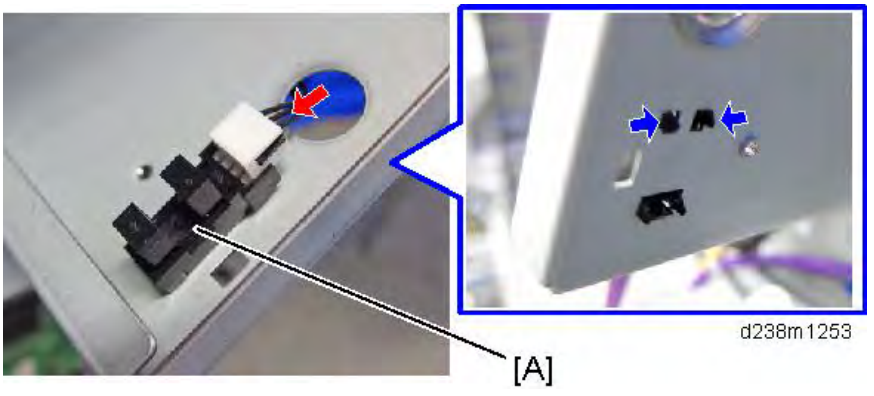
d238m1265

Stapleless Stapler HP Sensor

1. Move the stapleless stapler to the recess. (page 47 "Stapleless Stapler Transfer Motor")
2. Stapleless stapler HP sensor bracket [A] (×1)

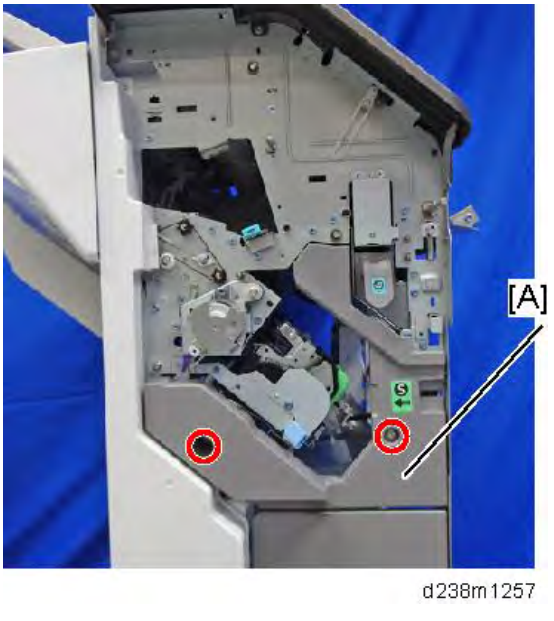
d238m1252

3. Stapleless stapler HP sensor [A] (×1)



Stapler HP sensor

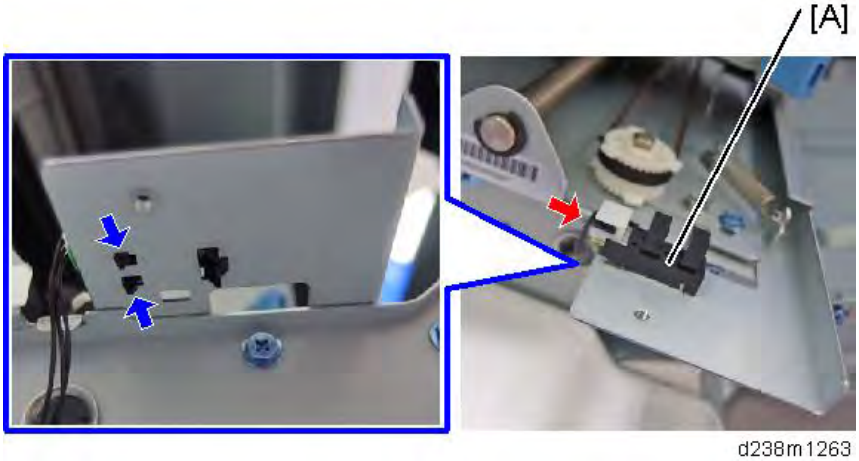
1. Open the front cover.
2. Inner middle cover [A] (×2)



3. Bracket [A] (×1)

d238m1262

4. Stapler HP sensor [A] (×1)

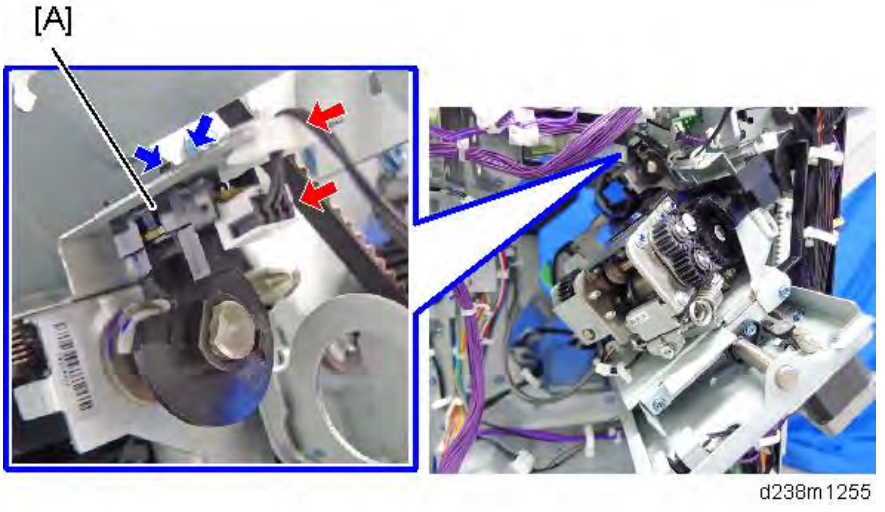


d238m1263

Paper Guide HP Sensor

1. Rear cover (page 11)

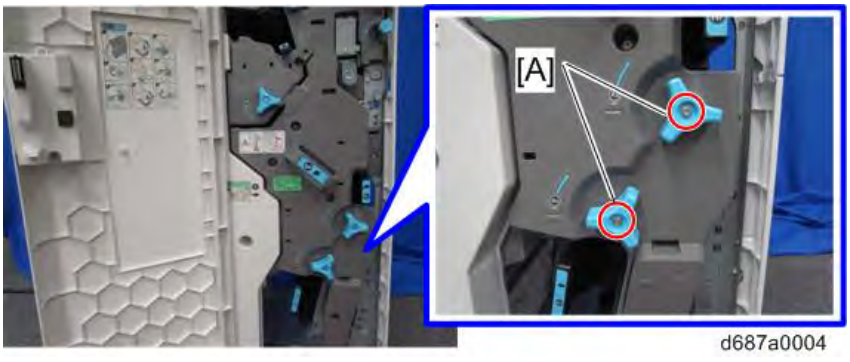
2. Paper guide HP sensor [A] (×1, ×1, hook ×2)



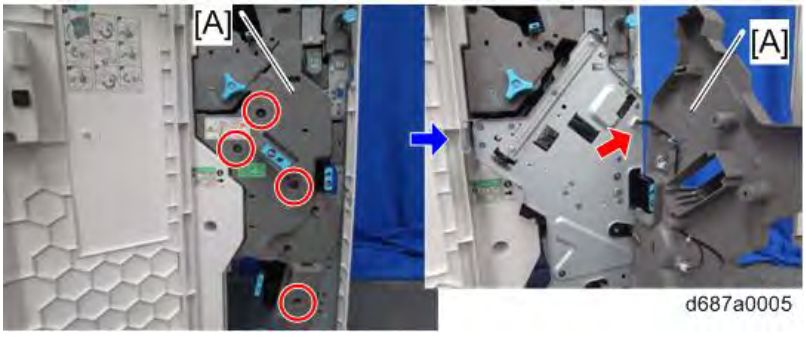
Booklet Stapler Unit (SR3220)

Stapler Unit

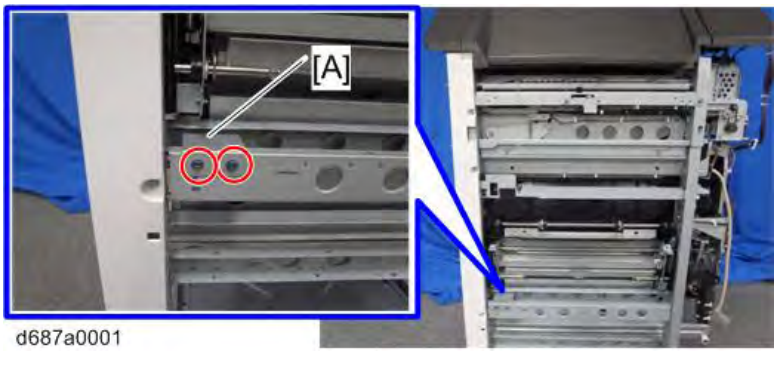
1. Open the front cover, and then remove two knobs [A] (x1 for each)



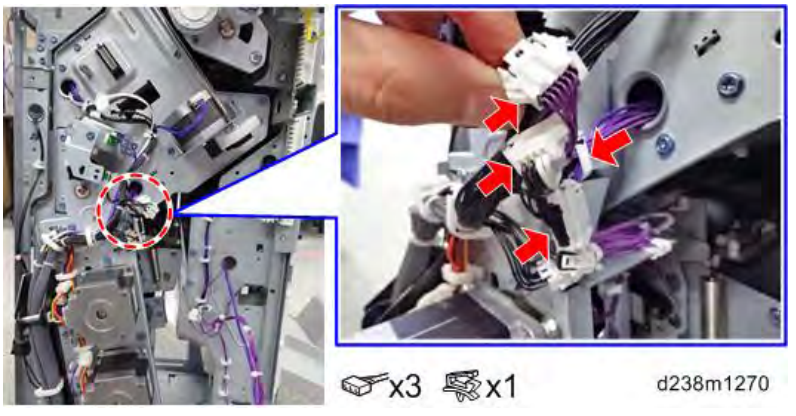
2. Booklet stapler unit cover [A] (x4, x1)



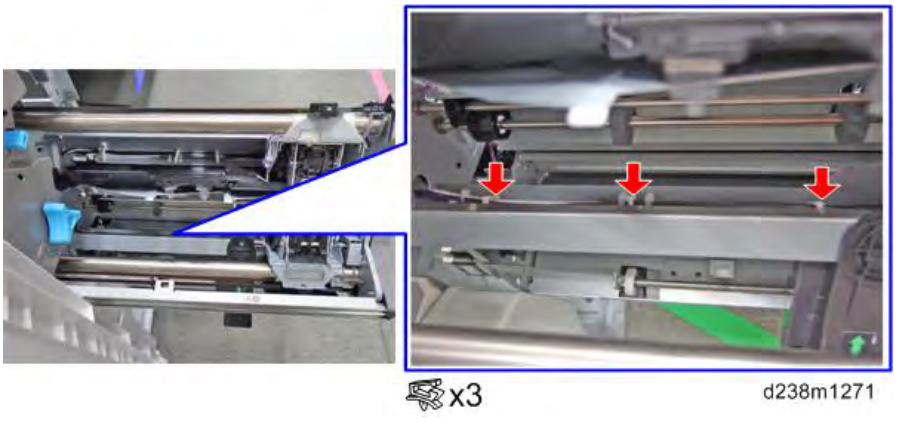
3. Stopper [A] (x2)



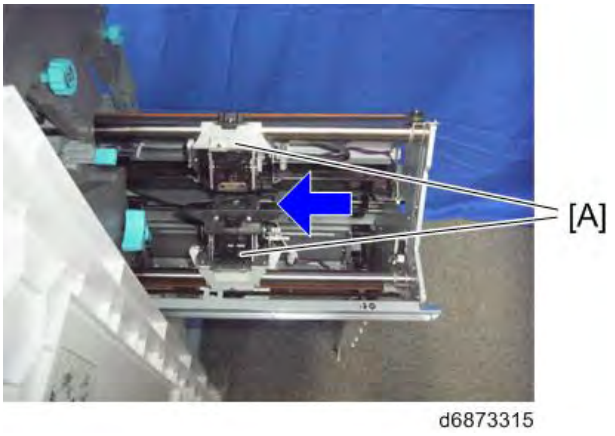
4. **Disconnect three connectors and one clamp at the rear side of the booklet stapler unit.**



5. **Pull out the booklet stapler unit, and then release three clamps.**

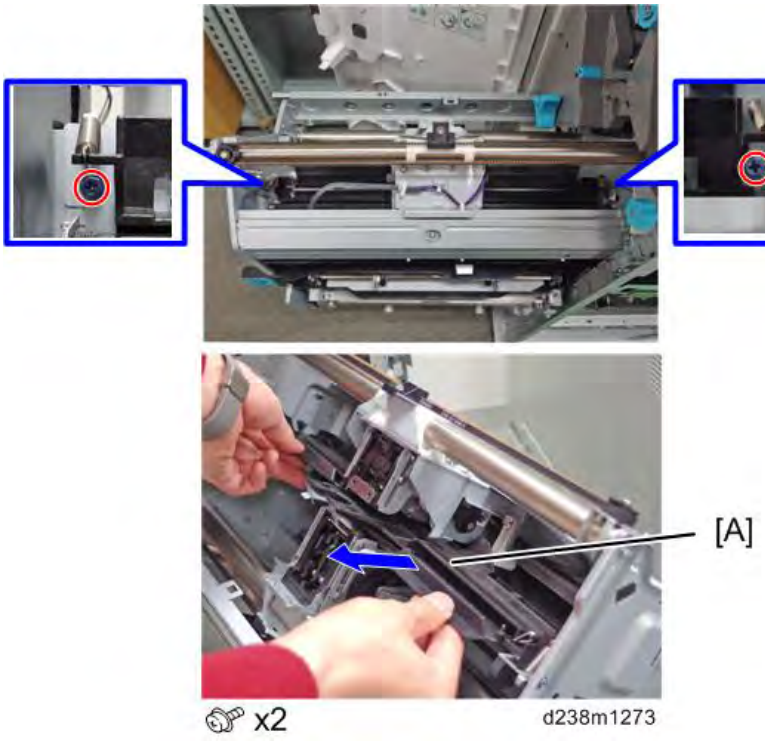


6. **Bring the stapler unit [A] near the center.**

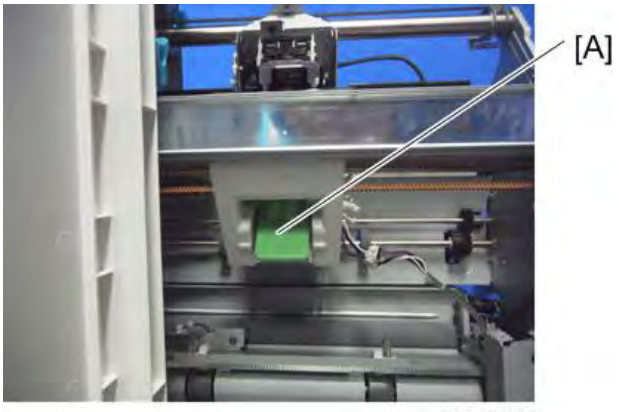


7. Small guide plate [A]

8. Guide plate [A]

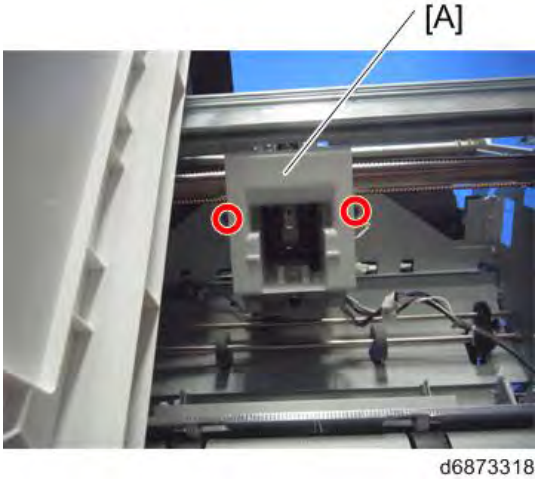


9. **Stapler cartridge [A]**



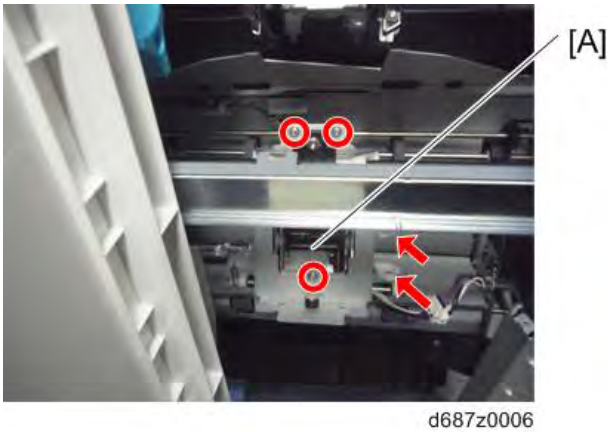
d6873317

10. **Cover [A] (×2)**



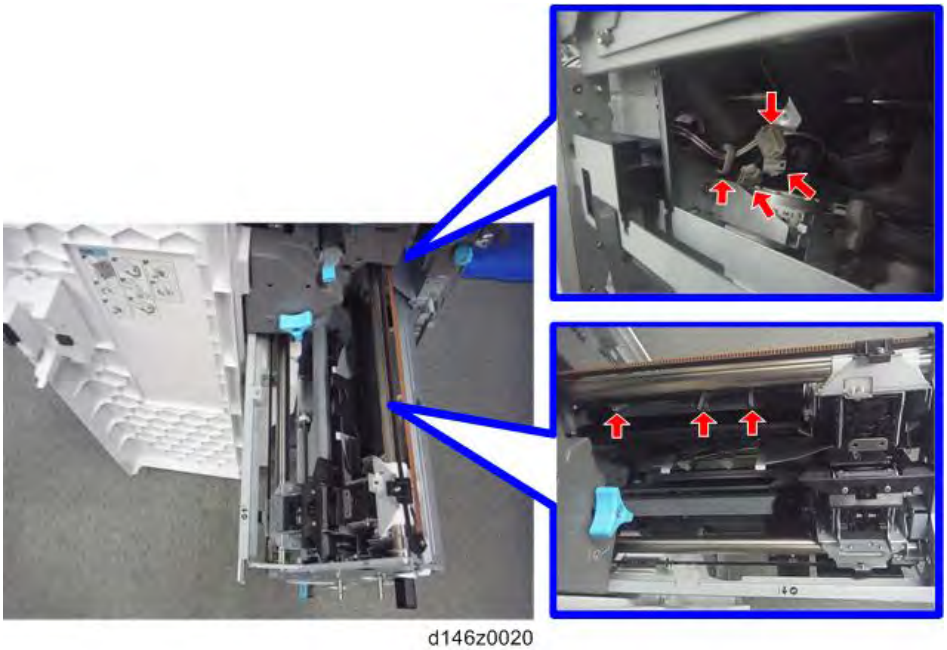
d6873318

11. **Stapler unit (clincher side) [A] (×3, ×2)**



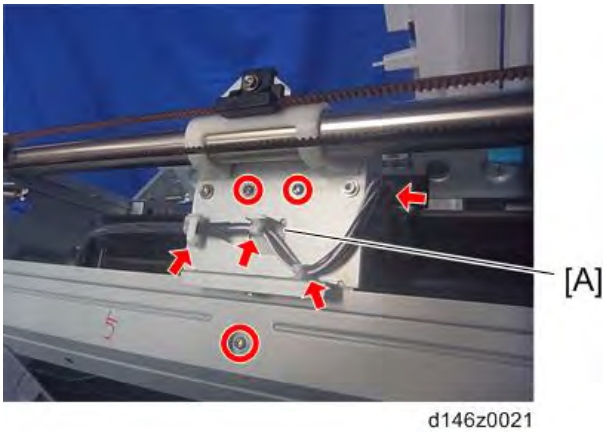
d687z0006

12. **Disconnect three connectors and release four clamps on the stapler unit (driver side).**



d146z0020

13. **Stapler unit (driver side) [A] (×3, ×4)**



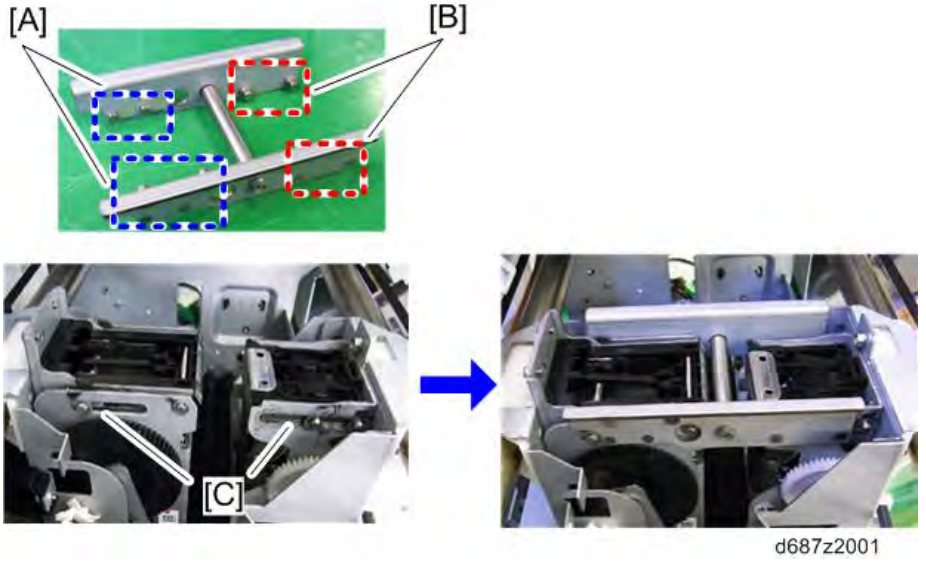
d146z0021

14. **Attach the special tool* to the stapler unit to adjust the staple position of the stapler unit.**

Check that four pins ([A] and [B]) on the special tool are fixed in the slots [C] on the stapler unit as shown below.

[A]: Two pins for driver

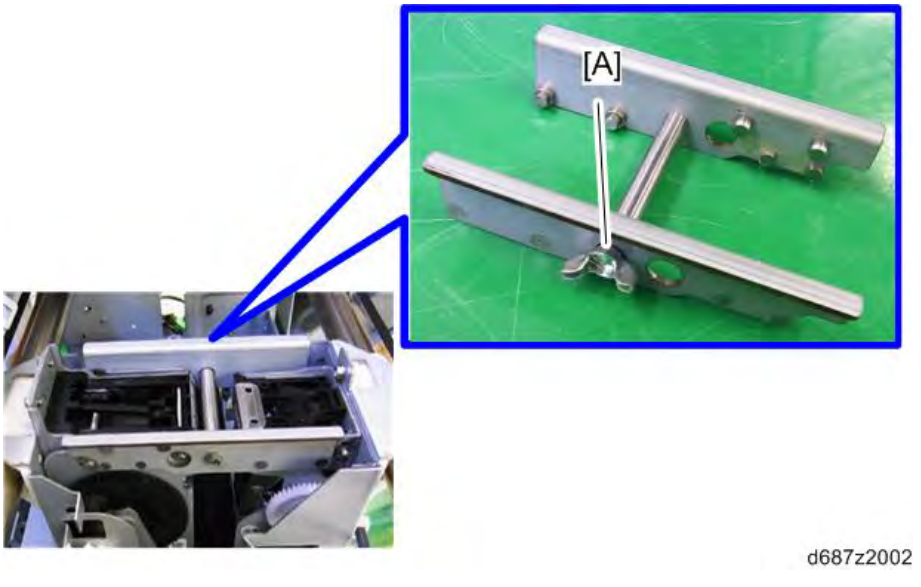
[B]: Two pins for clincher



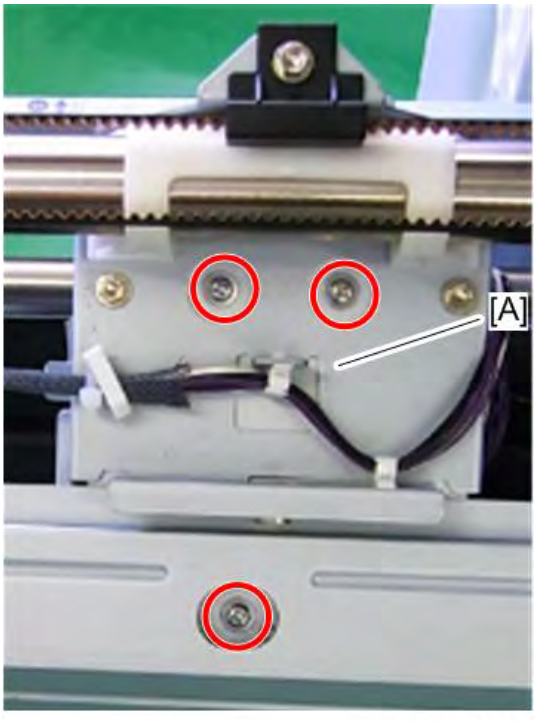
*Use the following part numbers to get the special tool

- HOLDER FLONT(B7936410)
- HOLDER: REAR (B7936420)
- ROD: CLAMP (B7936431)
- ADJUSTING SCREW: M4 (B7936432)
  -or-
- B7936400 STAPLER:SERVICE PARTS ASSY

15. Tighten the wing screw [A] on the special tool to secure the stapler and special tool.



16. Tighten the screws completely to secure the clincher side [A] of the stapler (×3).

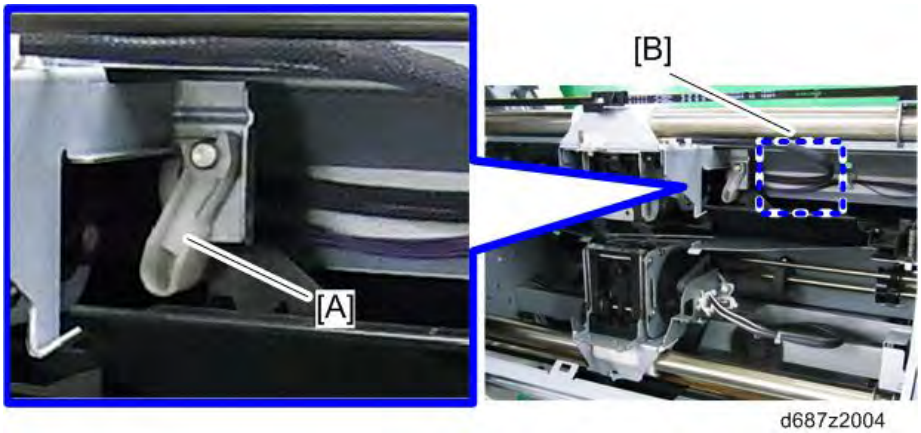


d687z2003

17. Loosen the wing screw to remove the special tool.
18. Reattach all the removed parts.

Note

- Make sure that the harnesses [B] are routed behind the resin part [A]. Otherwise, the harnesses block the route of the stapler, which causes a stapler transfer motor error.



d687z2004

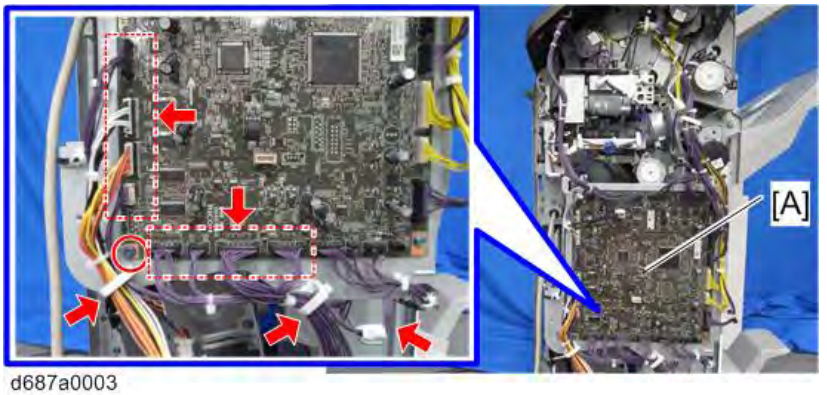
19. **Check that the stapler works properly.**

Note

- All staple patterns must be checked.
- If there are any problems with the clincher, adjust the staple position with the special tool again.

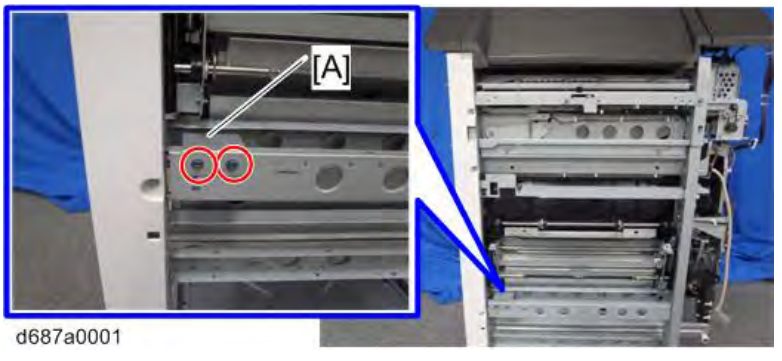
Booklet Stapler Unit

1. **Rear cover (page 11)**
2. **Remove the connectors of controller board [A] (×9, ×2, : ground plate×1)**



d687a0003

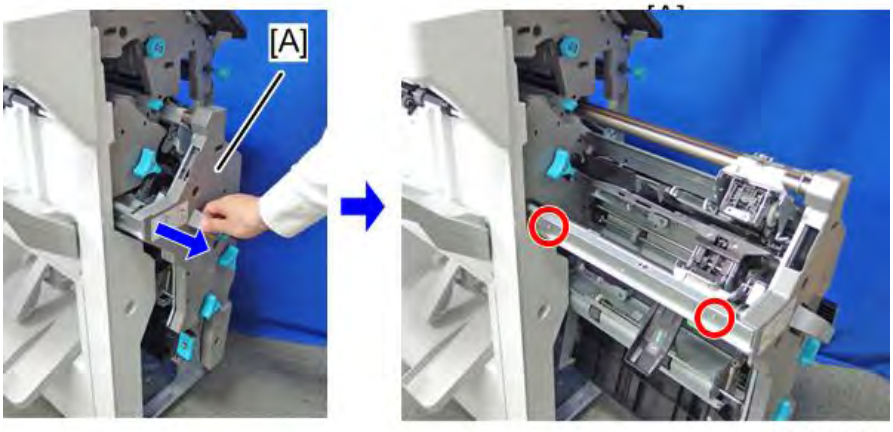
3. **Stopper [A] (×2)**



d687a0001

4. **Front cover (page 9)**
5. **Pull out the booklet stapler unit [A].**

6. **Booklet stapler unit (×2)**



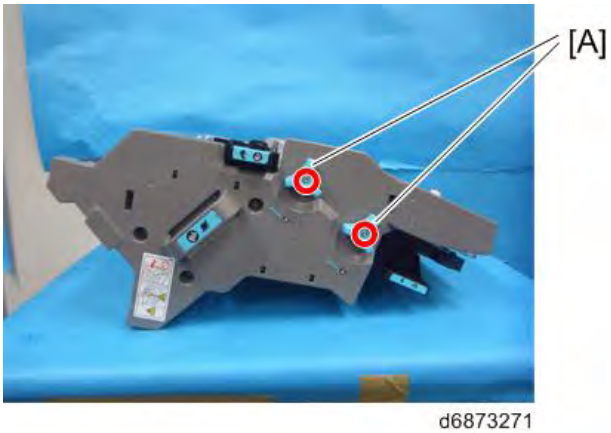
d238m1374

Note

- When you remove the booklet stapler unit from the main frame, be careful not to catch the cable on the frame.

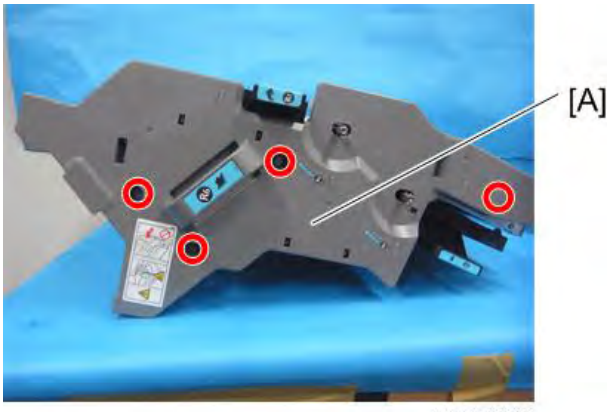
Center-Folding Unit

1. **Booklet stapler unit (page 60)**
2. **Knobs [A] (×2)**



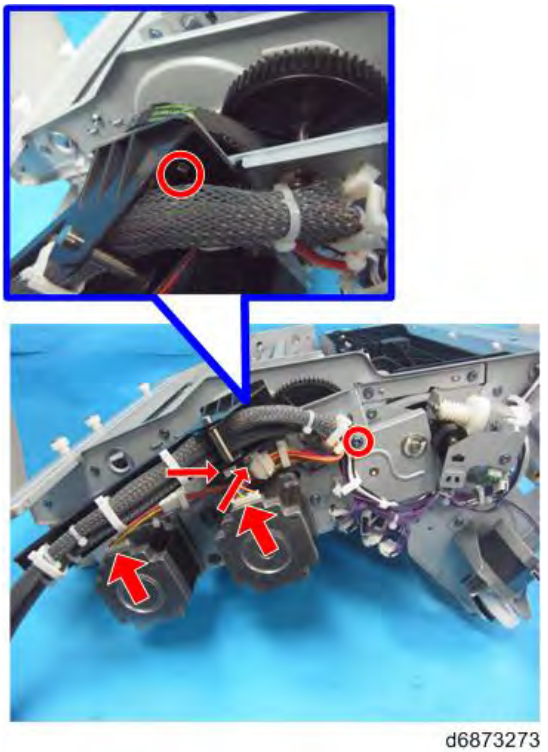
d6873271

3. **Booklet stapler unit cover [A] (×4, ×1)**



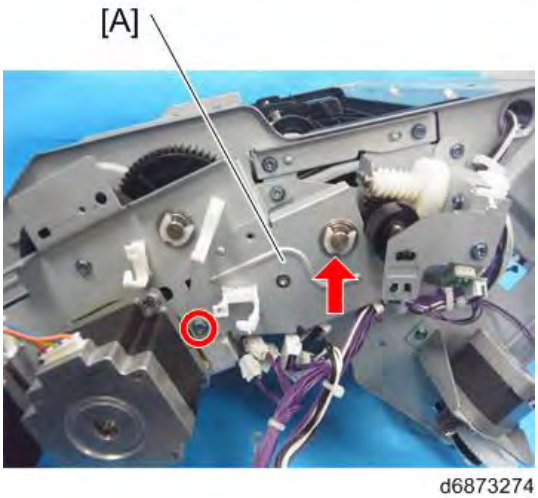
d687z0003

4. **Remove connectors (×1, ×4, ×4, ground plate×1)**



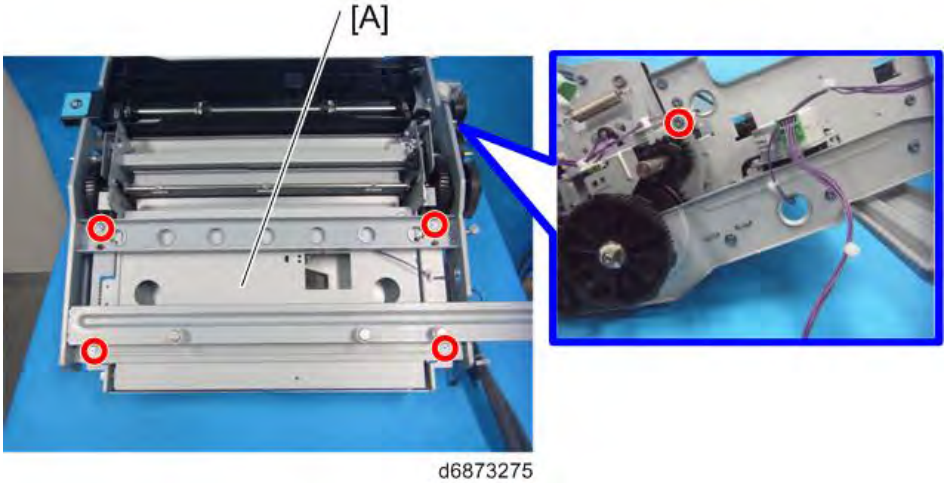
d6873273

5. Bracket [A] (×1, ×3, ×1)



d6873274

6. Center-folding unit [A] (×5)

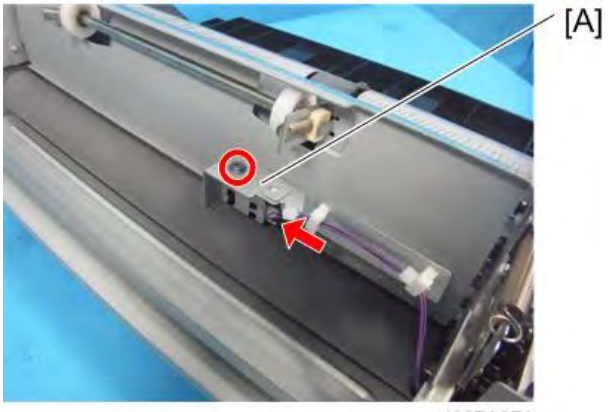


d6873275

Center-Folding Tray Paper Exit Sensor

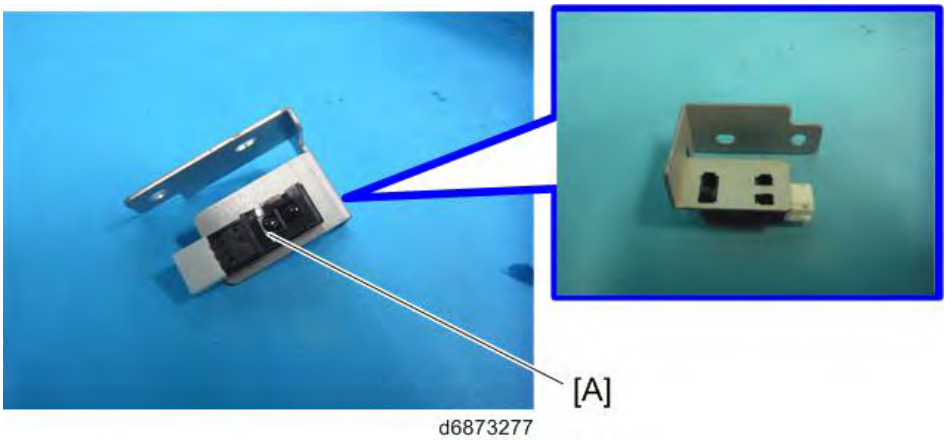
1. Center-folding unit (page 61)

2. Center-folding tray paper exit sensor bracket [A] (×1, ×1)



d6873276

3. Center-folding tray paper exit sensor [A]



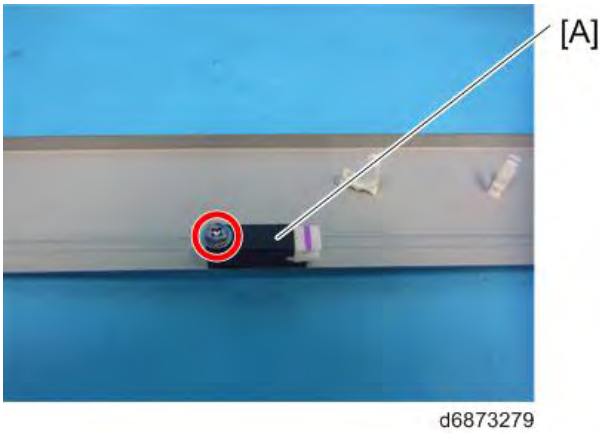
d6873277

Trailing Edge Stopper Transport Sensor

1. Center-folding unit (page 61)

2. Trailing edge stopper transport sensor bracket [A] (×2, ×1, ×4)

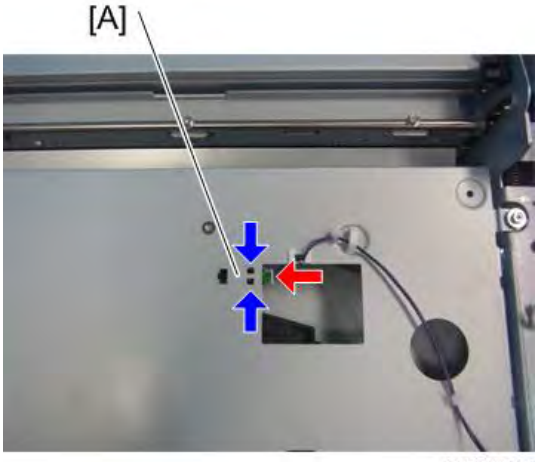
3. Trailing edge stopper paper surface sensor [A] (×1)



Trailing Edge Stopper HP Sensor

1. Center-folding unit (page 61)

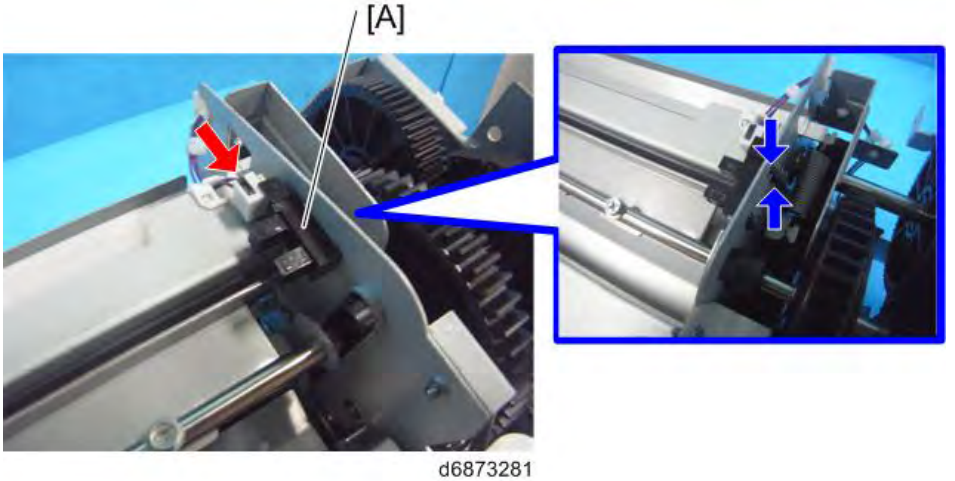
2. Trailing edge stopper HP sensor [A] (×1)



d6873280

Center-Folding Blade HP Sensor

1. Center-folding unit (page 61)
2. Center-folding blade HP sensor [A] (×1)

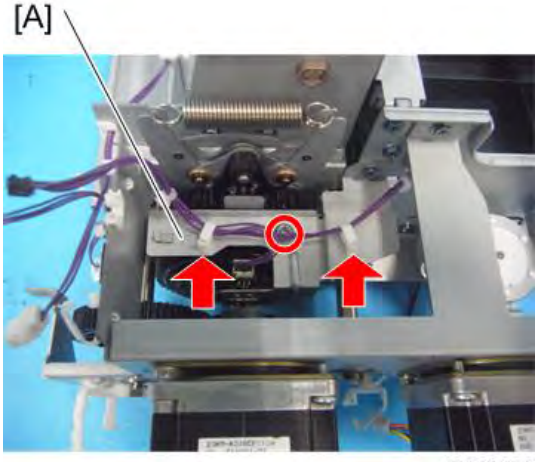


d6873281

Center-Folding Cam HP Sensor

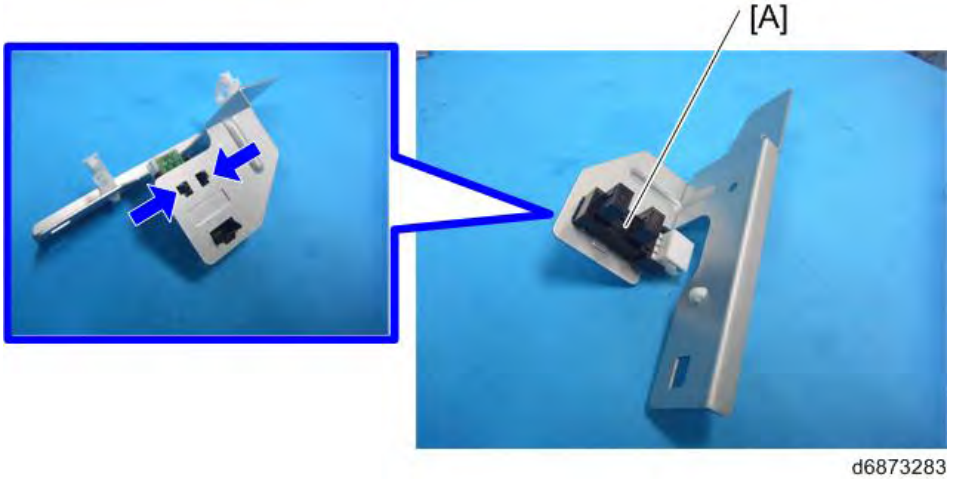
1. Center-folding unit (page 61)

2. Center-folding cam HP sensor bracket [A] (×1, ×2)



d6873282

3. Center-folding cam HP sensor [A] (×1)

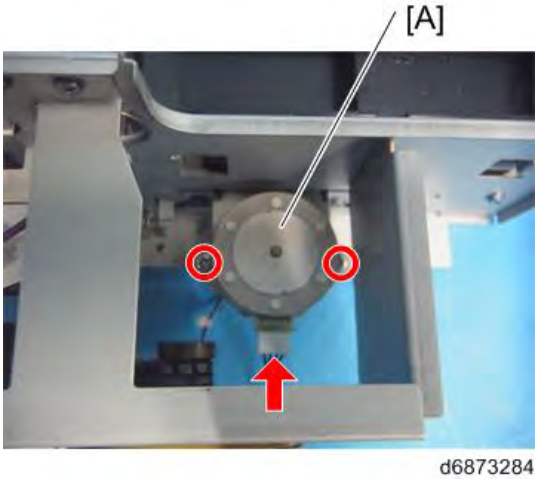


d6873283

Trailing Edge Stopper Motor

1. Center-folding unit (page 61)

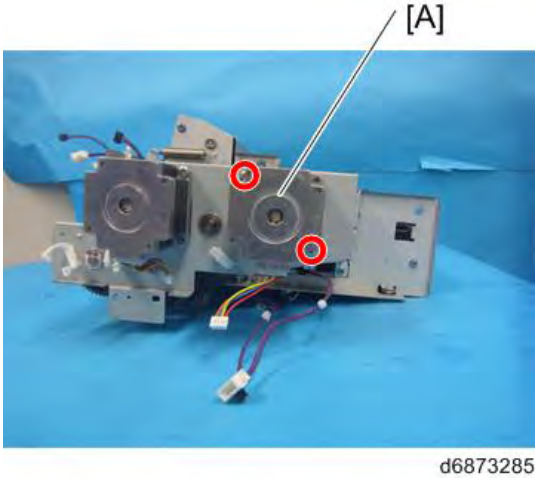
2. Trailing edge stopper motor [A] (×2, ×1)



d6873284

Folding Blade Motor

1. Center-folding unit (page 61)
2. Folding blade motor [A] (×2)

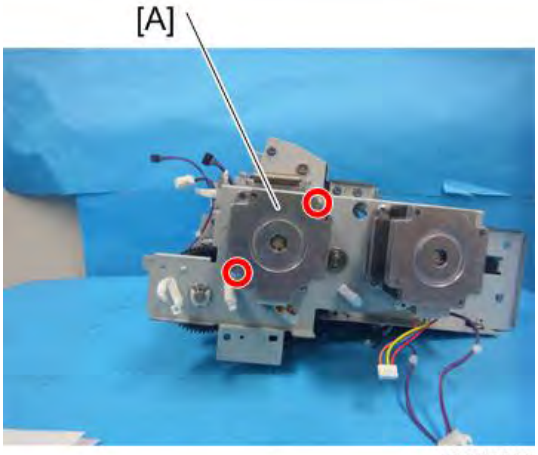


d6873285

Folding Transport Motor

1. Center-folding unit (page 61)

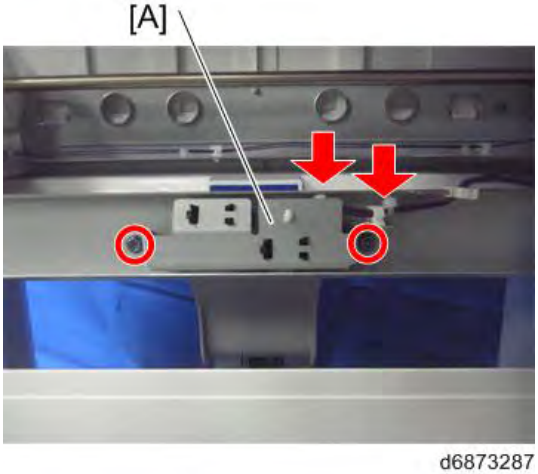
2. Folding transport motor [A] (×2)



d6873286

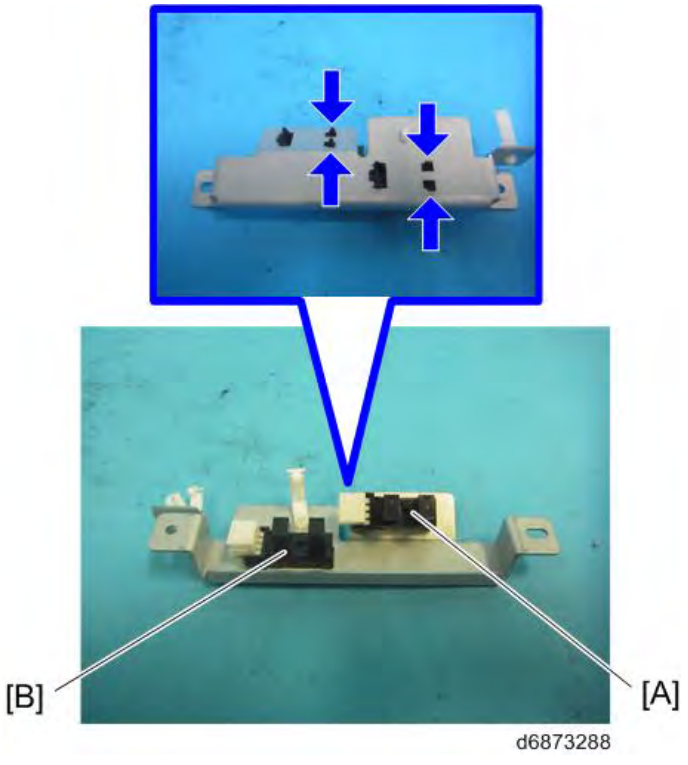
Booklet Tray Full Sensor 1, 2

1. Pull out the booklet stapler unit (page 60 "Booklet Stapler Unit")
2. Booklet tray full sensor bracket [A] (×2, ×2, ×2)



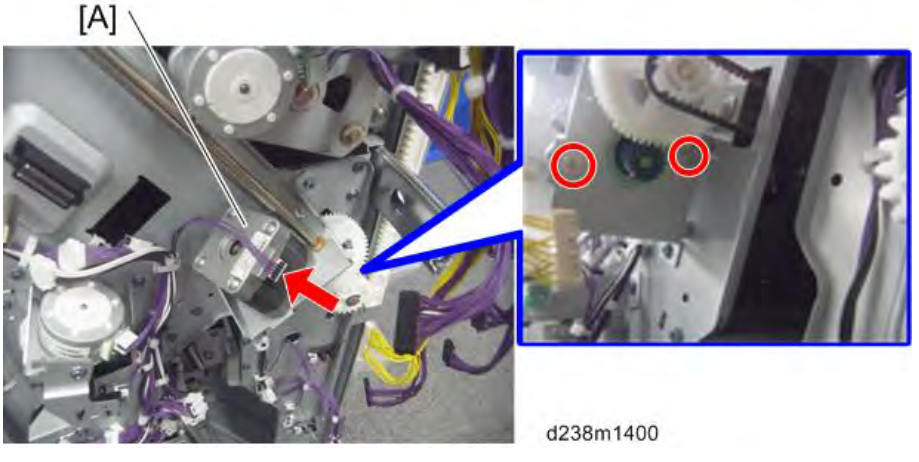
d6873287

3. **Booklet tray full sensor 1 [A], 2 [B]**



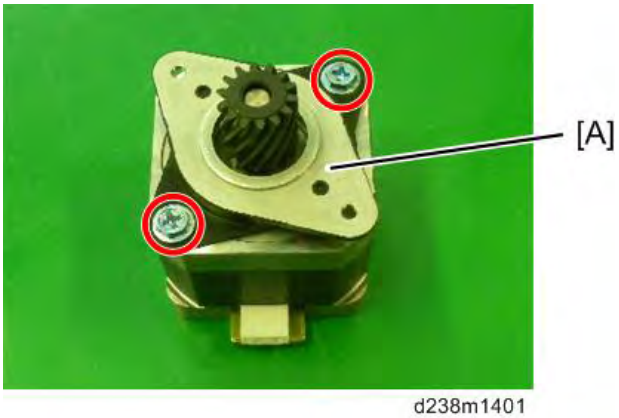
Stapler Transfer Motor (Middle)

1. Controller board bracket (**page 34 "Paper Bundle Transport Upper Motor (SR3220)"**)
2. Stapler transfer motor (Mid.) [A] (×2, ×1)



3. **Damper [A] (×2)**

   Attach it in the correct orientation as shown below.



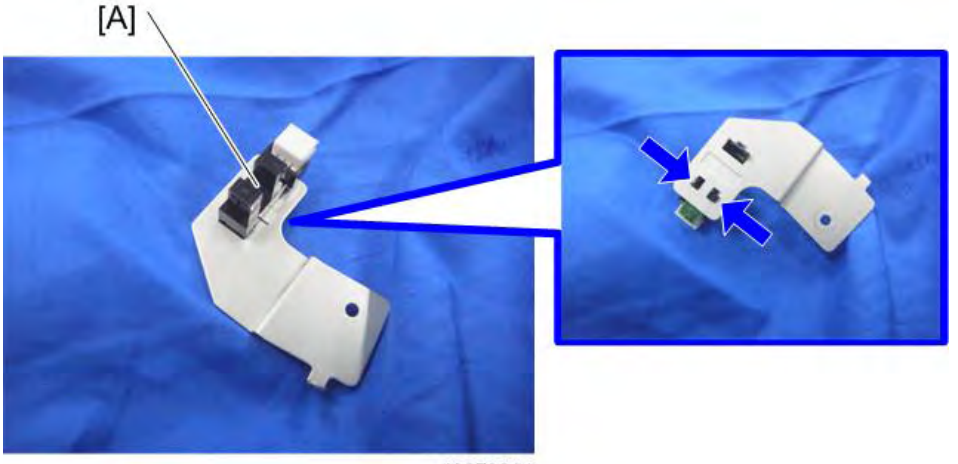
d238m1401

Paper Bundle Transport Lower Pressure Release HP Sensor

1. **Controller board bracket (page 34 "Paper Bundle Transport Upper Motor (SR3220)")**
2. **Paper bundle transport lower pressure release HP sensor bracket [A] (×1, ×1)**

d6873300

3. **Paper bundle transport lower pressure release HP sensor [A]**

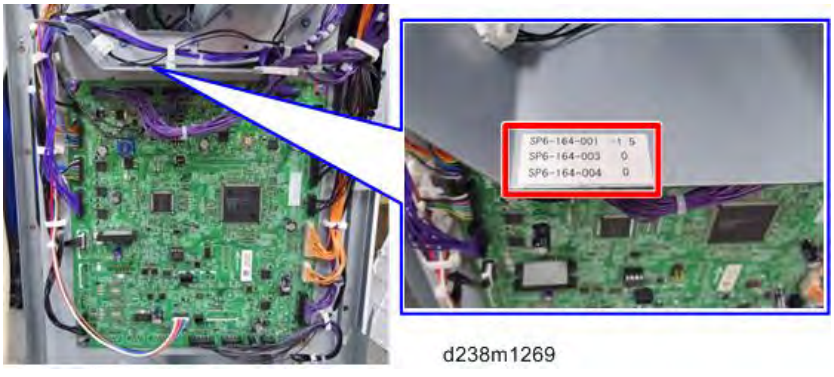


Boards

Main Controller Board

Important

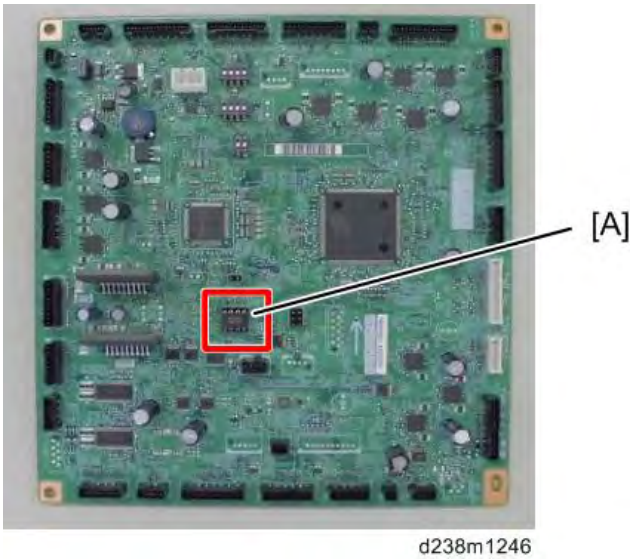
- Make sure to set the SP provided on the metal plate of the main controller board after replacing the main controller board.



d238m1269

Note

- An EEPROM [A] is installed in the controller board to record the drive frequency and number of sheets. When the controller board is replaced, take the EEPROM off the old board and install it on the new one.

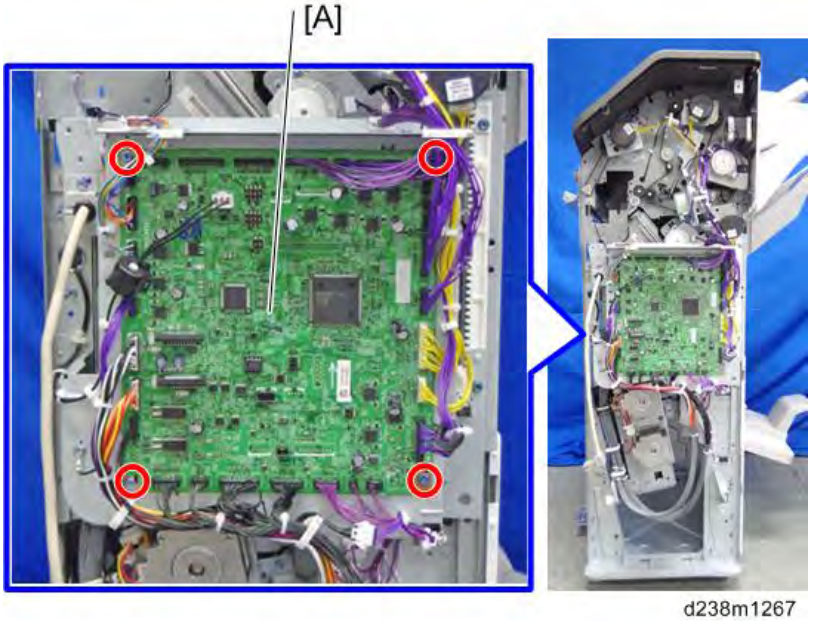


d238m1246

- There is an EEPROM on the new main controller board, but this is not needed and can be discarded or kept as a spare part.

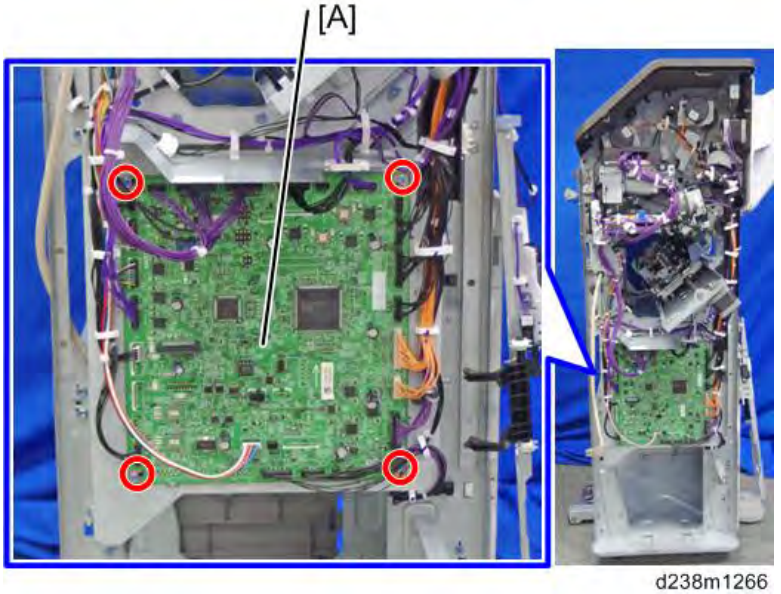
1. **Rear cover (page 11)**
2. **Main controller board [A] (×4, ×23)**

SR3220



d238m1267

SR3210



d238m1266

2. Detailed Descriptions

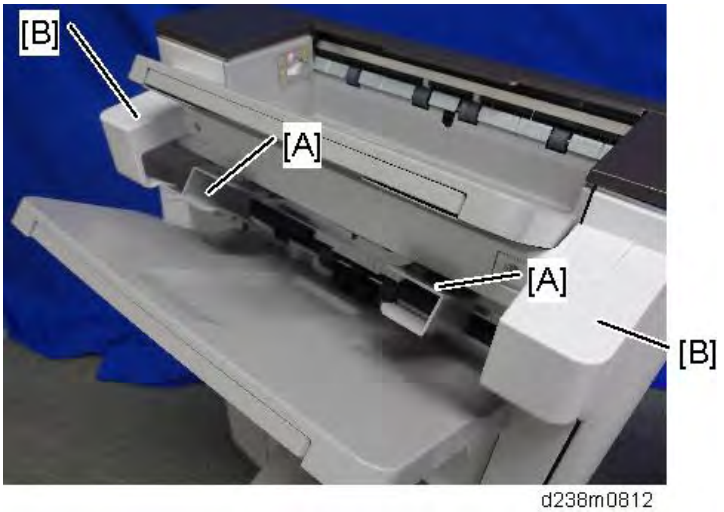
Booklet Finisher SR3220 / Finisher SR3210 (D3B9/D3B8)

Changes from the Previous Machine

Paper exit guide

Overview

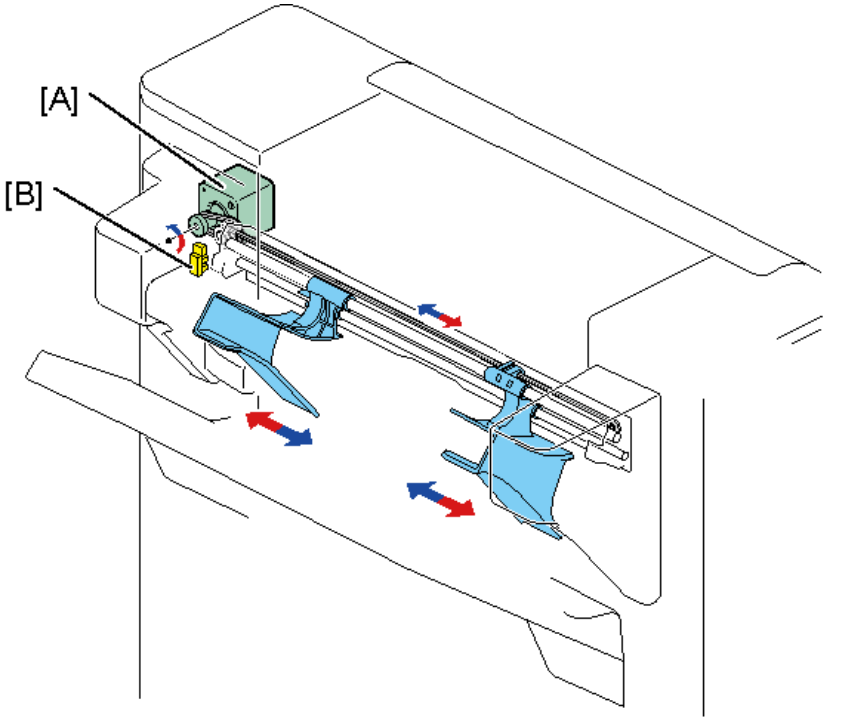
To achieve stable stacking of printouts and to prevent users from touching the printouts, paper exit guide [A] and paper exit guide cover [B] have been added.



Drive

With the paper exit guide drive motor [A] and the timing belt, the paper exit guides on both sides move at the same time.

Home position is detected by the paper exit guide HP sensor [B].



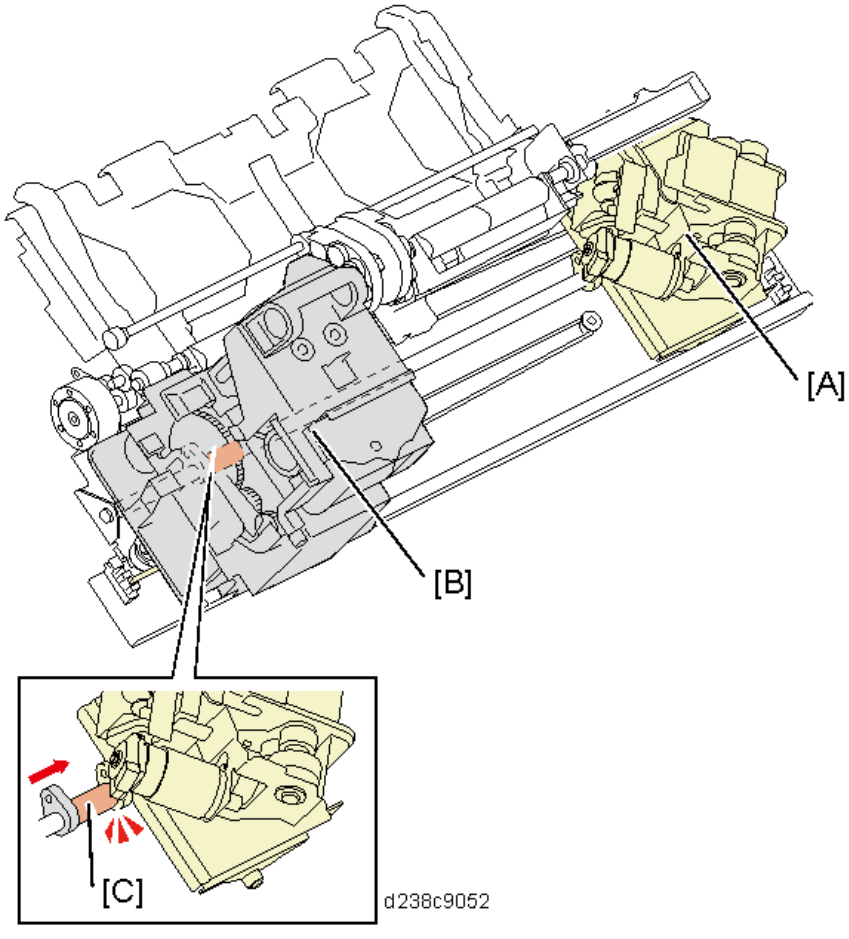
Stapleless Stapler (Finisher SR3210 only)

Location of the stapleless stapler unit

The stapleless stapler unit [A] is on the same shaft as the conventional stapler unit [B], which uses staples.

The stapleless stapler unit is at the back and the conventional stapler unit is at the front.

A spacer [C] on the shaft functions as a stopper, preventing the units from colliding.

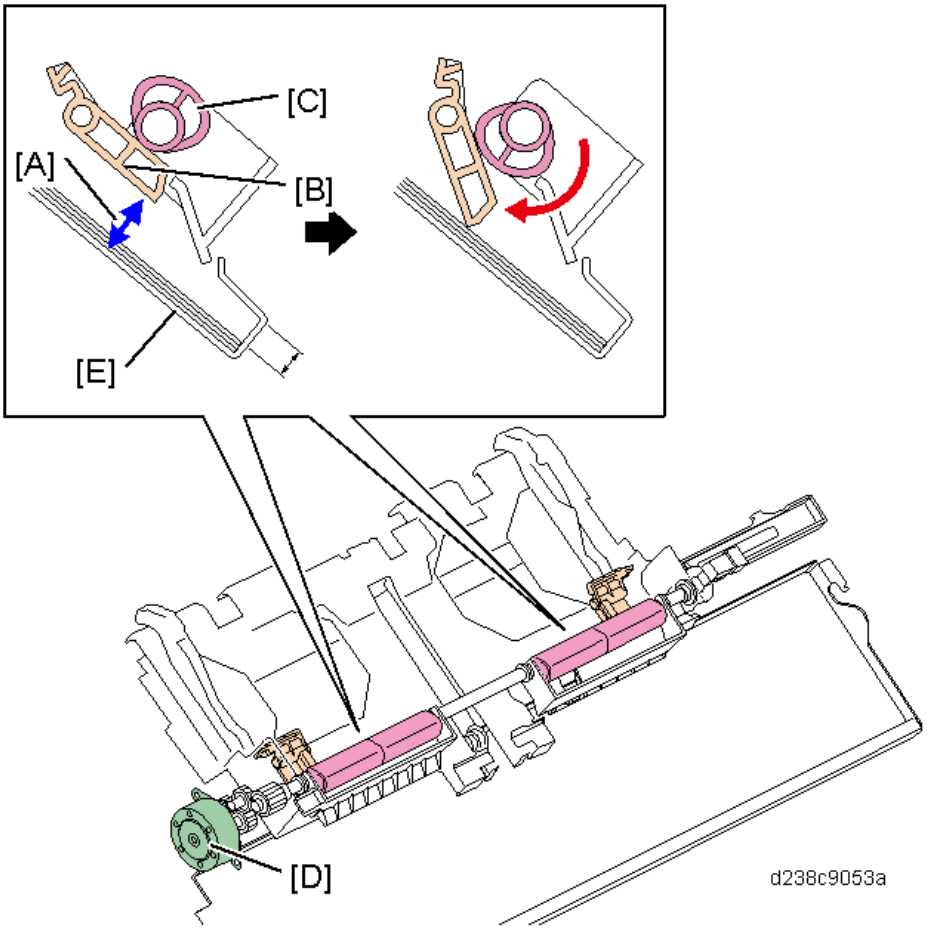


Paper stack mechanism for stapling

The maximum thickness of the stack is 50 sheets for the conventional stapler, and 5 sheets for the stapleless stapler.

In order for the stapleless stapler to stack the paper smoothly, cam [C] and paper guide [B] adjusts the gap [A] of the stapler tray [E].

The cam [C] controlled by the paper guide motor [D] pushes the paper guide [B] down during the stapleless staple operation.

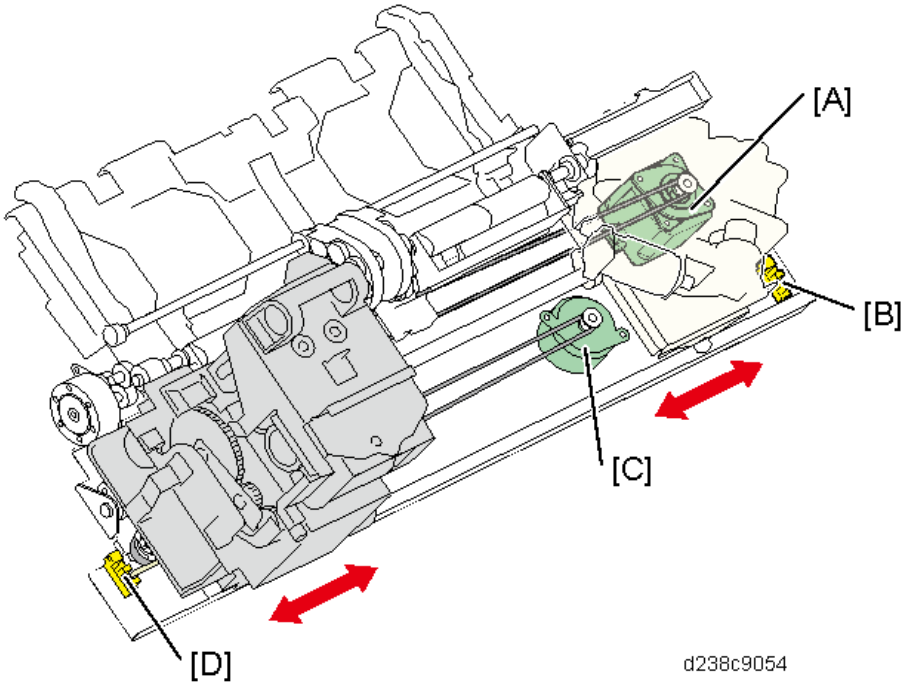


Stapleless stapler unit movement mechanism

The stapleless stapler transfer motor [A] moves the stapleless stapler unit to the stapling position from its home position when stapling with the stapleless stapler.

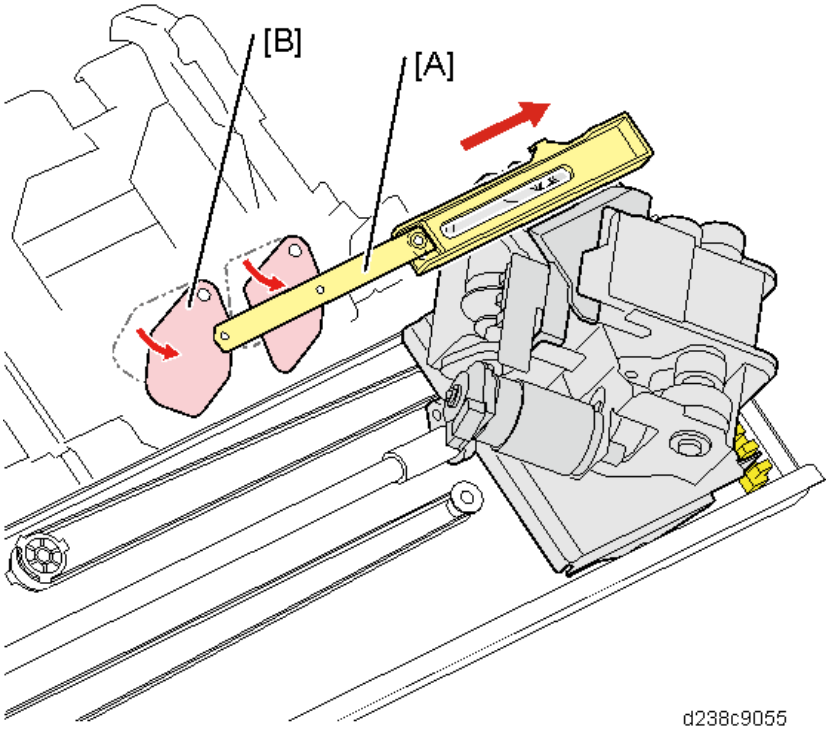
The home position is detected by the stapleless stapler HP sensor [B].

The stapler transfer motor [C] and the stapler HP sensor [D] are attached to the base plate.



There is a gap at the paper guide when the stapleless stapler unit is at the home position when stapling with the conventional stapler.

Because of this, paper will be guided with the paper guide [B] which works together with the lever [A] when the stapleless stapler unit moves to its home position.



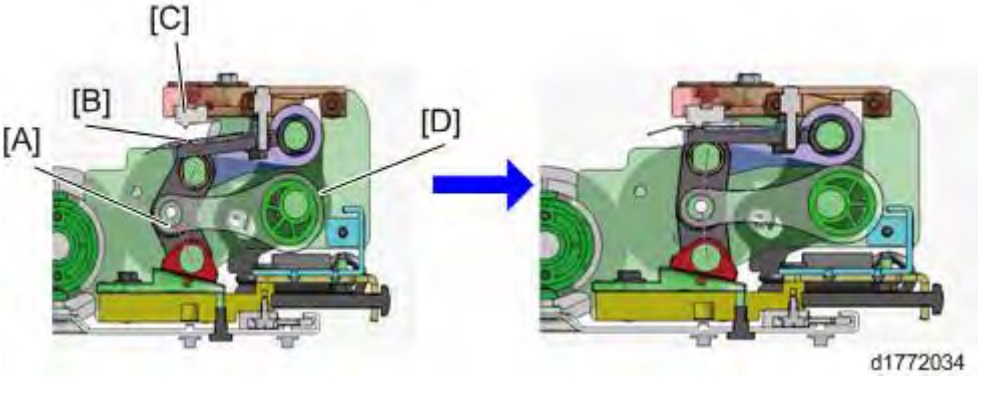
Stapleless Stapler mechanism

The staple operation in this option applies a crimping method. V-shaped teeth press the sheets, applying a pressure of 220 kg.

This option performs two stapling operations for a single stapling operation as follows.

[Moving to the first stapling position =>Stapling => Moving to the second stapling position => Stapling => Moving back to the home position]

Stapling is done by engaging the pressure cam [D] to stretch the pressure link [A], which applies pressure between to the upper tooth [C] and the lower tooth [B]. Moving and stapling operation for the stapler are driven by the stapler drive motor. The home position is detected by the stapleless stapler HP sensor.

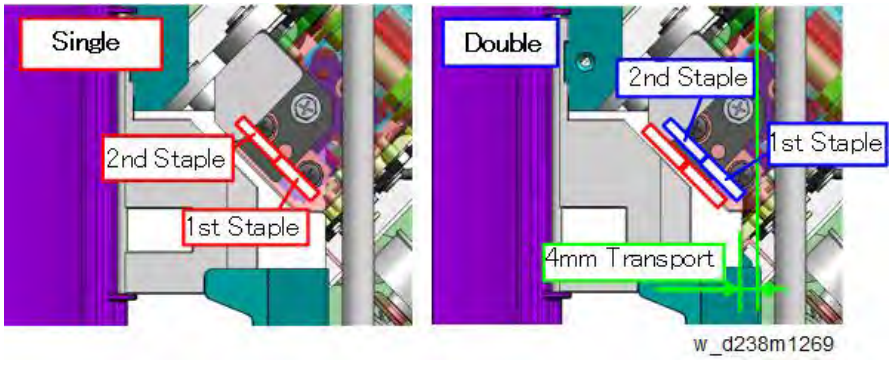


- Double/Single

  The bond strength depends on the degree of entwining of fibers between sheets of the paper bundle. Setting to Single or Double stapling allows you change the bond strength.

  Single applies one staple operation.

  Double applies one more, with the same operation as the first staple, at 4mm from the first. The stapleless stapler drive motor moves the paper after the first stapling.



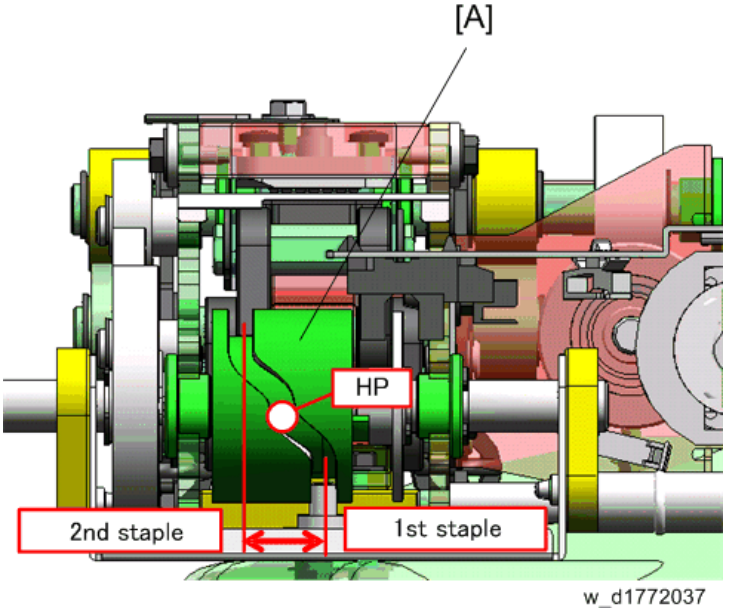
- Bundle ejection

  After stapling, the trailing edge presser is released. The bundle of paper is ejected by the paper output roller.

Stapler movement mechanism

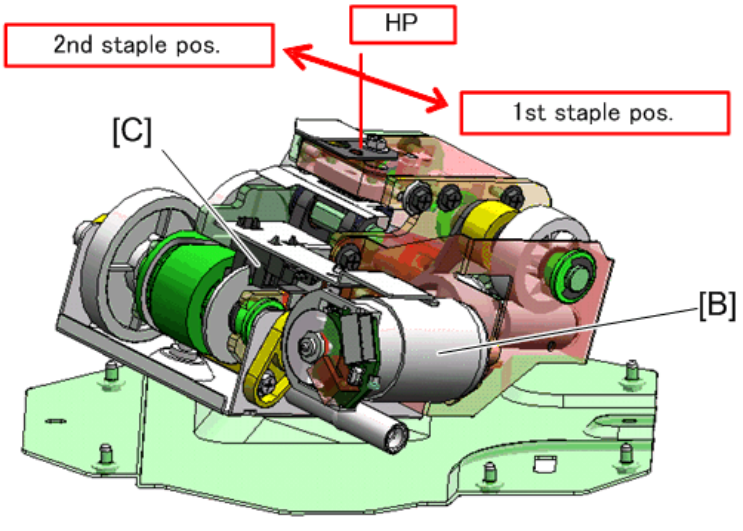
This stapler needs to staple twice for a single staple position, and must be moved to do this stapling.

A cam [A], which is located in the stapler unit and has a groove on the body, and a securing pin perform the moving operation when stapling.



w_d1772037

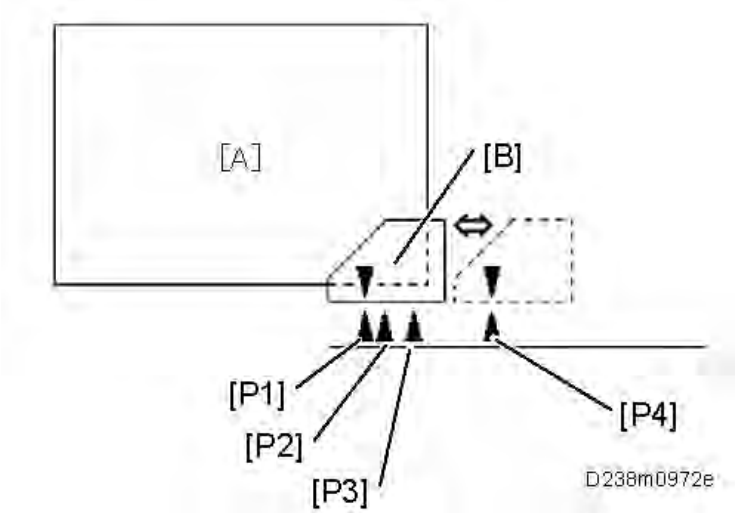
The moving and stapling is done by the stapleless stapler drive motor [B] and the home position is detected by the stapler HP sensor [C].



w_d1772036

Stapler movement process

The movement differs between Single and Double stapling.



[A]: Paper

[B]: Stapleless stapler unit

[P1]: Pre-stapling position

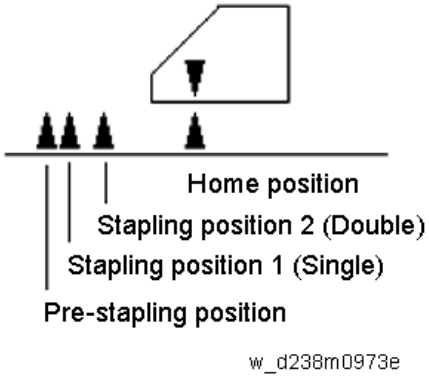
[P2]: Stapling position 1 (Single)

[P3]: Stapling position 2 (Double)

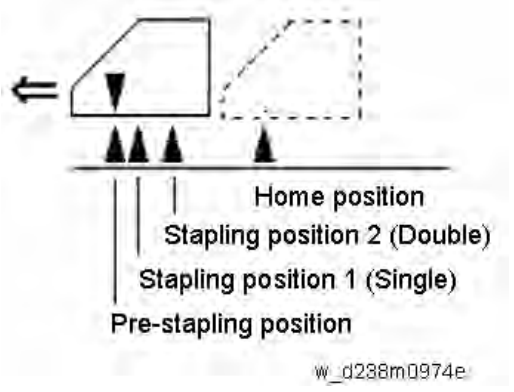
[P4]: Home position

Single stapling operation

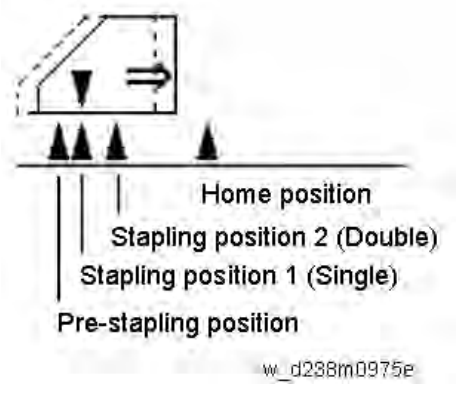
1. **The stapleless stapler unit is at the home position before receiving paper.**



2. **The stapleless stapler unit moves to the pre-stapling position when starting a stapleless stapling job.**

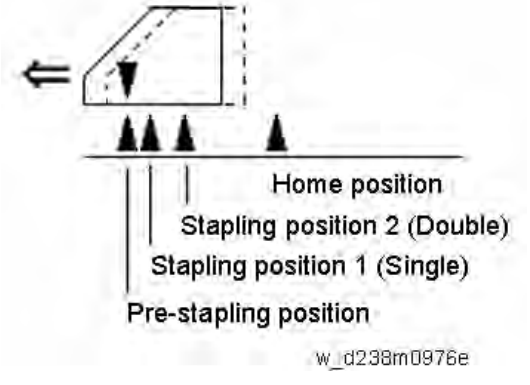


3. **After receiving the first sheet, the stapleless stapler unit moves from the Stapling Position 1 towards the rear by 2.2 mm. After stacking the sheets, stapling is performed. (Stapling Position 1)**

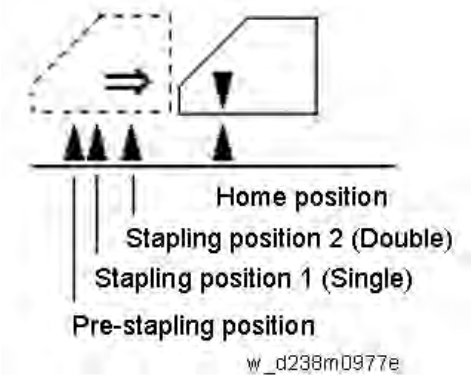


4. **When stapling on multiple copies, the stapleless stapler unit moves towards the front by 2.2 mm from the pre-stapling position after the paper is delivered.**

   When stapling on multiple copies, Steps 3 and 4 are repeated.

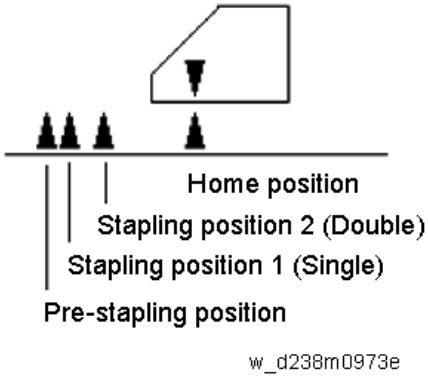


5. The stapleless stapler unit returns to the home position after completing the job.

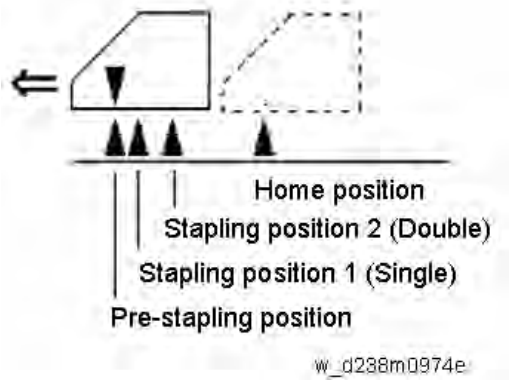


Double stapling operation

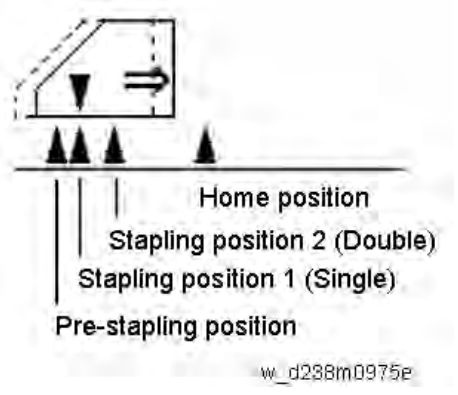
1. The stapleless stapler unit is at the home position before receiving paper.



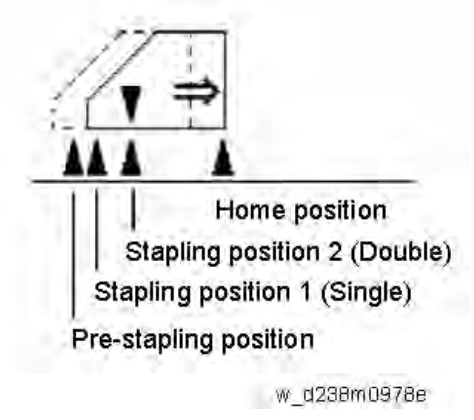
2. The stapleless stapler unit moves to the pre-stapling position when starting a stapleless stapling job.



3. **After receiving the first sheet, the stapleless stapler unit moves from the Stapling Position 1 towards the rear by 2.2 mm. After stacking the sheets, stapling is performed. (Stapling Position 1)**

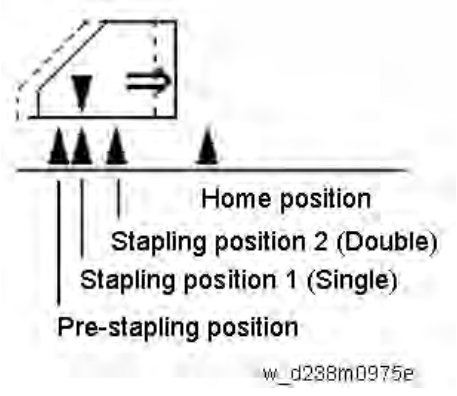


4. **The stapleless stapler unit moves further towards the rear by 4 mm and performs stapling. (Stapling Position 2)**

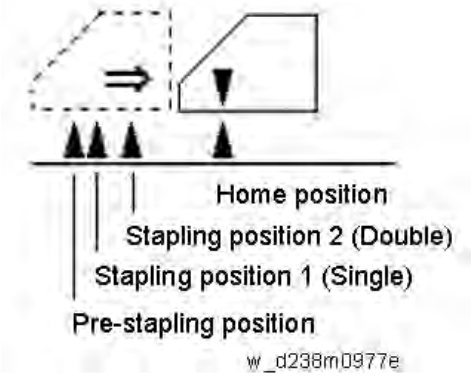


5. **When stapling multiple copies, the stapleless stapler unit moves towards the front by 6.4 mm from the pre-stapling position after the paper is delivered.**

   When stapling multiple copies, Steps 3 to 5 are repeated.



6. The stapler returns to the home position after completing the job.



SP6-160-004 (Replacement Mode for Service)

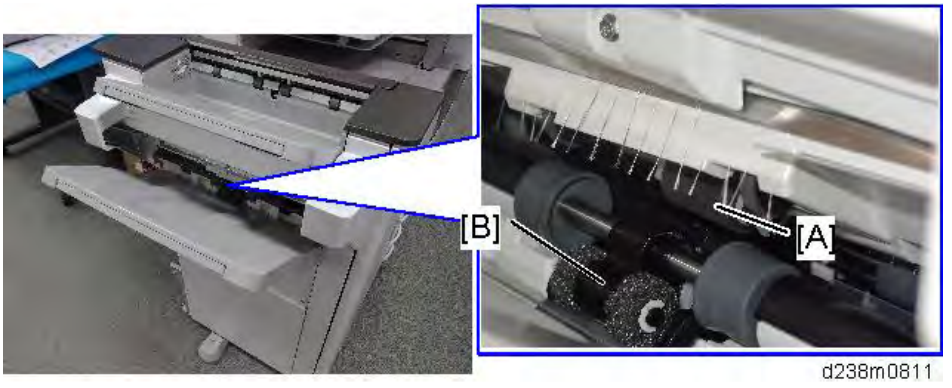
It is easier to access the following parts for replacement after running SP-6-160-004.

- Positioning Roller [A]

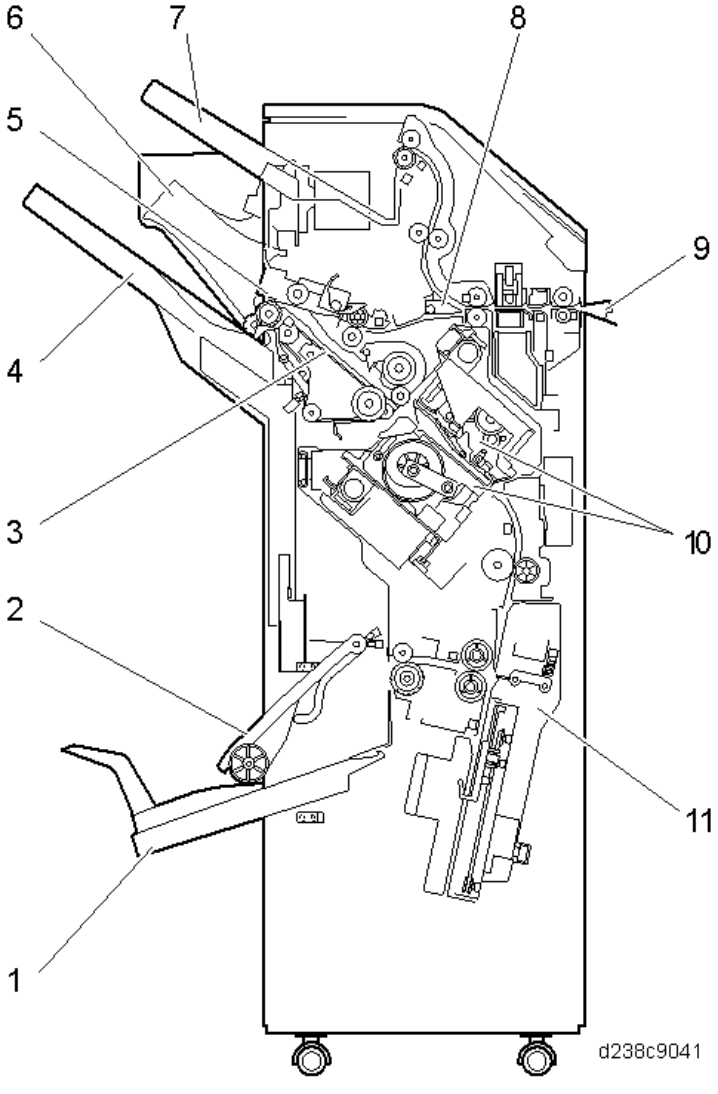
  The paper exit guide plate moves upwards and the positioning roller pops up in front for easier access.

- Reverse Roller [B]

  The paper exit guide plate moves upwards and the reverse roller can be accessed.


[B]
[A]
d238m0811

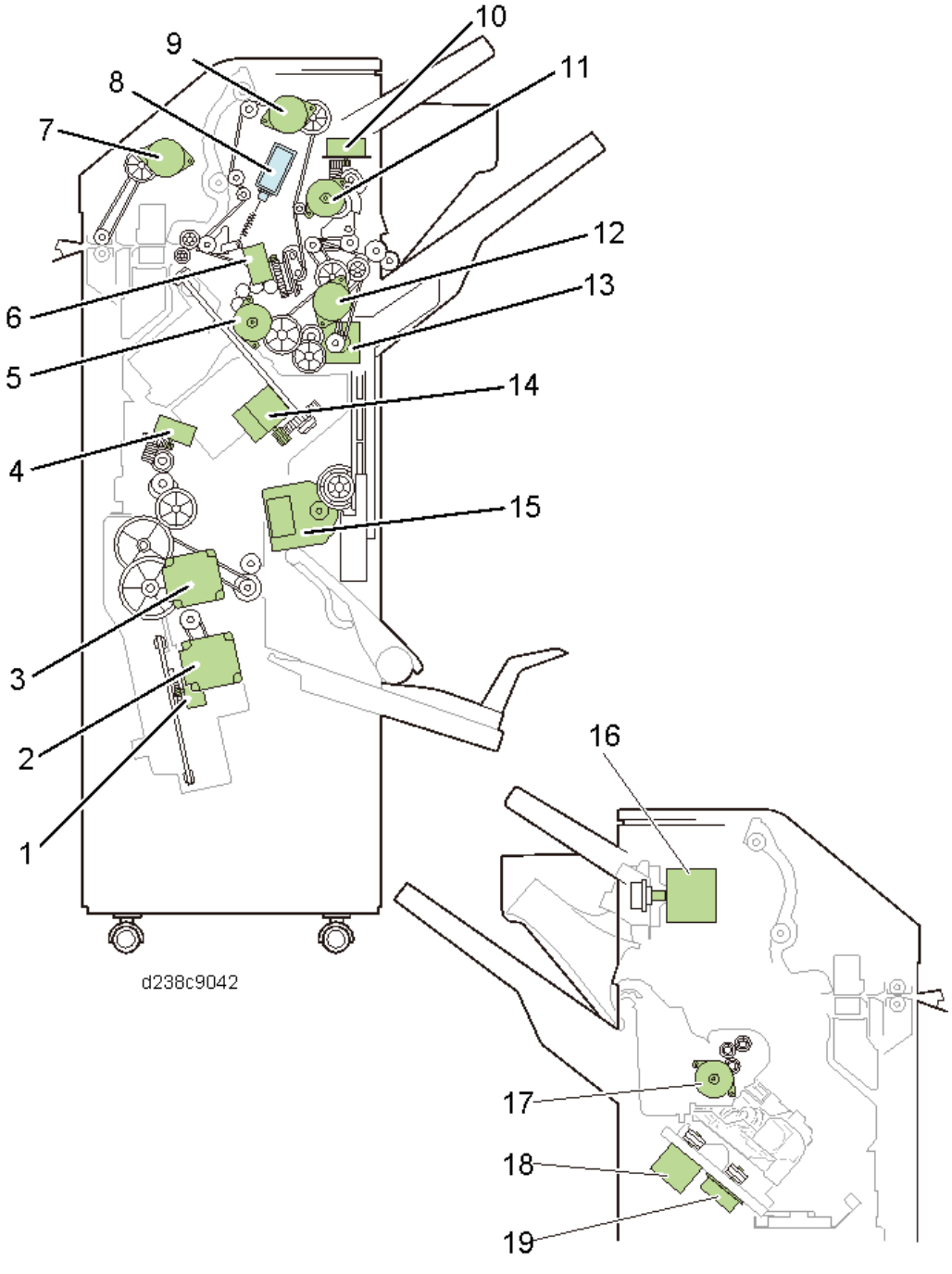
Parts Layout



No.	Description	No.	Description
1	Booklet tray	7	Proof tray
2	Paper surface detecting arm	8	Junction gate
3	Stapler tray	9	Relay Guide Plate
4	Shift tray	10	Stapler unit
5	Paper exit guide plate	11	Booklet unit

No.	Description	No.	Description
6	Paper exit guide		

Drive layout

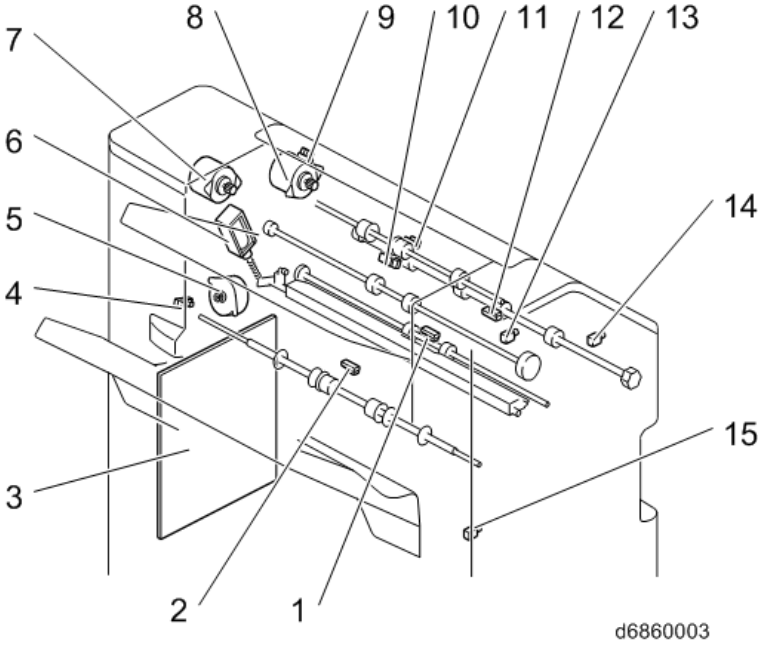


No.	Description	No.	Description
1	Edge stopper motor	12	Paper exit transport motor
2	Folding blade motor	13	Feedout Pawl motor
3	Folding transport motor	14	Stapler unit displacement motor
4	Booklet transport (lower) pressure release motor	15	Tray lift motor
5	Booklet bundle transport (upper) motor	16	Paper exit guide drive motor*
6	Shift motor	17	Paper guide drive motor*
7	Entrance transport motor	18	Stapleless stapler transfer motor*
8	Junction gate solenoid	19	Stapler transfer motor
9	Proof transport motor		
10	Paper exit guide plate open/close motor		
11	Positioning roller motor		

* Finisher SR3210 only

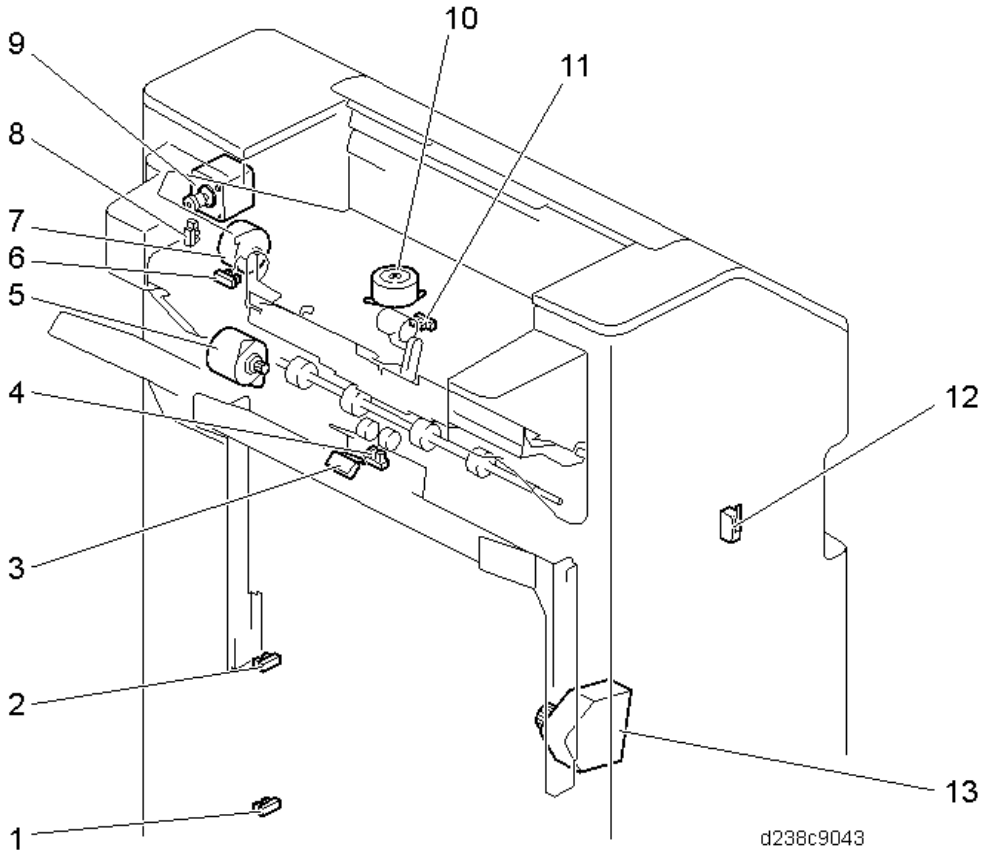
Electrical component layout

Transport system



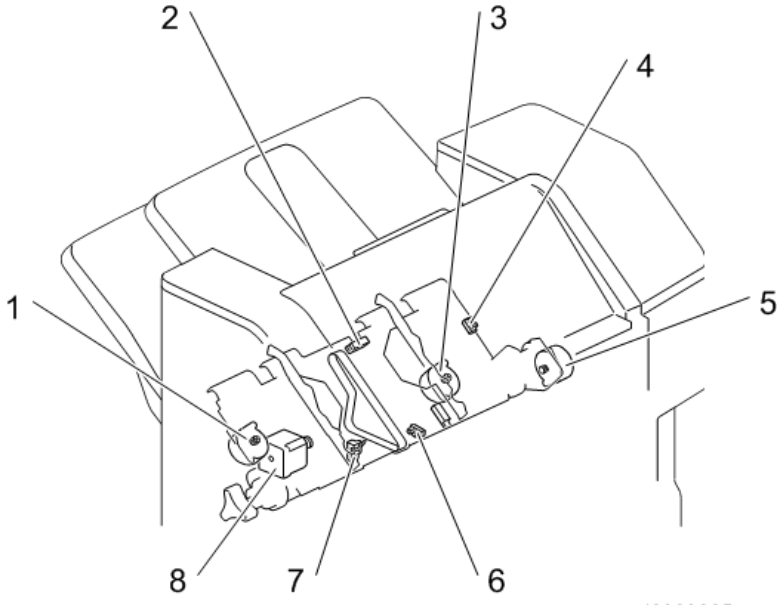
No.	Description	No.	Description
1	Intermediate transport (right) paper surface sensor	9	Upper cover open/close sensor
2	Intermediate transport (left) paper surface sensor	10	Proof tray full sensor
3	Controller	11	Proof paper exit sensor
4	Shift HP sensor	12	Entrance paper surface sensor
5	Shift motor	13	Straight transport LED
6	Junction gate solenoid	14	Entrance jam detection LED
7	Proof transport motor	15	Stapler jam detection LED
8	Entrance transport motor		

Shift system



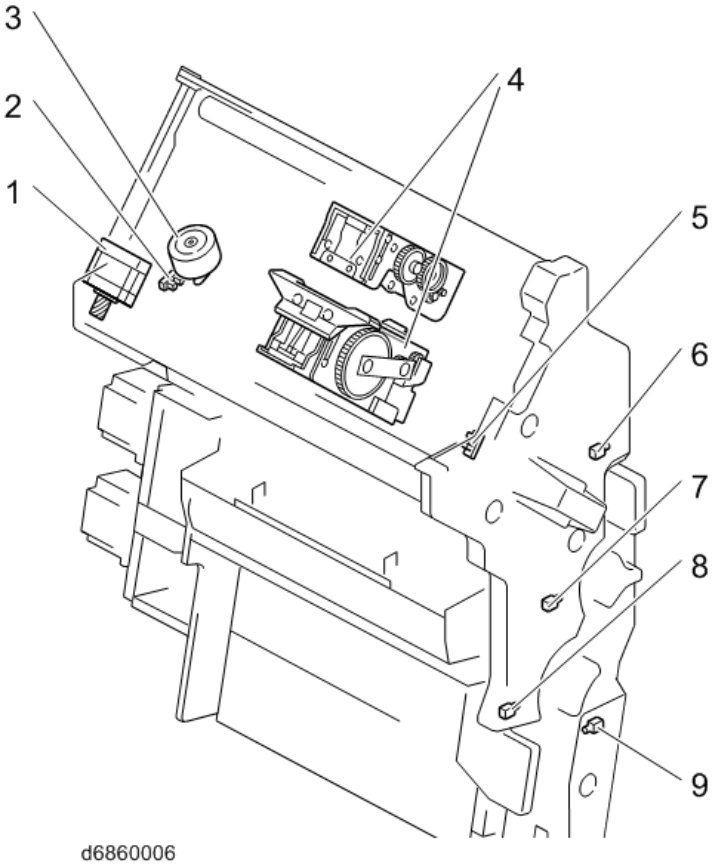
No.	Description	No.	Description
1	Tray lower limit sensor (upper)	8	Paper exit guide HP sensor
2	Tray lower limit sensor (lower)	9	Paper exit guide drive motor
3	Shift tray upper limit switch	10	Paper exit guide plate open/close motor
4	Shift tray paper surface sensor	11	Paper exit guide plate HP sensor
5	Paper Exit Transport Motor	12	Front door switch
6	Positioning roller HP sensor	13	Tray lift motor
7	Positioning roller motor		

Jogger system



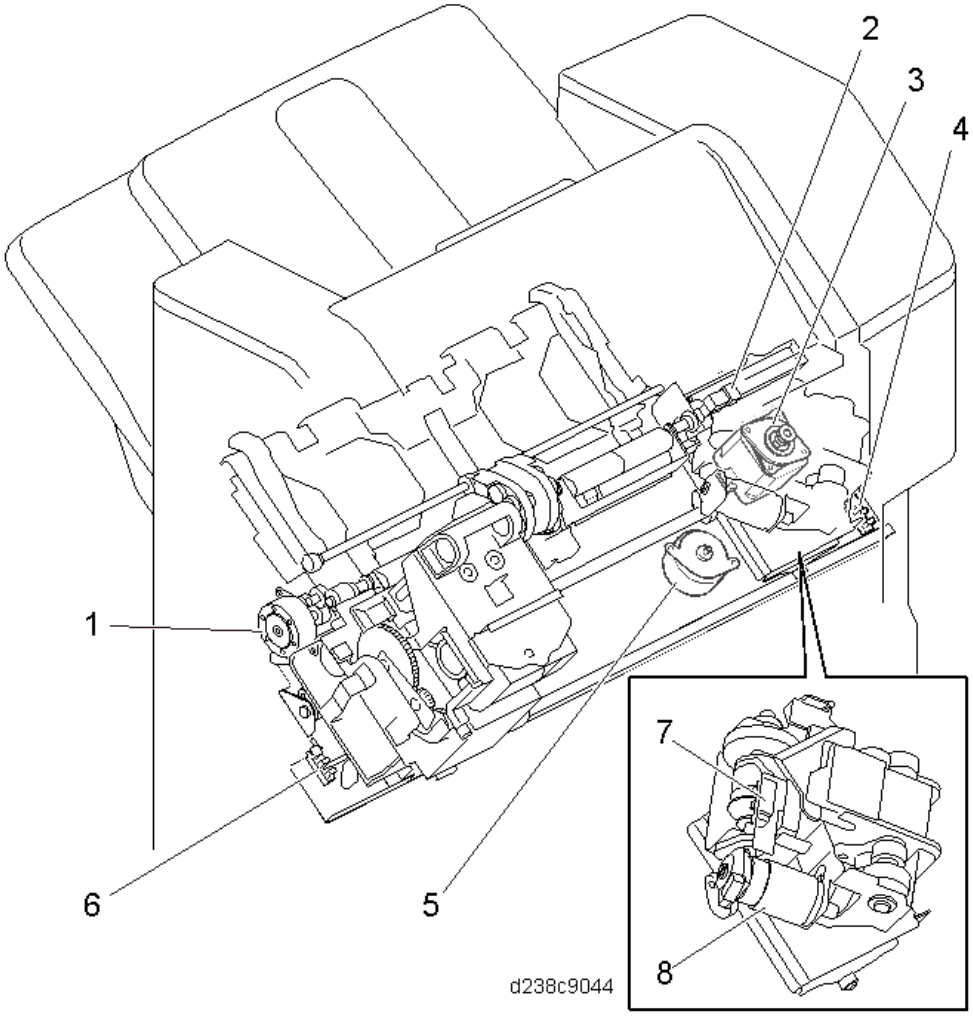
No.	Description	No.	Description
1	Jogger motor	5	Booklet stitch transport (upper) motor
2	Paper exit sensor	6	Stapler tray paper surface sensor
3	Booklet transport (upper) pressure release motor	7	Feedout Pawl HP sensor
4	Jogger HP sensor	8	Feedout Pawl motor

Stapler/Intermediate transport system



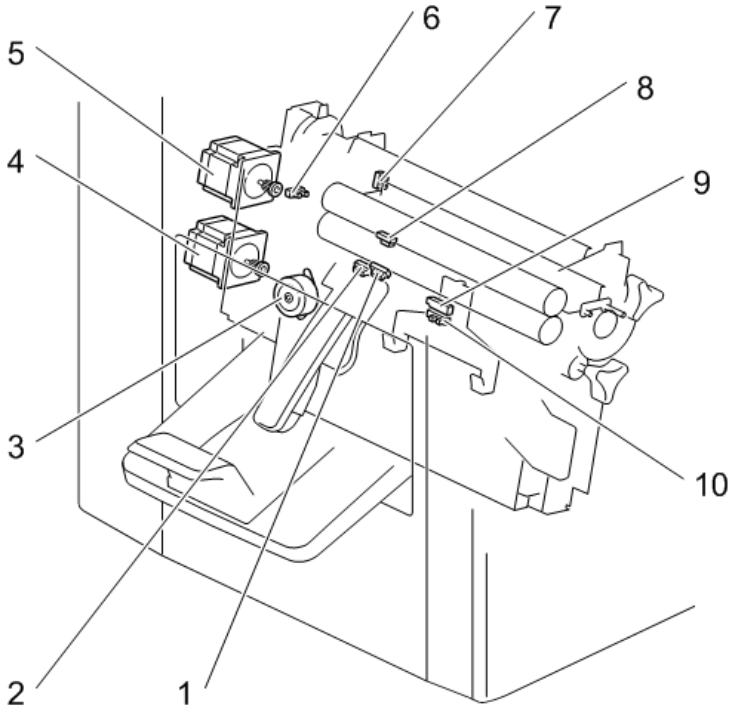
No.	Description	No.	Description
1	Stapler transfer motor	6	Booklet transport jam detection LED
2	Paper Bundle Transport Lower Pressure Release HP Sensor	7	Booklet unit jam detection LED1
3	Booklet transport (lower) pressure release motor	8	Stopper jam detection LED
4	Stapler unit	9	Booklet unit jam detection LED2
5	Stapler HP sensor		

Stapleless stapler unit (Finisher SR3210 only)



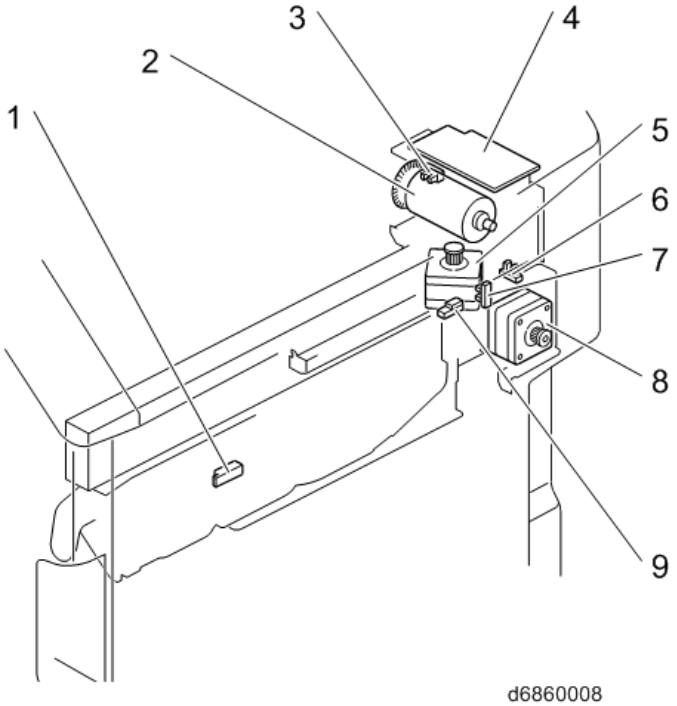
No.	Description	No.	Description
1	Paper guide drive motor	6	Stapler transfer motor
2	Paper guide HP sensor	7	Stapler HP sensor
3	Stapleless stapler transfer motor	8	Stapleless Stapler drive motor
4	Stapleless stapler HP sensor		
5	Stapler transfer motor		

Paper folding system



No.	Description	No.	Description
1	Booklet tray full sensor 1	6	Folding cam HP sensor
2	Booklet tray full sensor 2	7	Folding blade HP sensor
3	Edge stopper motor	8	Center-folding paper exit sensor
4	Folding blade motor	9	Edge stopper paper surface sensor
5	Folding transport motor	10	Edge stopper HP sensor

Punch system



d6860008

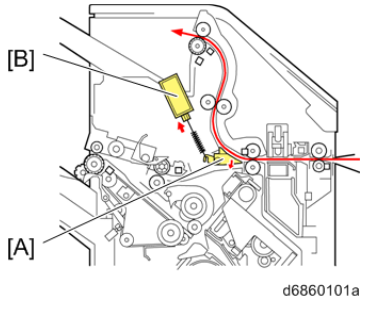
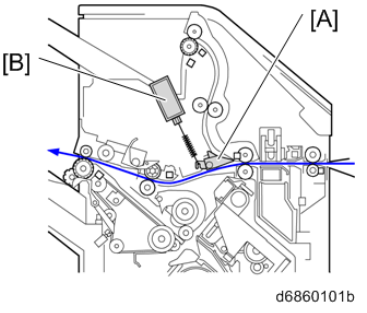
No.	Description	No.	Description
1	Hopper full sensor	6	Horizontal registration unit HP sensor
2	Punch unit drive motor	7	Horizontal registration correction unit HP sensor
3	Punch unit HP sensor	8	Horizontal registration correction motor
4	Controller	9	Horizontal registration correction sensor
5	Horizontal registration unit transfer motor		

Mechanisms

Separation mechanism

In the separation unit, the transport path of the paper is changed with the junction gate [A] by the junction gate solenoid [B].

The change-over action of the junction gate is as follows.

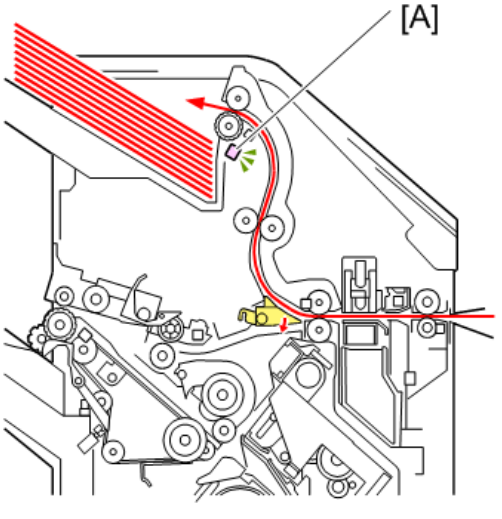
Mode	Proof mode	Shift mode
Paper transport path		
Junction gate solenoid	ON	OFF

Proof tray transport

The proof paper exit roller, proof transport roller and the intermediate transport roller are driven by the proof transport motor. The entrance transport roller is driven by the entrance transport motor.

Proof tray full detection

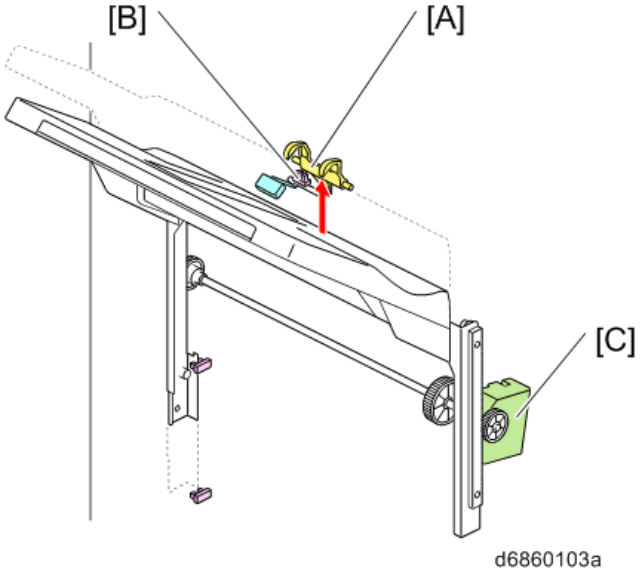
The proof tray full sensor [A] is above the proof tray. When a fixed amount of paper is ejected, it switches OFF (blocked), and "Full" is detected.



d6860102

Shift tray ascent/descent mechanism

Ascent/descent is performed according to the number of sheets of paper (paper surface height) released to the shift tray. This height is detected by the shift tray paper surface sensor [B] switching OFF/ON due to the rear end press lever [A], and is adjusted up and down by the tray lift motor [C] so that the shift tray paper surface sensor switches OFF (blocked).



Ascent

The shift tray paper surface sensor detects the movement upper limit of the shift tray, and disconnects the control circuit of the tray lift motor.

When paper is removed from the shift tray and the shift tray paper surface sensor switches ON (unblocked), the shift tray ascends, and when the sensor switches OFF (blocked), it stops.

Descent

- In shift mode

  When every 5 sheets of paper are delivered to the shift tray, the tray moves up and down.

  The shift tray first descends until the shift tray paper surface sensor switches ON (unblocked), and the shift tray then ascends until the sensor switches OFF (blocked).

- In stapling mode

  When exiting the paper to the shift tray, the tray lift motor switches ON/OFF for a definite time, and the tray height is adjusted.

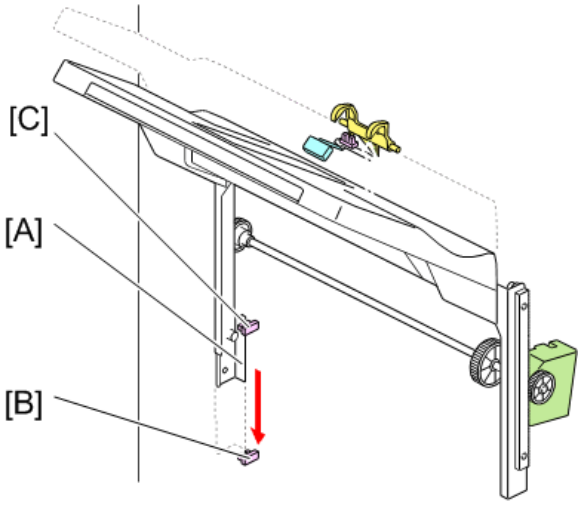
Shift tray full detection

Small size (Smaller than A4 SEF, LT LEF)

When the shift tray descends and the actuator [A] under the shift tray switches the lower limit sensor (lower) [B] OFF (blocked), shift tray "Full" is detected.

Large size (Larger than B4, LG)

When the shift tray descends and the actuator [A] under the shift tray switches the lower limit sensor (upper) [C] OFF (blocked), shift tray "Full" is detected.



Shift mechanism

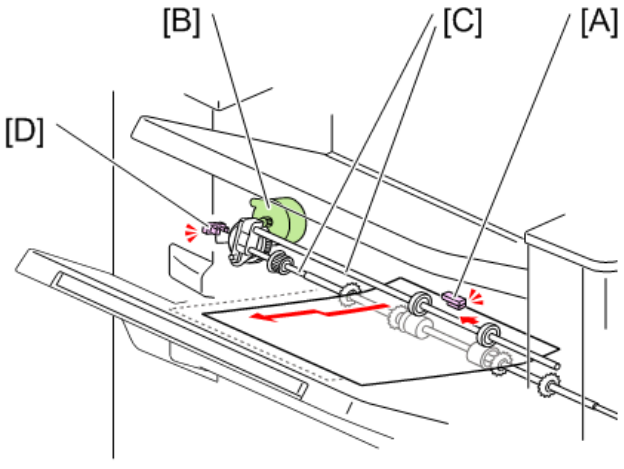
The paper is shifted from side to side by the shift roller in the transport path.

The paper exit guide plate floats up from the paper exit roller, and waits for the paper. After the shift paper exit sensor [A] switches ON, the paper exit guide plate is closed, and after the paper is ejected to the tray, the shift roller returns to the home position (center).

This operation is performed for every sheet, and when the shift direction changes (this happens when a new set of prints is fed out), the shift roller shifts in the opposite direction.

The shift roller [C] is moved to left and right by the shift motor [B].

The shift roller HP sensor [D] detects the home position of the shift roller.

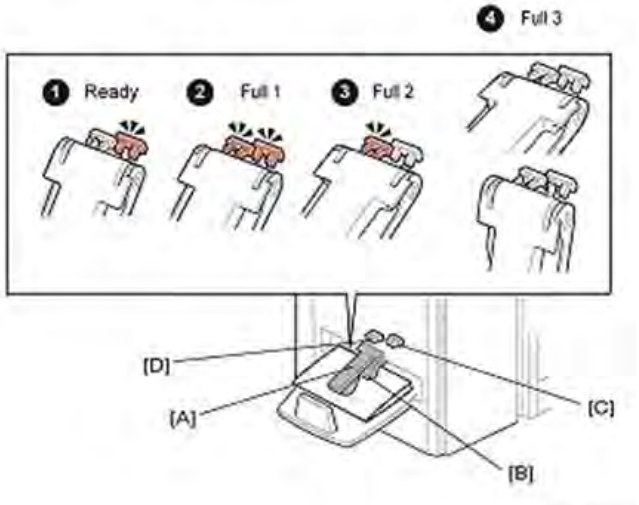


d6860104

Booklet tray

The paper surface detecting arm [A] detects the top of the pile of stapled booklets ejected to the booklet tray.

The arm press [B] presses the bulge of the edges of the booklets from the top. The booklet tray full sensor 1[C] and the booklet tray full sensor 2 [D] detect booklet tray "Full".



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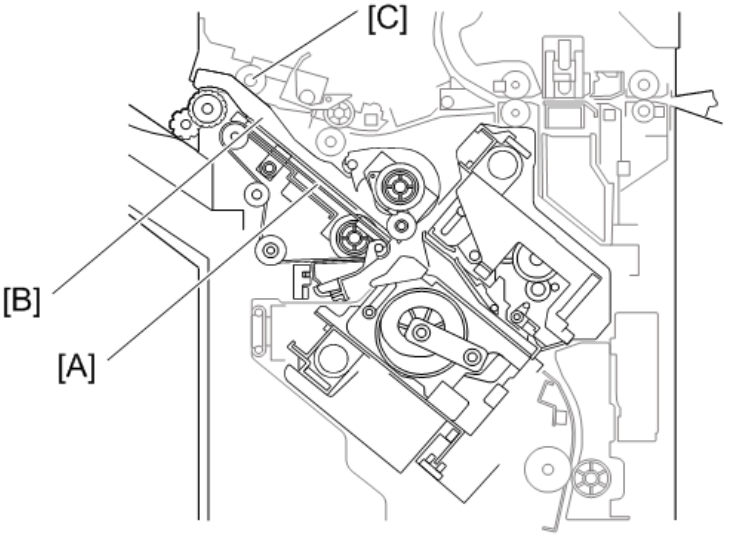
Tray full detection changes with the size of paper that has been stapled, and the number of sheets in one bundle. If the tray is full, the machine stops.

Tray status detection

Tray status	Booklet tray full sensor 1	Booklet tray full sensor 2
Standby position	ON	OFF
Full 1	ON	ON
Full 2	OFF	ON
Full 3	OFF	OFF

Stapled paper eject mechanism

Paper must first be stored in the stapler tray [A]. After the stapler tray paper surface sensor detects the paper sheet rear edge, the approach roller [C] descends, and transports the paper to the stapler tray.



d686z0003

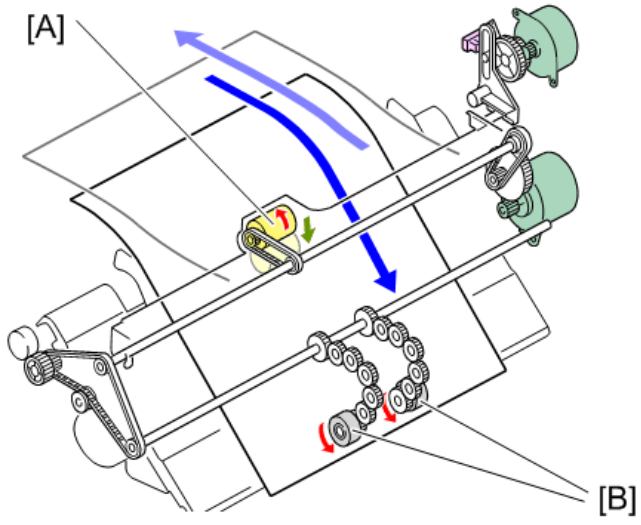
No.	Description	No.	Description
[A]	Stapler tray	[C]	Approach roller
[B]	Jogger fence		

Stacking mechanism (approach roller operation)

The rear edges of the paper stacked in the stapler tray are aligned one sheet at a time.

The paper is transferred to the reverse roller [B] by the approach roller [A], driven by the positioning roller motor, after the intermediate transport (left) paper surface sensor turns OFF.

The paper is then continuously pressed against the trailing edge fence by the reverse roller [B].



d6860108

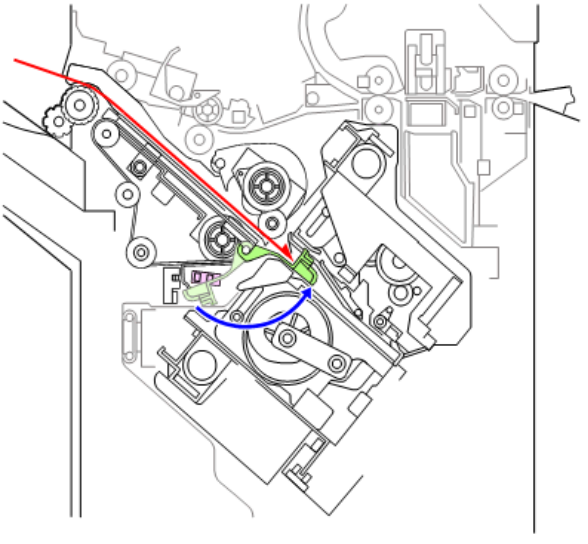
- Trailing edge fence operation

  The trailing edge fence used depends on the binding mode of the stapler. There are two trailing edge fences, upper and lower.

  Upper trailing edge fence

  Operated by the booklet transport (upper) pressure release motor.

  Binding modes: Edge binding mode (one position)/edge binding mode (two positions), and booklet stitch mode (small sizes: B5, A4, LT)

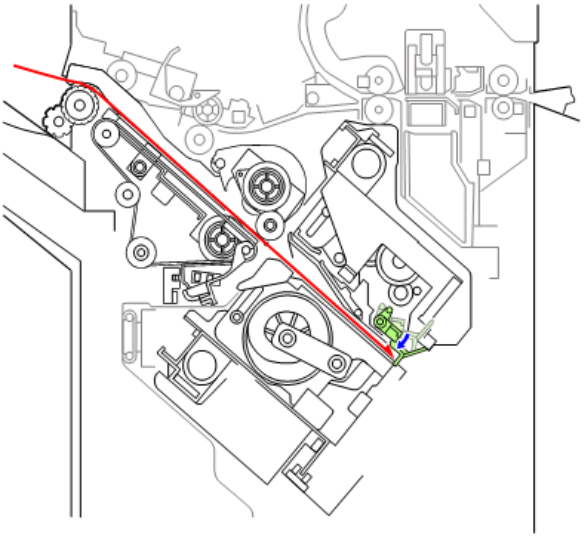


d6860106

Lower trailing edge fence

When the stapler moves to the center, the trailing edge fence is depressed by hitting the stapler.

Binding modes: booklet stitch mode (large sizes: LG, B4, A3, DLT, 12"×17.7")



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Jogger operation

After the paper rear edges have been aligned by stacking, jogger operation is then performed to align the width.

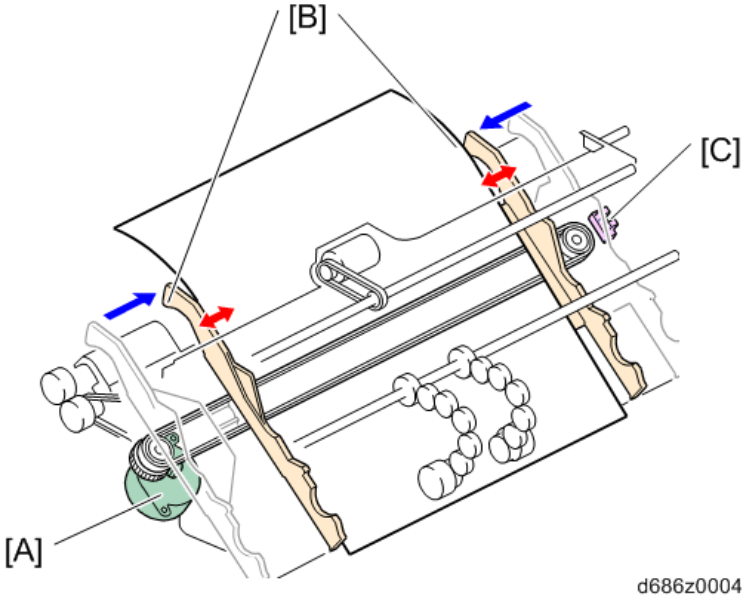
The jogger fences [B] are opened and closed by the jogger motor [A]. At the start of jogging, the jogger fences [B] stand by in a state where they are opened wider than the paper width.

When the rear edge of the transported paper is pressed against the trailing edge fence by the reverse roller, the jogger fences move close to the edges of the paper.

Next, the jogger fences move to the edges, to align the paper.

After jogging is complete, the jogger fences again open, and stand by to receive the next sheet.

The home position of the jogger fences is detected by the jogger HP sensor [C].



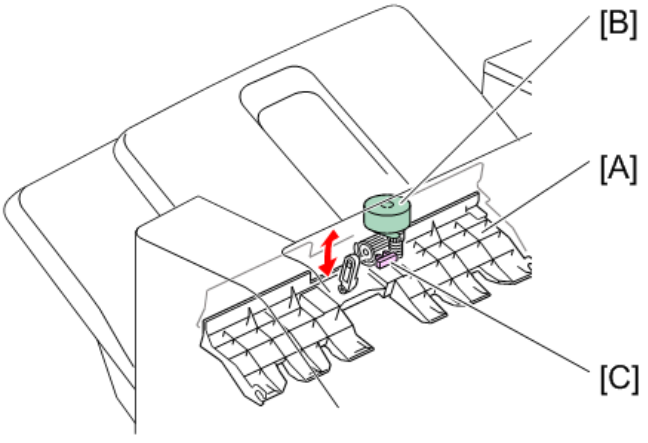
Paper exit guide plate open/close mechanism

When paper is stacked in the stapler tray, the paper exit guide plate [A] is opened to cancel the load on the paper exit roller.

When paper is stacked in the stapler tray, the paper exit guide plate remains open from the first page to the last page, and after the stapling operation is finished, the paper exit guide plate is closed, and the paper is ejected by the paper exit roller and release belt.

The switching action of the paper exit guide plate is driven by the paper exit guide plate open/close motor [B] via a link.

The home position of the paper exit guide plate is detected by the paper exit guide plate open/close HP sensor [C].



Stapler displacement mechanism

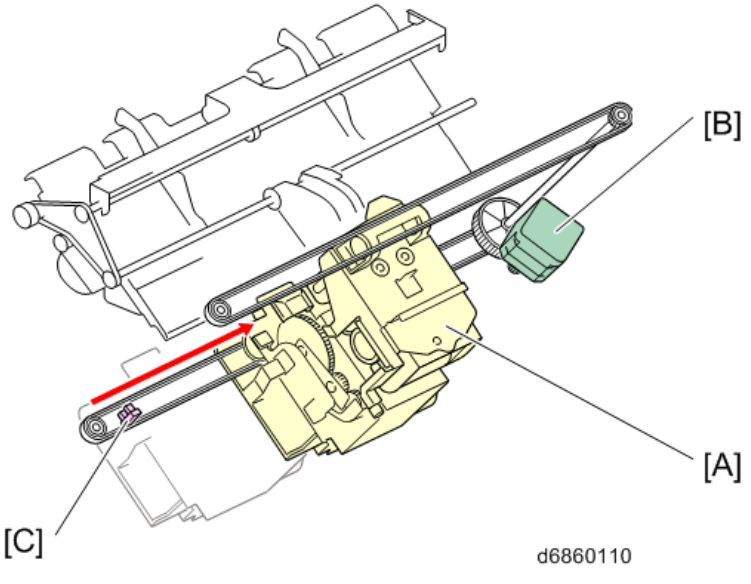
The stapler unit [A] staples the stack of sheets.

The stapling position changes with the stapling mode and paper size.

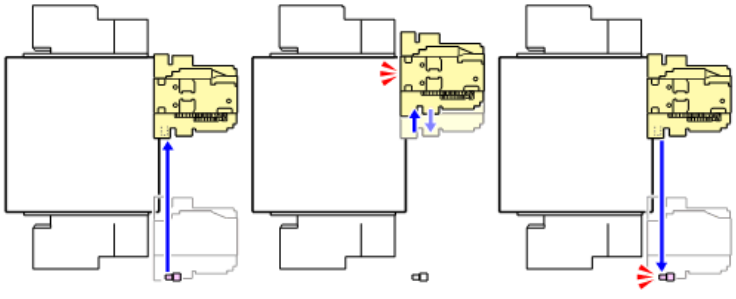
When the operation starts after power is switched on, or the front door opens and closes, the main controller board drives the stapler transfer motor [B] to return the stapler unit to the home position.

The stapler unit starts to transfer the paper to the front side of the stapler frame, and when the stapler HP sensor [C] under the stapler unit detects the screen, it temporarily stops. Then, the stapler transfer motor is driven for a predetermined number of pulses. The stapler unit moves to the rear side, and stands by.

To prevent the stapler unit colliding with the feedout pawl and trailing edge fences, a stapler retreat sensor is provided.

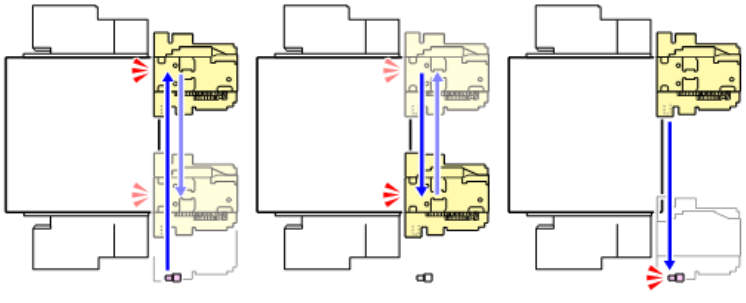


Edge binding mode (one position):



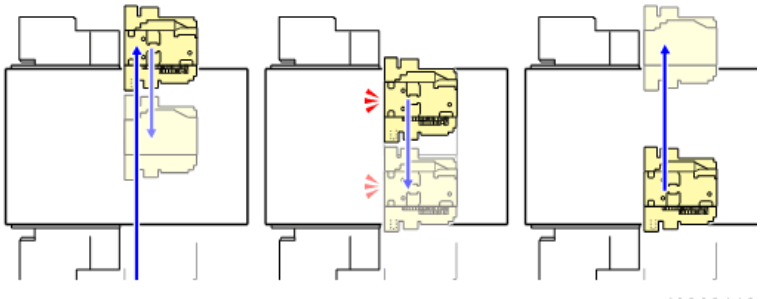
d6860111

Edge binding mode (two positions):



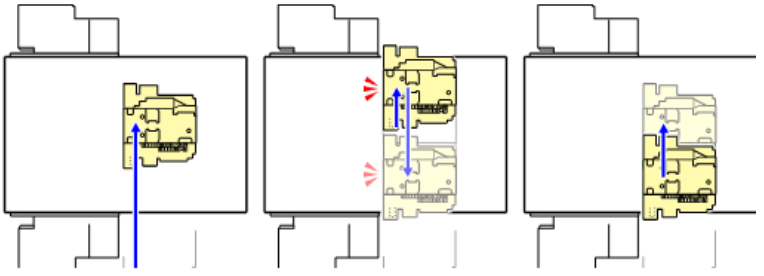
d6860112

Booklet stitch mode (small sizes: B5, A4, LT):



d6860113

Booklet stitch mode (large sizes: LG, B4, A3, DLT, 12"×17.7"):



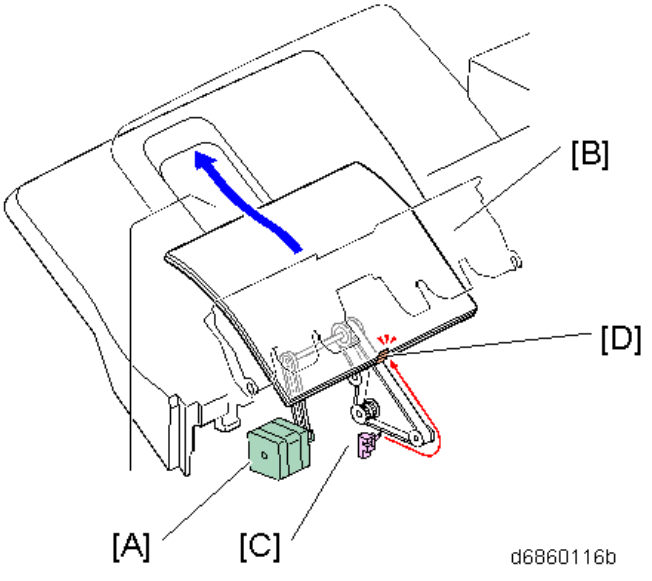
Release mechanism

Paper exits to the shift tray by the feedout pawl and the paper exit roller after the stapling is done.

When the feedout pawl motor [A] turns ON, the release belt is driven and the paper is moved upwards by the feedout pawl [D].

When the stapled stack touches the paper exit roller, the paper exit guide plate [B] closes and the paper is released. To prevent the stack from moving up too much, the feedout pawl motor is stopped temporarily.

The home position of the release belt is detected by the feedout pawl HP sensor [C].



Booklet stitching mechanism

Paper which has been stitched in the center is pressed in by the booklet stitch folding roller with the folding blade.

The paper folded by the folding roller is released by the paper exit shutter, and is stacked in the booklet tray one sheet at a time.

A compact layout is achieved by sharing the edge binding stapler, booklet tray, transport, and stack.

The stapler unit and the folding process unit are divided.

Booklet stitch bundle transport and pressure release

In the case of booklet stitching, the paper must be transported to the stapling position.

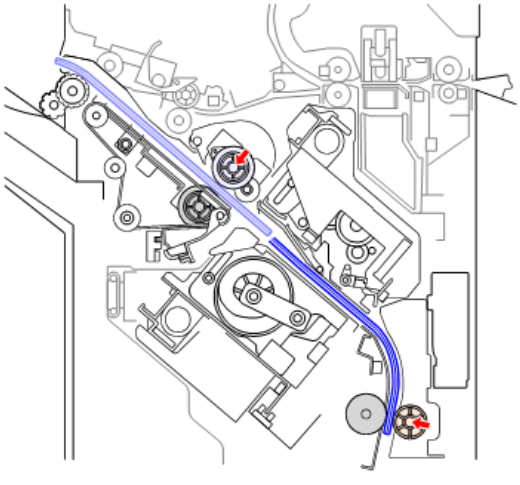
Booklet transport rollers are provided at two positions, upper and lower. The transport and timing of the rollers which transport the bundle differ according to the paper size.

A3, DLT, 12"×17.7"

After booklet stitching is complete, the (upper) booklet transport pressure release motor operates, and at the same time, the (lower) booklet transport roller starts applying pressure.

B4 or smaller

The (lower) booklet transport roller starts to pressurize after a certain amount of paper (as much as the leading edge goes through the nip of the (lower) booklet transport roller) for each size is transferred after booklet stitching is done.



d6860118

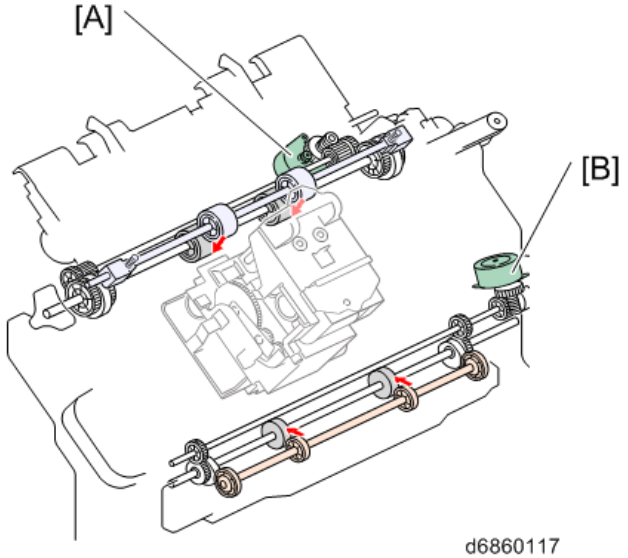
The booklet transport rollers transport the paper and apply pressure.

They transport the paper to the stapling position, and thence to the folding unit.

Transport and pressure/release are driven by upper and lower motors.

Upper: Booklet transport (upper) pressure release motor [A] (also performs trailing edge fence retreat)

Lower: Booklet transport (lower) pressure release motor [B]

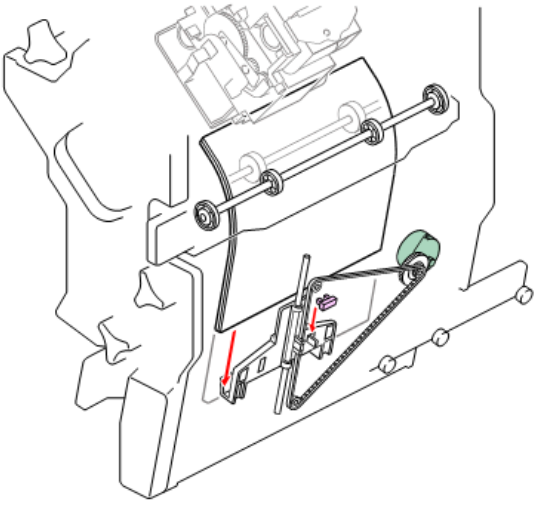


d6860117

Edge stopper operation

The paper is transported to the leading edge stopper of the paper folding unit.

The leading edge stopper moves to the standby position according to the folding size.



d6860119

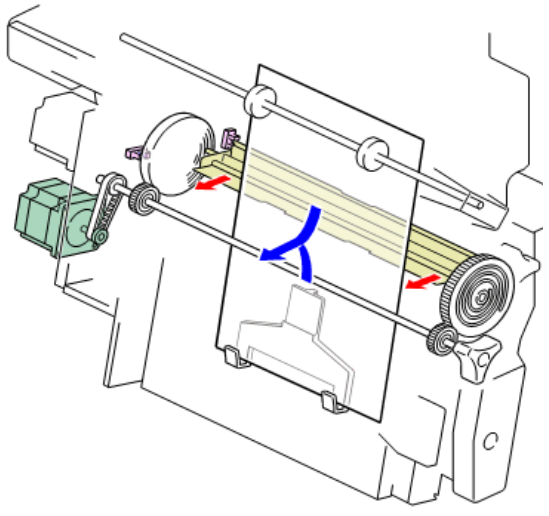
Folding blade operation

The binding position is pressed by the movement of the folding blade, and pushed in until the folding roller grips.

The movement is performed by front and rear folding cams, and the folding blade moves horizontally.

The rotation of the folding cam is controlled by the folding cam HP sensor, and the folding blade is controlled by the folding blade HP sensor.

This is driven by the folding blade motor.

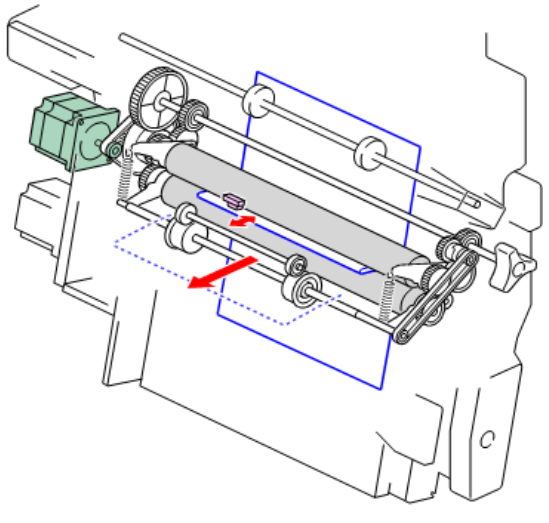


d6860120

Folding roller operation

The folding rollers apply pressure up and down by springs, and press the binding parts.

When the stitching position reciprocates back and forth, the paper is folded again, and the paper is then ejected.



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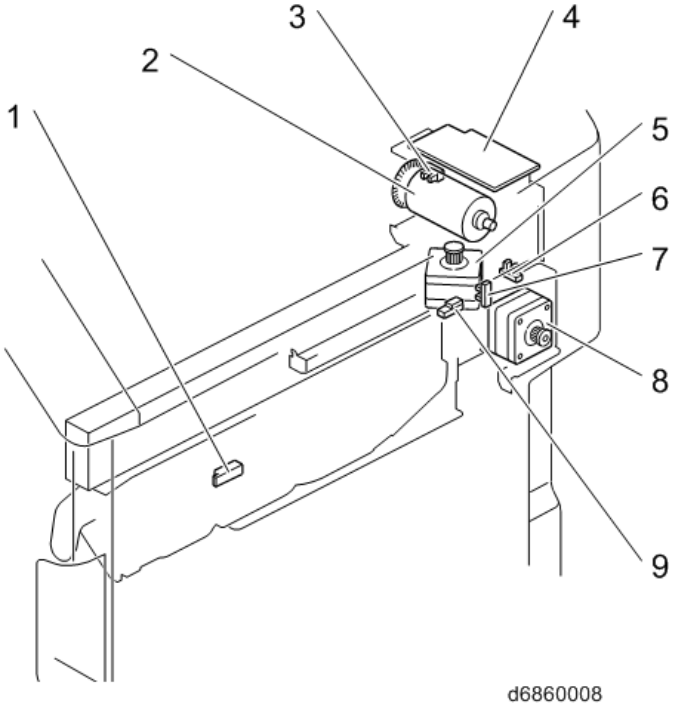
Punch Unit PU3050 (D717)

Changes from the Previous Machine

To prevent fire spreading from the circuit board, a cover [A] is placed over the controller board.

Parts Layout



No.	Description	No.	Description
1	Hopper full sensor	6	Punch unit HP sensor
2	Punch drive motor	7	Horizontal registration correction unit HP sensor
3	Punch HP sensor	8	Horizontal registration correction motor
4	Controller	9	Horizontal registration correction sensor
5	Punch unit movement motor		

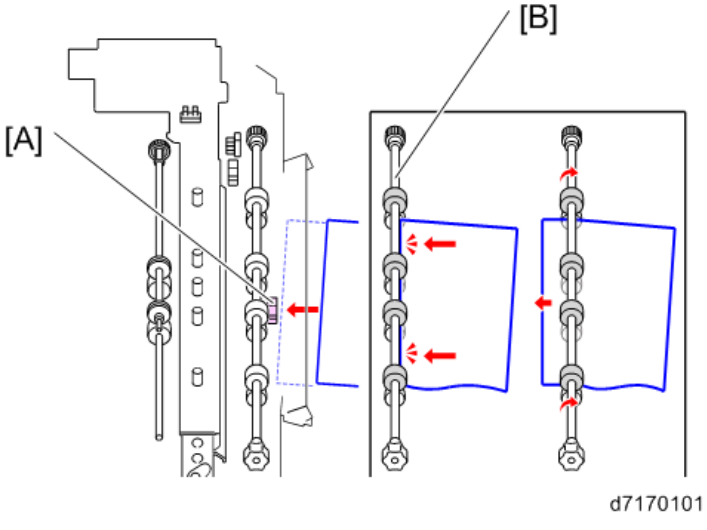
Mechanism

The punch unit is in the finisher paper feed unit, and when paper transported from the main machine stops, it makes two punch holes in the rear edge of the paper one sheet at a time.

Offset in the angle of the paper is corrected by skew correction, and offset in the lateral direction is corrected by moving the punch unit.

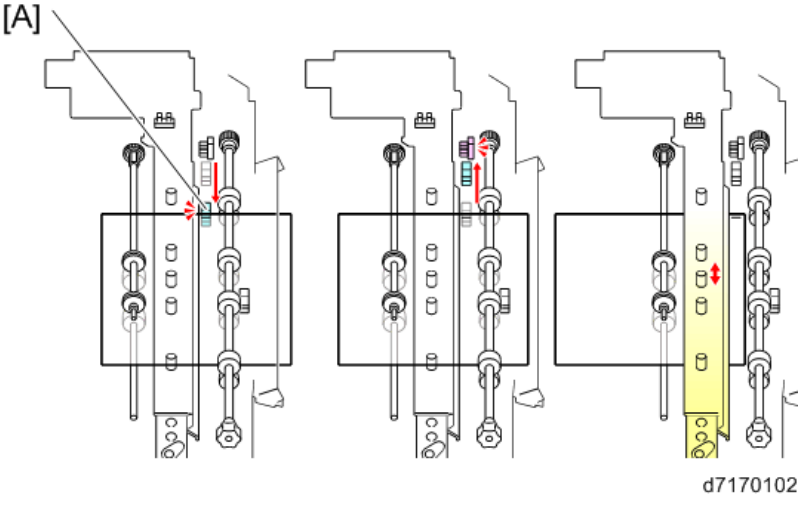
Skew Correction

1. Paper is output from the main machine.
2. The entrance sensor [A] detects the paper.
3. The paper is brought into contact with the entrance roller [B].
4. Skew correction is applied to the paper, and it is transported.



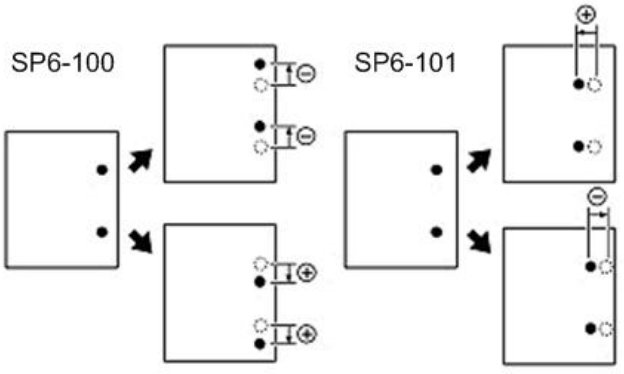
Registration

1. The horizontal registration correction sensor [A] detects the lateral offset of the paper.
2. The punch unit moves by the lateral offset detection amount, and completes punching.



Punch hole alignment adjustment

SP	Description
SP6-100-001	Sub-scanPunchPosAdj:2K/3K FIN JPN/EU: 2-Hole
SP6-100-002	Sub-scanPunchPosAdj:2K/3K FIN NA: 3-Hole
SP6-100-003	Sub-scanPunchPosAdj:2K/3K FIN Europe: 4-Hole
SP6-100-004	Sub-scanPunchPosAdj:2K/3K FIN NEU: 4-Hole
SP6-100-005	Sub-scanPunchPosAdj:2K/3K FIN NA: 2-Hole
SP6-101-001	Main-scanPunchPosAdj:2K/3K FIN JPN/EU: 2-Hole
SP6-101-002	Main-scanPunchPosAdj:2K/3K FIN NA: 3-Hole
SP6-101-003	Main-scanPunchPosAdj:2K/3K FIN Europe: 4-Hole
SP6-101-004	Main-scanPunchPosAdj:2K/3K FIN NEU: 4-Hole
SP6-101-005	Main-scanPunchPosAdj:2K/3K FIN NA: 2-Hole

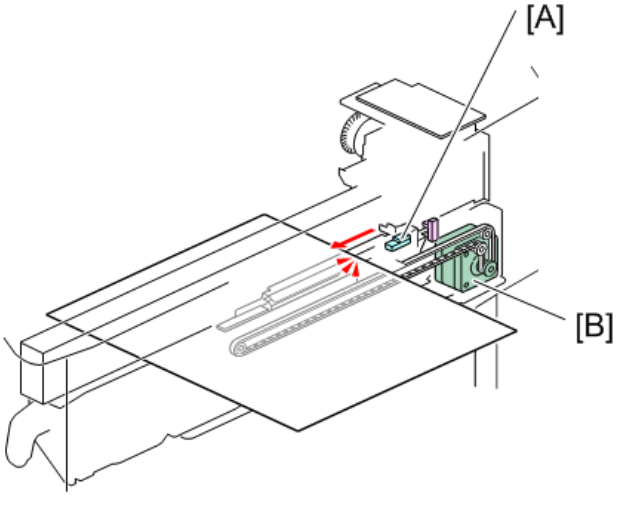


d1463124

Paper position detection

When the horizontal registration correction sensor [A] of the punch unit detects the leading edge of the paper from the MFP, the horizontal registration correction motor [B] is driven, and starts to move the punch unit to the front.

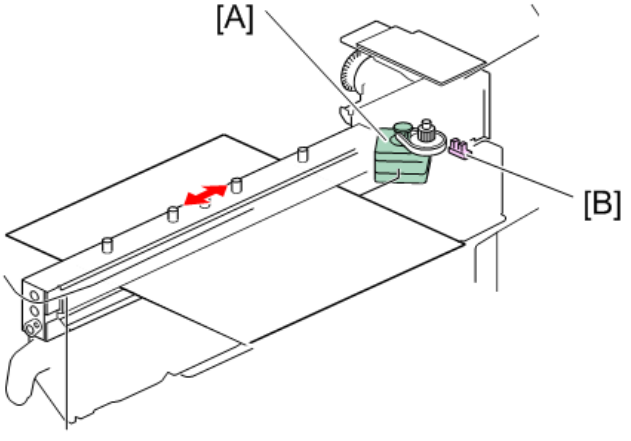
After the horizontal registration correction sensor detects the paper rear edge (as viewed from the front of the machine), the machine compares it with the paper size set in the MFP. The horizontal registration correction motor is then driven to a predetermined position at the front, and stops the punch unit.



d7170103

Punch unit movement

The punch unit moves towards the front or the rear according to the paper size. The front-rear movement is driven by the punch unit movement motor [A]. The home position of the punch unit is detected by the punch unit HP sensor [B].



d7170104

Punch drive

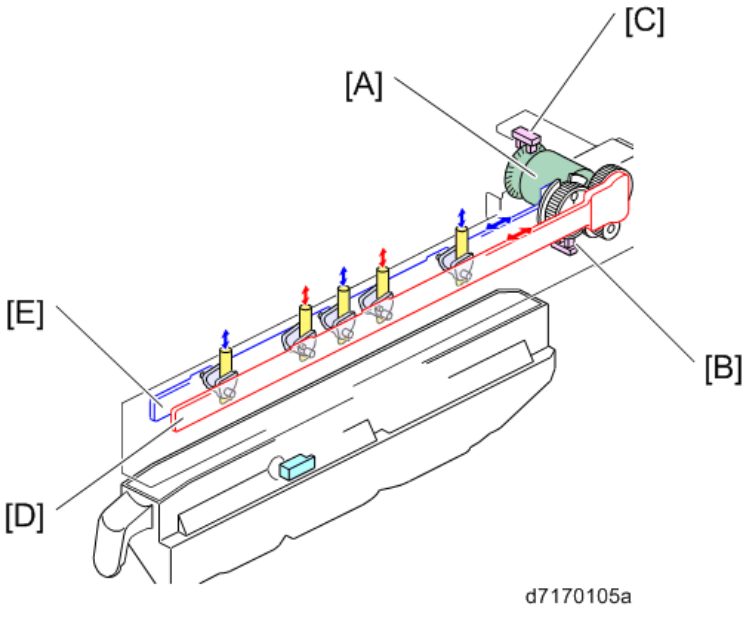
Punching is driven by the punch drive motor [A]. The punch home position is detected by the punch HP sensor [B].

Punch drive motor rotation control feeds back the encoder wheel rotation speed detected by the punch pulse wave count sensor [C] to the punch drive motor.

Punching is performed by moving the punch unit once back and forth, by rotating the punch shaft 180 degrees from the home position.

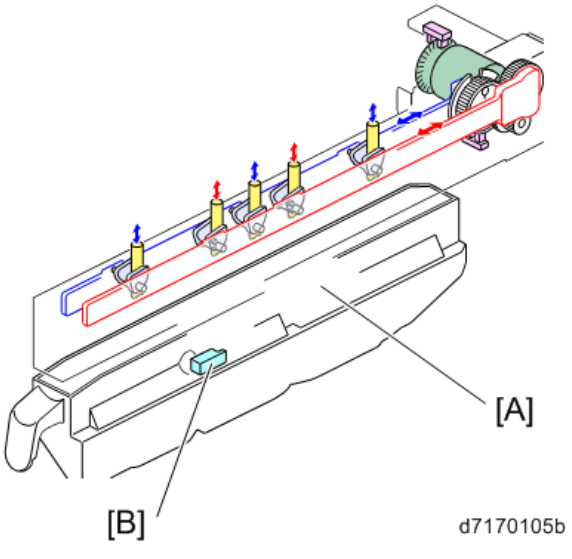
In the home position, the punch HP sensor is ON. The first sheet is punched by rotating the punch shaft 180 degrees in the forward direction, and is completed when the punch HP sensor switches from OFF to ON. The 2nd sheet is punched by rotating the punch shaft 180 degrees in the reverse direction, and is completed when the punch HP sensor switches from OFF to ON.

For 2 hole punch [D] and 3 hole punch [E], the timings are different.



Punch scrap collection/full detection

Punch scraps are collected by the hopper [A] provided under the punch unit. There is a hopper full sensor [B] in the hopper unit, and when punch scraps fill up to the sensor, the hopper is detected to be full.



MEMO

Finisher SR3230 /
Booklet Finisher SR3240
Machine Code: D3BA/D3BB
Field Service Manual

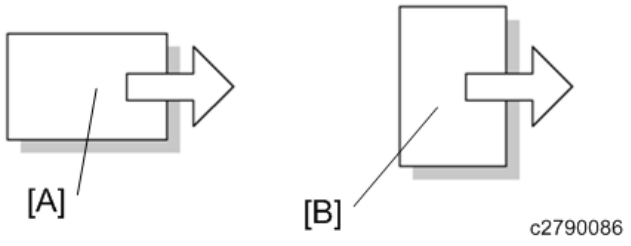
May, 2016

Symbols, Abbreviations and Trademarks

Symbols, Abbreviations

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

Symbol	What it means
	Clip ring
	Screw
	Connector
	Clamp
	E-ring
	Flat Flexible Cable
	Timing Belt
SEF	Short Edge Feed [A]
LEF	Long Edge Feed [B]
K	Black
C	Cyan
M	Magenta
Y	Yellow
B/W, BW	Black and White
FC	Full color



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- Windows® Internet Explorer® 8

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  Microsoft® Windows Vista® Home Premium

  Microsoft® Windows Vista® Home Basic

  Microsoft® Windows Vista® Enterprise
- The product names of Windows 7 are as follows:

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  Microsoft® Windows® 7 Professional

  Microsoft® Windows® 7 Ultimate

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- The product names of Windows 8 are as follows:

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  Microsoft® Windows® 8 Enterprise
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  Microsoft® Windows Server® 2012 Essentials

  Microsoft® Windows Server® 2012 Standard
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  Microsoft® Windows Server® 2012 R2 Standard

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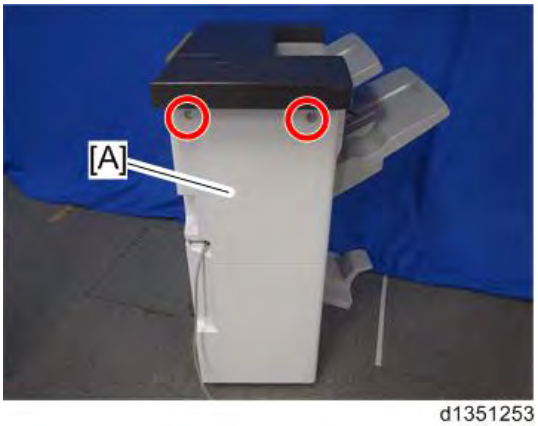
1. Replacement and Adjustment

Covers

Rear Upper Cover, Rear Lower Cover, Upper Cover

1. Rear upper cover [A] (x 2)



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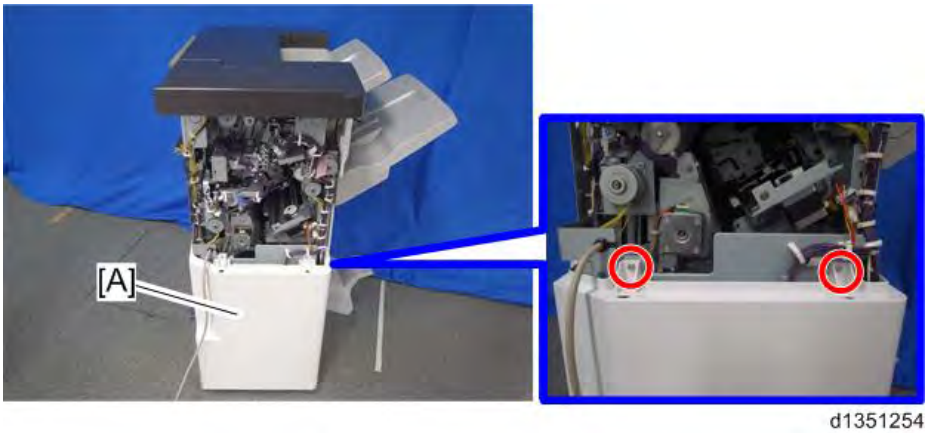
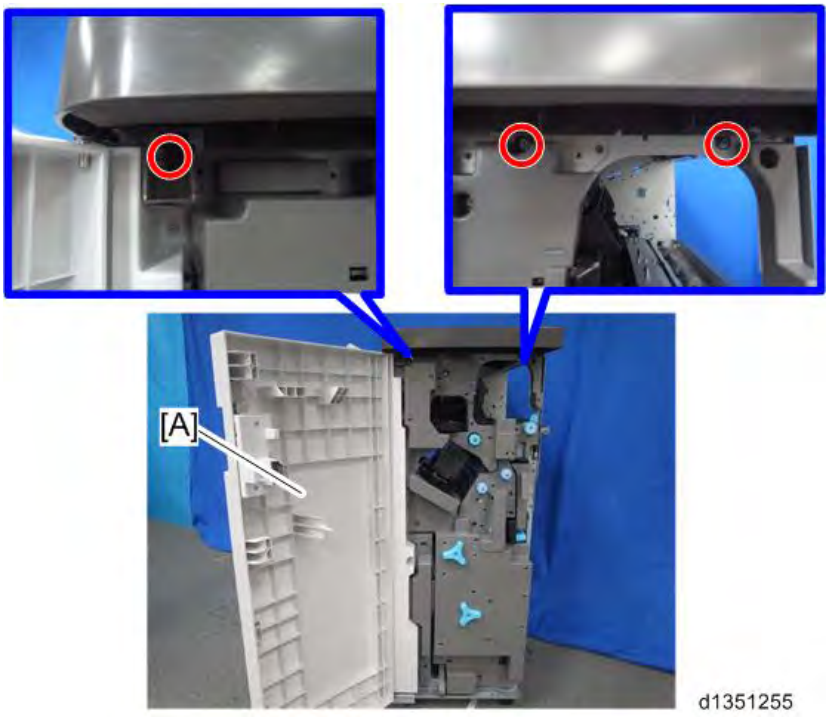
2. Rear lower cover [A] (x 2)

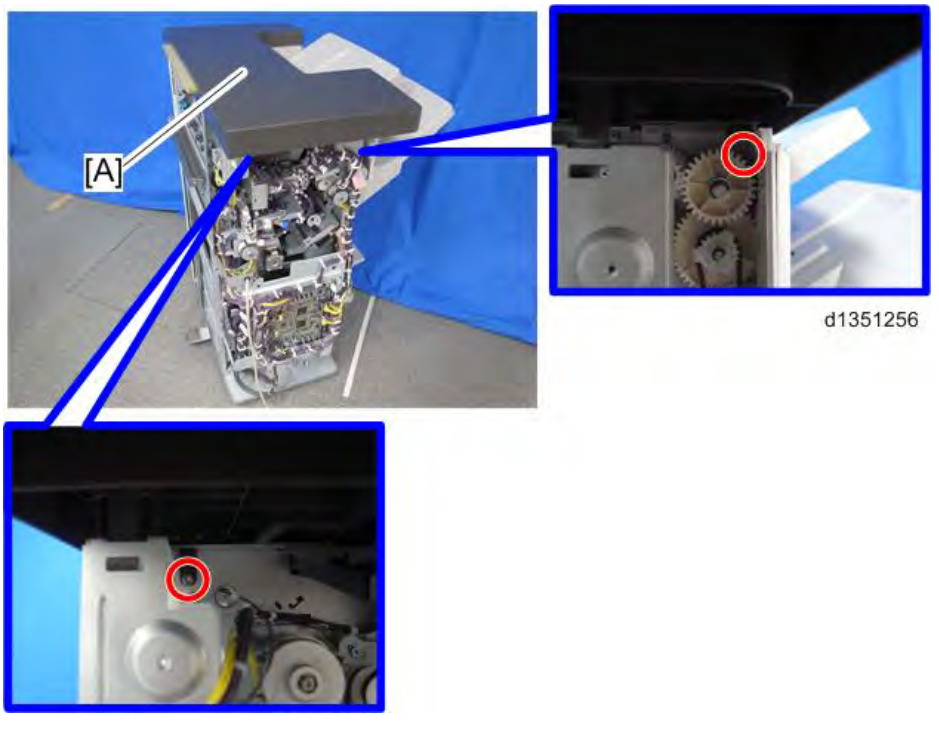


d1351254

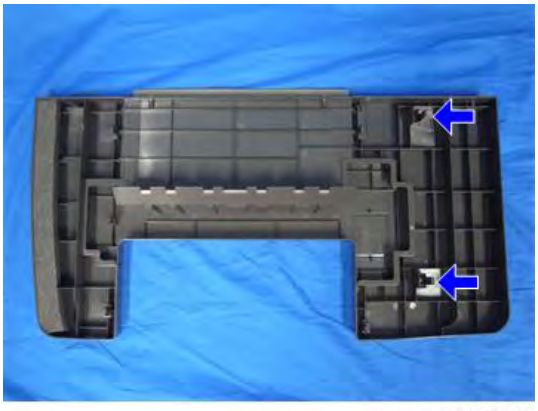
3. Open the front door [A], and remove the screws of the upper cover. (x 3)



4. Upper cover [A] (x 2, hook x 2)



5. Check the positions of the bosses and hooks before removing the upper cover.



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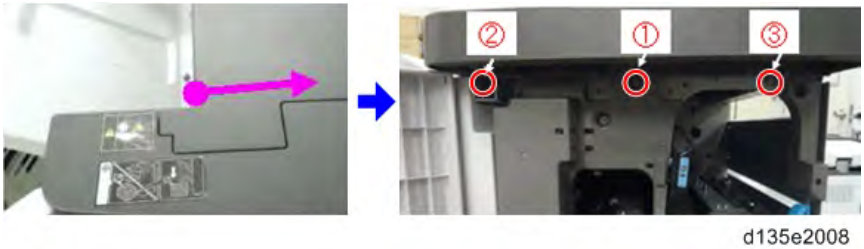
6. When re-attaching the upper cover, tighten the screws on the right side in the order shown below: 1 > 2 > 3.



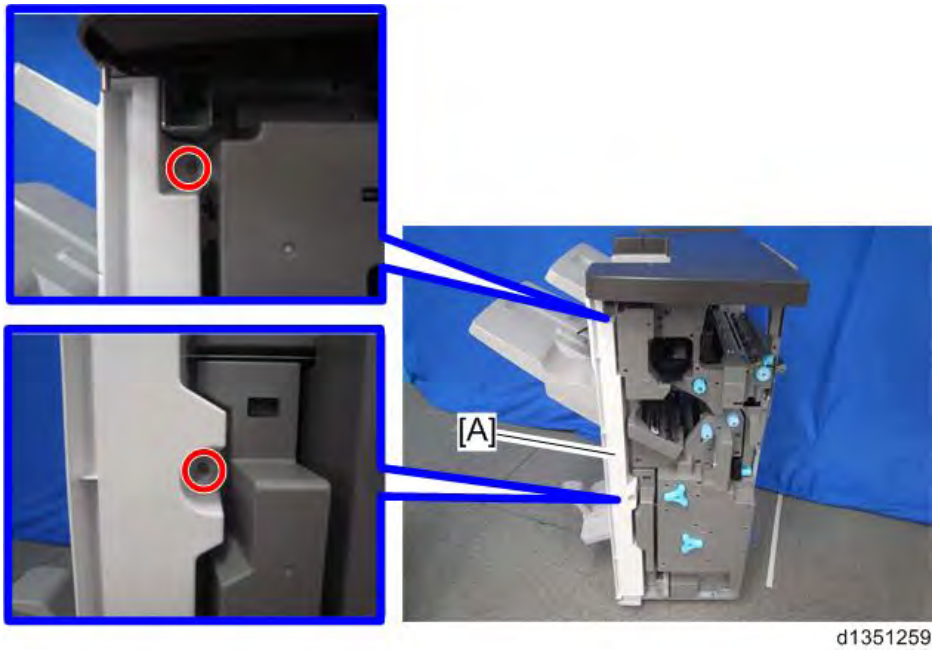
d135e2008

Front Cover, Front Left Side Cover

1. Open the front door [A], and then remove the front door bracket [B]. (x 1)
2. Front door [A]

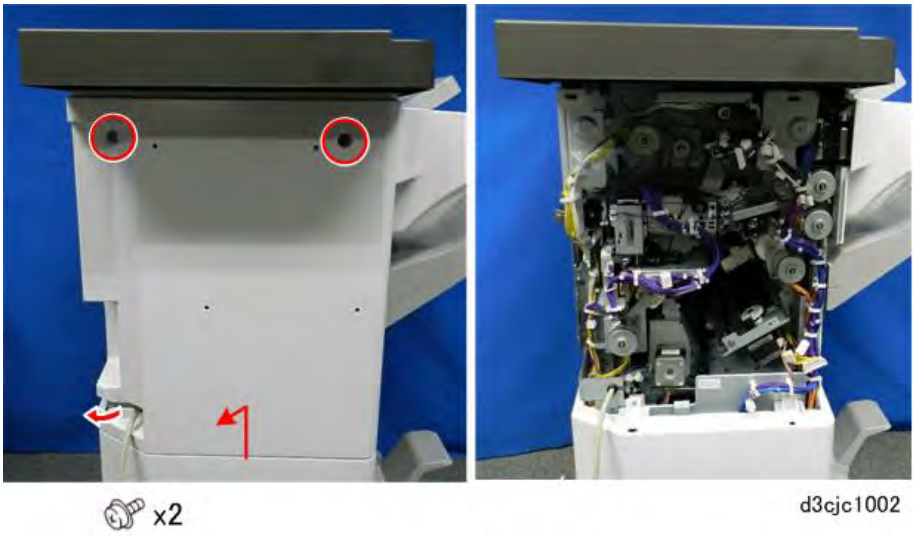
d1351258

3. Front left side cover [A] (x 2)

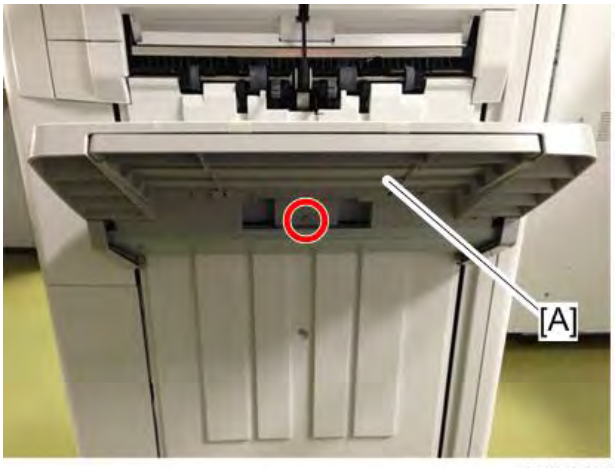


Paper Guide Cover

1. Remove the rear upper cover.



2. Remove the shift tray [A] (x1).

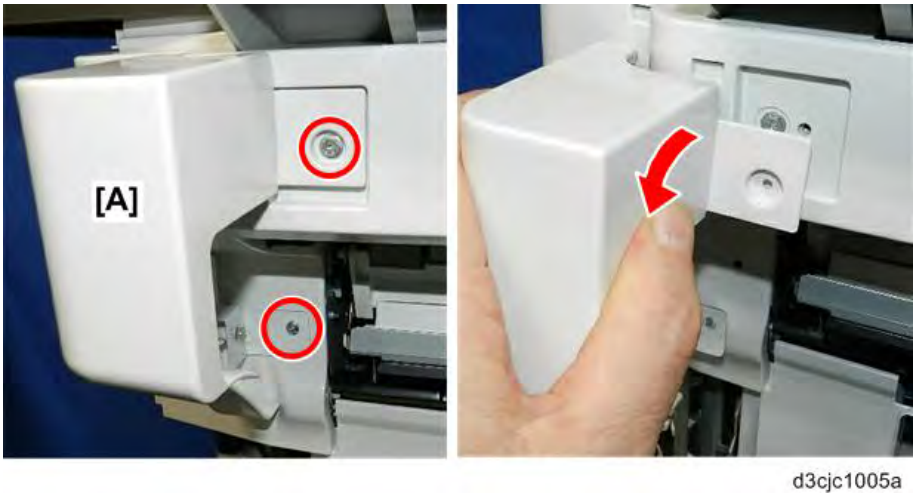


d1351777

3. Push the guides in to the center.

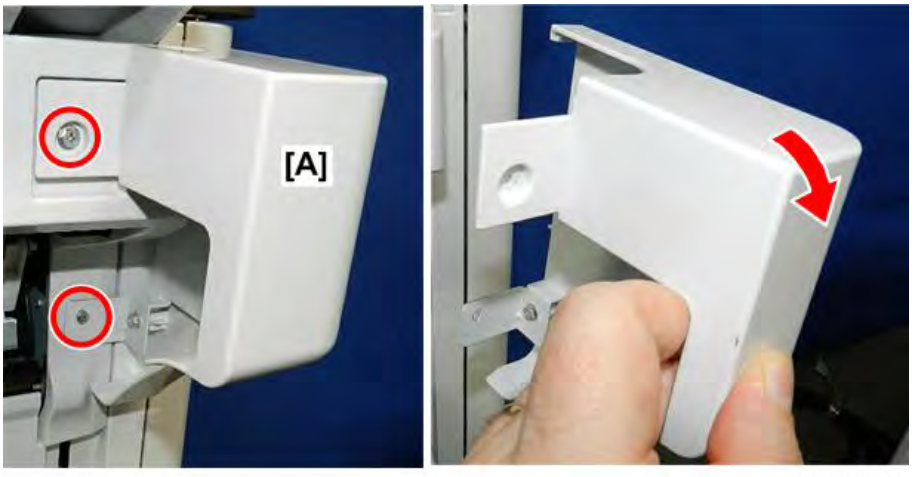
d3cjc1004

4. Remove the rear paper guide cover [A] (x2).



d3cjc1005a

5. Remove the front paper guide cover [A] (x2).



d3cjc1006a

6. Remove the paper guide cover [A] screws (x2).

d3cjc1007a

7. Disconnect the front tab, and then remove the cover.

d3cjc1008a

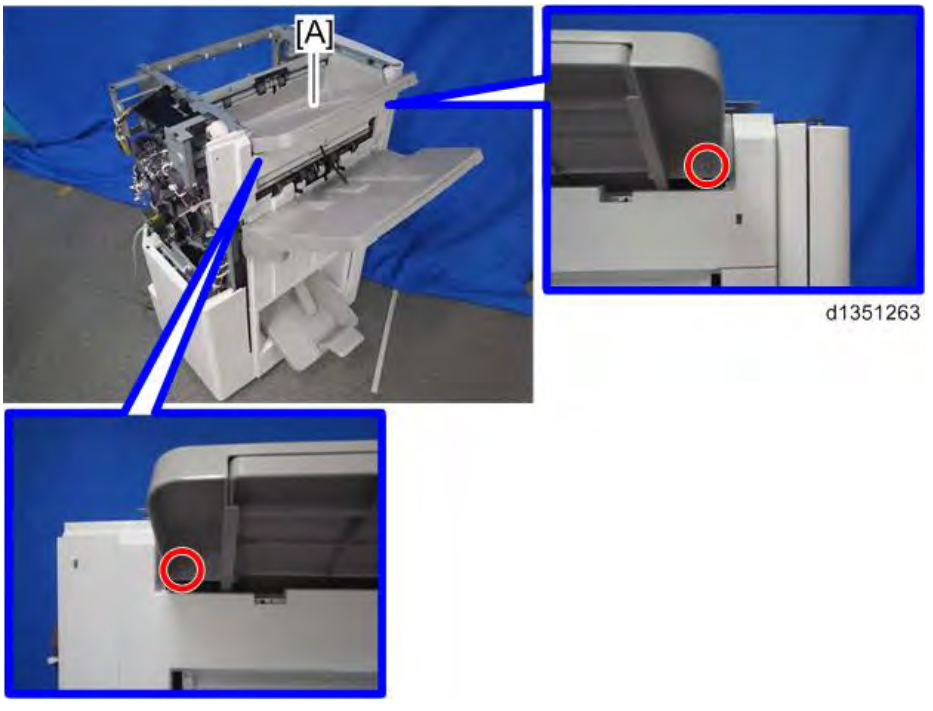
Lower Tray

1. Lower tray [A]

d1351262

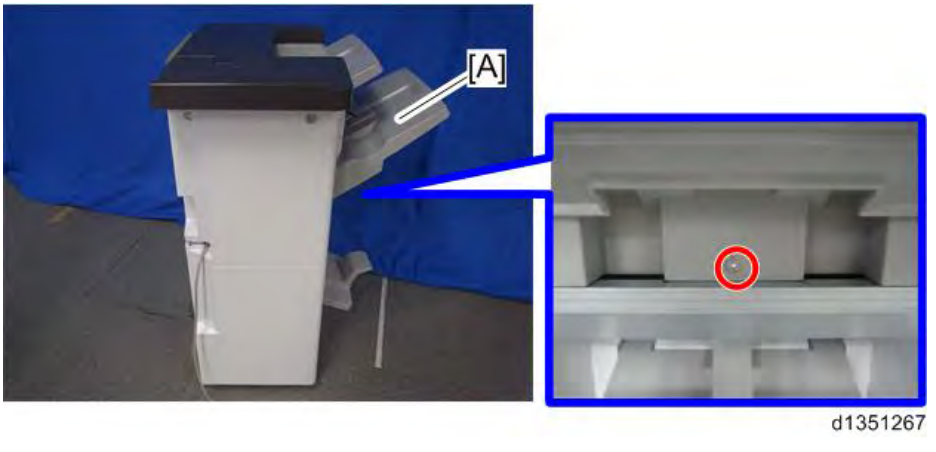
Proof Tray

1. Remove the following covers.
    - Rear upper cover (page 9)
    - Upper cover (page 9)
2. Proof tray [A] (x 2)



Upper Tray

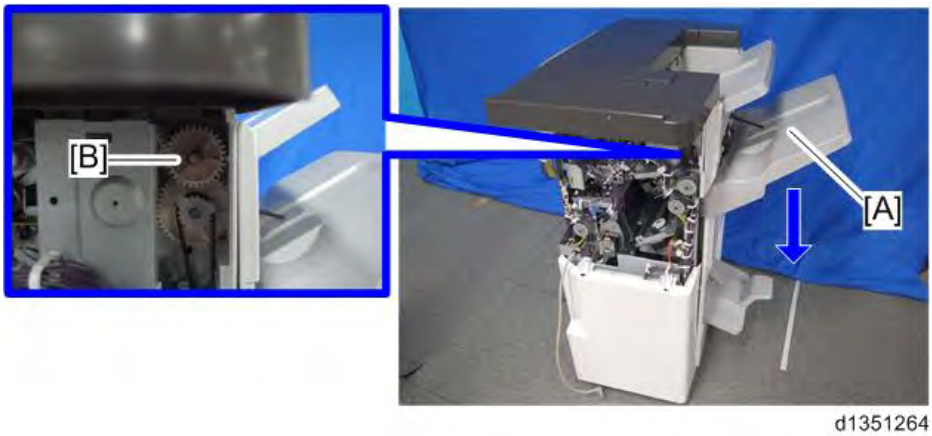
1. Upper tray [A] (☞ x 1)



End Fence (Booklet Finisher SR3240 Only)

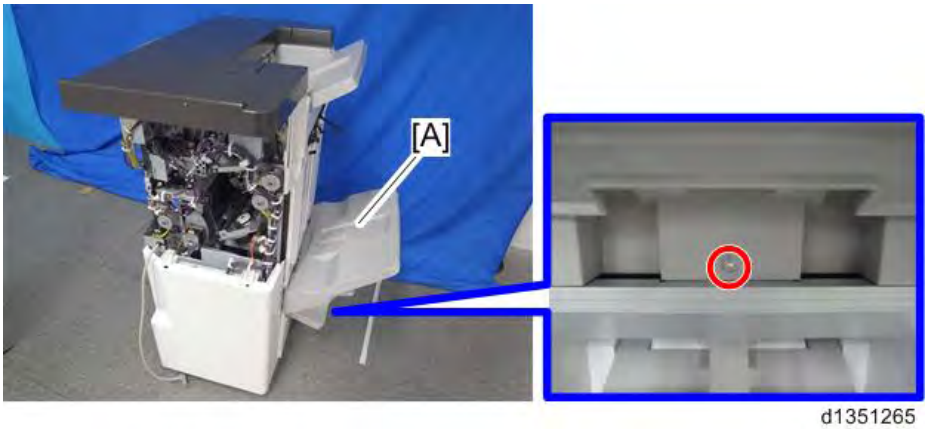
1. Rear Upper Cover (page 9)
2. Support the upper tray [A] with your right hand.

3. Pull gear [B] toward you to release.
4. Slowly lower the upper tray until it stops.



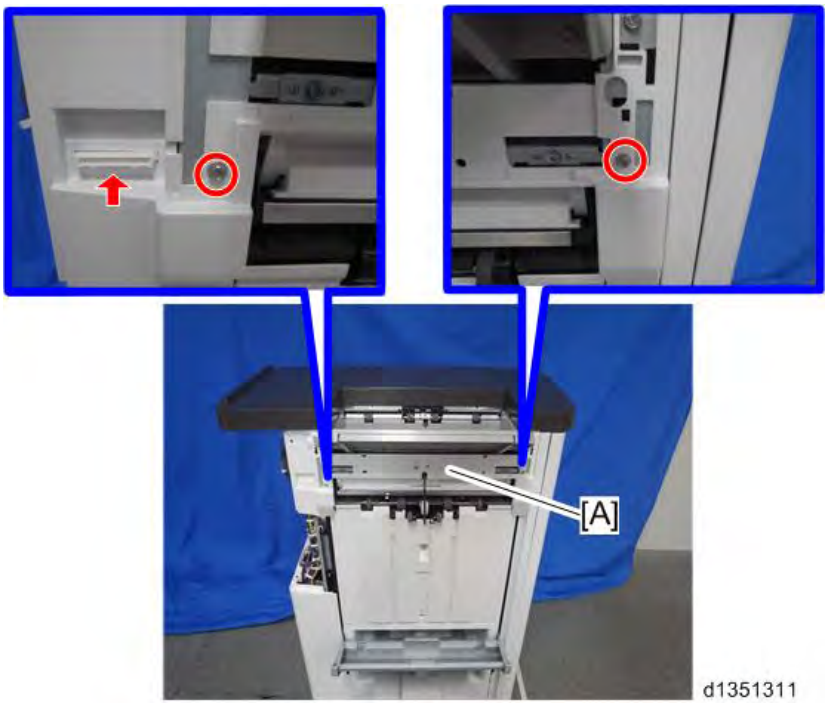
d1351264

5. Upper tray [A] (x 1)

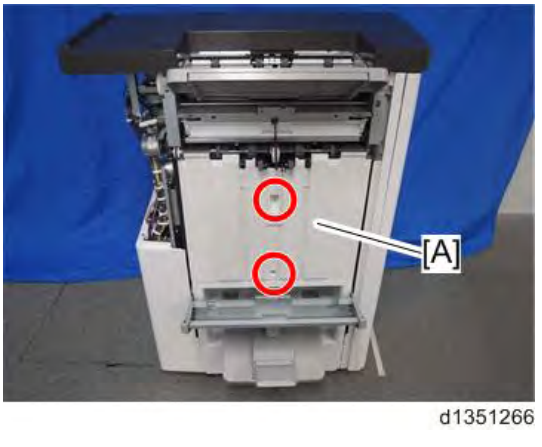


d1351265

6. Lower Tray (page 15)
7. Right upper cover [A] (x 2, connector bracket x 1)

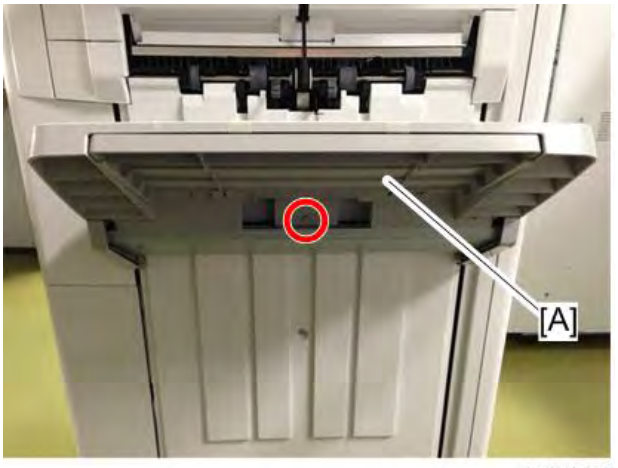


8. End fence [A] (x 2)



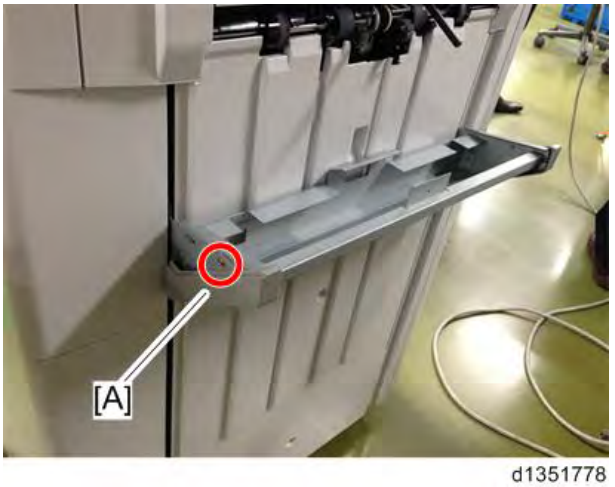
Left Cover (Finisher SR3230 Only)

1. Upper Tray [A] (x 1)



d1351777

2. Rear mold bracket [A] (x 1)

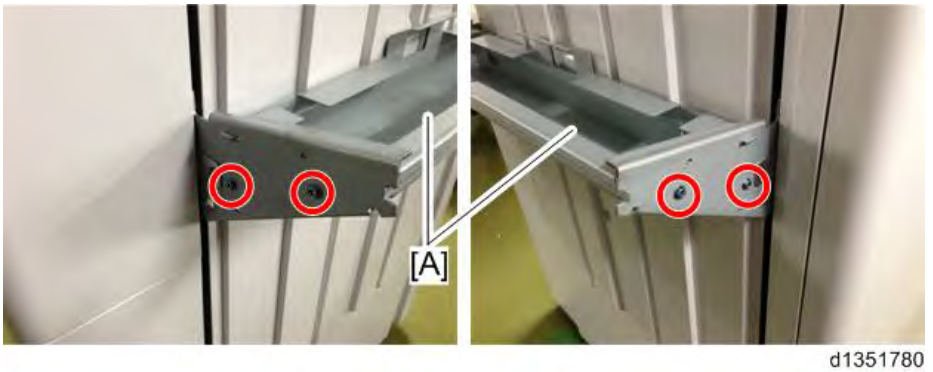


d1351778

3. Front mold bracket [A] (x 1)

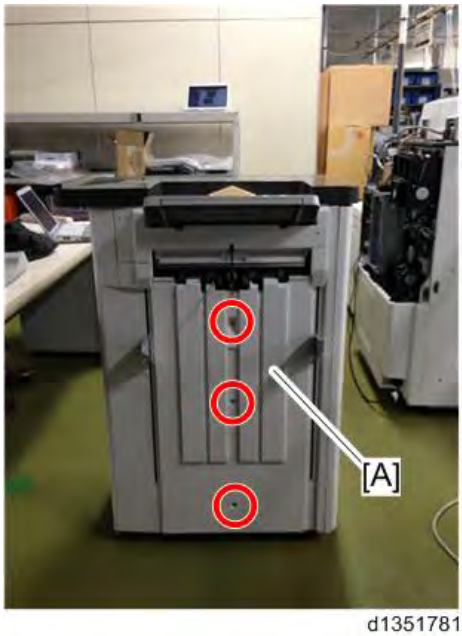
d1351779

4. Shift tray bracket [A] (x 4)



d1351780

5. Left cover [A] (x 3)

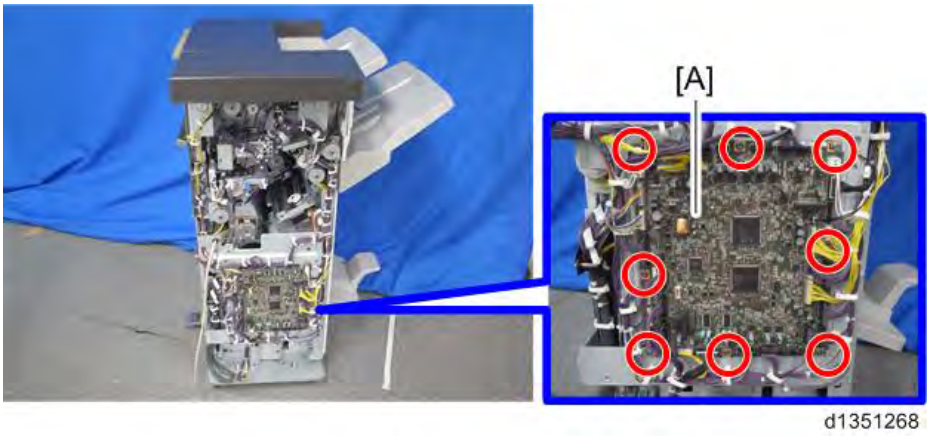


d1351781

Boards

Main Board

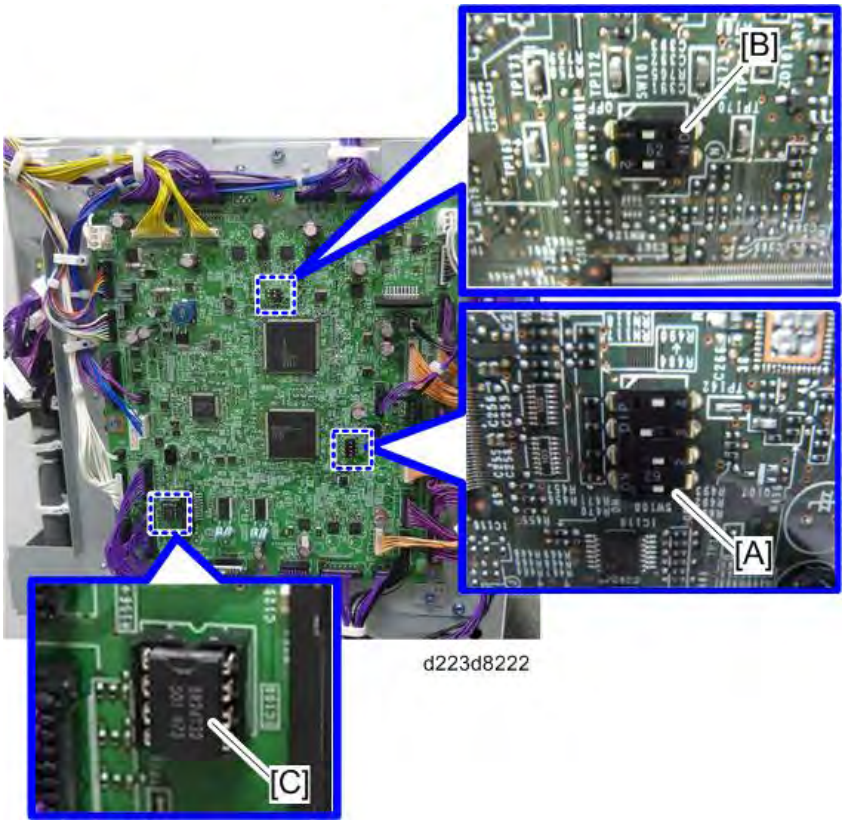
1. Remove the following covers.
    - Rear upper cover (page 9)
    - Rear lower cover (page 9)
2. Main board [A] (x 4, connector x all)



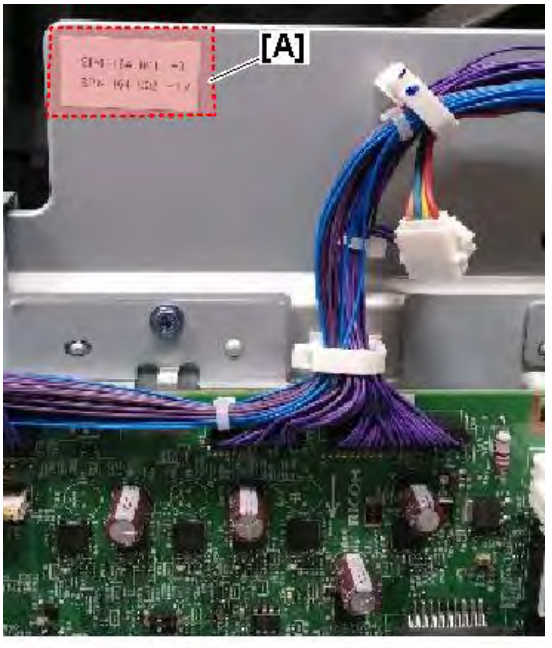
When replacing the main board

This board has two blocks of dip switches. When you reinstall the main board, follow the procedure below regarding the dip switch settings.

1. Check the settings of dip switch [A] on the old main board.
2. Replace the main board.
3. Change the settings of dip switch [A] on the new main board to match the settings on the old main board.
4. Make sure the switches of dip switch [B] on the new main board are all OFF.
5. Remove the EEPROM [C] from the old board and install it on the new board.



6. Locate the label [A] attached near the right corner of the board.



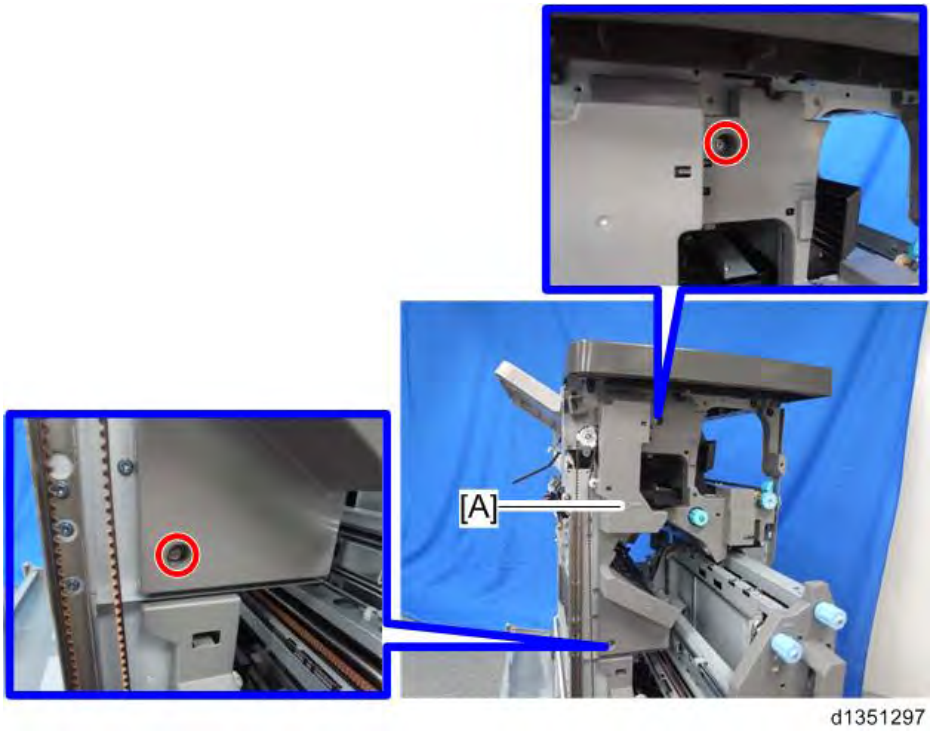
d223d8235b

7. Go into the SP mode, open these SP codes, and then enter the numbers you see on the label.
    - SP6121-001 NV Adj. Data: Jog Position: Factory Adj.
    - SP6121-002 NV Adj. Data: Fold Position: Factory Adj.

Main Motors

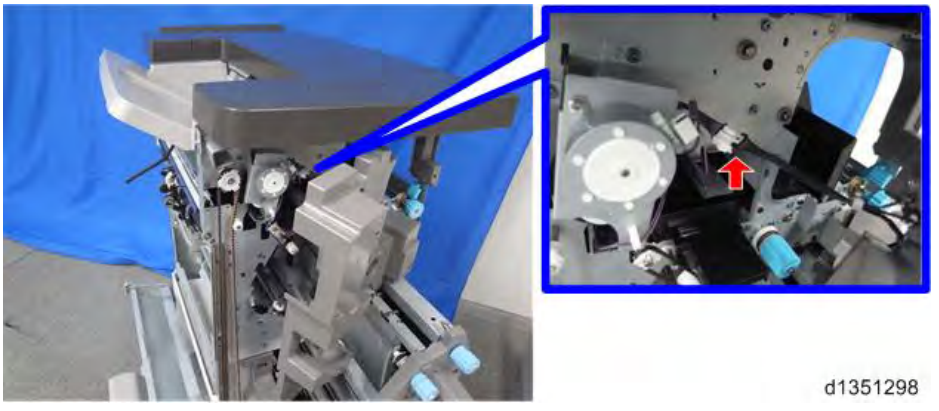
Corner Stapling Unit

1. Remove the following covers.
    - Front cover (page 11)
    - Front left side cover (page 11)
    - End fence (page 16)
    - Rear upper cover (page 9)
    - Rear lower cover (page 9)
2. Pull out the booklet stapler unit, and remove the inner upper cover [A]. (x 2)

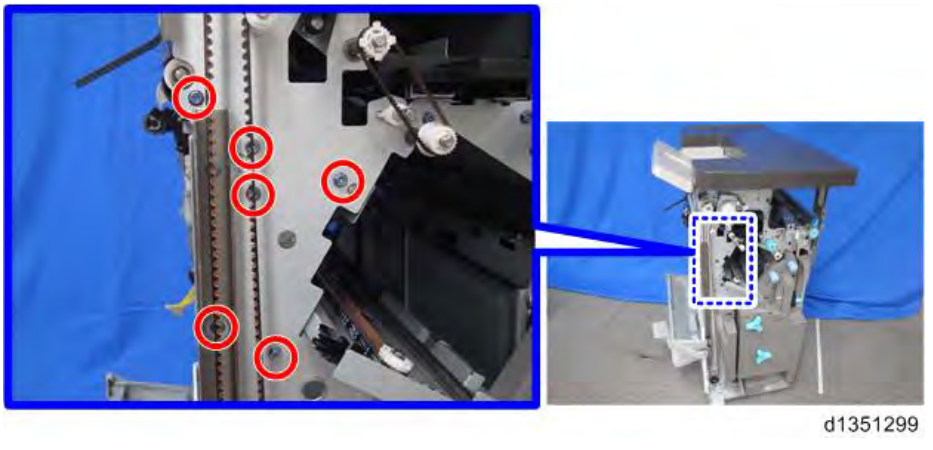


Note

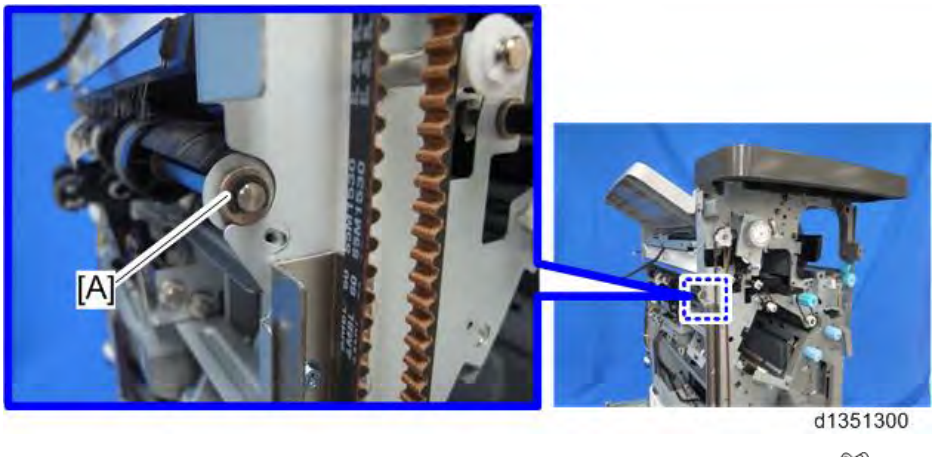
- Disconnect the harness from the back side of the inner upper cover when you remove the inner upper cover.



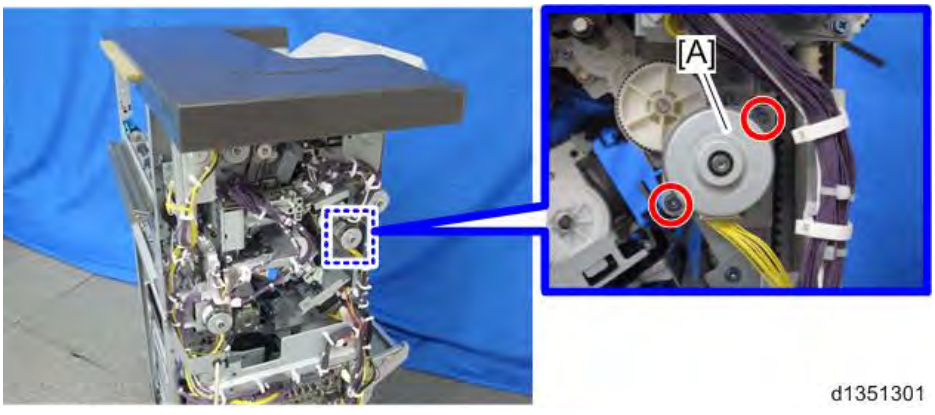
3. Remove the screws from the front side of the finisher. (x 6)



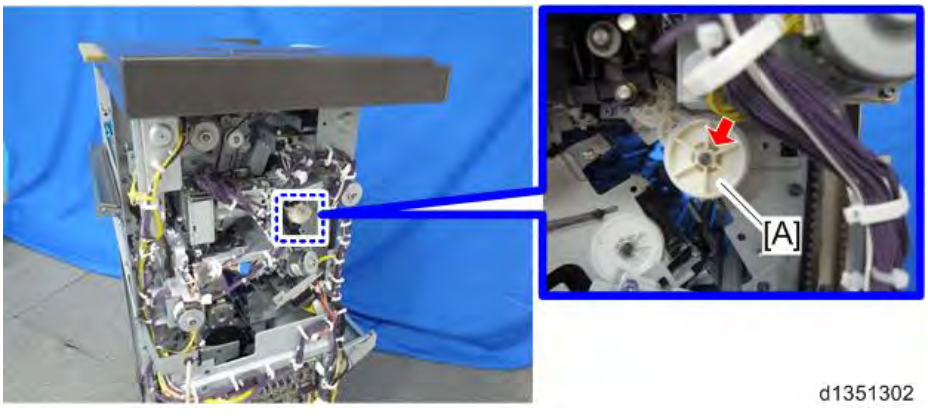
4. Remove the bushing [A] from the front side of the finisher. (C-ring x 1)



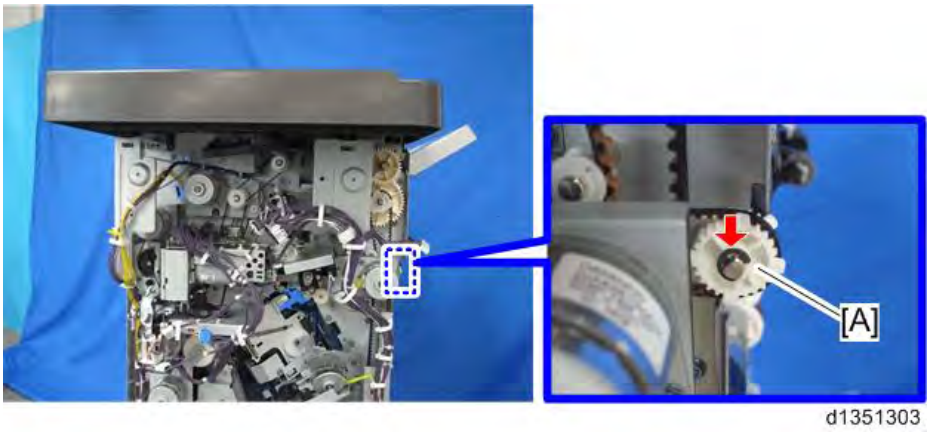
5. Remove the pressure release motor bracket [A] from the rear side of the finisher. (x 2)



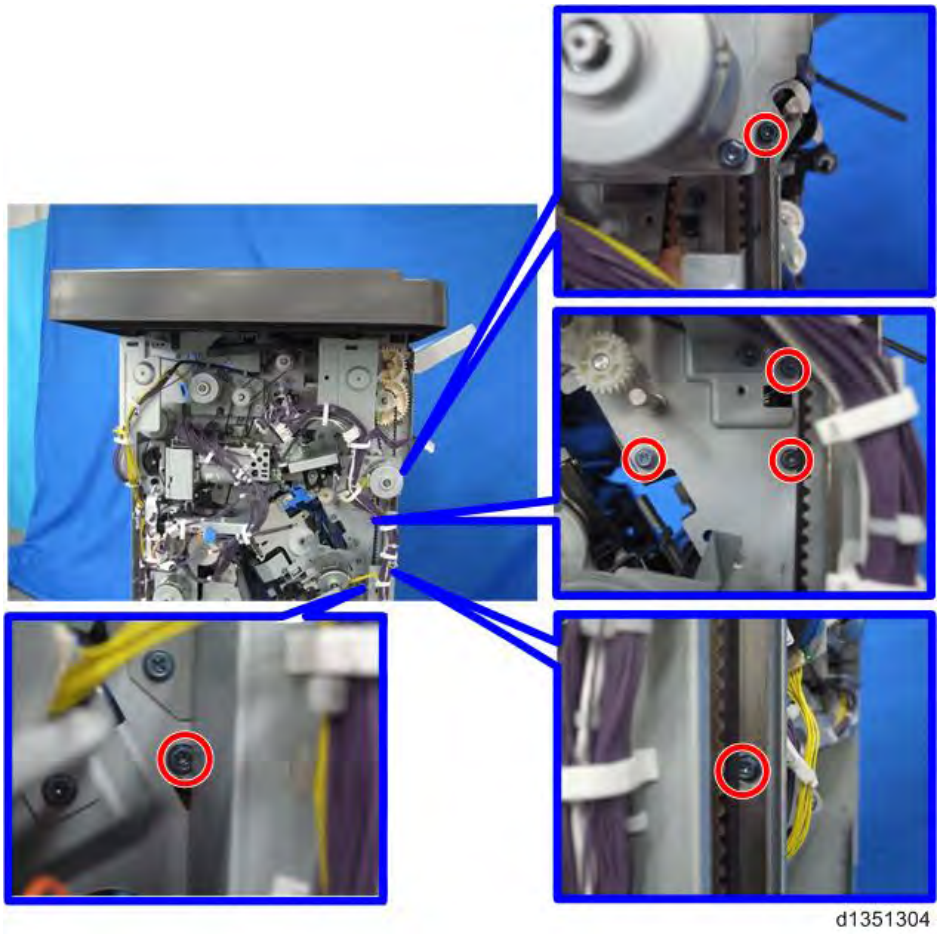
6. Remove the gear [A] from the rear side of the finisher. (snap-fit x 1)



7. Remove the pulley [A] from the rear side of the finisher. (C-ring x 1)

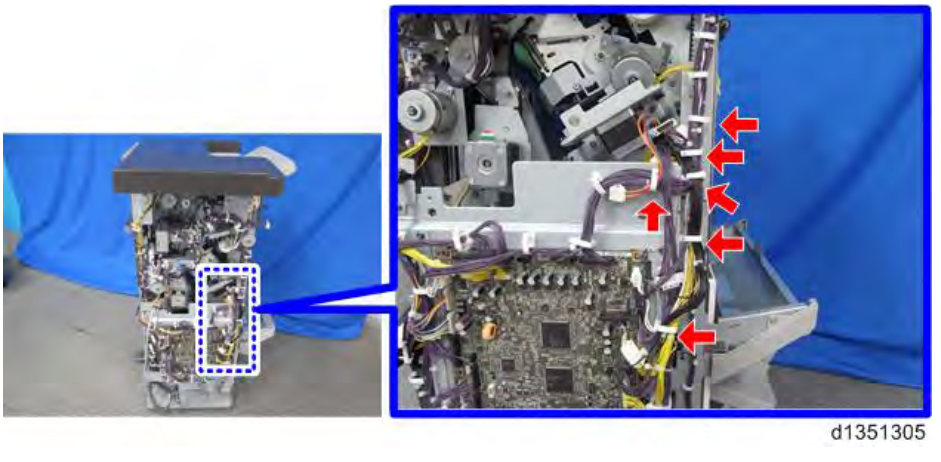


8. Remove 6 screws from the rear side of the finisher. (x 6)



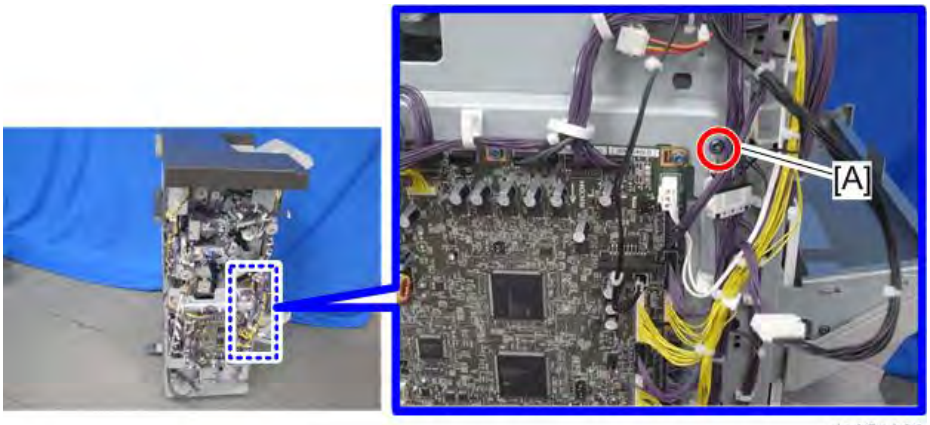
d1351304

9. Remove the clamps shown below. (x 6)



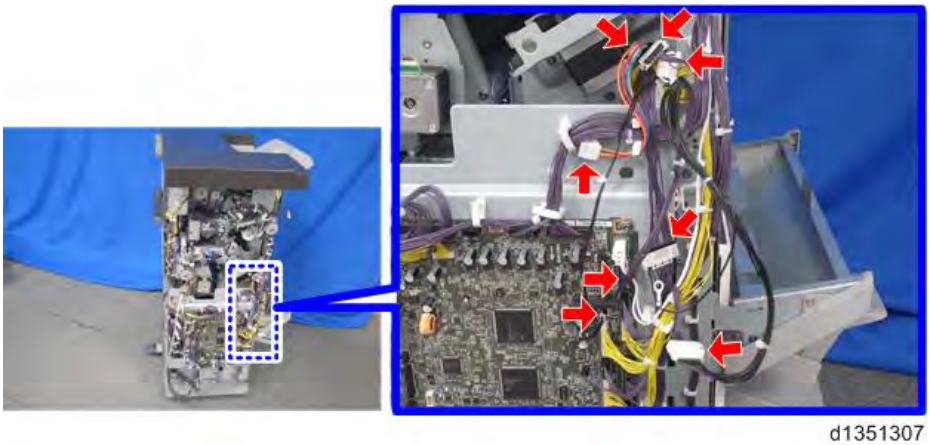
d1351305

10. Remove the ground wire [A] of the main board. (x 1)



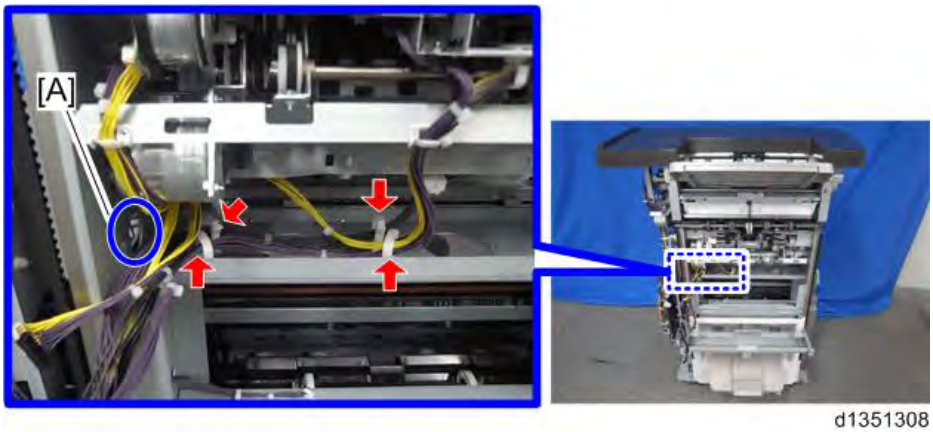
d1351306

11. Disconnect the connectors shown below. (x 8)



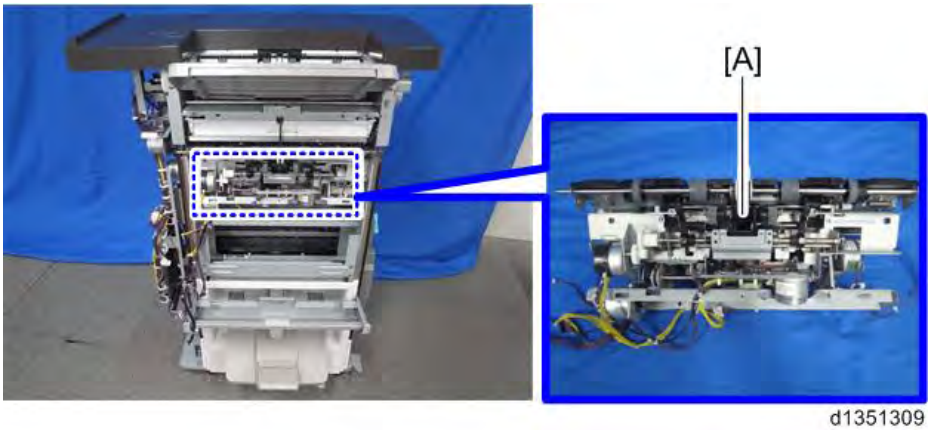
d1351307

12. Pull out the harnesses disconnected in step 11 to the right side of the finisher through the hole [A].
13. Remove the harness from the clamps. (x 4)



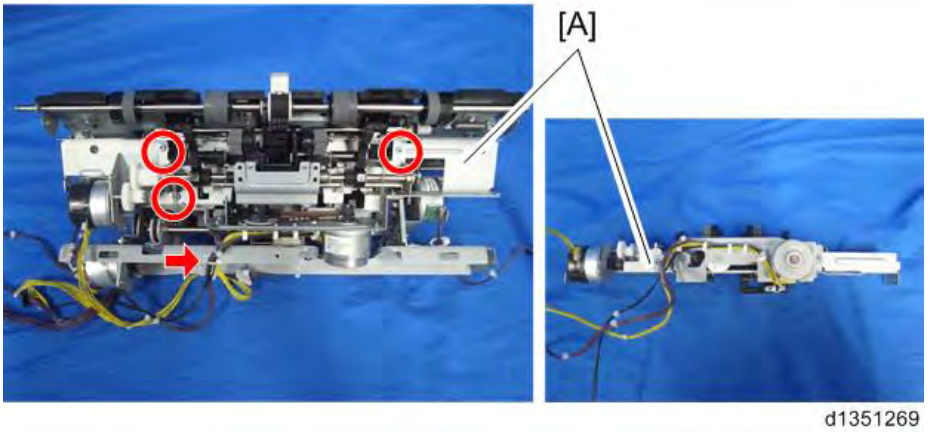
d1351308

14. Remove the corner stapling unit [A] from between the front and left plate.

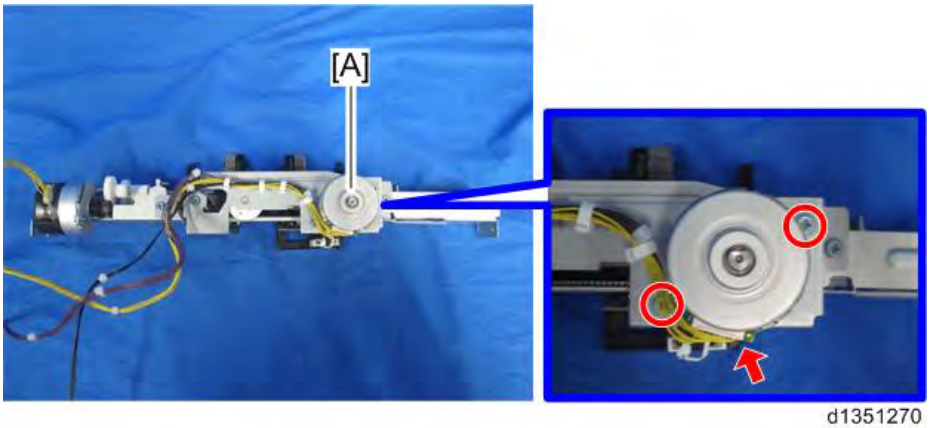


Paper Exit Gate Motor

1. Corner stapling unit (page 25)
2. Stapler bracket [A] (x 3, x 1)

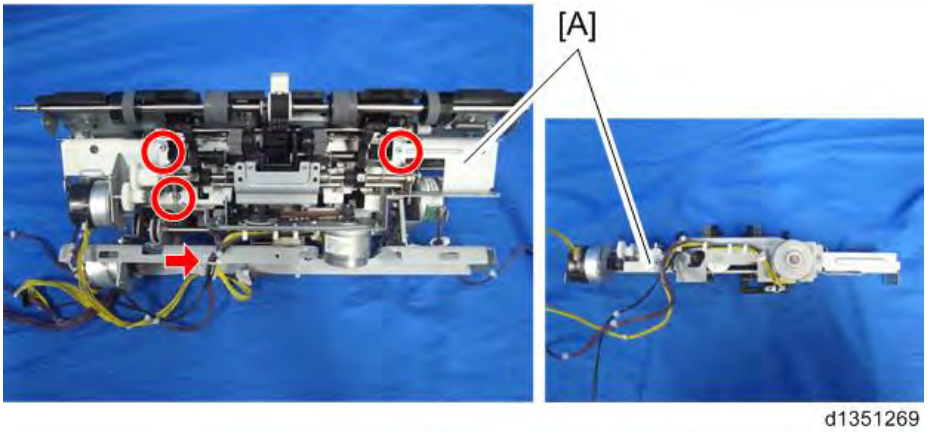


3. Paper exit gate motor [A] (x 2, x 1)

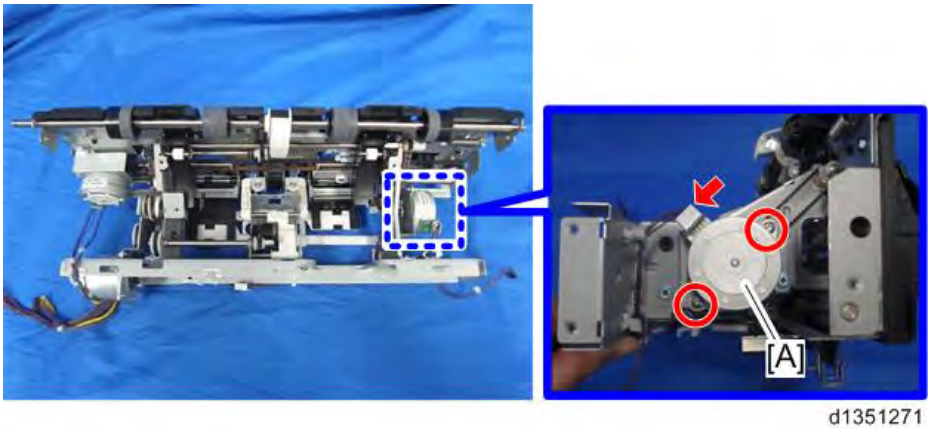


Leading Edge Guide Motor

1. Corner stapling unit (page 25)
2. Stapler bracket [A] (x 3, x 1)



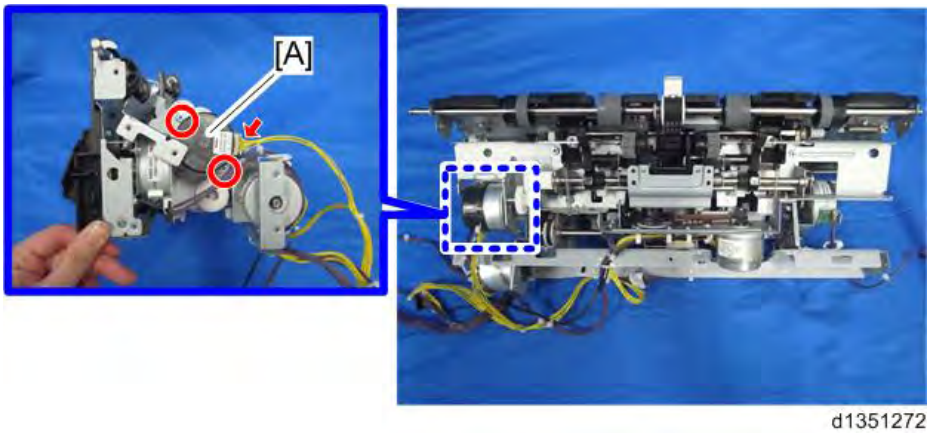
3. Leading edge guide motor [A] (x 2, x 1)



d1351271

Trailing Edge Pressure Plate Motor

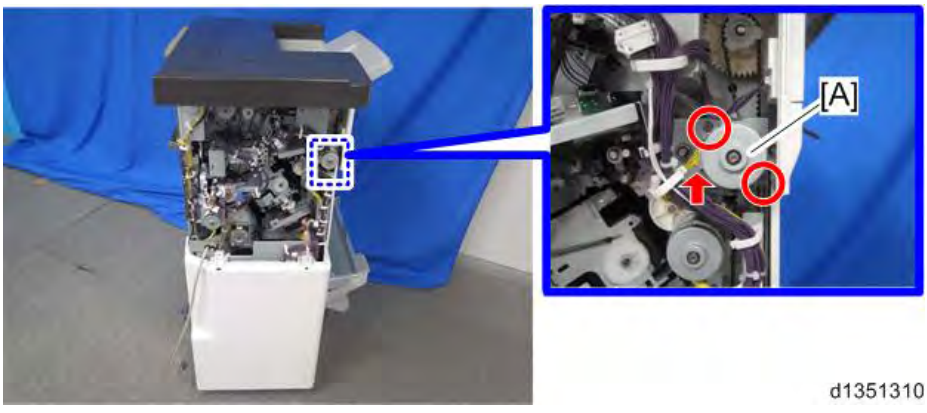
1. Corner stapling unit (page 25)
2. Trailing edge pressure plate motor [A] (x 2, x 1)



d1351272

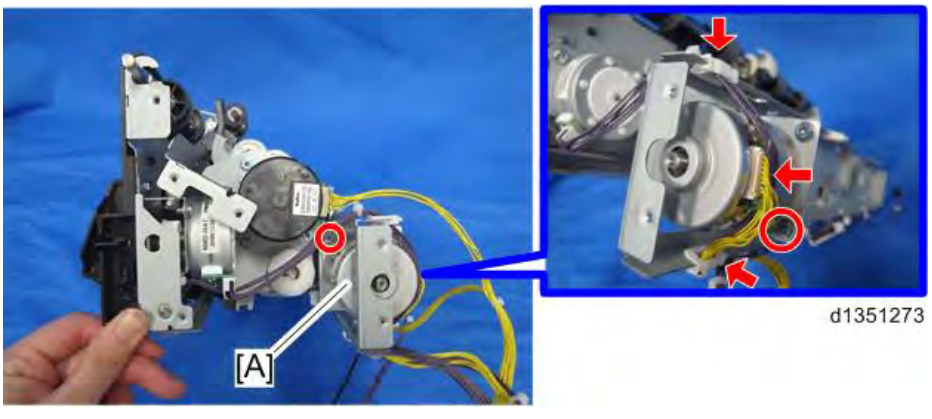
Stacking Roller Motor

1. Rear upper cover (page 9)
2. Stacking roller motor [A] (x 2, x 1)



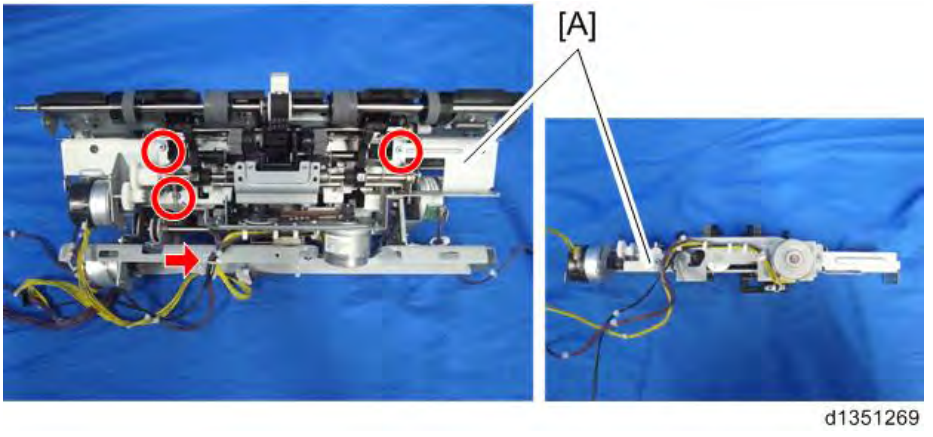
Feed Out Motor

1. Corner stapling unit (page 25)
2. Feed out motor [A] (x 2, x 1, x 2)

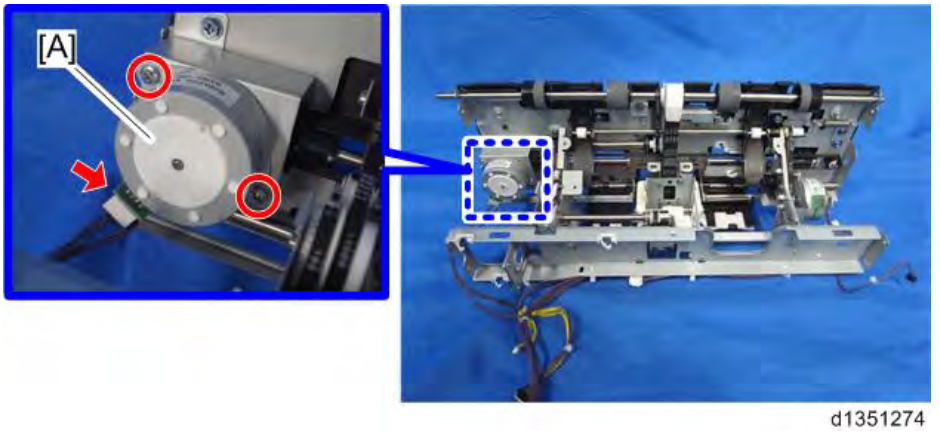


Jogger Motor

1. Corner stapling unit (page 25)
2. Stapler bracket [A] (x 3, x 1)



3. Feed out motor (page 33)
4. Jogger motor [A] (x 2, x 1)



Paper Guide Motor

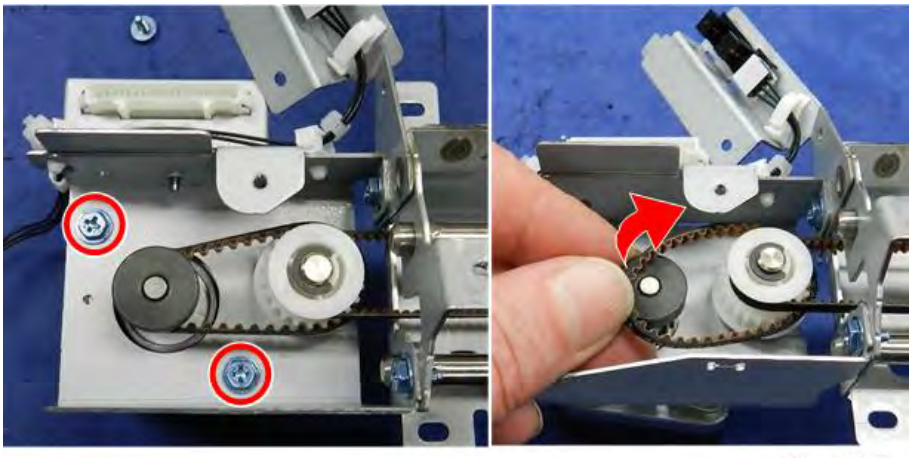
1. The paper guide motor is at [A].

d3cgc3005c

2. Remove the paper guide unit. (page 68)
3. Remove sensor bracket (x1).

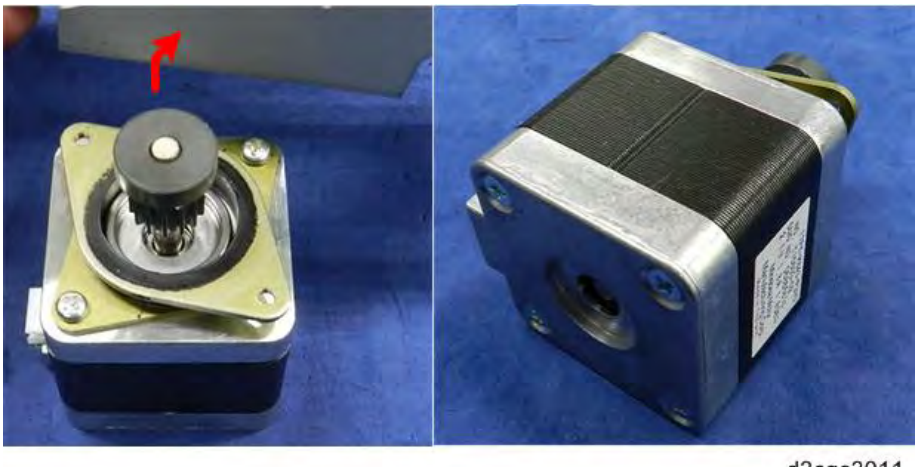
d3cgc3006a

4. Unfasten the motor, and disconnect the belt (x2, x1).



d3cgc3010a

5. Disconnect the motor harness, and then remove the motor (x1).



d3cgc3011

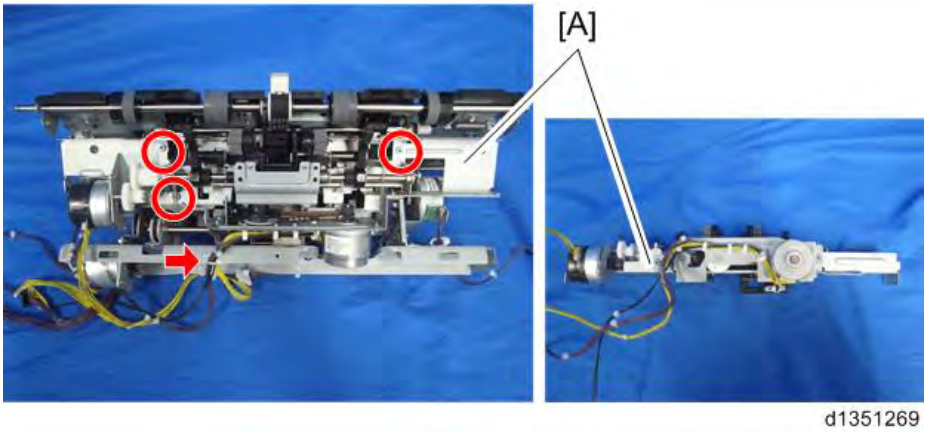
6. When you re-install the motor, make sure that the connector is pointing to the back of the unit.

d3cgc3012

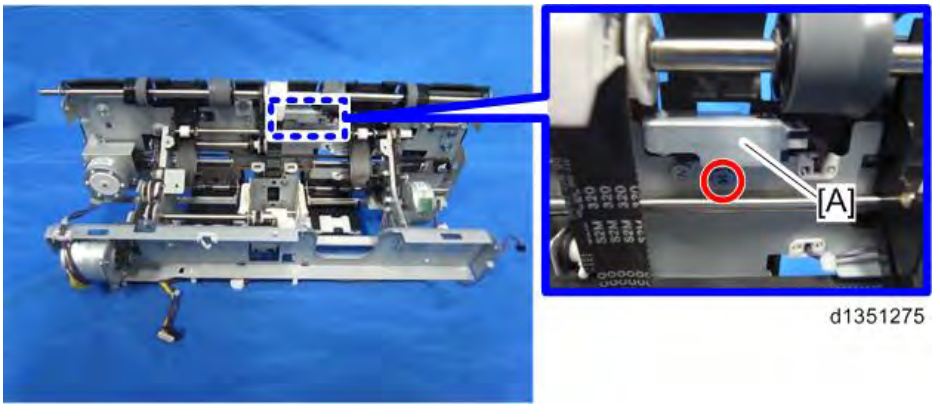
Sensors

Shift Tray Paper Sensor

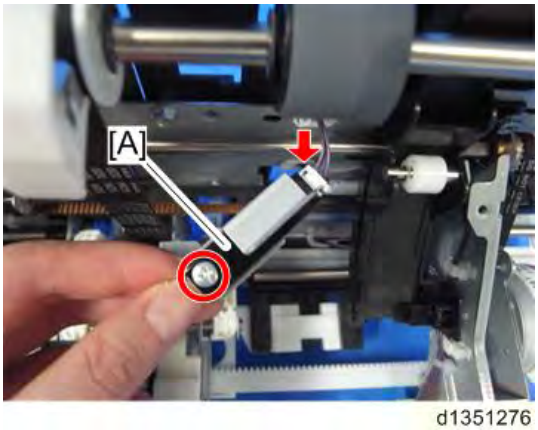
1. Corner stapling unit (page 25)
2. Stapler bracket [A] (x 3, x 1)



3. Shift tray paper sensor bracket [A] (x 1)

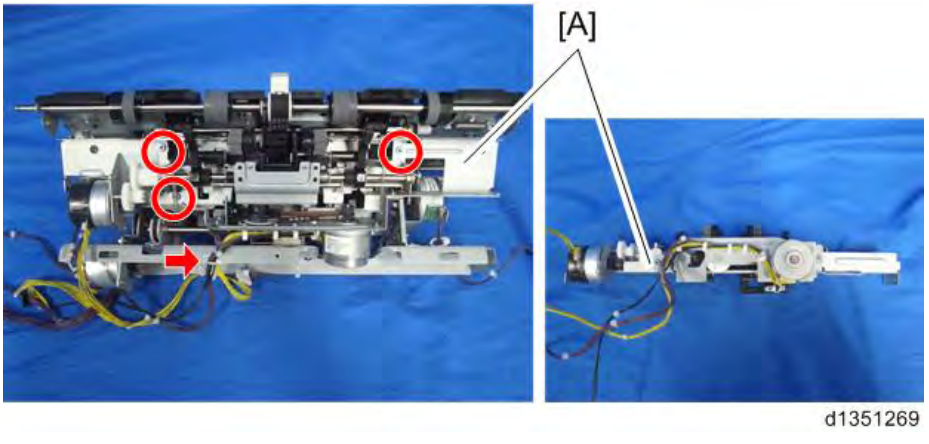


4. Shift tray paper sensor [A] (x 1, x 1)

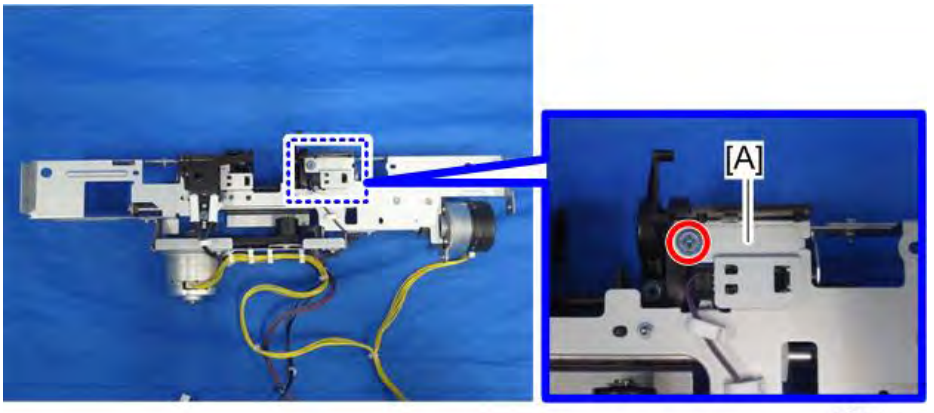


Trailing Edge Pressure Plate HP Sensor

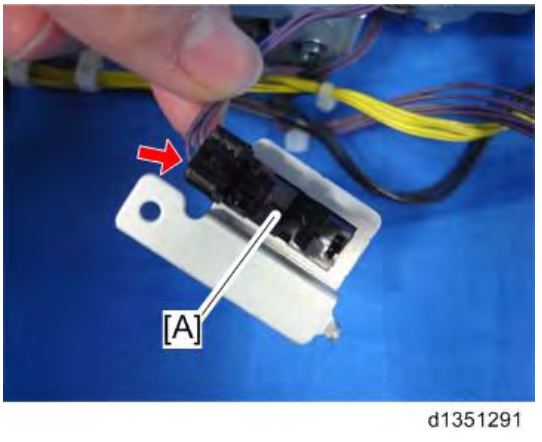
1. Corner stapling unit (page 25)
2. Stapler bracket [A] (x 3, x 1)



3. Turn back the stapler bracket, and remove the trailing edge pressure plate HP sensor bracket [A]. (x 1)

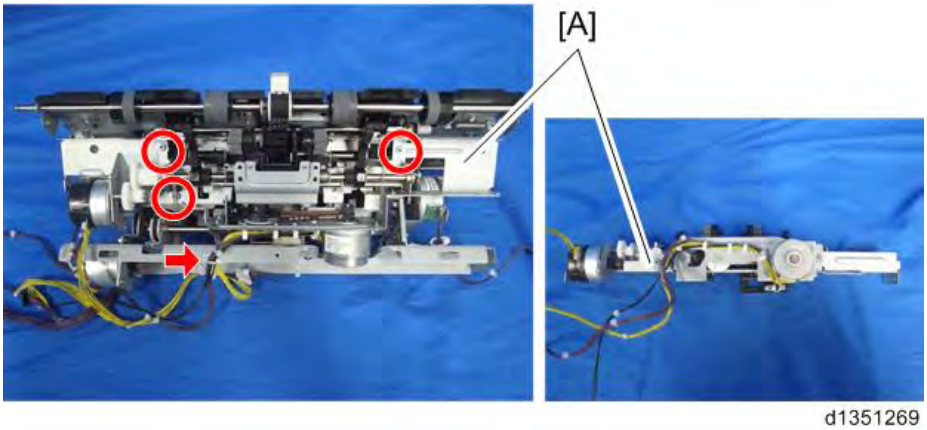


4. Trailing edge pressure plate HP sensor [A] (x 1)

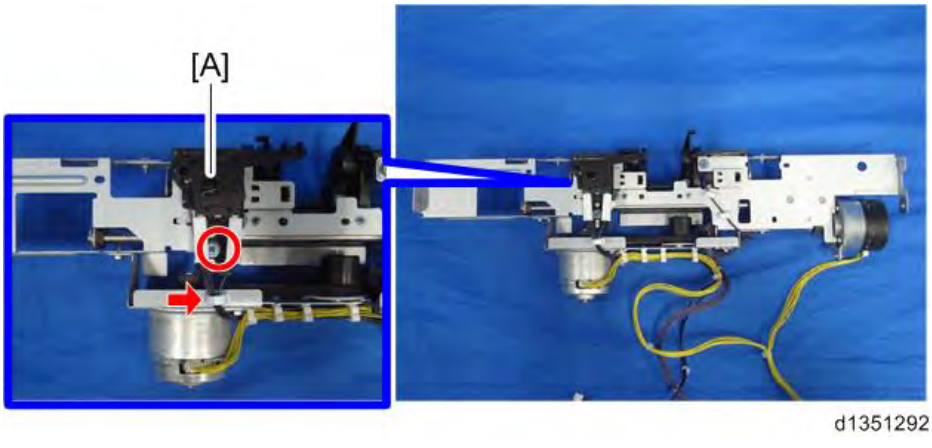


Stacking Roller HP Sensor

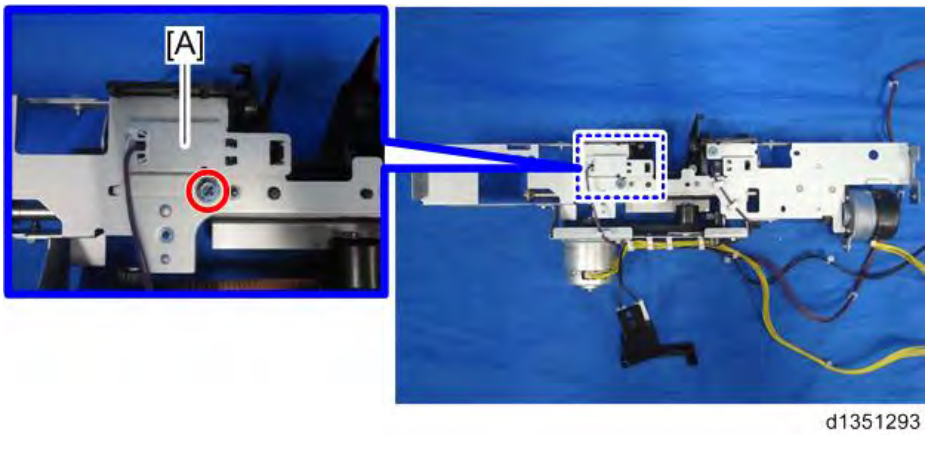
1. Corner stapling unit (page 25)
2. Stapler bracket [A] (x 3, x 1)



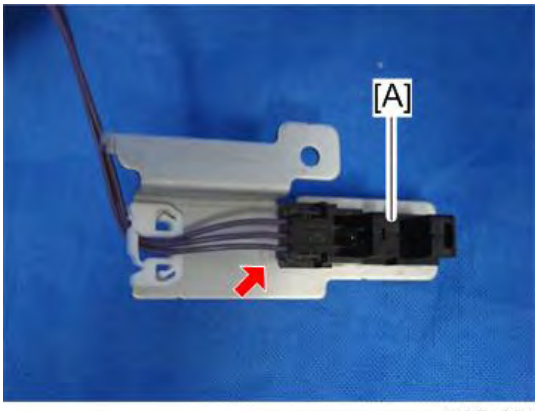
3. Turn back the stapler bracket, and remove the paper exit gate motor bracket [A]. (x 1, x 1)



4. Stacking roller HP sensor bracket [A] (x 1)



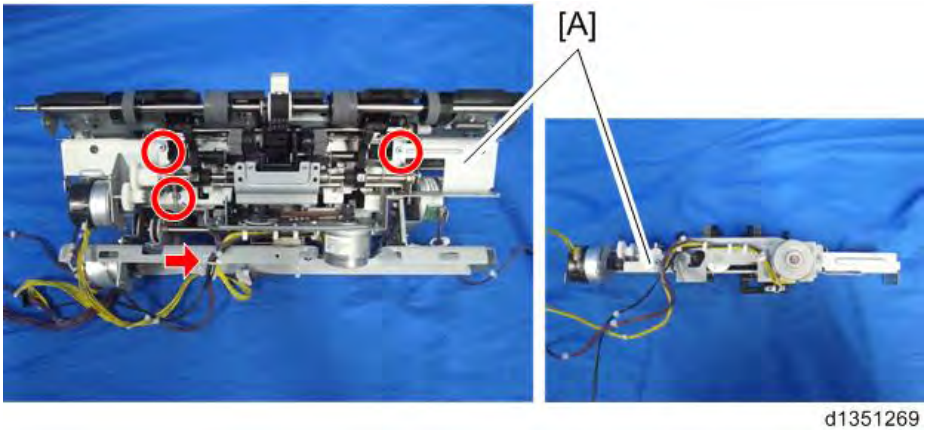
5. Stacking roller HP sensor [A] (x 1)



d1351294

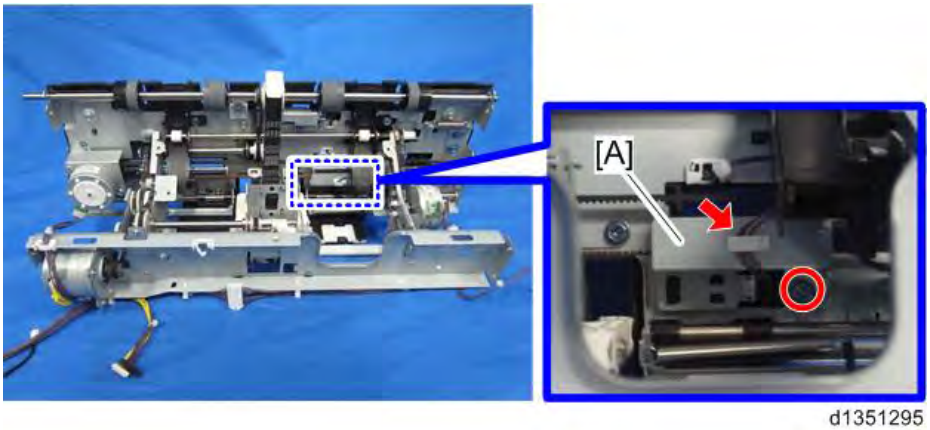
Staple Tray Paper Sensor

1. Corner stapling unit (page 25)
2. Stapler bracket [A] (x 3, x 1)



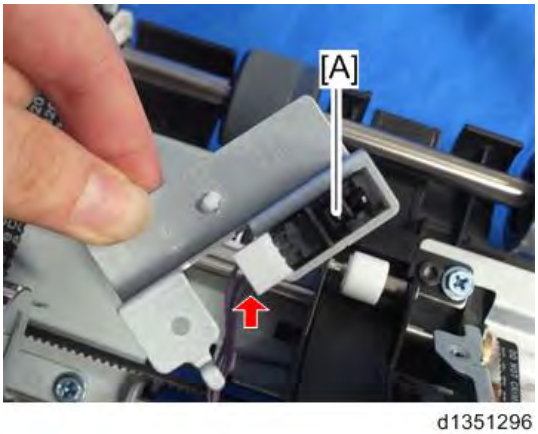
d1351269

3. Staple tray paper sensor bracket [A] (x 1, x 1)



d1351295

4. Staple tray paper sensor [A] (x 1)



d1351296

Paper Guide HP Sensor

1. The paper guide HP sensor is located at [A].

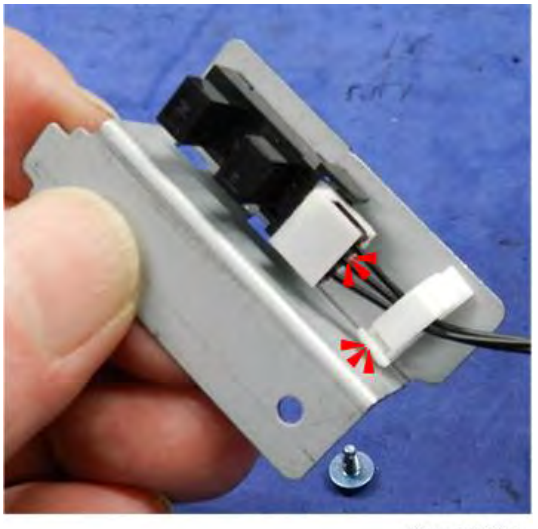
d3cgc3005b

2. Remove the paper guide unit. (page 68)

3. Remove sensor bracket [A] (x1).

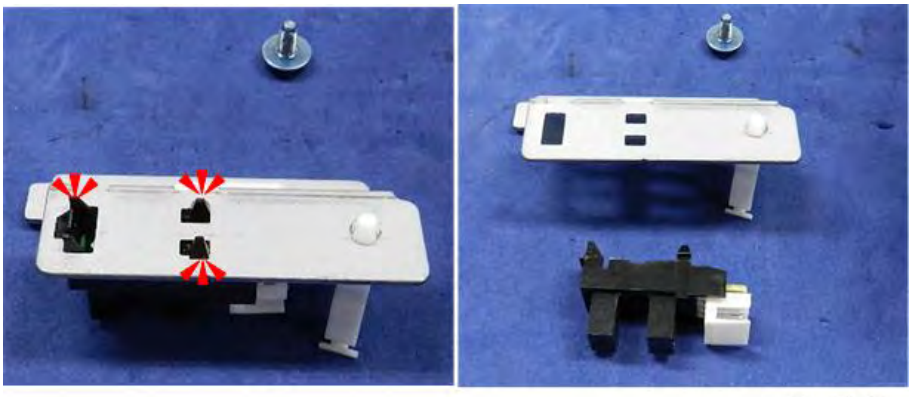
d3cgc3006a

4. Open the clamp and disconnect the sensor (x1, x1).



d3cgc3007a

5. Separate the sensor and bracket (x3).

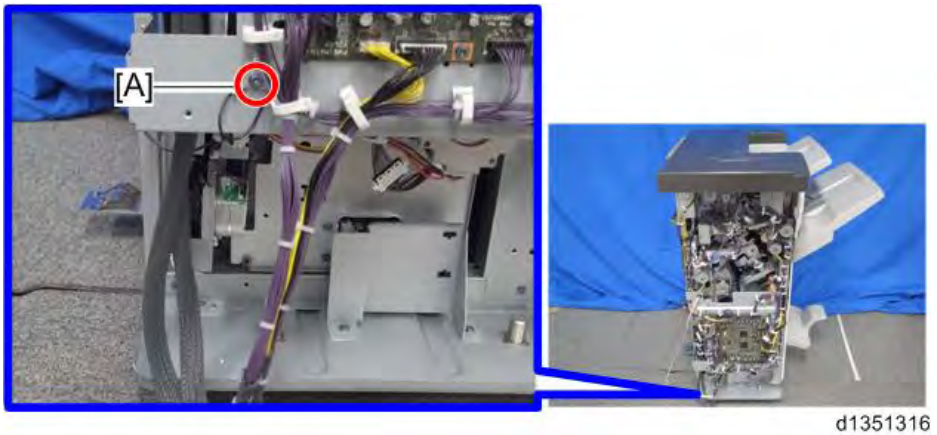


d3cgc3008a

Booklet Unit Motors

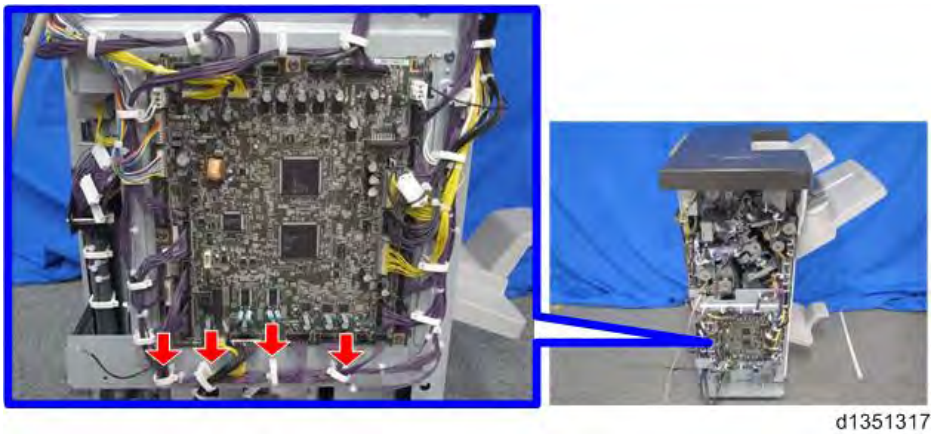
Booklet Stapler Unit

1. Remove the following covers.
   - Rear Upper Cover (page 9)
   - Rear Lower Cover (page 9)
2. Disconnect the ground wire [A] in the left lower side of the main unit. (x 1)



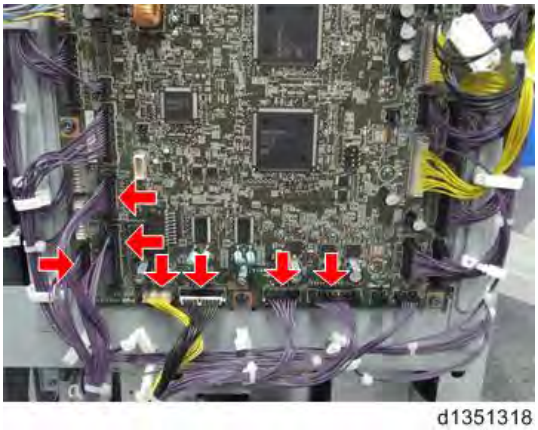
d1351316

3. Release the harness from the 4 clamps shown below. (x 4)



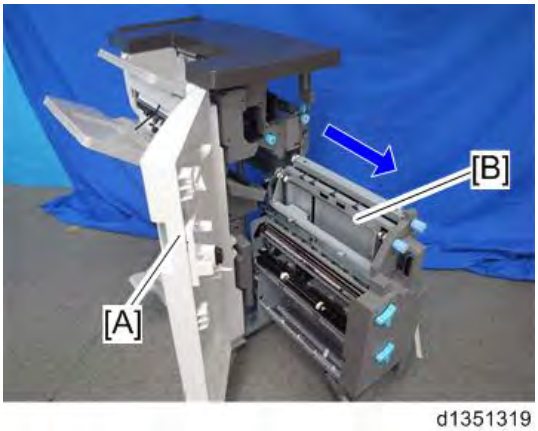
d1351317

4. Disconnect the following 7 connectors from the main board. (x 7)



d1351318

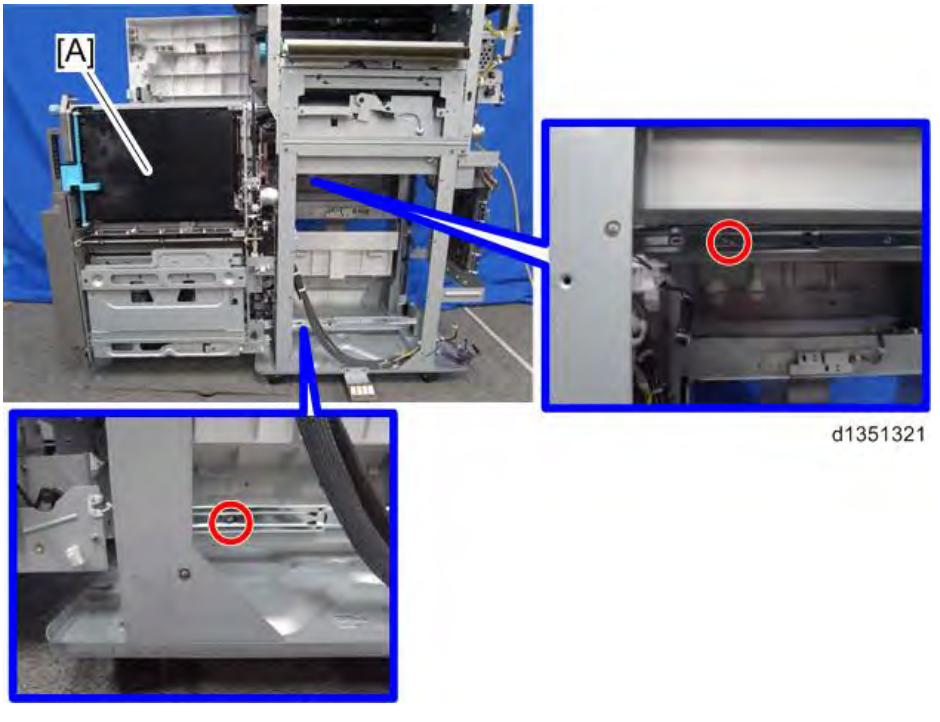
5. Open the front door [A] and pull out the booklet stapler unit [B].



d1351319

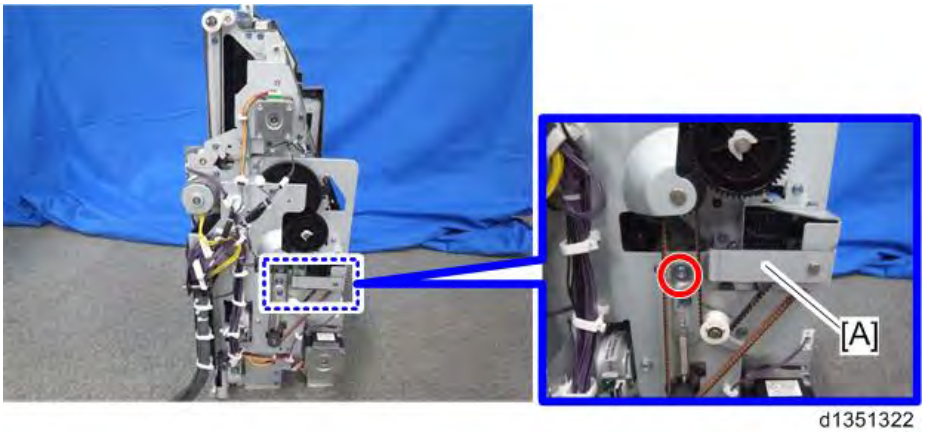
6. Remove the following screws. (x 6)

7. Lift up to remove the booklet stapler unit [A]. (x 2)

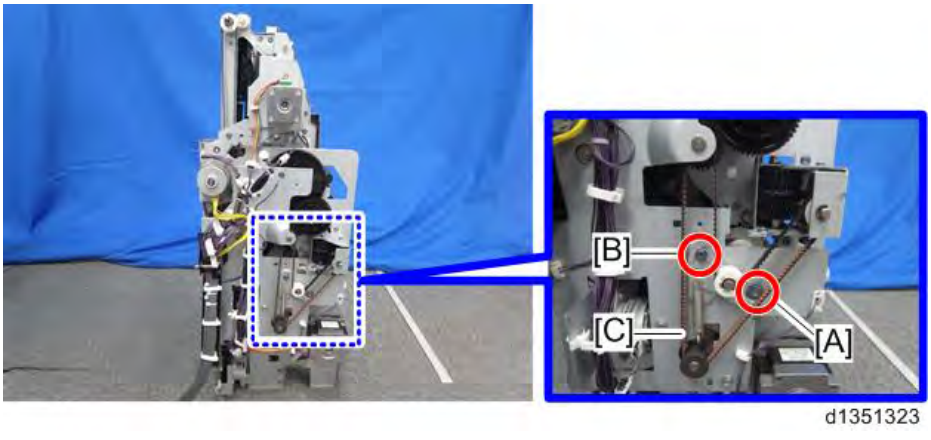


Press Folding Motor

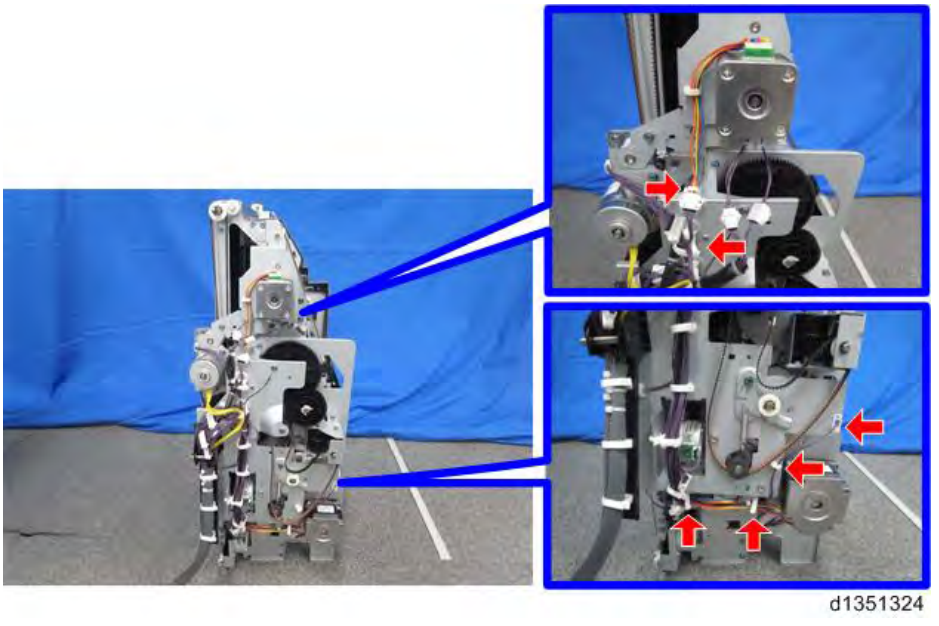
1. Booklet stapler unit (page 46)
2. Remove bracket [A]. (x 1)



3. Remove the screw [A] shown in the photo below. (x 1)
4. Loosen the screw [B] to loosen the press folding motor belt [C].

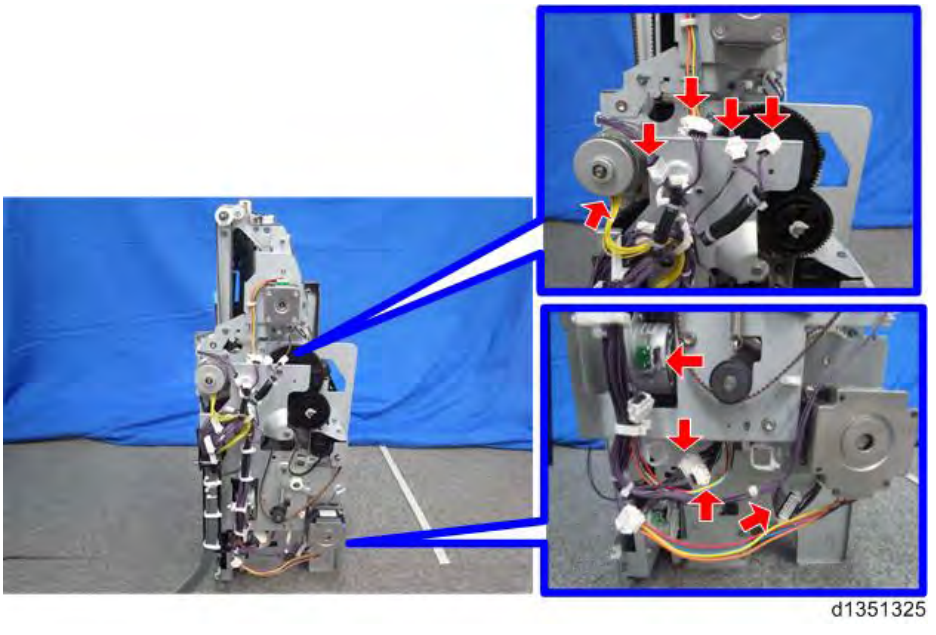


5. Release the harness from the 6 clamps shown below. (x 6)



d1351324

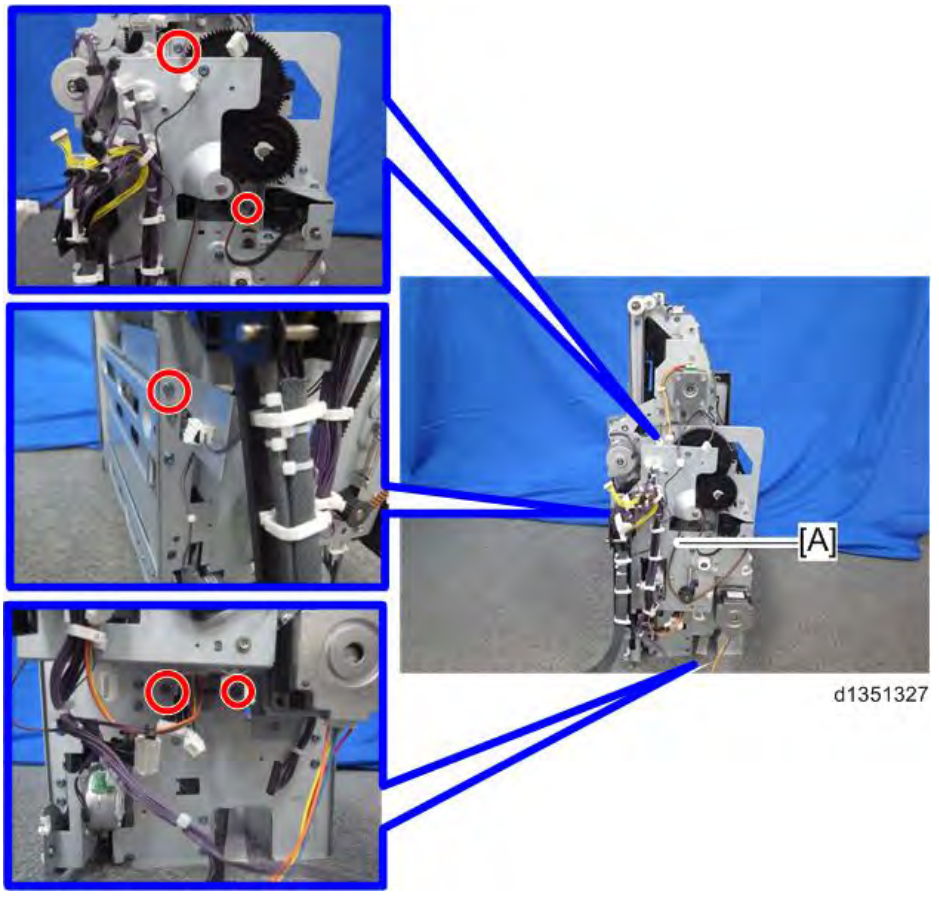
6. Disconnect the 9 connectors shown below. (☞ x 9)



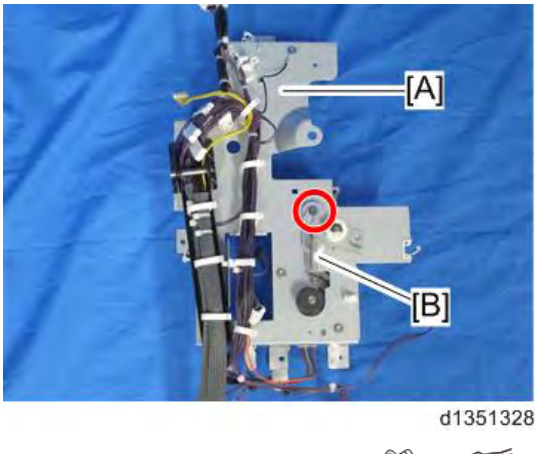
d1351325

7. Disconnect the 2 connectors shown below. (☞ x 2)

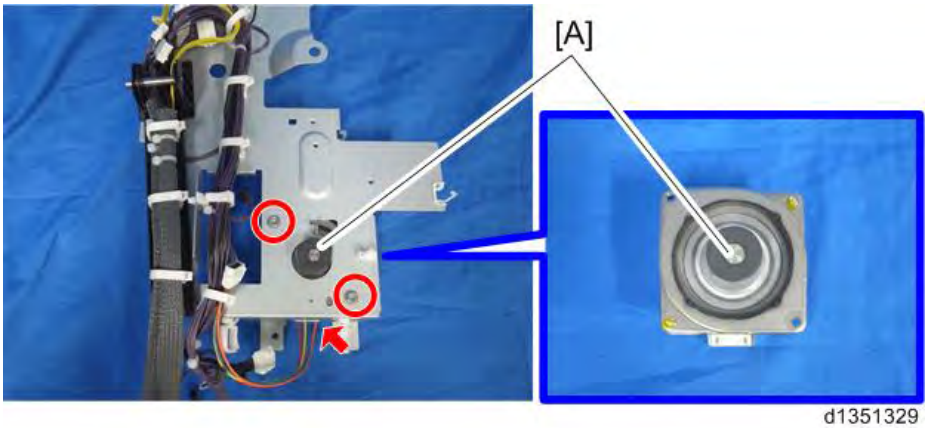
8. Remove the press folding motor bracket [A]. (x 5)



9. Remove the spring [B] from the press folding motor bracket [A] (x 1, spring x 1)



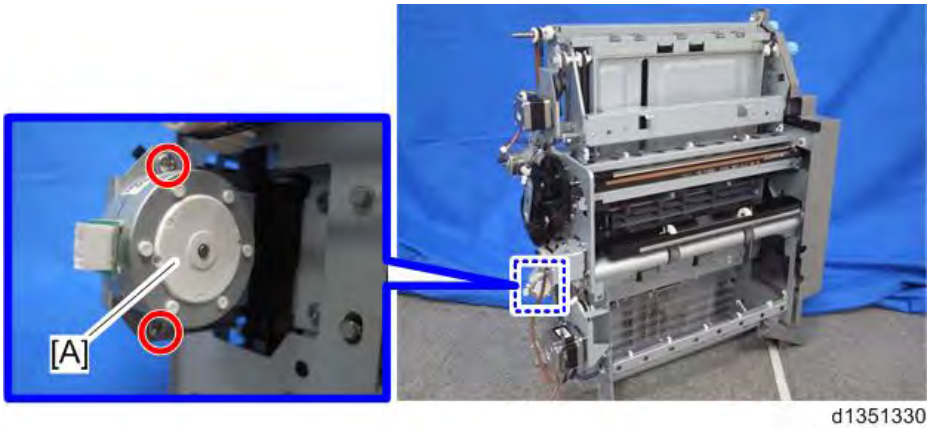
10. Remove the press folding motor [A] (x 2, x 1)



d1351329

Booklet Jogger Motor

1. Booklet stapler unit (page 46)
2. Press folding motor bracket (page 49 "Press Folding Motor")
3. Booklet Jogger Motor [A] (x 2)

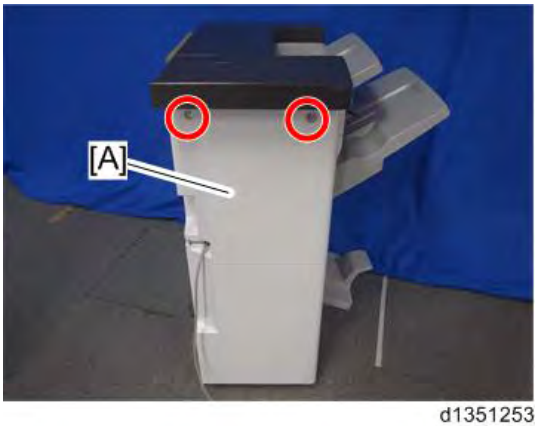


d1351330

Stapler Unit

Stapler Unit

1. Remove the rear upper cover [A]. (x 2)

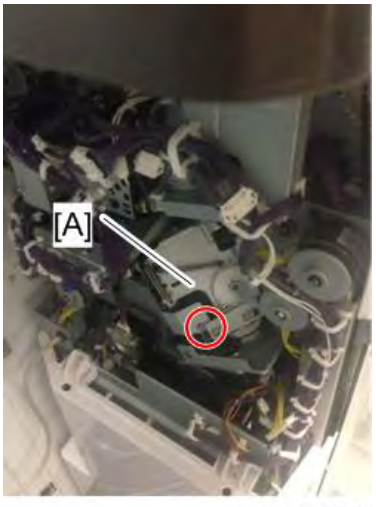


d1351253

2. Open the front door and push the stapler [A] to the rear side of the finisher.

d135a0026

3. At the rear side, remove the screw circled in the photo below from the stapler [A] (x 1).



d135a0027

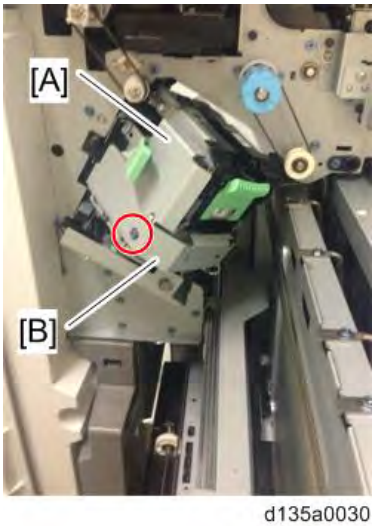
4. Push the stapler to the front side of the finisher.
5. Remove the inner upper cover [A]. (x 2)

d135a0028

6. Pull out the stapler unit [A].

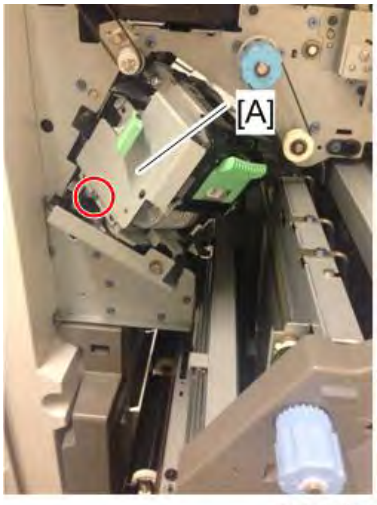
d135a0029

7. Remove the bracket [B] from the stapler [A]. (x 1)



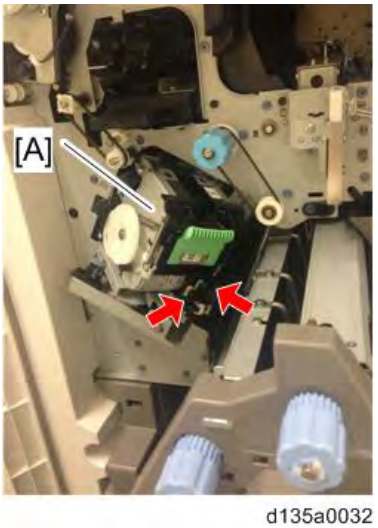
d135a0030

8. Remove bracket [A]. (x 1)



d135a0031

9. Remove the stapler [A]. (x 2)



d135a0032

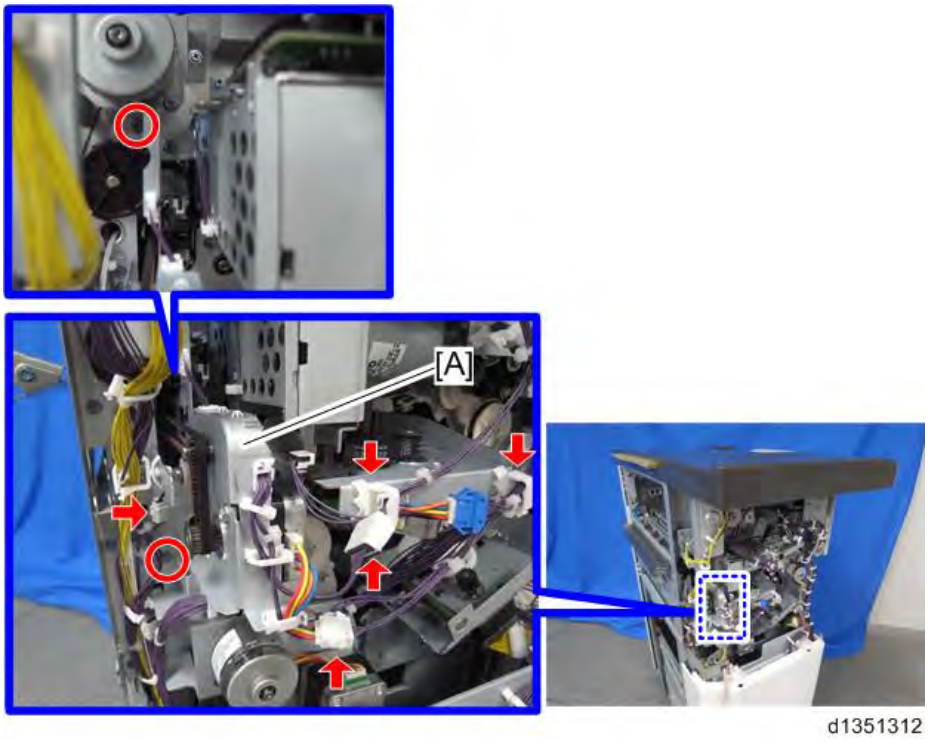
Punch Unit

The punch unit is already adjusted in the factory, so you don't need to adjust it. When you need to replace the parts of the punch unit, replace the whole unit.

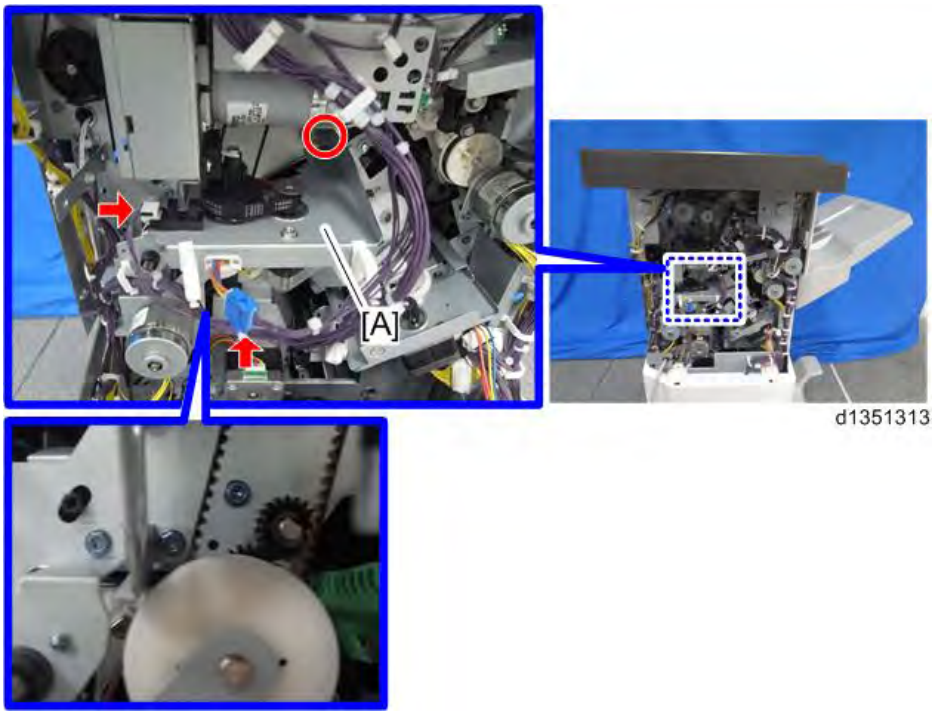
Note

- Do not disassemble the punch unit. This unit is precisely adjusted in the factory.
- Do not drop or give a shock to the unit when you replace it. The unit could be damaged.

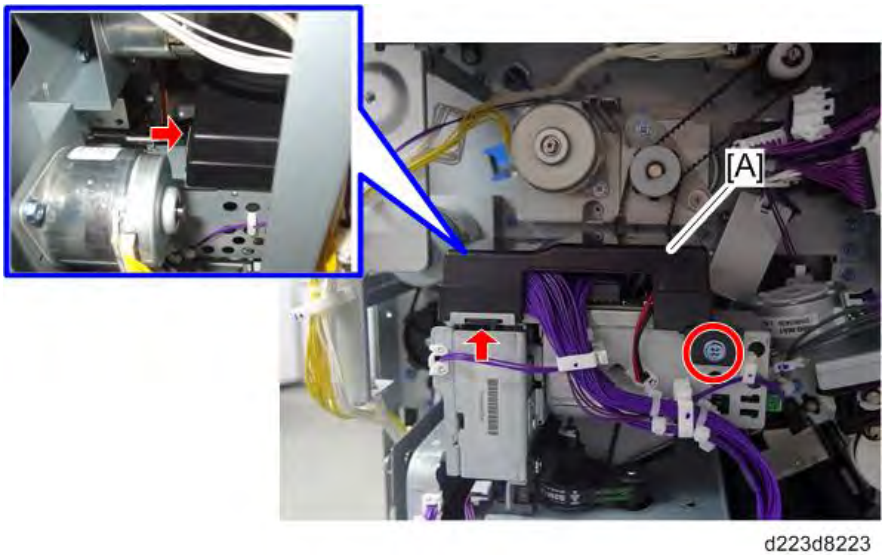
1. Remove the following covers.
   - Rear Upper Cover (page 9)
   - Rear Lower Cover (page 9)
2. Remove the side-to-side detection unit [A] (x 2, x 3, x 2).



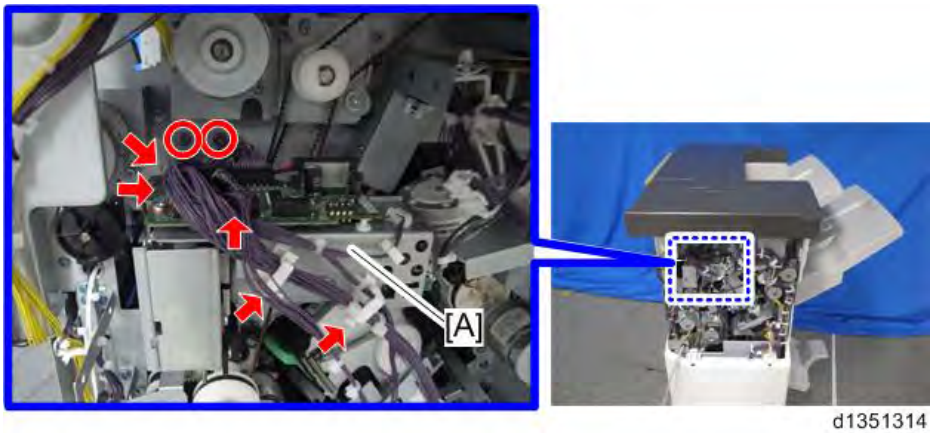
3. Stepper motor bracket [A] (x 1, x 2)



4. Remove punch unit control board [A] (x1, x2).



5. Pull out the punch unit [A] (x 2, x 3, x 2).



d1351314

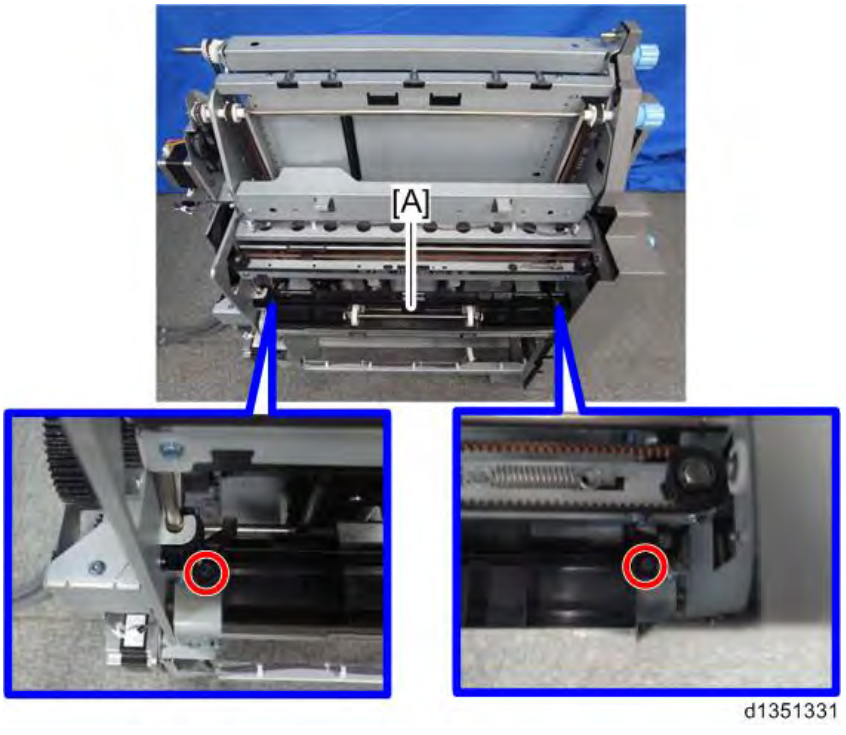
d1351315

Fold Adjustments

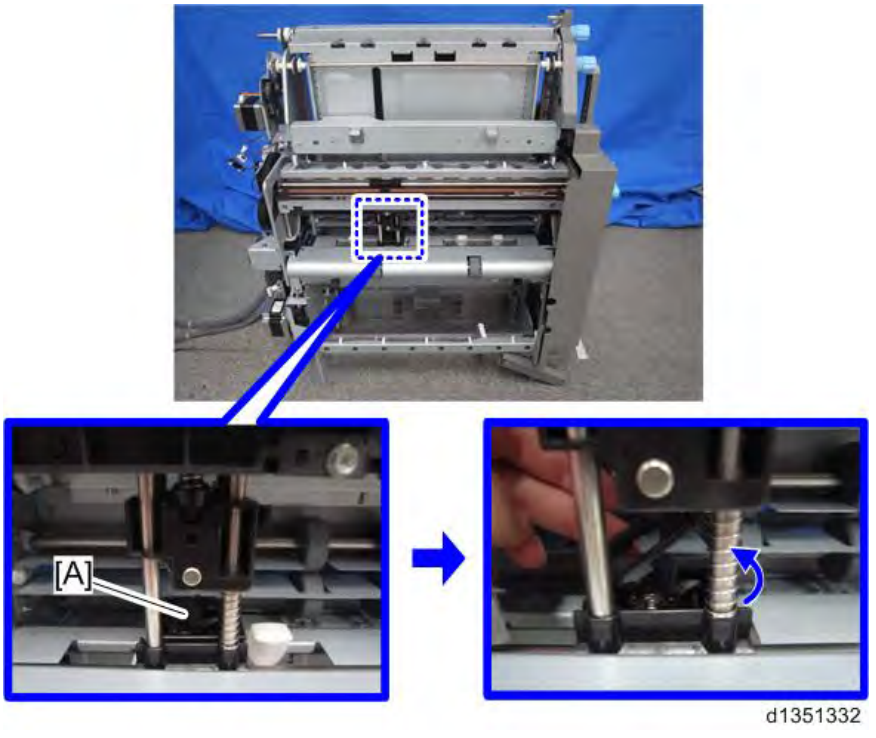
Adjusting the Alignment of the Flat Fold Rollers

To adjust the folding strength, adjust the difference in vertical alignment between the flat fold rollers.

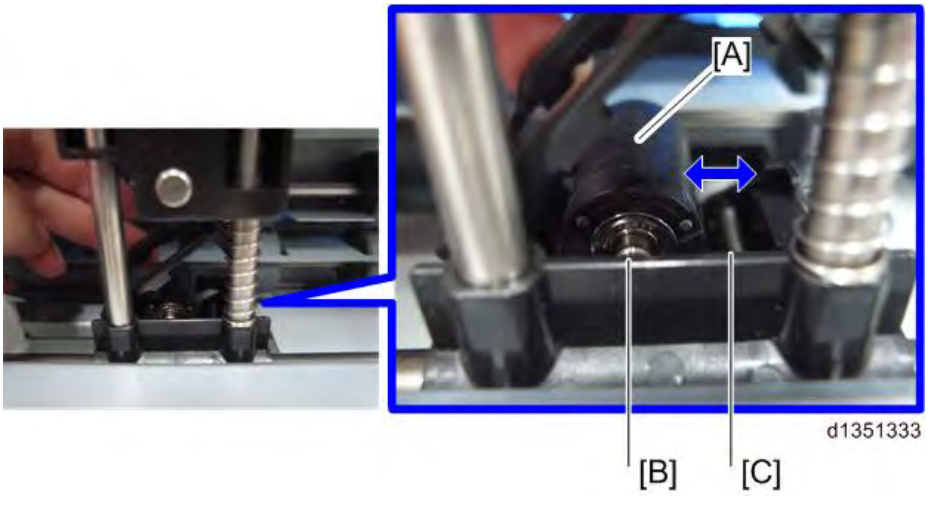
1. Booklet stapler unit (page 46)
2. Fold plate bracket [A] (x 2)

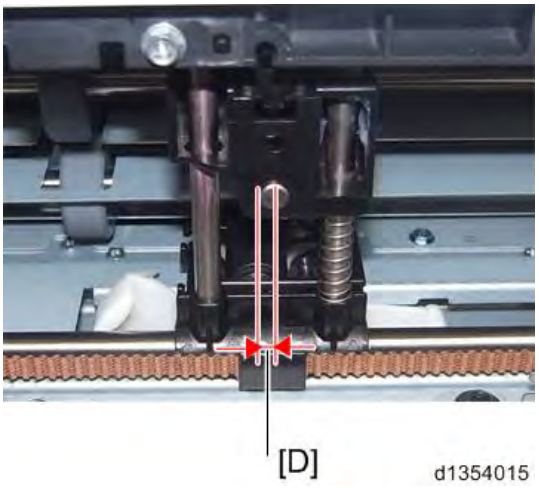


3. Open the bracket [A] of the flat fold roller.



4. Adjust the position of the flat fold lower roller [A] to adjust the difference in alignment between the upper and lower rollers of the flat fold booklet unit.





Note

- With the factory default, the upper and lower rollers of the flat fold booklet unit are not aligned vertically. There is a 3mm difference [D] between the upper and lower rollers. However, you can change the lower roller position from [B] (factory default) to [C]. If you change the lower roller position to [C], the difference becomes 0mm. In this condition, the upper and lower rollers are aligned vertically.
- If the toner does not stick well to the folding line of the booklet due to excessive folding strength, change the lower roller position to [C]. In this position, the booklet will be thicker than the factory default position.
- If you want increase the folding strength, the lower roller position should be [B] (factory default position). In addition, this will make the booklet thinner.
  If you want to reduce the folding strength, the lower roller position should be [C] (the difference in alignment is 0mm). In addition, this will make the booklet thicker.

Difference in Alignment and Folding Strength

Difference in Alignment	Folding Strength	Thickness of the booklet	The amount of toner sticking to the folding line
3mm (default)	Strong	Thin	OK
0mm	Weak	Thick	Good

5. Close the bracket after the adjustment.
6. Reassemble the machine.

Adjusting the Folding Speed

You can adjust the thickness of the booklet by adjusting the moving speed of the flat fold booklet unit.

If you want to make the booklet thinner, set a slower speed. If you want to make the booklet thicker, set a faster speed.

1. Enter the SP mode.
2. Set the moving speed of the flat fold booklet unit for each paper size with SP6-114-001 to 010 (Fold Speed Adj.: 2K/3K FIN).

SP	Setting Items	Selection	Default Value
SP6-114-001	Fold Speed Adj.: 2K/3K FIN: A3 SEF	0: Standard 1: Middle 2: Low **Note** • [0: Standard] is faster than [1: Middle].	0: Standard
SP6-114-002	Fold Speed Adj.: 2K/3K FIN: B4 SEF		
SP6-114-003	Fold Speed Adj.: 2K/3K FIN: A4 SEF		
SP6-114-004	Fold Speed Adj.: 2K/3K FIN: B5 SEF		
SP6-114-005	Fold Speed Adj.: 2K/3K FIN: DLT SEF		
SP6-114-006	Fold Speed Adj.: 2K/3K FIN: LG SEF		
SP6-114-007	Fold Speed Adj.: 2K/3K FIN: LT SEF		
SP6-114-008	Fold Speed Adj.: 2K/3K FIN: 12"x18"		
SP6-114-009	Fold Speed Adj.: 2K/3K FIN: 8K SEF		
SP6-114-010	Fold Speed Adj.: 2K/3K FIN: Other		

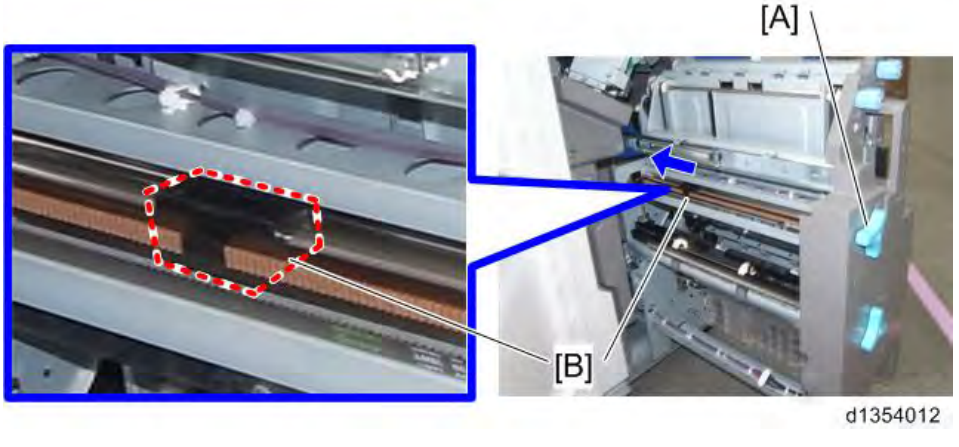
3. Exit the SP mode.

Flat Fold Booklet Unit Home Position Adjustment

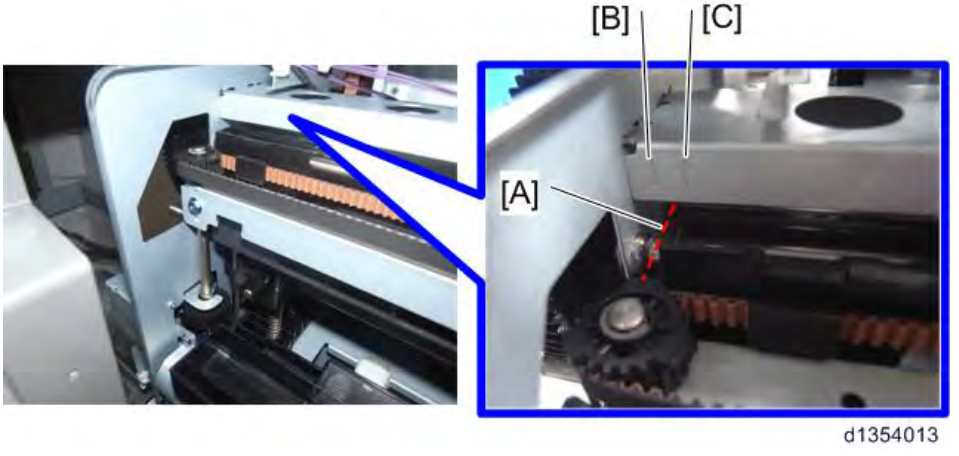
1. Pull out the stapling unit [A].

2. Timing gear [A] (x 1)

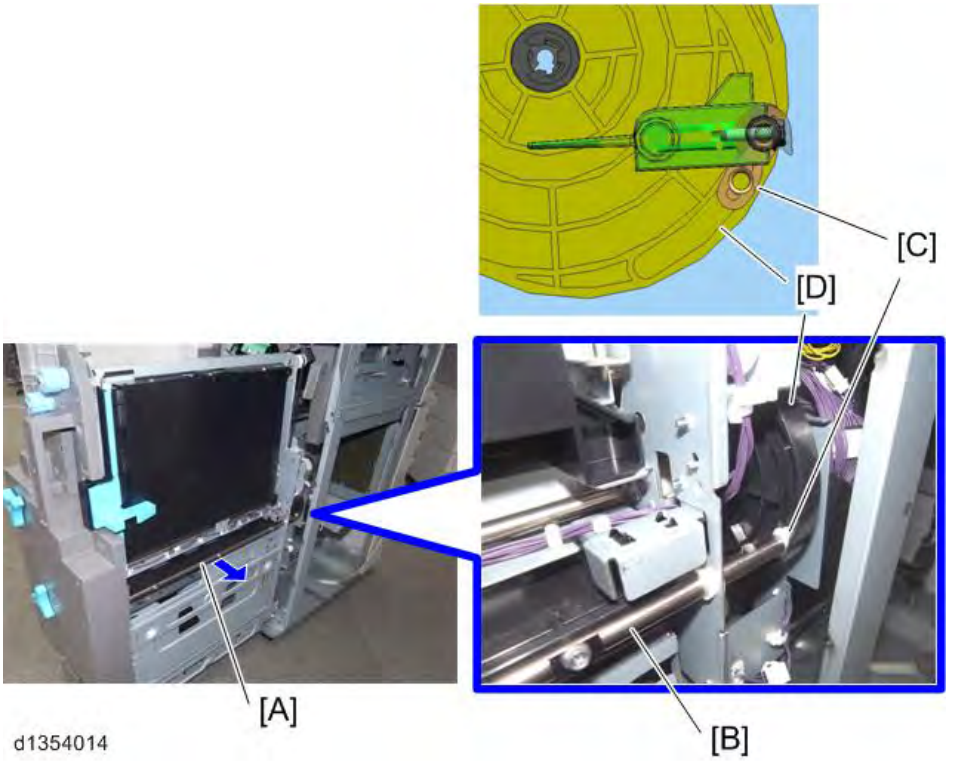
3. Turn the knob [A] clockwise to move the flat fold roller unit [B] in the direction of the arrow.



4. Move the flat fold roller unit until the edge of the unit [A] is between the guide lines [B] and [C] inscribed on the bracket.



5. Check that the fold plate [A] has been moved in the direction of the arrow as far as it can go and the bushing [C] on the rear end of the fold plate shaft [B] is aligned with the fold plate positioning cam [D].



6. Re-attach the timing gear [A] (☞ x 1).

7. Reassemble the finisher and connect it to the copier.
8. Turn on the copier.
9. After the finisher initialization is complete, check that the flat fold roller unit, fold plate and the cam are positioned as described in steps 4 and 5.

Paper Guide

1

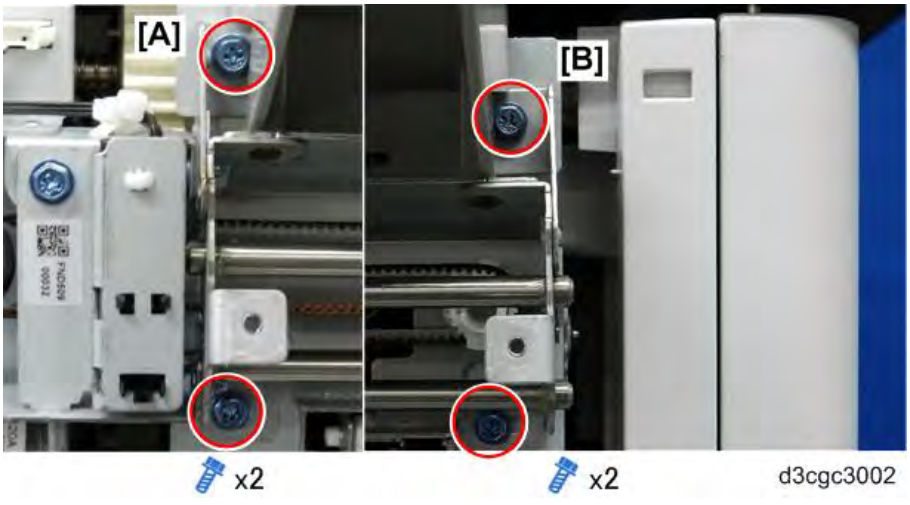
Paper Guide Unit

1. Remove the paper guide covers (page 12)
2. Disconnect the cover support bracket.

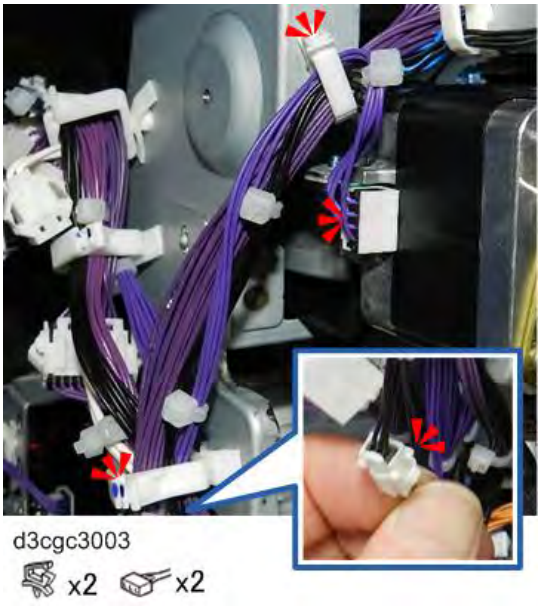
3. Remove the cover support bracket.

4. **Loosen** (do not remove) the screws on both ends of the paper exit. This will loosen the tray so you can move the tray slightly side-to-side in order to remove the bracket screws more easily.

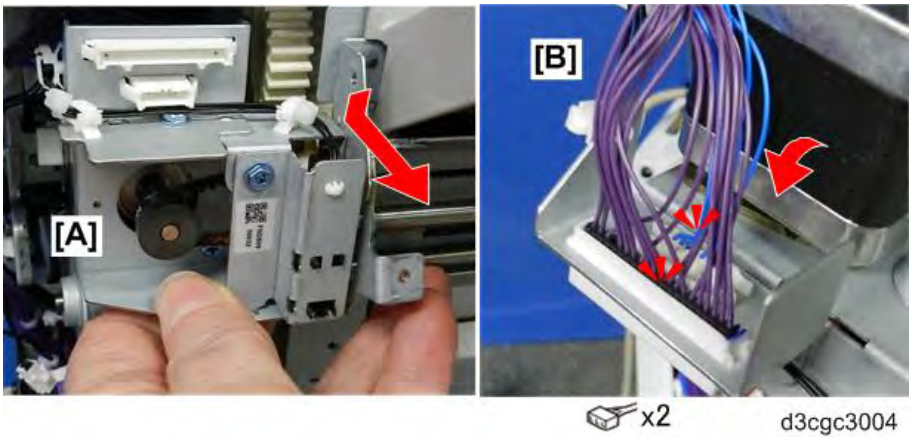
5. Disconnect the rear end of the paper guide unit bracket [A].
6. Disconnect the front end of the paper guide unit bracket [B].



7. At the rear, open the clamps and disconnect the motor and sensor harnesses.



8. Hold the unit bracket with both hands, lower the rear end [A], roll it toward you slightly, and then disconnect the harnesses [B].



9. Lay the unit on flat clean surface so you can see the paper guide motor [1] and paper guide position sensor bracket [2].

2. Detailed Descriptions

Overview

Specifications

Finisher SR3230

Item		Specification
Upper tray	Paper Sizes	A3 SEF,A4 LEF/ SEF, A5 LEF/ SEF, A6 SEF, B4 SEF, B5 LEF/ SEF, B6 SEF, 11″×17″ SEF, $8^1/_2$″×14″ SEF, $8^1/_2$″×11″ LEF/ SEF, 8″ ×13″ SEF, $7^1/_4$″×$10^1/_2$″ LEF/ SEF, $5^1/_2$″ ×$8^1/_2$″ LEF/ SEF, Postal Postcard SEF, 12″ ×18″ SEF, 10″×15″ SEF, 10″×14″ SEF, 13″ ×$19^1/_5$″ SEF, 13″×19″ SEF, $12^3/_5$″×$19^1/_5$″ SEF, $12^3/_5$″×$18^1/_2$″ SEF, 13″×18″ SEF, SRA3 SEF, SRA4 LEF/ SEF, Custom Size(90x139.7 to 330.2x487.7 mm)
	Capacity (Normal Paper)	• A4, $8^1/_2$″×11″ or smaller: 250 sheets • B4, $8^1/_2$″×14″ or smaller: 50 sheets * Up to 80g/m^2, no folding
	Paper thickness	52.0 to 220.0 g/m^2
Shift tray	Paper Sizes	A3 SEF, A4 LEF/ SEF, A5 LEF/ SEF, A6 SEF, B4 SEF, B5 LEF/ SEF, B6 SEF, 11″×17″ SEF, $8^1/_2$″×14″ SEF, $8^1/_2$″×11″ LEF/ SEF, 8″ ×13″ SEF, $7^1/_4$″×$10^1/_2$″ LEF/ SEF, $5^1/_2$″ ×$8^1/_2$″ LEF/ SEF, Postal Postcard SEF, 12″ ×18″ SEF, 10″×15″ SEF, 10″×14″ SEF, 13″ ×$19^1/_5$″ SEF, 13″×19″ SEF, $12^3/_5$″×$19^1/_5$″ SEF, $12^3/_5$″×$18^1/_2$″ SEF, 13″×18″ SEF, SRA3 SEF, SRA4 LEF/ SEF, Custom Size(90x139.7 to 330.2x4 87.7mm)

Item		Specification
Shift tray	Capacity (Normal Paper)	• A4 LEF, 8 1/2"×11" LEF: 3,000 sheets • A3 SEF, A4 SEF, B4 SEF, B5 LEF/ SEF, 11"×17" SEF, 8 1/2"×14" SEF, 8 1/2" ×11" SEF, 12"×18", SRA3 SEF, 13" ×19 1/5" SEF: 1,500 sheets • A5 LEF: 500 sheets • A5 SEF, A6 SEF, B6 SEF, 5 1/2"×8 1/2" SEF: 100 sheets * Up to 80g/m^2, no folding
Shift tray	Paper thickness	52.3 to 300.0g/m^2
	Paper size for shift operation	A3 SEF, A4 LEF/ SEF, A5 LEF/ SEF, B4 SEF, B5 LEF/ SEF, 11"×17" SEF, 8 1/2"×14" SEF, 8 1/2"×11" LEF/ SEF, 8"×13" SEF, 7 1/4" ×10 1/2" LEF/ SEF, 5 1/2"×8 1/2" LEF/ SEF, 12"×18" SEF, 10"×15" SEF, 10"×14" SEF, SRA4 SEF, Custom Sizes(125x139.7 to 304.8x457.2 mm)
	Paper thickness for shift operation	52.3 to 300.0g/m^2
Staple Tray	Paper sizes	A3 SEF, A4 LEF/ SEF, B4 SEF, B5 LEF/ SEF, 11"×17" SEF, 8 1/2"×14" SEF, 8 1/2"×11" LEF/ SEF, 8"×13" SEF, 7 1/4"×10 1/2" LEF/ SEF, 10"×15" SEF, 10"×14" SEF, Custom Sizes

Item		Specification
Staple Tray	Staple stack size (Normal Paper)	• A3 SEF, A4 LEF/ SEF, B4 SEF, B5 LEF/ SEF, 11″×17″ SEF, $8^1/_2$″×14″ SEF, $8^1/_2$″×11″ LEF/ SEF, 8″×13″ SEF, $7^1/_4$″×$10^1/_2$″ LEF/ SEF, 10″×15″ SEF, 10″×14″ SEF, $8^1/_2$″×13″ SEF, $8^1/_4$″×14″ SEF, $8^1/_4$″×13″ SEF, 8K SEF, 11″×14″ SEF, 11″×15″ SEF: 65 sheets • Mixed sizes: 65 sheets(A3 SEF/A4 LEF, B4 SEF/B5 LEF, 11″×17″ SEF/$8^1/_2$×11 LEF) * Up to 80g/ m^2, no folding • Z-folding 5 sheets (80 – 105 g/m^2) • 8 sheets (52 – 80 g/m^2) • Z-folding yes/no • When Z-folded paper and other paper are mixed, 1 sheet without Z-folding (52 to 80 g/m^2), 13 sheets (80 to 105 g/m^2) is upper limit
Staple Tray	Tray capacity after stapling (Normal Paper)	• A4 LEF, $8^1/_2$″×11″ LEF: 20 to 65 stapled sheets, 150 to 46 sets, 2 to 19 sheets 150 sets • A4 SEF, B5 SEF/ LEF, $8^1/_2$×11 SEF: 15 to 65 stapled sheets,100 to 23set, 2 to 14 sheets 100 sets • Other paper sizes: 15 to 65 stapled sheets 100 to 23 sets, 2 to 14 stapled sheets 100 sets • Mixed sizes: 65 sheets 23 sets (A3 SEF/A4 LEF, B4 SEF/B5 LEF, 11″×17″ SEF, $8^1/_2$×11 LEF) * Up to 80g/m^2, no folding
	Staple paper thickness	52.3 to 105.0 g/m^2 * A4 LT cover sheets (up to 256g/ m^2)1 to 2 mixed bundles possible

Item		Specification
	Stapling positions	Rear, front, rear oblique, left edge (x2), top edge (x2)
Punch specifications	Paper size	A3 SEF, A4 LEF/ SEF, A5 LEF/ SEF, B4 SEF, B5 LEF/ SEF, 11"×17" SEF, $8\frac{1}{2}$"×14" SEF, $8\frac{1}{2}$"×11" LEF/ SEF, 8"×13" SEF, $7\frac{1}{4}$" ×$10\frac{1}{2}$" LEF/ SEF, $5\frac{1}{2}$"×$8\frac{1}{2}$" LEF/ SEF, 10"×15" SEF, 10"×14" SEF, Custom Sizes
	Punch paper thickness	52.3 to 256.0g/m^2
	Punch position	2 holes
Max. power consumption		67 W (supplied from main machine)
Dimensions (w x d x h)		657×730×980 mm (26 x 29 x 39 in.)
Weight		Approximately 41 kg (90 lb.)

Booklet Finisher SR3240

Item		Specification
Upper tray	Paper Sizes	A3 SEF, A4 LEF/ SEF, A5 LEF/ SEF, A6 SEF, B4 SEF, B5 LEF/ SEF, B6 SEF, 11″×17″ SEF, $8^1/_2$″×14″ SEF, $8^1/_2$″×11″ LEF/ SEF, 8″×13″ SEF, $7^1/4$″×$10^1/_2$″ LEF/ SEF, $5^1/_2$″ ×$8^1/_2$″ LEF/ SEF, Postcards SEF, 12″×18″ SEF, 10″×15″ SEF, 10″ ×14″ SEF, 13″×$19^1/_5$″ SEF, 13″ ×19″ SEF, $12^3/_5$″×$19^1/_5$″ SEF, $12^3/_5$″×$18^1/_2$″ SEF, 13″×18″ SEF, SRA3 SEF, SRA4 LEF/ SEF, Custom Sizes(90x139.7 to 330.2x487.7 mm)
	Capacity (Normal Paper)	• A4, $8^1/_2$″×11″ or smaller: 250 sheets • B4, $8^1/_2$″×14″ and larger 50 sheets * Up to 80g/ m^2, no folding
	Paper thickness	52.3 to 220.0g/m^2

Item		Specification
Shift tray	Paper Sizes	A3 SEF, A4 LEF/ SEF, A5 LEF/ SEF, A6 SEF, B4 SEF, B5 LEF/ SEF, B6 SEF, 11"×17" SEF, $8^1/_2$"×14" SEF, $8^1/_2$"×11" LEF/ SEF, 8"×13" SEF, $7^1/_4$"×$10^1/_2$" LEF/ SEF, $5^1/_2$" ×$8^1/_2$" LEF/ SEF, Postal Postcard SEF, 12"×18" SEF, 10"×15" SEF, 10"×14" SEF, 13"×$19^1/_5$" SEF, 13"×19" SEF, $12^3/_5$"×$19^1/_5$" SEF, $12^3/_5$"×$18^1/_2$" SEF, 13"×18" SEF, SRA3 SEF, SRA4 LEF/ SEF, Custom Size(90x139.7 to 330.2x4 87.7mm)
	Capacity (Normal Paper)	• A4 LEF, $8^1/_2$"×11" LEF: 2,000 sheets • A3 SEF, B4 SEF, A4 SEF, B5 LEF/ SEF, 11"×17" SEF, $8^1/_2$" ×14" SEF, $8^1/_2$"×11" SEF, 12" ×18" SEF, SRA3 SEF, 13" ×$19^1/_5$" SEF: 1,000 sheets • A5 LEF: 500 sheets • A5 SEF, A6 SEF, $5^1/_2$"×$8^1/_2$" SEF, A6 SEF: 100 sheets * Up to 80g/m^2, no folding
	Paper thickness	52.0 to 300.0 g/m^2
	Paper size for shift operation	A3 SEF, A4 LEF/ SEF, A5 LEF/ SEF, B4 SEF, B5 LEF/ SEF, 11"×17" SEF, $8^1/_2$"×14" SEF, $8^1/_2$"×11" LEF/ SEF, 8"×13" SEF, $7^1/_4$"×$10^1/_2$" LEF/ SEF, $5^1/_2$"×$8^1/_2$" LEF/ SEF, 12"×18" SEF, 10"×15" SEF, 10" ×14" SEF, SRA4 SEF, Custom Sizes(125x139.7 to 304.8x457.2 mm)
	Paper thickness for shift operation	52.0 to 300.0 g/m^2

Item		Specification
Corner stapling specifications	Paper sizes	A3 SEF, A4 LEF/ SEF, B4 SEF, B5 LEF/ SEF, 11"×17" SEF, $8^1/_2$"×14" SEF, $8^1/_2$"×11" LEF/ SEF, 8"×13" SEF, $7^1/_4$"×$10^1/_2$" LEF/ SEF, 10" ×15" SEF, 10"×14" SEF, Custom Sizes
Corner stapling specifications	Staple stack size	• A3 SEF, A4 LEF/ SEF, B4 SEF, B5 LEF/ SEF, 11"×17" SEF, $8^1/_2$"×14" SEF, $8^1/_2$"×11" LEF/ SEF, $8^1/_2$"×13" SEF, $8^1/_4$"×14" SEF, $8^1/_4$"×13" SEF, 8"×13" SEF, 8K SEF, 11" ×15" SEF, 11"×14" SEF, 10" ×15" SEF, 10"×14" SEF, $7^1/_4$" ×$10^1/_2$" LEF/ SEF: 65 sheets • Mixed paper sizes 65 sheets(A3 SEF/A4 LEF, B4 SEF/B5 LEF, 11"×17" SEF/ $8^1/_2$"×11" LEF) * Up to 80g/m^2, no folding (Normal Paper) • Z-folding 5 sheets (80 - 105g/m^2) • 8 sheets (52 - 80g/m^2) When Z-folded paper and other paper are mixed, 1 sheet without Z-folding 8 sheets (52 to 80 g/m^2), 13 sheets (80 to 105 g/m^2) is upper limit

Item		Specification
Corner stapling specifications	Tray capacity after stapling (Normal Paper)	• A4 LEF, $8^1/_2$"×11" LEF: 13 to 65 stapled sheets, 150 to 30 sets, 2 to 12 sheets 150 sets • Other paper sizes: 10 to 65 stapled sheets 100 to 15 sets, 2 to 9 stapled sheets 100 sets • Mixed paper sizes Mixed sizes: 2 to 65 sheets 23 sets (A3 SEF/A4 LEF, B4 SEF/B5 LEF, 11"×17" SEF/ $8^1/_2$×11 LEF) * Up to 80g/m^2, no folding
	Staple paper thickness	52.3 to 105.0g/m^2 * A4 LT cover sheets (up to 256g/m^2)1 to 2 mixed bundles possible
	Stapling positions	Rear, front, rear oblique, left edge (x2), top edge (x2)

Item		Specification
Booklet stapling specifications	Booklet staple stack size	20 sheets (Normal Paper) * Less than 80g/m^2
	Booklet staple paper sizes	A3 SEF, A4 SEF, B4 SEF, B5 SEF, 11″×17″ SEF, 8$^1/_2$″×14″ SEF, 8$^1/_2$″×11″ SEF, 12″×18″ SEF, 11″×15″ SEF, 11″×14″ SEF, 10″×15″ SEF, 10″×14″ SEF, 13″×18″ SEF, SRA4 SEF, SRA3 SEF, Custom Sizes(W 182 to 330, L 257 to 457 However, Width range: 182, 207 to 225, 250 to 257, 279.4 to 306, 330 to 33, Length limit: B5 (257mm) or larger, up to 18 in.(457.2mm)
	Booklet output tray capacity	2 to 5 sheets, 30 booklets, 6 to 10 sheets: 15 booklets, 11 to 15 sheets 10 booklets, 16 to 20 sheets 6 booklets, approximately (These estimates may vary, depending on paper type.))
	Booklet staple paper thickness	64.0 to 105.0g/m^2 Cover sheets (less than 216 g/m^2), 1 booklet, 1 cover sheet
	Booklet staple position	2 staples, centered
	Booklet folding	Center
Punch specifications	Paper size	A3 SEF, A4 LEF/ SEF, A5 LEF/ SEF, B4 SEF, B5 LEF/ SEF, 11″×17″ SEF, 8$^1/_2$″×14″ SEF, 8$^1/_2$″×11″ LEF/ SEF, 8″×13″ SEF, 7$^1/_4$″×10$^1/_2$″ LEF/ SEF, 5$^1/_2$″×8$^1/_2$″ LEF/ SEF, 10″×15″ SEF, 10″×14″ SEF, Custom Sizes
	Punch paper thickness	52.3 to 256.0g/m^2
	Punch position	2 holes

Item		Specification
Fold specifications	Fold type	FM2: Equal Halves
	Half-fold paper sizes	A3 SEF, A4 SEF, B4 SEF, B5 SEF, 11"×17" SEF, $8^1/_2$"×14" SEF, $8^1/_2$"×11" SEF, 12"×18" SEF, 11"×15" SEF, 11"×14" SEF, 10"×15" SEF, 10"×14" SEF, 13"×18" SEF, SRA4 SEF, SRA3 SEF
	Half-fold paper thickness	64.0 to 105.0 g/m^2 Cover sheets (less than 216 g/m^2), 1 booklet, 1 cover sheet
	Multi-sheet fold paper sizes	A3 SEF, A4 SEF, B4 SEF, B5 SEF, 11"×17" SEF, $8^1/_2$"×14" SEF, $8^1/_2$"×11" SEF, 12"×18" SEF, 11"×15" SEF, 11"×14" SEF, 10"×15" SEF, 10"×14" SEF, 13"×18" SEF, SRA4
	Multi-sheet fold paper thickness	64.0 to 105.0g/m^2
Max. power consumption		67 W (supplied from main machine: DC24V +10% -5%)
Dimensions (w x d x h)		657×730×980 mm (26 x 29 x 39 in.)
Weight		Approximately 61kg (90 lb.)

Paper Specifications

Size	Normal	Thin (52-59)	Norm 1 (60-74)	Norm 2 (75-81)	Med Thk (82-105)	Thk 1 (160-169)	Thk 2 (170-220)	Thk 3 (221-256)	Thk 4 (257-300)
A3 SEF	◎	◎	◎	◎	◎	●	●	△	▲
B4 SEF	◎	◎	◎	◎	◎	●	●	△	▲

Size	Normal	Thin (52-59)	Norm 1 (60-74)	Norm 2 (75-81)	Med Thk (82-105)	Thk 1 (160-169)	Thk 2 (170-220)	Thk 3 (221-256)	Thk 4 (257-300)
A4 SEF	◎	◎	◎	◎	◎	●	●	△	▲
A4 LEF	■	■	■	■	■	●	●	△	▲
B5 SEF	◎	◎	◎	◎	◎	●	●	△	▲
B5 LEF	■	■	■	■	■	●	●	△	▲
A5 SEF	●	●	●	●	●	●	●	△	▲
A5 LEF	●	●	●	●	●	●	●	△	▲
B6 SEF	◇	◇	◇	◇	◇	◇	◇	▲	▲
A6 SEF	◇	◇	◇	◇	◇	◇	◇	▲	▲
13″×19.2″ SEF	-	◇	◇	◇	◇	◇	◇	▲	▲
12″×18″ SEF	-	◇	◇	◇	◇	◇	◇	▲	▲
12.6″×17.7″ (SRA3) SEF	-	◇	◇	◇	◇	◇	◇	▲	▲
11″×17″ SEF	-	◎	◎	◎	◎	●	●	△	▲
8 1/2″×14″ SEF	-	◎	◎	◎	◎	●	●	△	▲
8 1/2″×11″ SEF	-	◎	◎	◎	◎	●	●	△	▲
$8^1/_2$″×11″ LEF	-	■	■	■	■	●	●	△	▲
$5^1/_2$″×$8^1/_2$″ SEF	-	●	●	●	●	●	●	△	▲
$5^1/_2$″×$8^1/_2$″ LEF	-	◇	◇	◇	◇	◇	◇	▲	▲

Here is the key for the symbols.

◎ Corner stapling, booklet stapling, paper shift, proof tray, punching possible

○ Booklet stapling, shift tray, proof tray

■ Corner stapling, shift tray, proof tray, punching possible

● Shift tray, proof tray, punching possible

△ Shift tray, punching possible

◇ Shift tray, proof tray possible

▲ Shift tray possible

x Cannot be used

- Incompatible

	Color	Translucent	Label SA	Postcard	Transparencies
A3 SEF	●	△	-	-	-
B4 SEF	●	△	△	-	-
A4 SEF	●	△	△	△	△
A4 LEF	◎	△	△	△	△
B5 SEF	●	△	-	-	△
B5 LEF	◎	△	-	-	△
A5 SEF	-	-	-	-	-
A5 LEF	-	-	-	-	-
B6 SEF	-	-	-	-	-
B6 LEF	-	-	-	-	-
12″×18″ SEF	●*1	-	-	-	-
11″×17″ SEF	●	△	-	-	-
8 1/2″×14″ SEF	●	△	-	-	-
8 1/2″×11″ SEF	●	△	-	-	-
$8\frac{1}{2}$″×11″ LEF	◎	△	-	-	-
$5\frac{1}{2}$″×$8\frac{1}{2}$″ SEF	-	-	-	-	-

	Color	Translucent	Label SA	Postcard	Transparencies
$5^1/_2$″×$8^1/_2$″ LEF	-	-	-	-	-

*1 No corner stapling

Here is the key for the symbols.

◎ Corner stapling, booklet stapling, paper shift, proof tray, punching possible

● Shift tray, proof tray, punching possible

○ Booklet stapling, shift tray, proof tray

△ Shift tray, punching possible

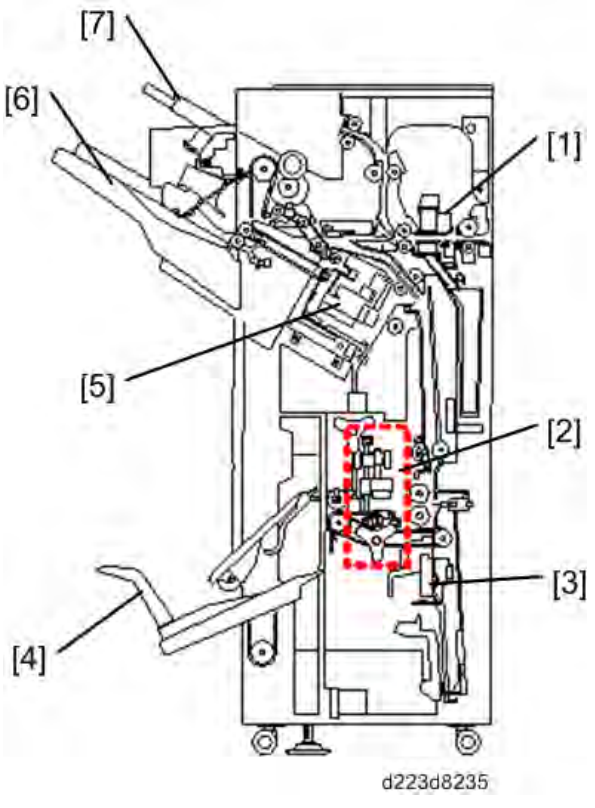
◇ Shift tray, proof tray possible

x Cannot be used

- Incompatible

Layout

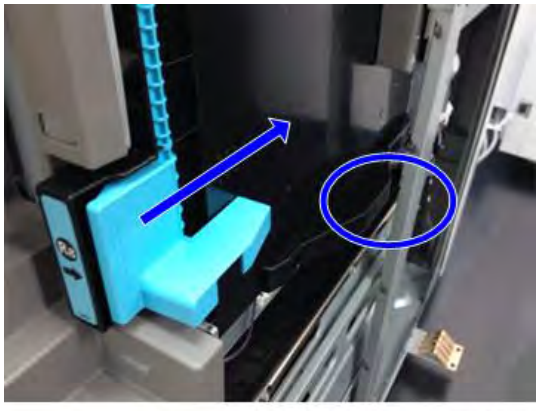
General Layout



No.	Name	No.	Name
1	Punch Units	5	Corner Stapler
2	Side-to-Side Fold Roller	6	Shift Tray
3	Booklet Stapler	7	Proof Tray
4	Booklet Staple Tray	-	-

Note

- The jam release lever R8 closes completely when the part shown below in the blue circle touches the frame while pushing the booklet stapler unit into the finisher.



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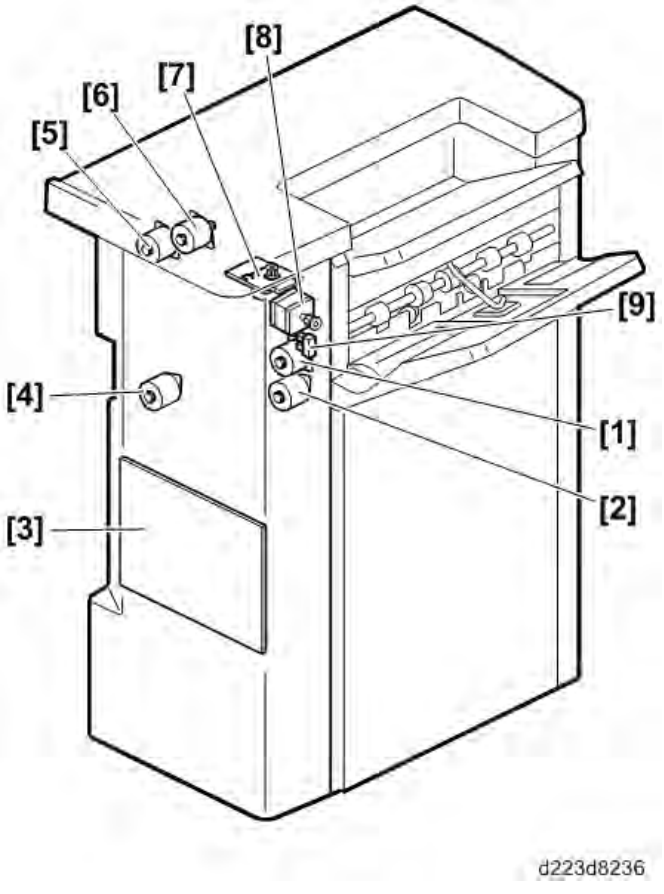
Electrical Component Layout



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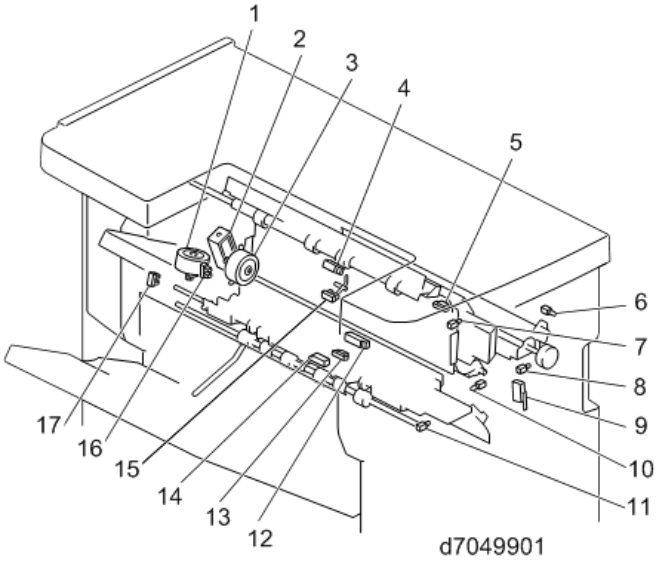
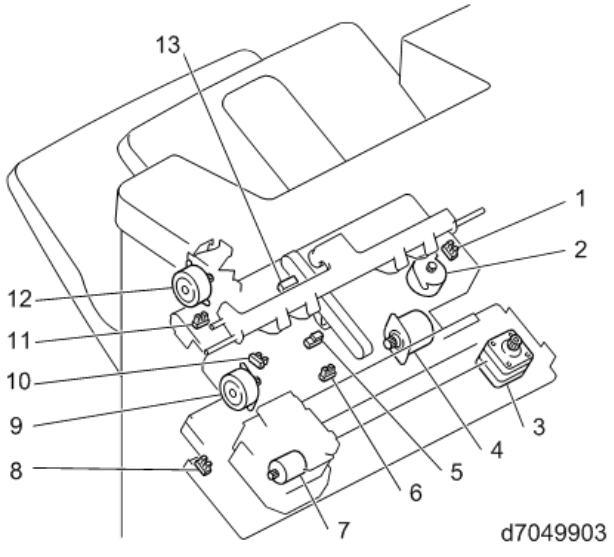
No.	Part
1	Exit Motor
2	Transport Motor
3	Main Control Board
4	Pre-stack Transport Motor
5	Entrance Transport Motor
6	Horizontal Transport Motor
7	Tray Lift Motor
8	Paper Guide Motor
9	Paper Guide HP Sensor

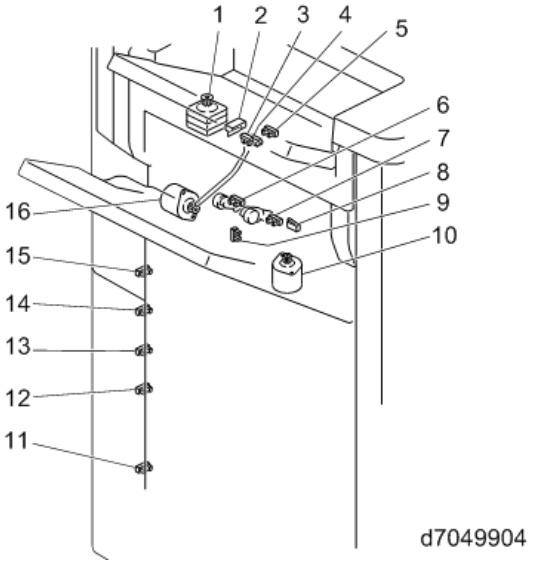


No.	Part	No.	Part
1	Shift Motor	10	LED 3
2	Upper Junction Gate Solenoid	11	LED 2
3	Lower Junction Gate Motor	12	Horizontal Transport Sensor
4	Proof Tray Full Sensor	13	Switchback Transport Sensor

No.	Part	No.	Part
5	Entrance Sensor	14	Transport Path Paper Sensor
6	LED 5	15	Proof Tray Exit Sensor
7	LED 1	16	Lower Junction Gate JP Sensor
8	LED 4	17	Shift Roller HP Sensor
9	Front Door Switch		

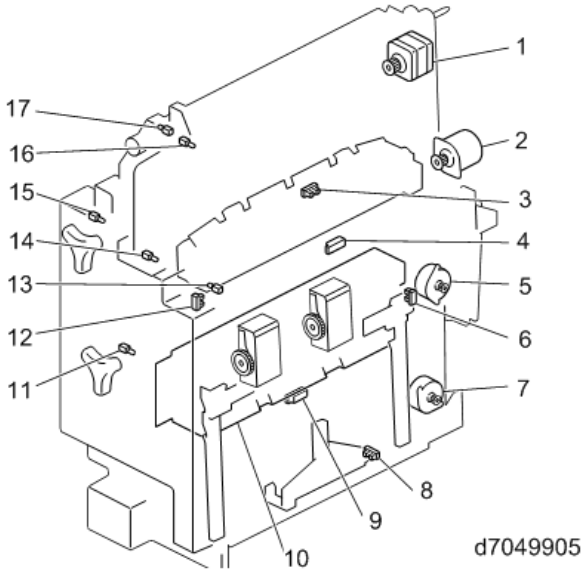


No.	Part	No.	Part
1	Jogger Fence HP Sensor	8	Stapler Move HP Sensor
2	Jogger Motor	9	Leading Edge Guide Motor
3	Corner Stapler Movement Motor	10	Leading Edge Guide HP Sensor
4	Feed-out belt motor	11	Positioning Roller HP Sensor
5	Staple Tray Paper Sensor	12	Positioning Roller Motor
6	Feed-out Belt HP Sensor	13	Shift Tray Exit Sensor
7	Corner Stapler Motor		

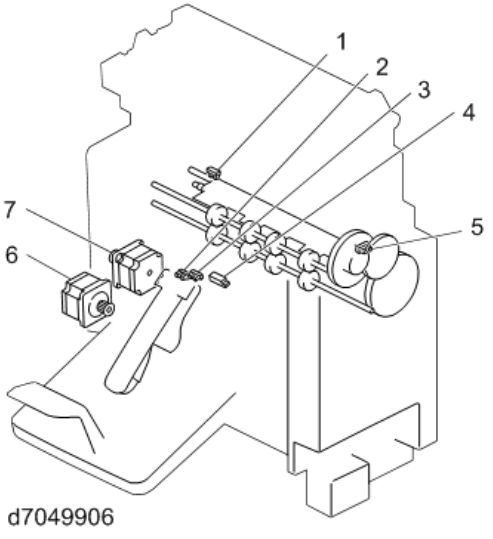


No.	Part	No.	Part
1	Paper Exit Guide Plate Motor	9	Return Roller HP Sensor
2	Paper Exit Guide Plate Limit Switch	10	Return Roller Motor
3	Booklet Stack Height Sensor 1	11	Shift Tray Lower Limit Sensor 5
4	Booklet Stack Height Sensor 2	12	Shift Tray Lower Limit Sensor 4
5	Exit Guide Plate HP Sensor	13	Shift Tray Lower Limit Sensor 3
6	Trailing Edge Press HP Sensor	14	Shift Tray Lower Limit Sensor 2
7	Shift Paper Height Sensor	15	Shift Tray Lower Limit Sensor 1
8	Upper Tray Height Limit Switch	16	Trailing Edge Press Motor

Booklet Finisher SR3240 Electrical Components

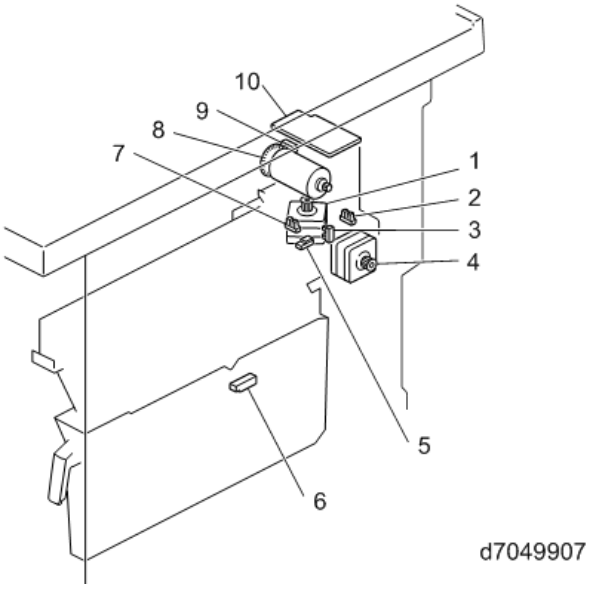


No.	Part	No.	Part
1	Booklet Jogging Pawl Movement Motor	10	Booklet Stapler Motor
2	Shift Roller drive Motor	11	Booklet LED 1
3	Booklet Jogging Pawl HP Sensor	12	Booklet Guide Plate Sensor
4	Booklet Upper Transport Path Stack Sensor	13	Booklet LED 2
5	Booklet Jogger Motor	14	Booklet LED 3
6	Booklet Jogging HP Sensor	15	Booklet LED 4
7	Booklet Bottom Fence Motor	16	Booklet LED 5
8	Booklet Trailing Edge Bottom Fence HP Sensor	17	Booklet LED 6
9	Booklet Lower Transport Path Stack Sensor		



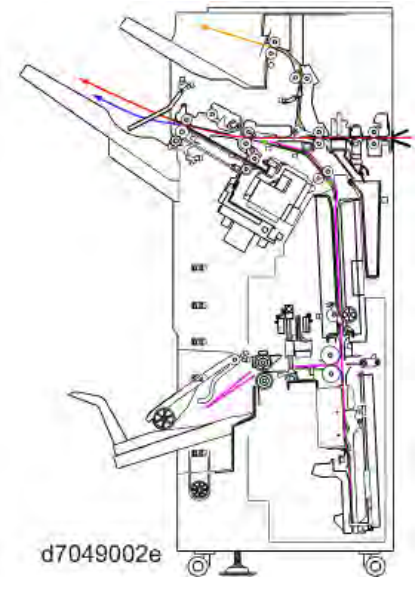
No.	Part
1	Fold Plate HP Sensor
2	Booklet Tray Full Sensor 2
3	Booklet Tray Full Sensor 1
4	Booklet Exit Sensor 1
5	Fold Plate Cam HP Sensor
6	Fold Transport Motor
7	Press Fold Motor

Punch Units



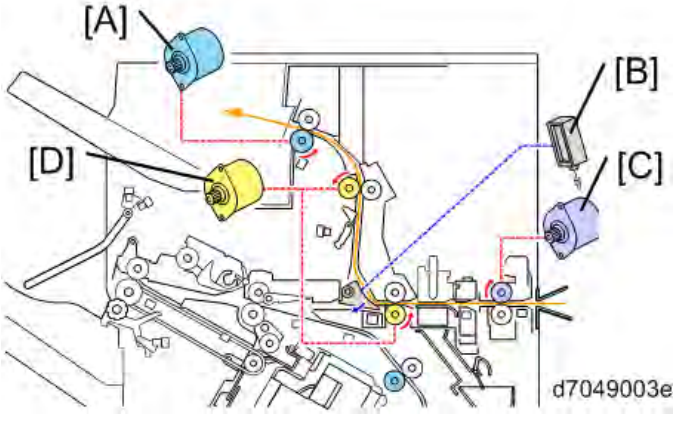
No.	Part
1	Punch Unit Movement Motor
2	Punch Unit HP Sensor
3	Punch Registration HP Sensor
4	Punch Registration Motor
5	Punch Registration Sensor
6	Punchout Hopper Full Sensor
7	Punch HP Sensor
8	Punch Drive Motor
9	Punch Motor Rotation Sensor
10	Punch Unit Control Board

Transport Layout



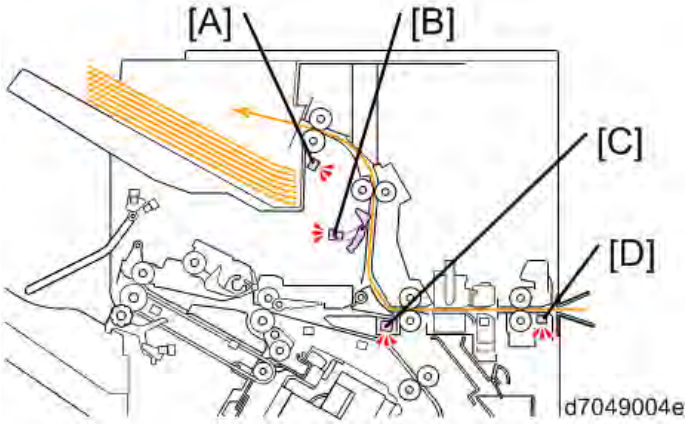
Red	Straight Through Path
Orange	Proof Path
Green	Pre-stack Path
Purple	Corner Staple Path
Pink	Booklet Staple Path

Proof Transport Layout (Drive)



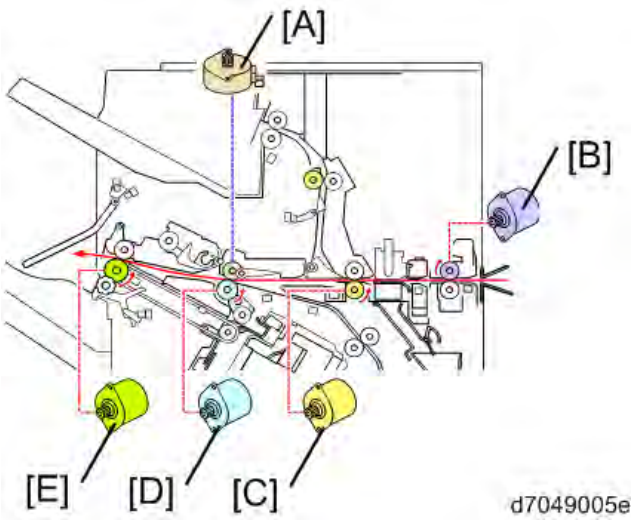
No.	Name	No.	Name
A	Proof Exit Motor	C	Entrance Transport Motor
B	Junction Gate Solenoid	D	Horizontal Transport Motor

Proof Transport Layout (Sensors)



No.	Name	No.	Name
A	Proof Tray Full Sensor	C	Horizontal Transport Sensor
B	Proof Exit Sensor	D	Entrance Sensor

Shift Transport Layout (Drive)

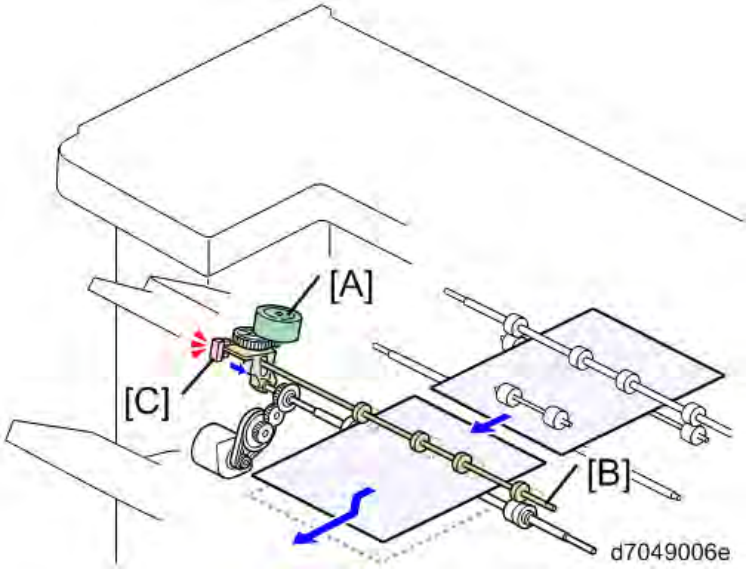


No.	Name	No.	Name
A	Shift Roller Motor (shift only)	D	Relay Transport Motor
B	Entrance Transport Motor	E	Upper Tray Exit Motor
C	Horizontal Transport Motor		

Operation Details

Shift Operation (Shift Transport)

To output paper, the shift roller motor [A] moves the shift roller [B] side-to-side while the shift roller is driven. The shift roller HP sensor [C] is used to control this mechanism.

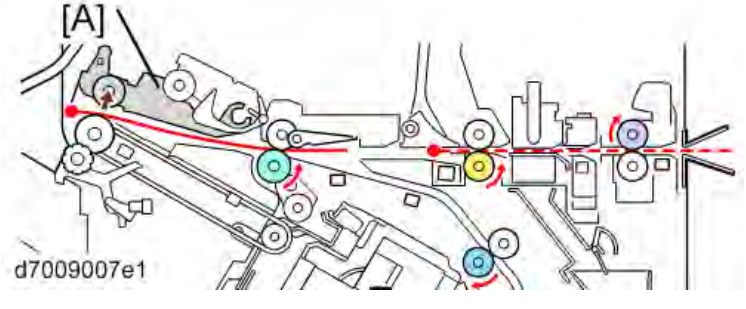


Pre-stack Operation (In Corner Stapling)

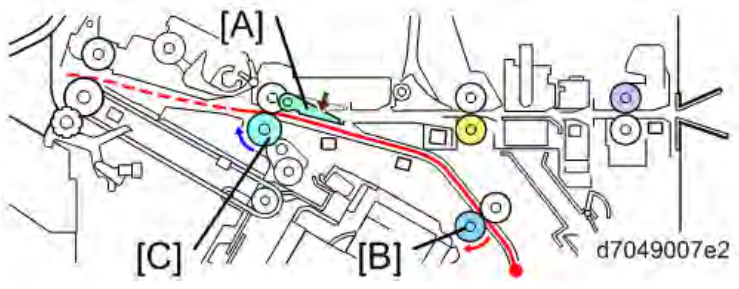
- **Pre-stack Capacity:** 1 sheet
- **Pre-stack Size:** A4 SEF/LEF, B5 SEF/LEF, LT SEF/LEF

There are four steps as follows:

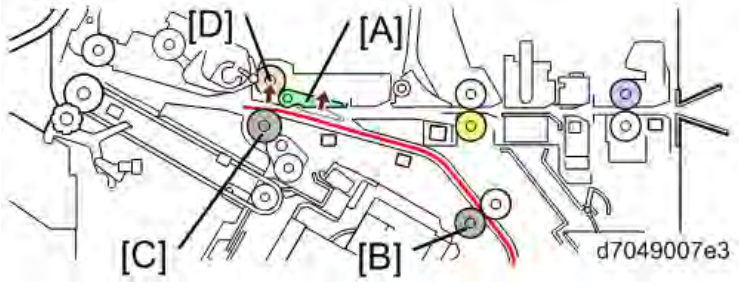
1. The upper tray exit guide plate [A] moves up (opens). Paper comes through the entrance transport path and reaches the relay transport path.



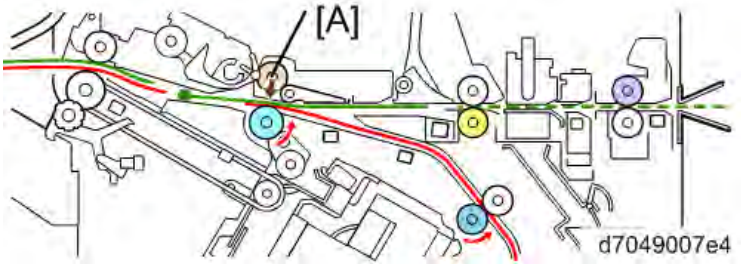
2. After paper passes the pre-stack junction gate [A], the pre-stack junction gate [A] moves down (closes) and the relay transport roller [C] rotates in reverse. The pre-stack roller [B] rotates to transport paper to the pre-stack position.



3. The rotation of the relay transport roller [C] and the pre-stack roller [B] stops, and the pre-stack junction gate [A] moves up (opens). The shift roller [D] also moves up to release the pressure between itself [D] and the relay transport roller [C].



4. The following sheet comes through the entrance and reaches the relay transport path. After that, the shift roller [A] drops to press the pre-stacked sheet and the following sheet. Then with the pre-stacked sheet, the following sheet goes to the next process (corner stapling).

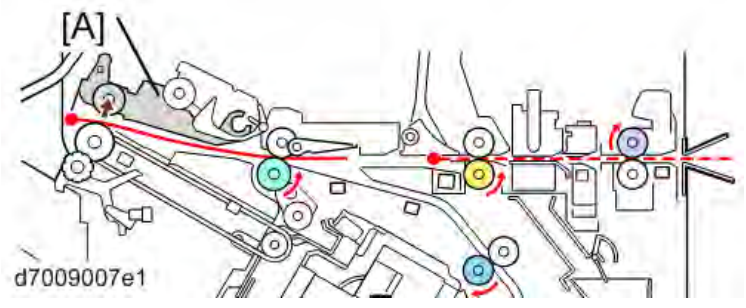


Pre-stack Operation (Booklet Stapling)

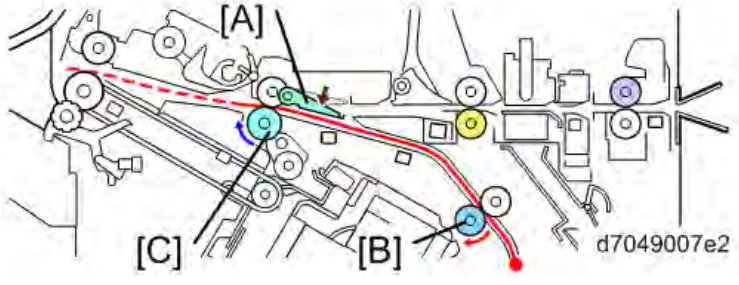
- **Pre-stack Capacity:** 2 sheets
- **Pre-stack Size:** All Sizes

There are five steps as follows:

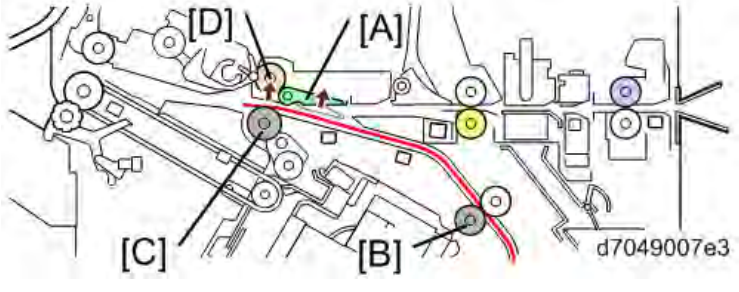
1. The upper tray exit guide plate [A] moves up (opens). Paper comes through the entrance transport and reaches the relay transport path.



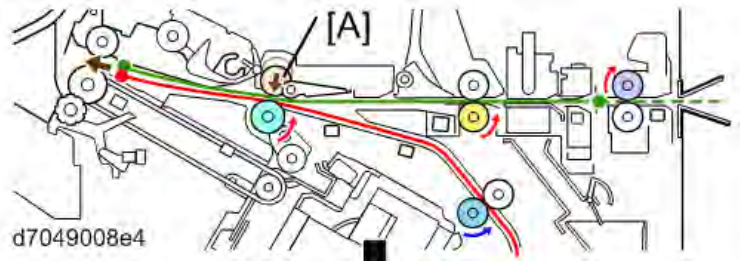
2. The pre-stack junction gate [A] drops (closes) and the relay transport roller [C] rotates in reverse. The pre-stack roller [B] rotates to transport paper to the pre-stack position.



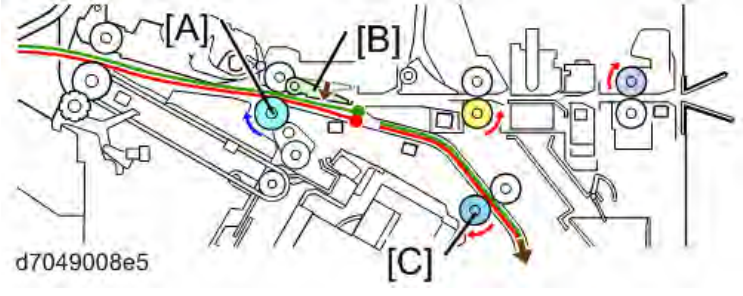
3. The rotation of the relay transport roller [C] and the pre-stack roller [B] stops, and the pre-stack junction gate [A] moves up (opens). The shift roller [D] moves up to release the pressure between itself [D] and the relay transport roller [C].



4. The following sheet comes thorough the entrance and reaches the relay transport path. After that, the shift roller [A] drops to press the pre-stacked sheet and the following sheet. With the pre-stacked sheet, the following sheet goes toward the exit (does not pass through completely).



5. The pre-stack junction gate [B] drops (closes) again, and the relay transport roller [A] rotates in reverse and the pre-stack roller [C] rotates to send two sheets paper (pre-stacked sheet and the following sheet) to the booklet stapling path.



Upper Tray Shift Drive / Limit Sensor / Full Sensor

Upper Tray Shift Up/down

The upper tray lift motor [A] moves the upper tray up/down.

Upper-position Detection

With the actuator, the limit sensor [B] detects the upper position of the tray (without output paper). To prevent too much moving upward, the forced stop switch (interlock switch) [C] is installed. When the upper tray moves up to the upper position but doesn't stop, the forced stop switch is pushed and the tray shift motor [A] stops.

Upper Tray Full Detection

Condition 1

Five tray full sensors [D] are installed on the rear side of the machine.

SR3240: Three sensors to detect 500, 1000, 2000 sheets

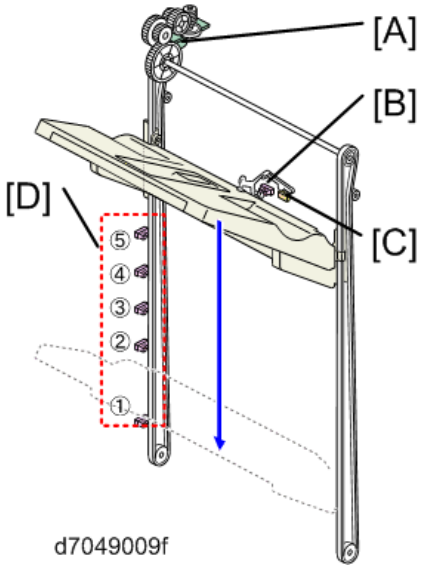
SR3230: Three sensors to detect 500, 1500, 3000 sheets

Booklet Finisher SR3240

State	Sensors	Paper Size	Length
500 sheets	Shift Tray Lower Limit Sensor 5	A5 SEF,A5 LEF, B6 SEF,HLT LEF, A6 SEF	148 to 182 mm
1,000 sheets	Shift Tray Lower Limit Sensor 4	A3 .SEF, A4. SEF, B4 SEF, B5 SEF, B5 LEF, DLT SEF, LG, SEF, LT SEF, 12"x18" SEF, SRA3,13"x19.2" SEF	182 to 488 mm
2,000 sheets	Shift Tray Lower Limit Sensor 2	A4 LEF, LT LEF	

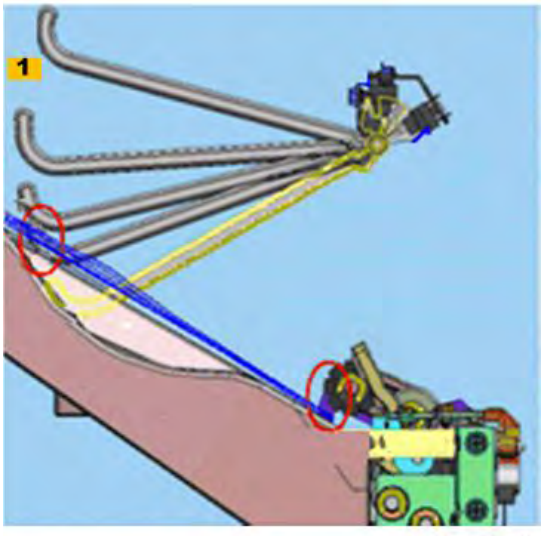
Finisher SR3230

State	Sensors	Paper Size	Length
500 sheets	Shift Tray Lower Limit Sensor 5	A5 SEF, A5 LEF, B6 SEF, HLT SEF, A6 SEF	148 to 182 mm
1,500 sheets	Shift Tray Lower Limit Sensor 3	A3 SEF, A4 SEF, B4 SEF, B5 SEF, B5 LEF, DLT SEF, LG SEF, LT SEF, 12"x18" SEF, SRA3 SEF, 13"x19.2" SEF	182 to 488 mm
3,000 sheets	Shift Tray Lower Limit Sensor 1	A4 LEF, LT LEF	



Condition 2

When the feeler rises as far as "1", and remains there for 13 sec., the tray is detected full. The purpose is to accurately detect tray full for stacks of Z-folded paper, or incorrectly stacked documents.



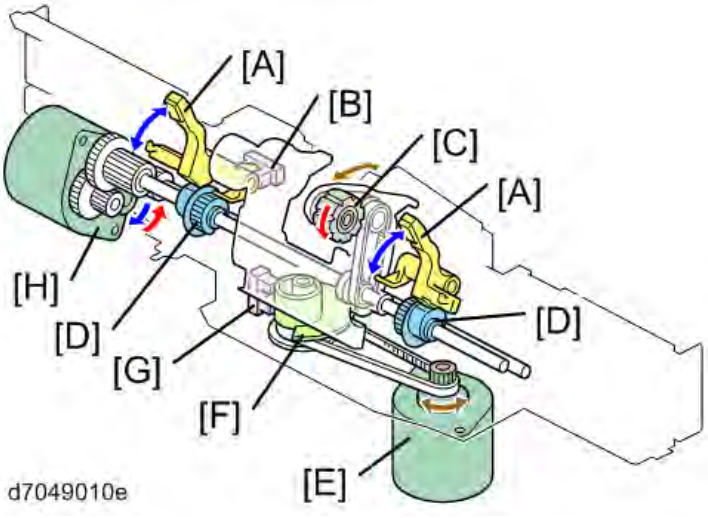
d3cgc3014

Condition 3

Shift tray detection input check: SP6123-35 normally set to "0" (default), tray not full.

Pull-in Roller / Paper Stack Holder

Components

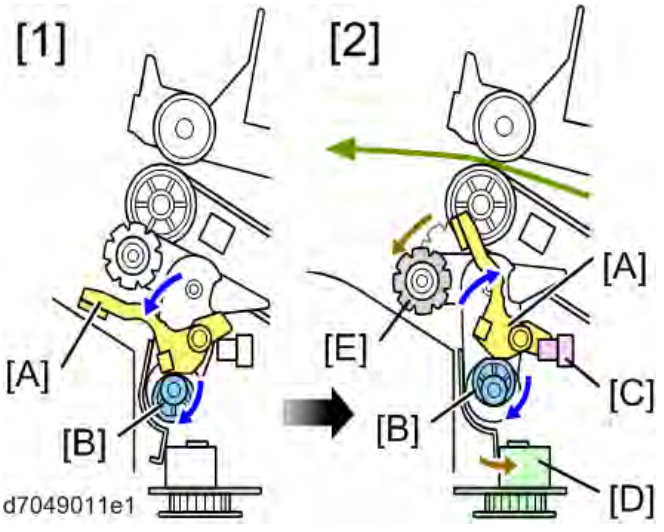


No.	Name	No.	Name
A	Paper Stacking Holder	E	Stacking Sponge Roller Fluctuation Motor
B	Holder HP Sensor	F	Stacking Sponge Roller Cam
C	Stacking Sponge Roller	G	Stacking Sponge Roller HP Sensor
D	Paper Stacking Holder Cam	H	Paper Stacking Holder Motor

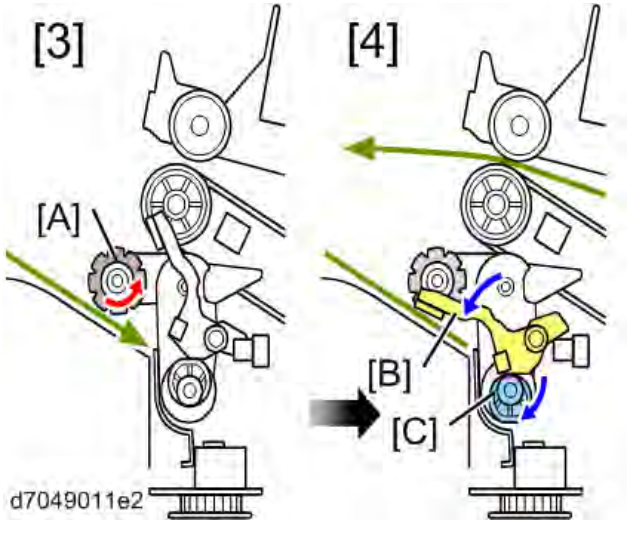
Operation

There are five steps in the operation:

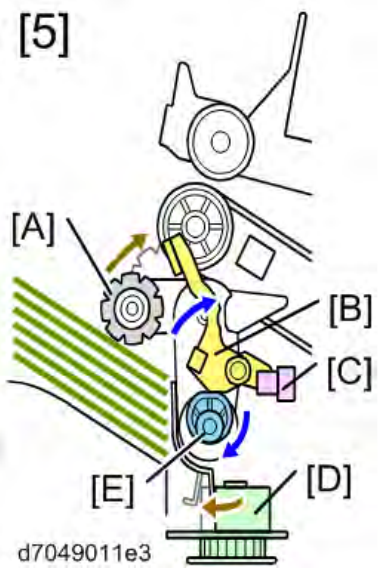
1. When a job starts, the paper stacking holder motor rotates the paper stacking holder cam [B] to move the paper stacking holder [A] down.
2. The stacking sponge roller fluctuation motor rotates the stacking sponge roller cam [D] to move the stacking sponge roller [E] down. The paper stacking holder motor rotates the paper stacking holder cam [B] to lift the paper stacking holder [A] up to its HP (until the paper stacking holder interrupts the paper stacking holder HP sensor [C]).



3. The paper stacking holder motor drives in reverse to let the stacking sponge roller [A] pull the output paper in.
4. The paper stacking holder motor rotates the paper stacking holder cam [C] to drop the paper stacking holder [B] (until job end, the machine repeats step 3 and step 4).

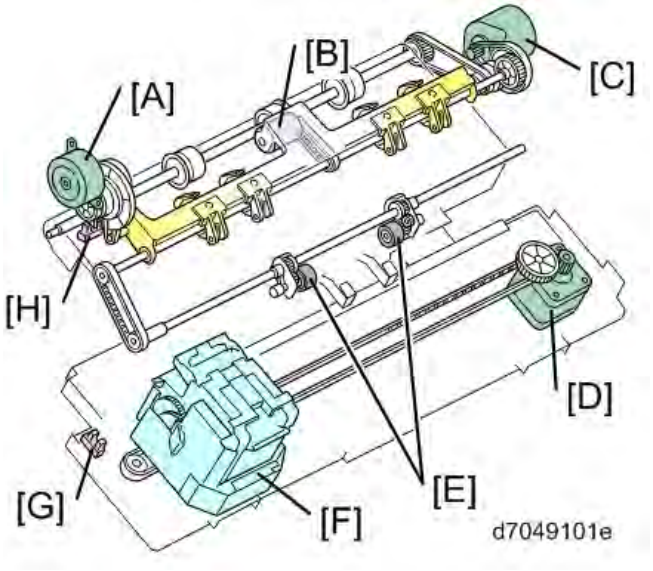


5. After job end, the stacking sponge fluctuation motor rotates the stacking sponge roller cam [D] to lift the stacking sponge roller [A] up to its HP position. At the same time, the paper stacking holder motor rotates the holder cam [E] to lift the paper stacking holder [B] up to its HP (until the paper stacking holder HP sensor [C] detects the end of the paper stacking holder [B]).



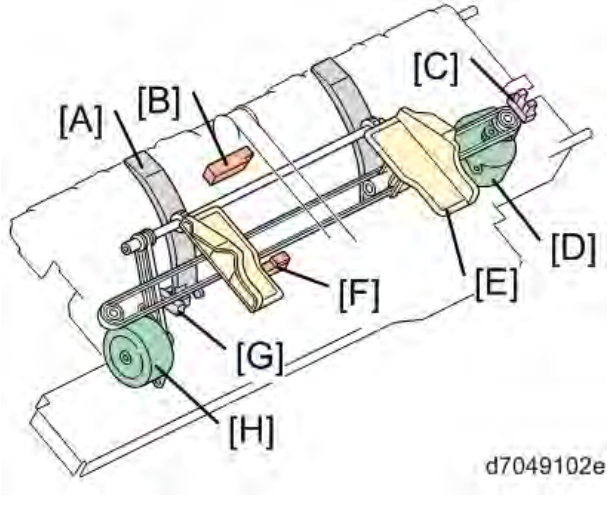
Corner Stapling

Components

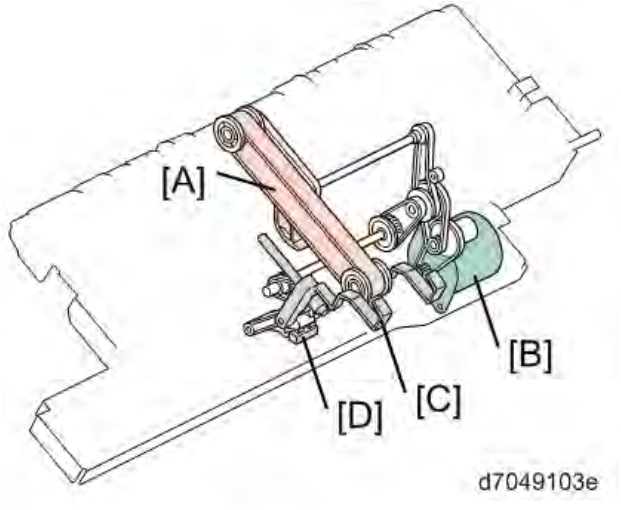


No.	Name	No.	Name
A	Positioning Roller Lift Motor	E	Drag Roller

No.	Name	No.	Name
B	Positioning Roller	F	Stapler
C	Exit Motor	G	Stapler HP Sensor
D	Stapler Movement Motor	H	Positioning Roller HP Sensor



No.	Name	No.	Name
A	Edge Guide	E	Jogger Fence
B	Upper Tray Exit Sensor	F	Staple Tray Paper Sensor
C	Jogger HP sensor	G	Edge Guide HP Sensor
D	Jogger Motor	H	Edge Guide Motor

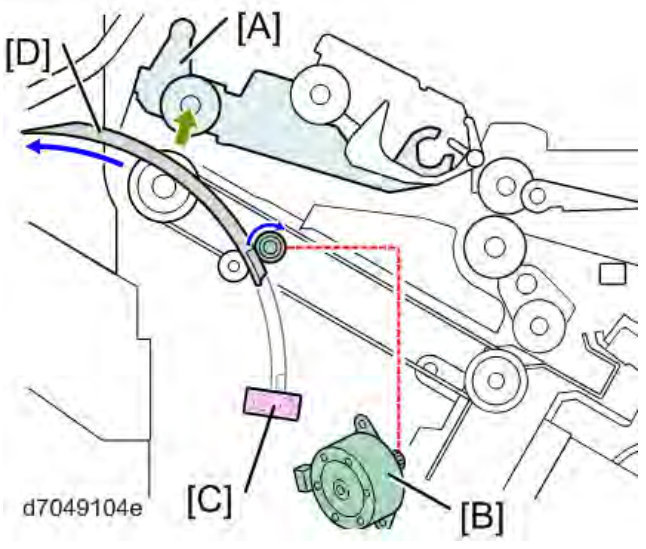


No.	Name	No.	Name
A	Stack Feed-out Belt (with stack feed-out pawl)	C	Trailing Edge Fence
B	Stack Feed-out Motor	D	Stack Feed-out Pawl HP

Edge Guide

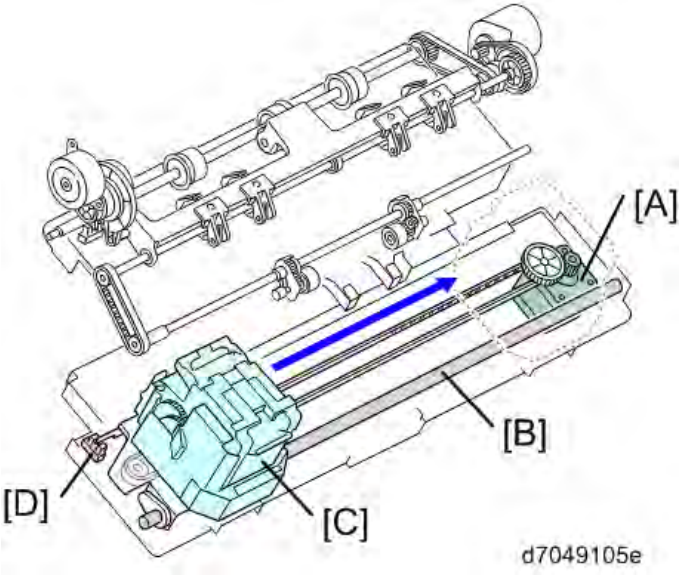
This machine applies a corner staple to the paper stack while it is hanging out of the exit. At this time, to prevent the paper stack from dropping to the upper tray, the edge guide [D] comes out of the unit. The edge guide operates as follows:

1. When a job starts, the upper tray guide plate [A] shifts up.
2. The edge guide motor [B] drives to push the edge guide [D] out. The edge guide retreats into the machine when the last sheet of a job is output (the edge guide HP sensor [C] detects the edge guide).



Stapler Movement

The stapler movement motor [A] moves the stapler [C] along the guide rod [B]. After a job finishes, the stapler [C] returns to its HP (the stapler HP sensor [D] detects the base of the stapler).

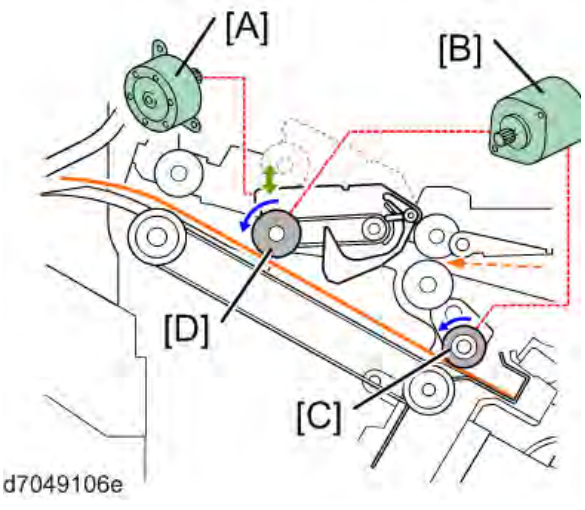


Positioning Roller / Drag Roller

The positioning roller and drag roller operate as follows:

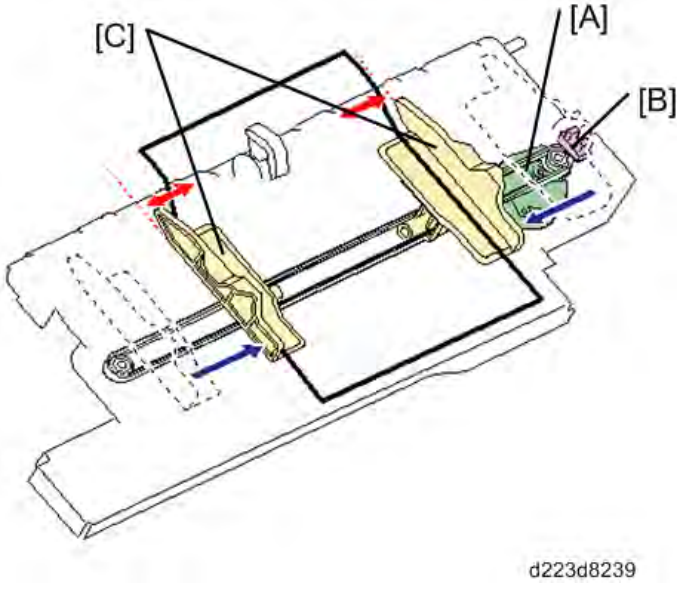
1. The positioning roller shift motor [A] moves the positioning roller [D] down at the start of every job.

2. The positioning roller motor [B] rotates the positioning roller [D] to transport paper to the staple tray.
3. The positioning roller motor [B] also rotates the drag roller [C]. The drag roller [C] is a sponge roller that pushes paper against the trailing edge fence, in order to hold paper in the stapling position.



Jogger

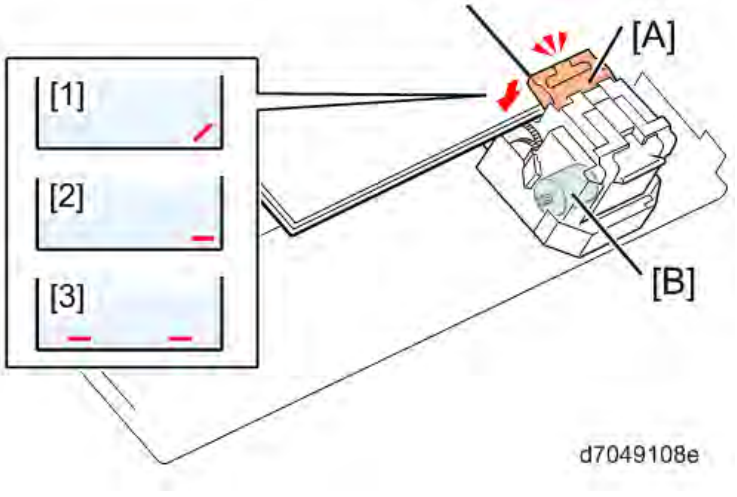
The jogger motor [A] moves the jogger fences [C] to the ready position and wait for the first sheet. As each sheet enters, the jogger fences push toward the center. At the end of the job, the jogger fences return to their HP and stop. The jogger fence HP sensor [B] detects the jogger fence at the home position.



Stapling

The staple hammer motor [B] pushes the staple hammer [A] down in order to staple the paper stack. The stapling positions are as follows:

- **For oblique stapling:** [1]
- **For horizontal stapling:** [2]
- **For horizontal stapling at 2 points**: [3]



Feeding-out

The trailing edge fence [B] moves paper up to the proper position to output. Then the stack feed-out pawl [A] that is attached to the stack feed-out belt [C] pushes the paper out. The stack feed-out motor [D] moves the stack feed-out pawl [A] and the trailing edge fence [B]. After a stack is output, both the trailing edge fence [B] and stack feed-out pawl [A] return to their HP.

There are two types of stack output.

- 1. Pawl, exit roller: Small sizes (A4, LT, B4 SEF)

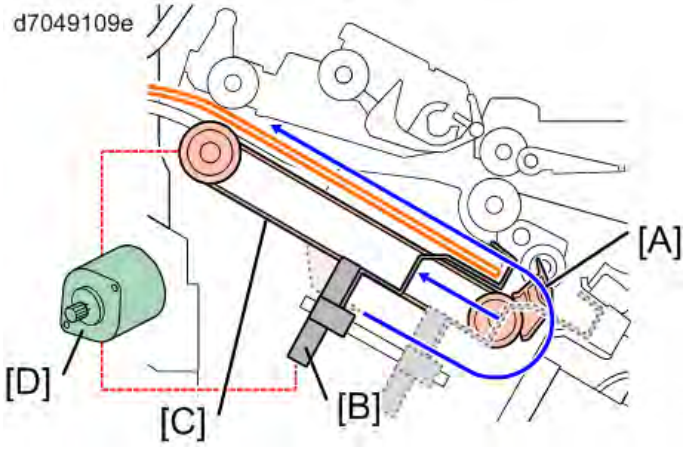
  Output is done by the exit roller as described above.

- 2. Roller exit: A4, LT, B5 LEF

  Only the exit roller is used to output the stack, without using the trailing edge fence and the stack feed-out pawl.

For Large Sizes (A3, B4, LG, DLT)

- 1 to 10 sheets: Roller exit method
- More than 11 sheets: Pawl, exit roller method



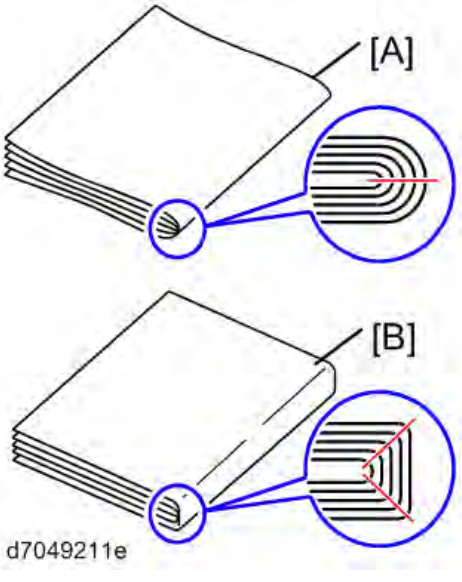
Saddle Stitching (Booklet Stapling)

A New Type of Saddle Stitching

Compared to normal center stapling, center stapling with this finisher can reduce the bulge at the center of the booklet.

[A] Common saddle stitching

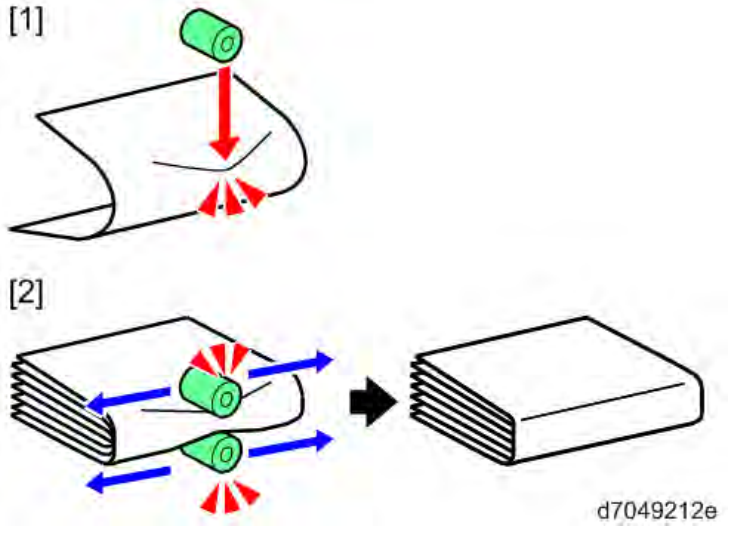
[B] Saddle stitching with this finisher



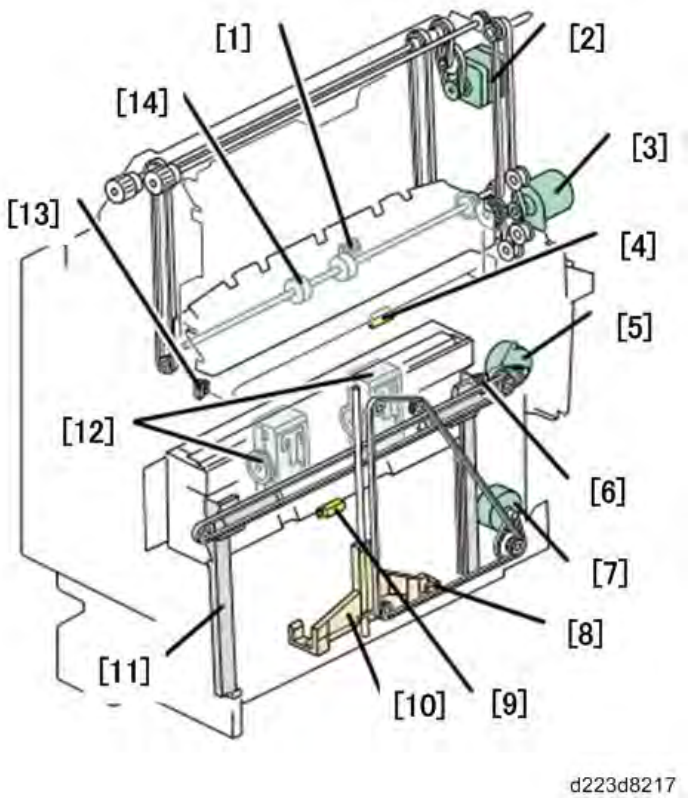
Saddle Stitching with This Finisher

Until now, very heavy pressure had to be applied in order to shape the saddle, and this could not be done unless the finisher was very large. This finisher, however, in spite of being very small, uses the device described below to achieve a better saddle shape.

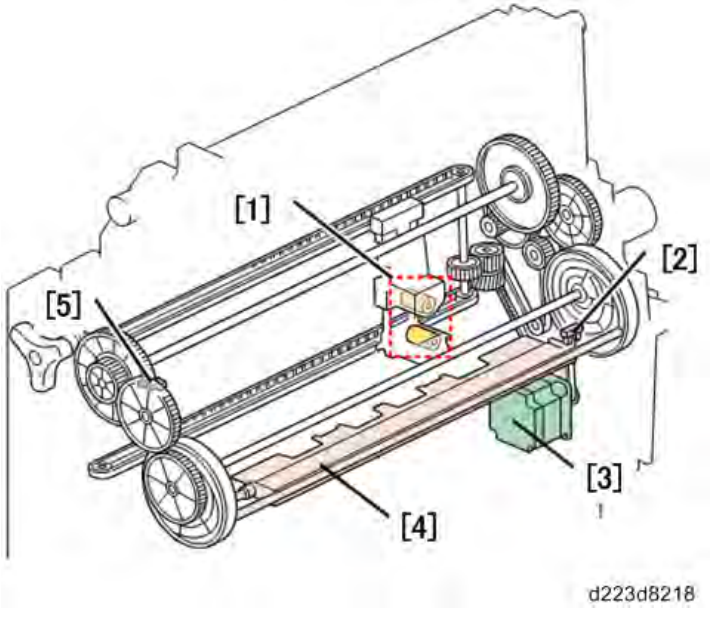
1. Pressure is applied to the fold with a roller to form the saddle.
2. Pressure is applied while the paper is buckled at the top and bottom with two rollers to form the saddle. The rollers move to front and back to strengthen the crease with two folds, not just one fold.



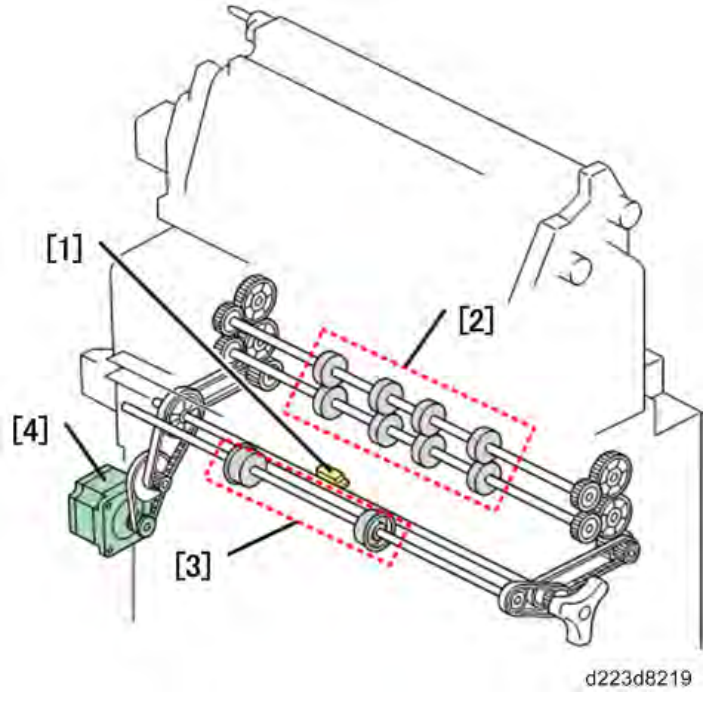
Components



No.	Name	No.	Name
1	Stack junction Gate HP Sensor	8	Bottom Fence HP Sensor
2	Shift Roller Lift Motor	9	Booklet Lower Transport Path Paper Sensor
3	Shift Roller Drive Motor	10	Bottom Fence
4	Booklet Upper Transport Path Paper Sensor	11	Jogger Fence
5	Jogger Fence Motor	12	Booklet Stapler
6	Jogger Fence HP Sensor	13	Guide Open/Closed Sensor
7	Bottom Fence Motor	14	Shift Roller



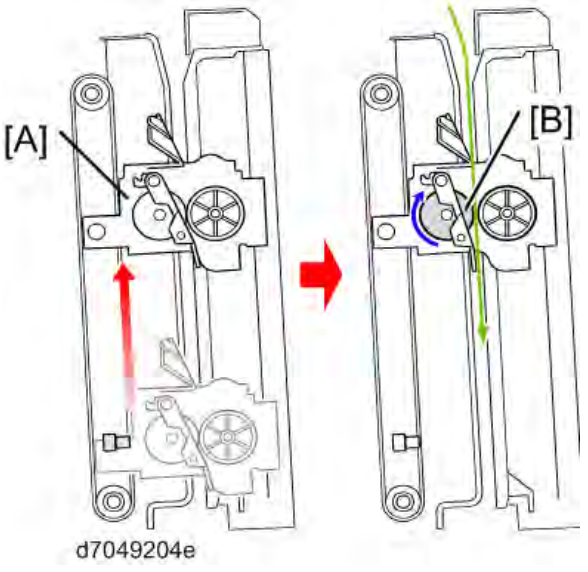
No.	Name	No.	Name
1	Side-to-side Shift Fold Roller	4	Fold Plate
2	Fold Plate HP Sensor	5	Fold Plate Cam Sensor
3	Fold Plate Motor		



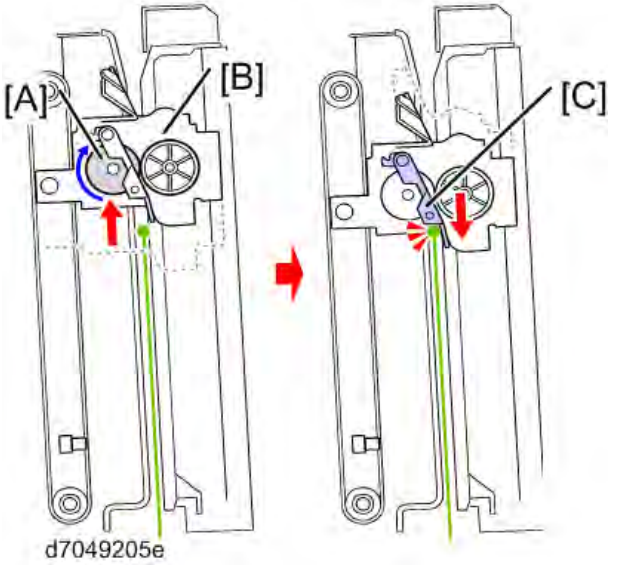
No.	Name	No.	Name
1	Fold Unit Exit Sensor	3	Fold Unit Exit Roller
2	Fold Roller	4	Fold Roller Motor

Booklet Staple Transport

When paper begins to go through the booklet staple path, the shift roller unit [A] moves up to its operating position in order to be ready to transport paper. The shift roller lift motor moves the shift roller unit [A]. The shift roller drive motor rotates the shift roller [B] to transport paper to the bottom.

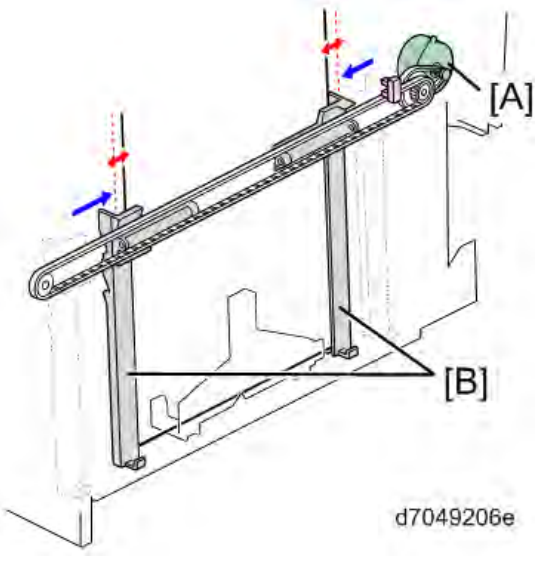


After the transportation has finished, the shift roller unit [B] moves up away from the paper face. While the shift roller unit moves up, the shift roller [A] rotates to feed paper out to the bottom. Then the shift roller unit drops to bump the stack junction gate [C] onto the edge of the paper stack. With this operation, the paper stack is aligned.



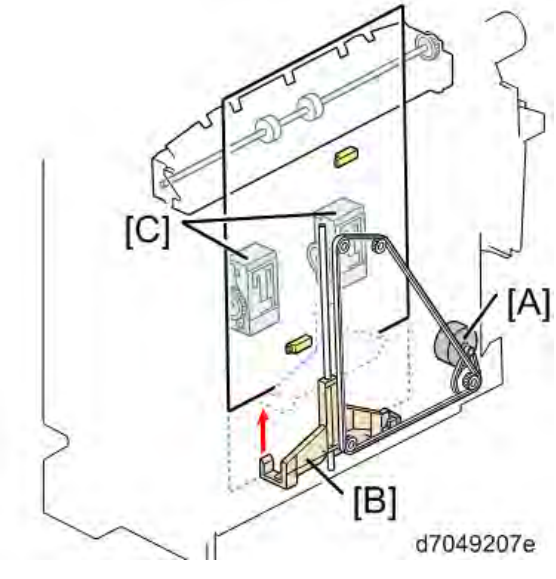
Jogger

The jogger fence motor [A] moves the jogger fences [B] in to align the sides of each page. When a job starts, the jogger fences move to the ready position (this depends on the paper size).



Bottom Fence Operation / Stapling

The stack that is pushed with the stack junction gate bumps against the bottom fence [B] in order to align the stack. Then the booklet staplers [C] staple at the middle points of the stack. After that, the bottom fence motor [A] moves the bottom fence [B] up to the position where the stack is folded with the fold plate.

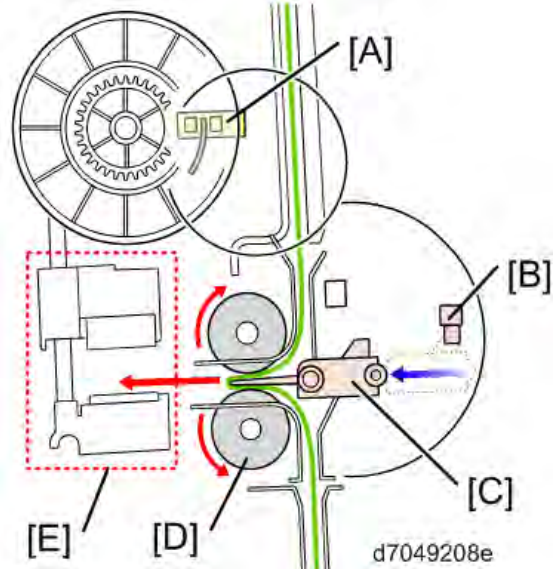


Overview of Center Folding and Saddle Shaping

The fold plate [C] center folds the stack lifted to the fold position by the bottom fence with the pressure from the fold transport motor [D]. Next, the side-to-side fold roller unit [E] forms the saddle shape. The press fold motor drives both the fold plate [C] and the side-to-side fold roller [E]. This is so the fold plate [C] and side-to-side fold roller [E] can operate at the same time.

[A] is the side-to-side fold unit HP sensor.

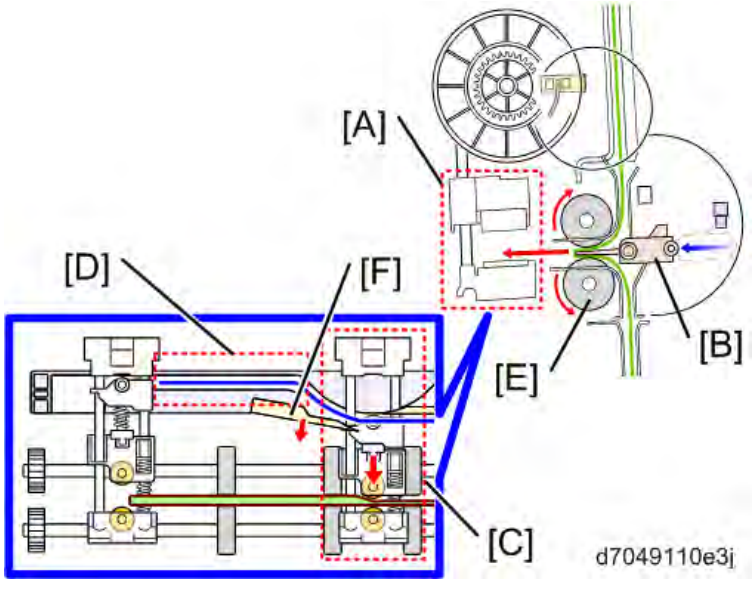
[B] is the fold plate HP sensor.



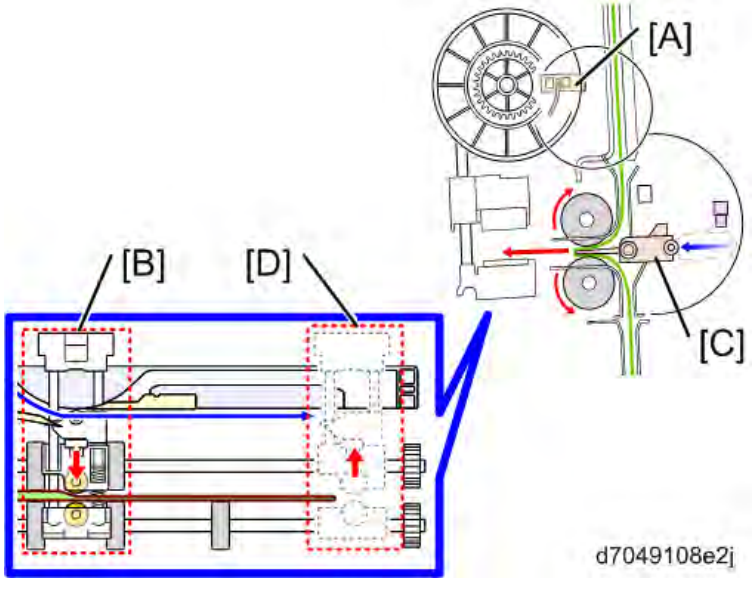
Center Folding and Saddle Shaping Operation

The operation of stack folding and saddle shaping is described below. Saddle shaping alone is described below under "Saddle Shaping Operation".

When the fold plate [B] pushes the center of the stack between the fold transport rollers [E], the side-to-side roller unit slides along the upper path [D]. Next, when the fold plate [B] has pushed the center of the stack completely between the fold rollers, the upper part of the fold roller unit, while pushing out switch plate 1 [F], slides down onto the lower path. Next, the lowering of the top of the side-to-side roller unit presses in the center of the stack with pressure from a large spring, and then center folding begins when the fold plate [B] pushes into the center of the stack.

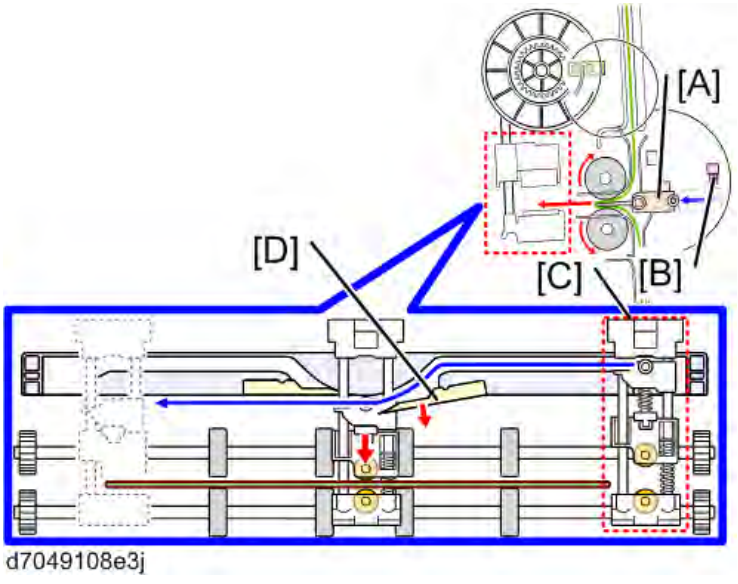


The movement of the fold plate cam stops the fold plate [C] and this holds the center of the stack out in the folded position. The fold roller [B] applies pressure to the protruding stack and moves it toward the left as shown below. Next, when fold roller unit cam sensor [A] goes on twice after the cam has rotated twice, the saddle shape operation is half finished, the fold roller unit is at position [D], and then the press fold motor switches into reverse. At the same time, in the upper path, the top of fold roller unit reverses, releasing pressure on the fold.

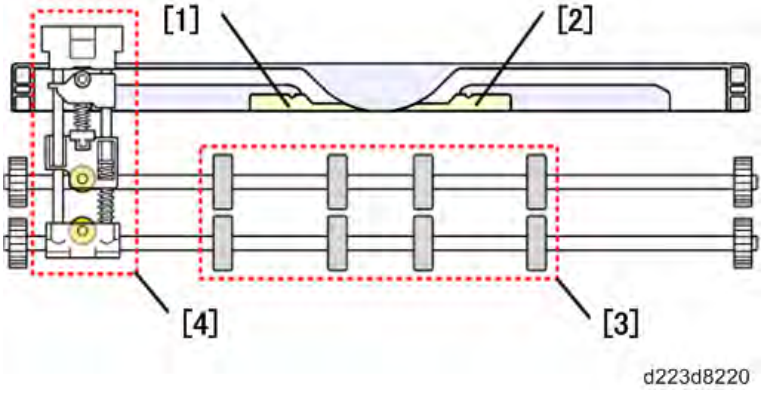


When the fold roller unit [C] releases pressure and starts to reverse, the top of the side-to-side fold roller presses on switch plate 2 [D] which directs it down into the lower path. When pressure is applied to the

remaining part of the stack, fold roller [A] returns to the home position, detected by the fold blade HP sensor [B].



Saddle Shaping Operation

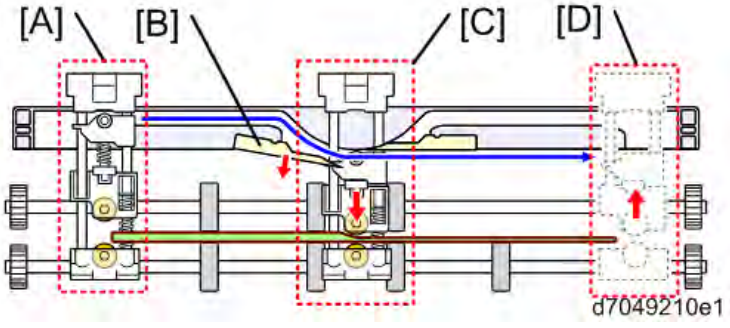


No.	Name	No.	Name
1	Guide Plate	3	Fold Transport Roller
2	Guide Plate 2	4	Side-to-Side Fold Roller Unit

The side-to-side fold roller unit in the center moves from [A] to [C].

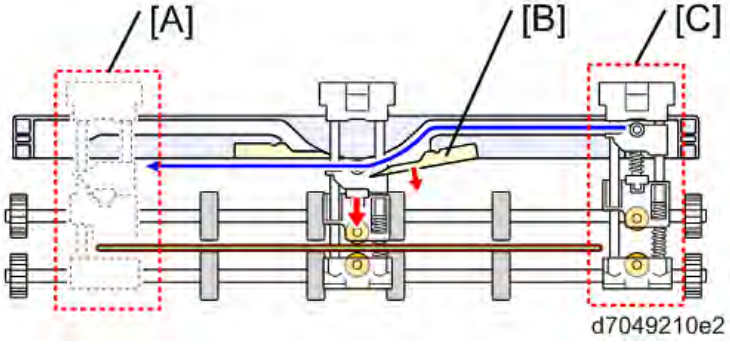
It moves along a rail when it comes to the center, the upper fold (up) descends, and then pressure from a large spring folds the center of the stack.

With the pressure of the side-to-side fold roller applied, the unit moves forward from [C] to [D]. When the roller moves as far as [D], the upper roller of the roller unit ascends from the lower path to the upper path, releasing the pressure on the center of the stack.



The fold plate motor reverses, and the unit increases pressure on the stack as it moves and applies creasing on the remainder of the saddle shape as it moves from [C] to [A].

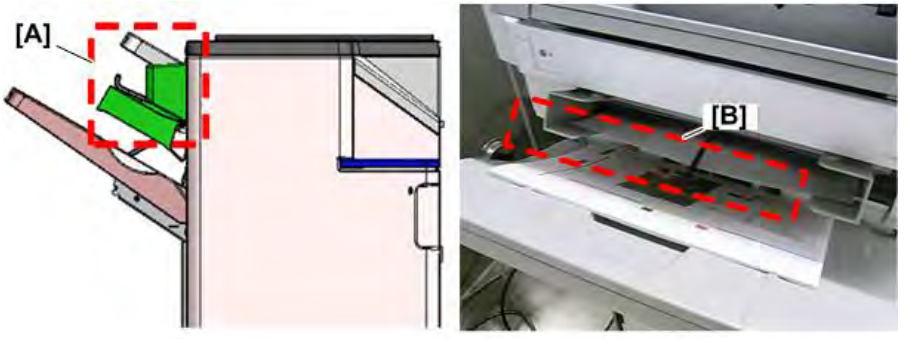
When the top of the side-to-side fold unit reaches the side-to-side fold unit HP sensor, the unit ascends to the upper path and releases pressure on the center of the stack.



Paper Guide Unit

As each stapled copy exits the finisher, it contacts the copy ahead of it already on the shift tray, and the paper guide unit [A] prevents the copies from becoming entangled on the shift tray.

The paper guide motor drives the paper guide cover to reduce the amount of curl and prevent the leading edges from curling and improve the output of stapled copies on the shift tray.



d223d8202a

Related SP Codes

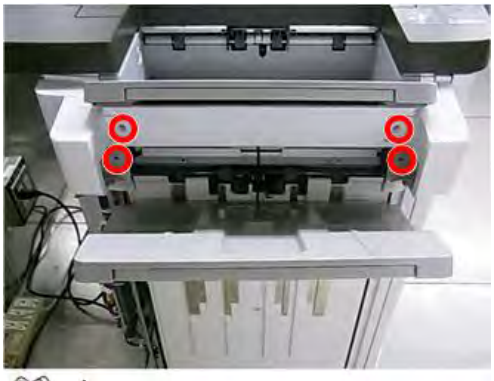
The paper guide mode for corner stapled copies does not operate for shift tray exit, booklet stapled copes, large paper sizes above 300 mm.

- SP6126-001 Use Paper Guide (Small sizes up to 300 mm)
- SP6125-001 Use Paper Guide (Large sizes large than 300 mm)

Paper Guide Removal

The paper guide unit is provided with the paper guide covers [A] at the initial position for users who want to take advantage of the improved stacking, but these covers can be removed. (Even with the covers removed, output will be done correctly even if the paper guides touch during operation.)

d223d8203



SP6-160-004 (Replacement Mode for Service)

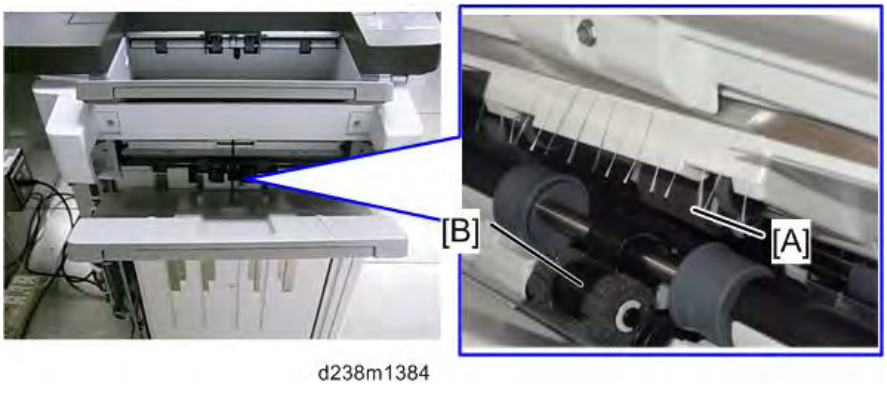
It is easier to access the following parts after running SP-6-160-004.

- Positioning Roller [A]

  The paper exit guide plate moves upwards and the positioning roller pops up in front for easier access.

- Reverse Roller [B]

  The paper exit guide plate moves upwards and the reverse roller can be accessed.



MEMO

MEMO

MEMO

1 Bin Tray BN3110
Machine Code: D3CQ
Field Service Manual

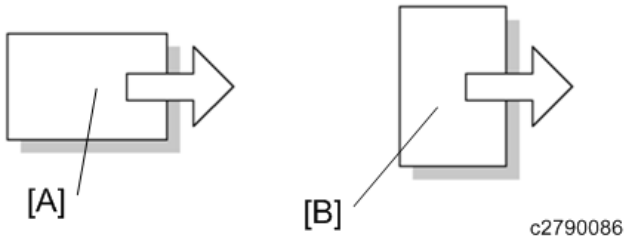
May, 2016

Symbols, Abbreviations and Trademarks

Symbols, Abbreviations

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

Symbol	What it means
	Clip ring
	Screw
	Connector
	Clamp
	E-ring
	Flat Flexible Cable
	Timing Belt
SEF	Short Edge Feed [A]
LEF	Long Edge Feed [B]
K	Black
C	Cyan
M	Magenta
Y	Yellow
B/W, BW	Black and White
FC	Full color



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- Windows® Internet Explorer® 7
- Windows® Internet Explorer® 8

The proper names of the Windows operating systems are as follows:

- The product names of Windows Vista are as follows:

  Microsoft® Windows Vista® Ultimate

  Microsoft® Windows Vista® Business

  Microsoft® Windows Vista® Home Premium

  Microsoft® Windows Vista® Home Basic

  Microsoft® Windows Vista® Enterprise
- The product names of Windows 7 are as follows:

  Microsoft® Windows® 7 Home Premium

  Microsoft® Windows® 7 Professional

  Microsoft® Windows® 7 Ultimate

  Microsoft® Windows® 7 Enterprise
- The product names of Windows 8 are as follows:

  Microsoft® Windows® 8

  Microsoft® Windows® 8 Pro

  Microsoft® Windows® 8 Enterprise
- The product names of Windows 8.1 are as follows:

  Microsoft® Windows® 8.1

  Microsoft® Windows® 8.1 Pro

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Microsoft® Windows® 10 Home Premium

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Microsoft® Windows® 10 Enterprise

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- The product names of Windows Server 2003 are as follows:

  Microsoft® Windows Server® 2003 Standard Edition

  Microsoft® Windows Server® 2003 Enterprise Edition
- The product names of Windows Server 2003 R2 are as follows:

  Microsoft® Windows Server® 2003 R2 Standard Edition

  Microsoft® Windows Server® 2003 R2 Enterprise Edition
- The product names of Windows Server 2008 are as follows:

  Microsoft® Windows Server® 2008 Standard

  Microsoft® Windows Server® 2008 Enterprise
- The product names of Windows Server 2008 R2 are as follows:

  Microsoft® Windows Server® 2008 R2 Standard

  Microsoft® Windows Server® 2008 R2 Enterprise
- The product names of Windows Server 2012 are as follows:

  Microsoft® Windows Server® 2012 Foundation

  Microsoft® Windows Server® 2012 Essentials

  Microsoft® Windows Server® 2012 Standard
- The product names of Windows Server 2012 R2 are as follows:

  Microsoft® Windows Server® 2012 R2 Foundation

  Microsoft® Windows Server® 2012 R2 Essentials

  Microsoft® Windows Server® 2012 R2 Standard

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Microsoft product screen shots reprinted with permission from Microsoft Corporation.

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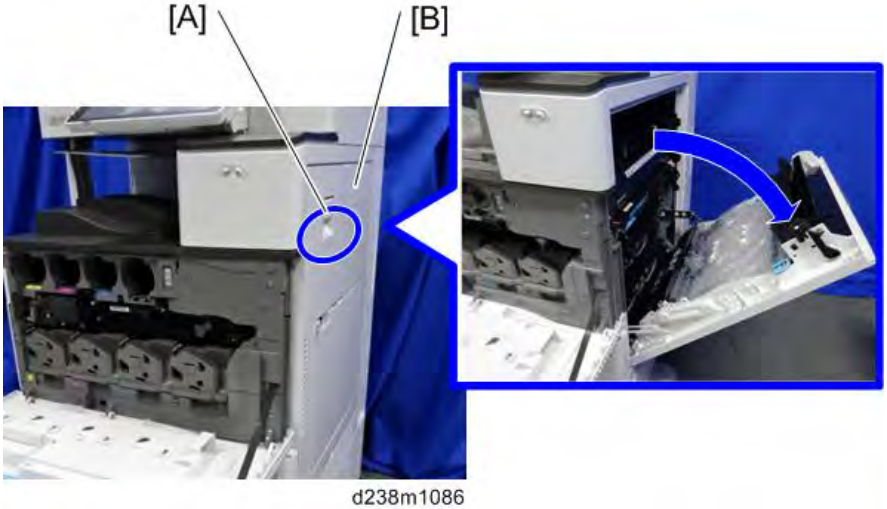
1. Replacement and Adjustment

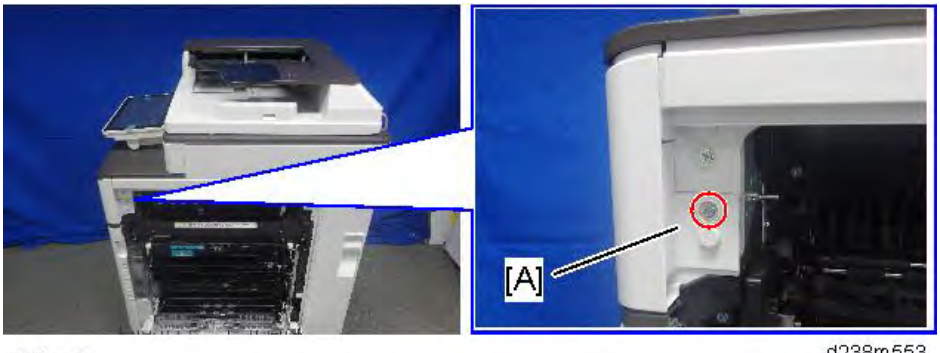
Paper Sensor

1. Unlock the lever [A], and then open the right door [B].



d238m1086

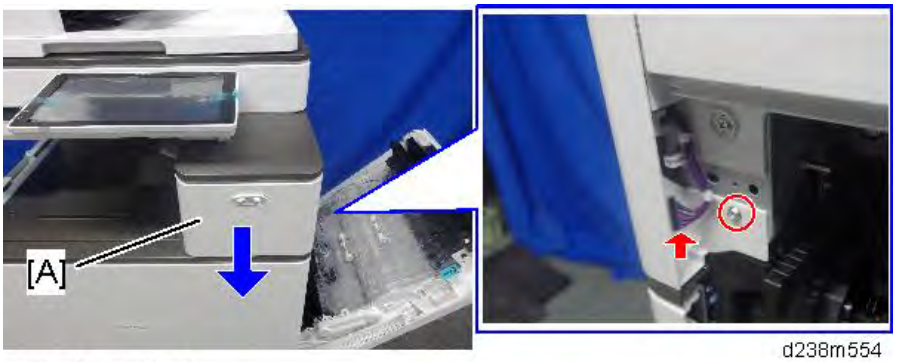
2. Small cover [A]



x1

d238m553

3. Proximity sensor cover [A]

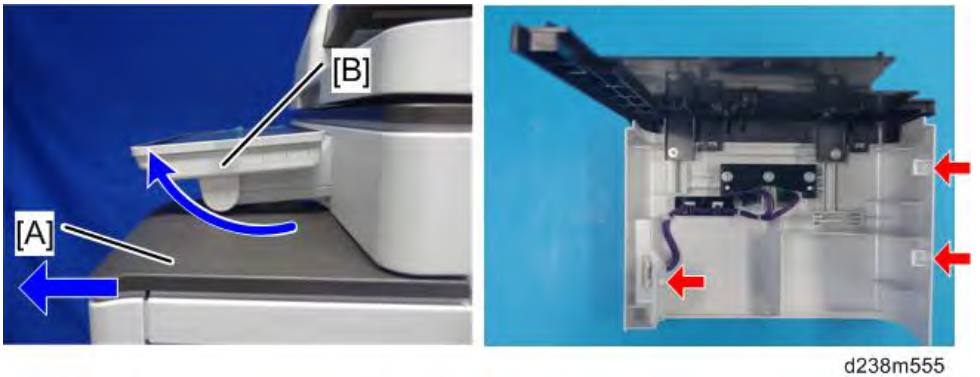


d238m554

x1, x1

Note

- There are three tabs at the positions of the red arrows.
- Tilt the operation panel [B], and then remove the proximity sensor cover [A].

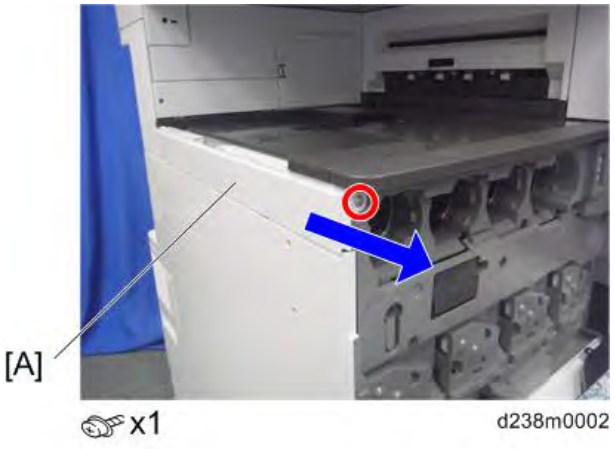


d238m555

4. Paper exit tray [A]

d1462023

5. **Left upper cover [A]**



6. **Left rear cover [A] (hook×1)**

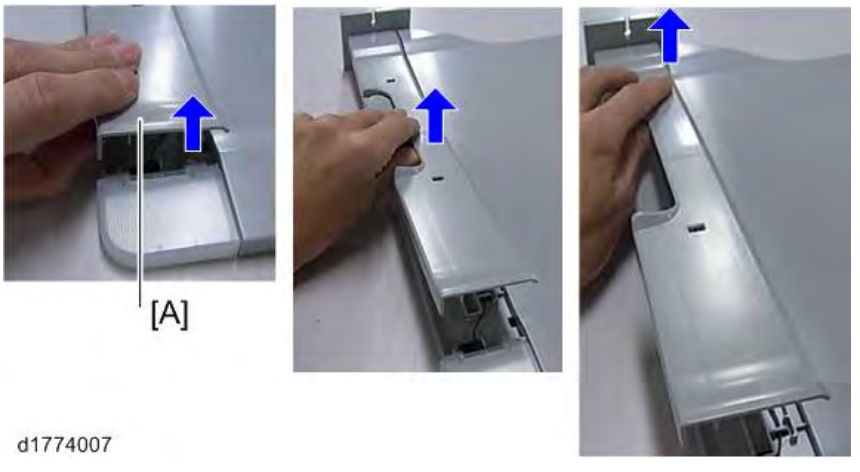
7. **Remove the cover [A] carefully in accordance with the notes described below.**

Note

- Do not twist the cover to remove the cover as shown below. Otherwise, some hooks inside the cover may be broken.

d146z0048

- Lift up the cover [A] vertically to remove the cover as shown below.

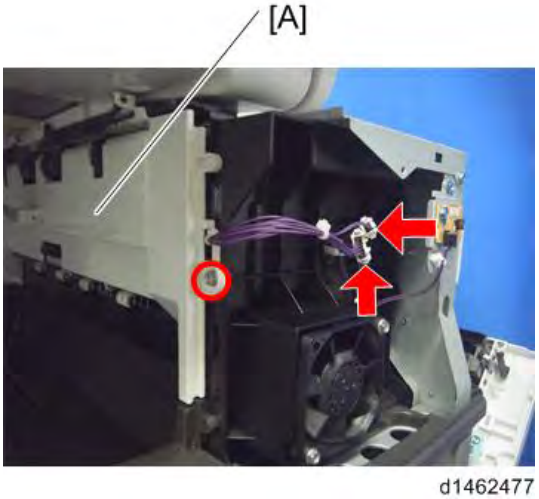


d1774007

8. 1 bin tray [A] (×1)

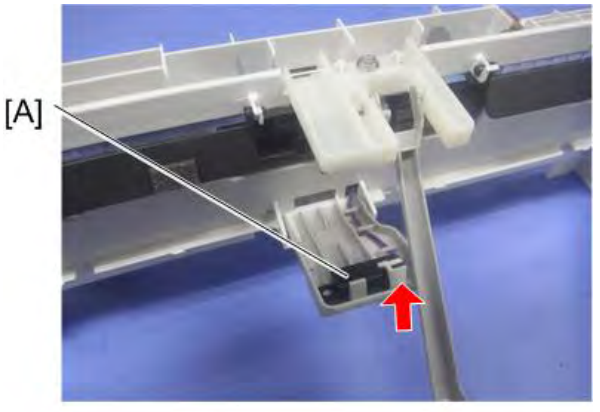
d1462801

9. 1 bin tray unit [A] (×1, ×2)



d1462477

10. Paper sensor [A] (×1)

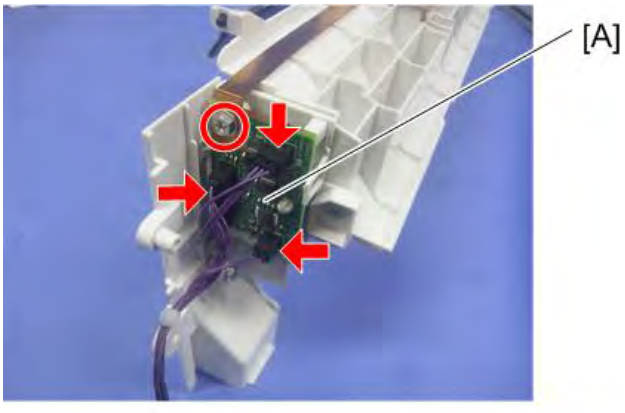


d1462803

Board

Controller Board

1. 1 bin tray unit (page 7)
2. Controller board [A] (×1, ×3)

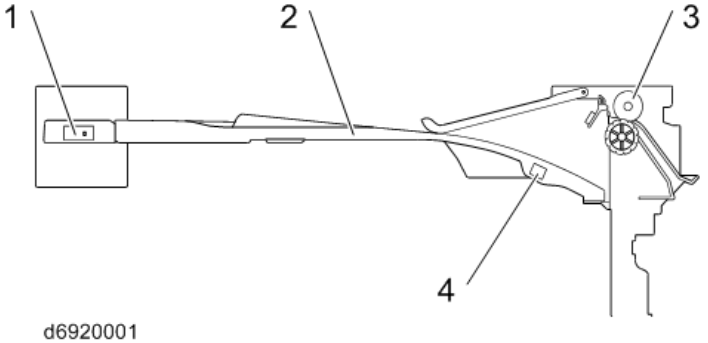


d1462804

2. Detailed Descriptions

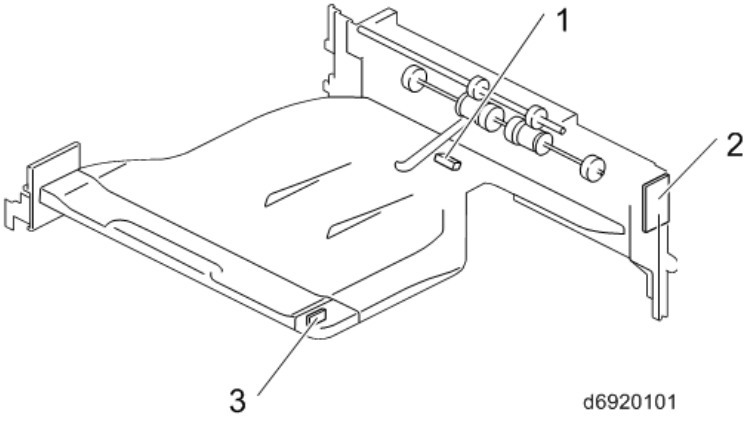
1 Bin Tray BN3110 (D3CQ)

Parts Layout



d6920001

No.	Description	No.	Description
1	LED	3	Paper exit roller
2	Paper tray	4	Paper sensor



d6920101

No.	Description	No.	Description
1	Paper sensor	3	LED
2	Controller board		

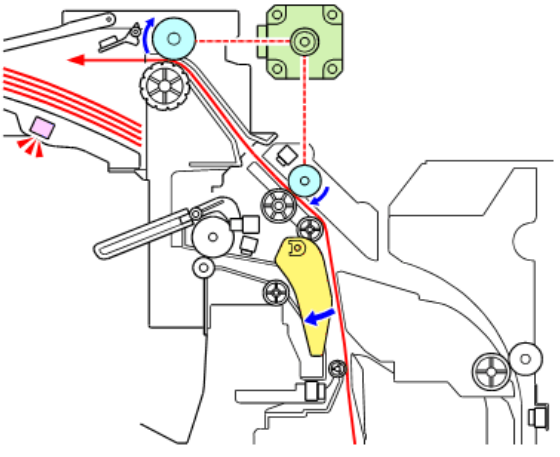
Mechanism

Paper detection display

The paper sensor is located in the 1 bin unit. When paper is detected, the LED lights up.

Paper exit roller drive mechanism

The 1 bin paper exit roller is driven by the main motor through a gear and timing belt.



d6920102

Paper ejection mechanism

Paper transported from the mainframe's paper exit is ejected to the 1 bin tray by the paper exit roller.

Fax Option Type M29
Machine Code: D3DX
Field Service Manual
Ver 1.0

Initial Release: Nov, 2016

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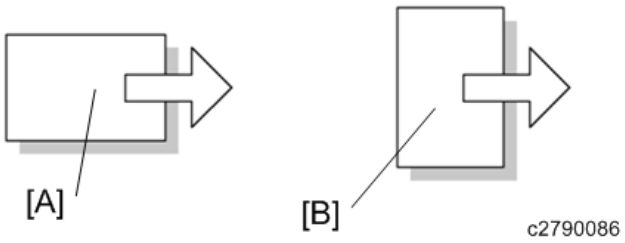
Symbols, Abbreviations

Symbols, Abbreviations

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

Symbol	What it means
	Clip ring
	Screw
	Connector
	Clamp
	E-ring
	Flat Flexible Cable
	Timing Belt
SEF	Short Edge Feed
LEF	Long Edge Feed
K	Black
C	Cyan
M	Magenta
Y	Yellow
B/W, BW	Black and White
FC	Full color



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

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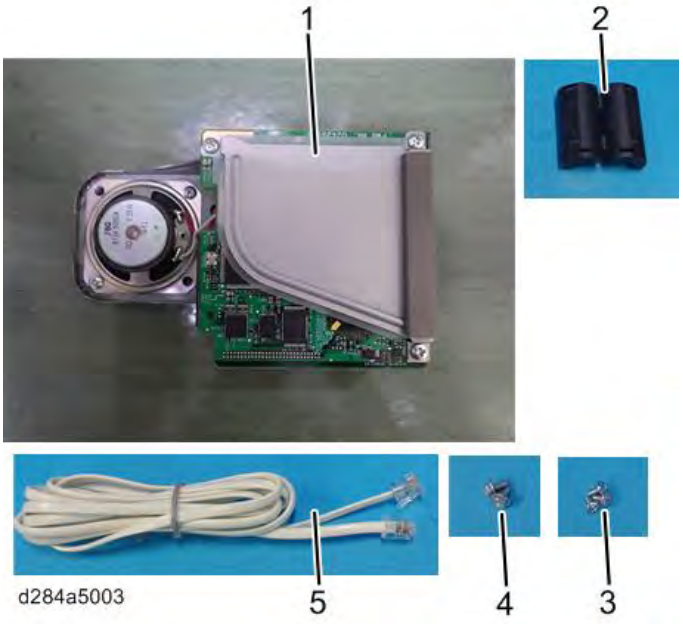
1. Installation

Fax Option Type M29 (D3DX-01, -02, -03)

Accessory Check

Check the quantity and condition of the accessories against the following list.

No.	Description	Q'ty
1	PCB:GWFCU3.8E:DOM:ASS'Y	1
2	FERRITE CORE:K3 NF-75(N)BK0	1
3	SCREW:M3X5	3
4	SCREW:M3X6	2
5	MODULAR CORD:6P2C:DOM	1
-	CLAMP:LWST-1012	1
-	INSULATING SHEET:FCU3.8E	1
-	LABEL:RATING NAME PLATE:W105	1
-	MY BANK & QA REGISTRATION CARD	1



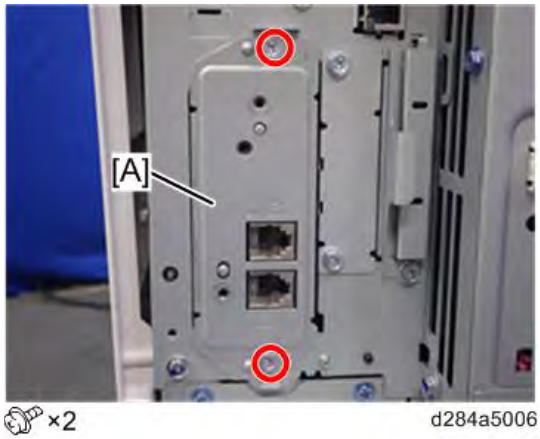
Installation Procedure

⚠CAUTION

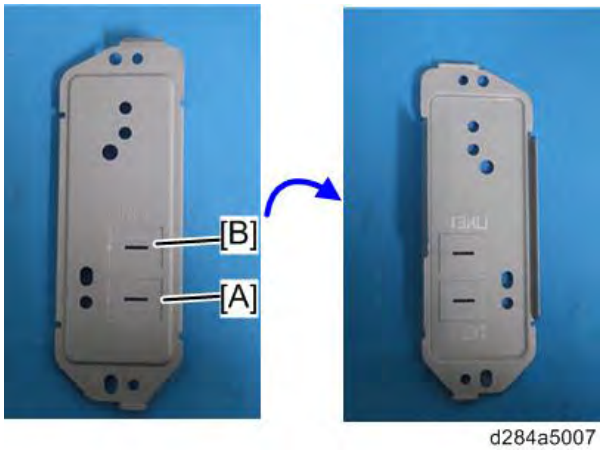
- Before installing this fax unit, print out all data in the printer buffer. Turn the main power to OFF and disconnect the power cord and the network cable.

1. Remove the I/F cover [A].

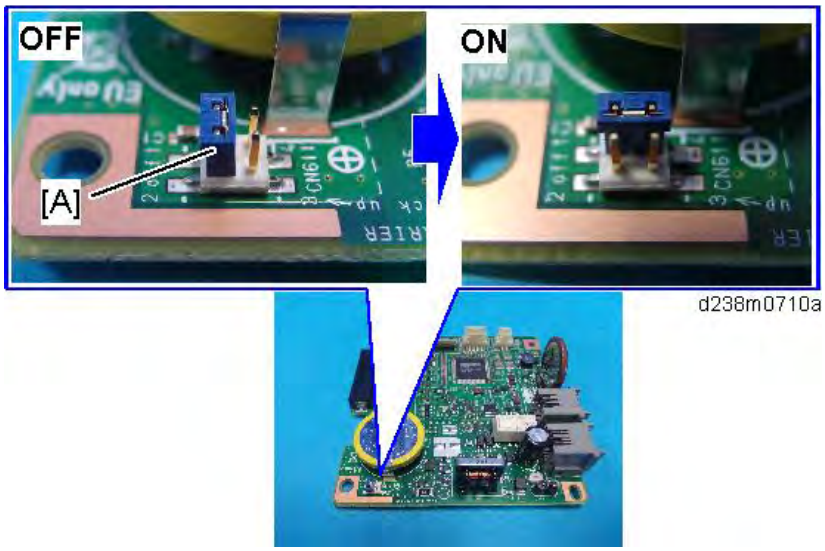
2. Remove the interface slot cover [A].



3. Remove the "TEL" [A] and "LINE1" [B] covers on the interface slot cover using a screwdriver.

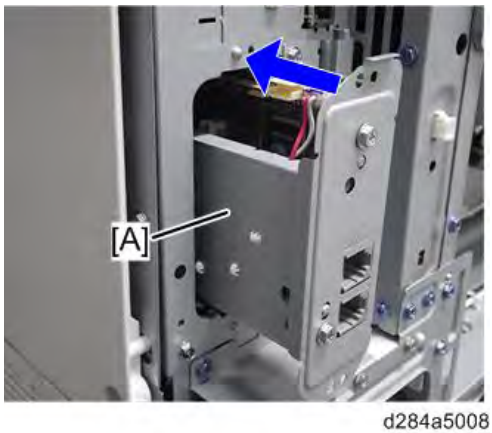


4. Switch the battery jumper switch [A] to the "ON" position.



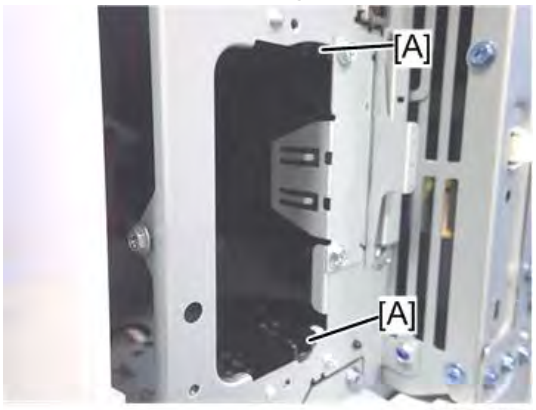
5. Attach the slot cover [A].

6. Insert the FCU [A] completely into the interface slot.



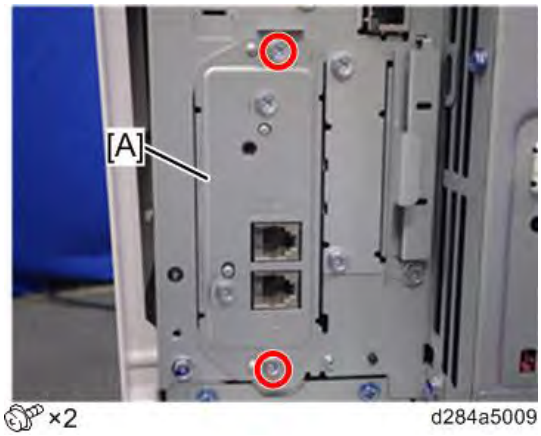
Note

- Insert the FCU board along the rail [A].



d284a5010

7. Reattach the interface slot cover [A].



d284a5009

8. Reinstall the I/F cover (x 3).

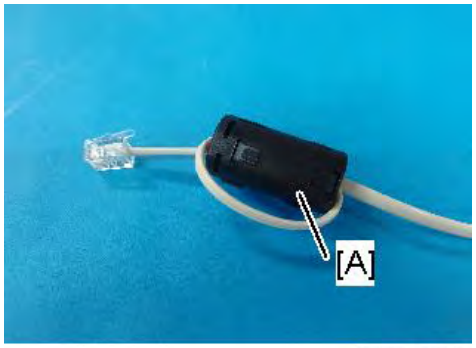
9. Attach the handset support bracket and handset bracket to the machine. To install the handset, connect the handset cord with the ferrite core to the "TEL" jack.

Note

- For details about installation, refer to Handset HS3020 (D739).

Taiwan only: Install the telephone jack cap in the "TEL" jack if the handset is not installed on the machine.

10. Make one loop with the telephone cord, and then attach the ferrite core [A] (this step is not needed for NA).



d238m0916

11. Connect the telephone cord to the "LINE 1" jack.

12. Attach the clamp [A] as shown in the picture below, and put the cable in the narrow space [B].

13. Attach the serial number decal under the machine serial number decal on the rear cover of the machine.

14. Attach the FCC decal to the rear cover of the machine (NA only).

15. Insert the power plug into the outlet. Turn ON the main power of the machine.

Note

- Make sure that the outlet is grounded.
- "SRAM formatted" is displayed on the operation panel after the main power is turned ON. Turn the main power OFF and then ON again for normal use.

16. Make sure that the date and time are correctly set.

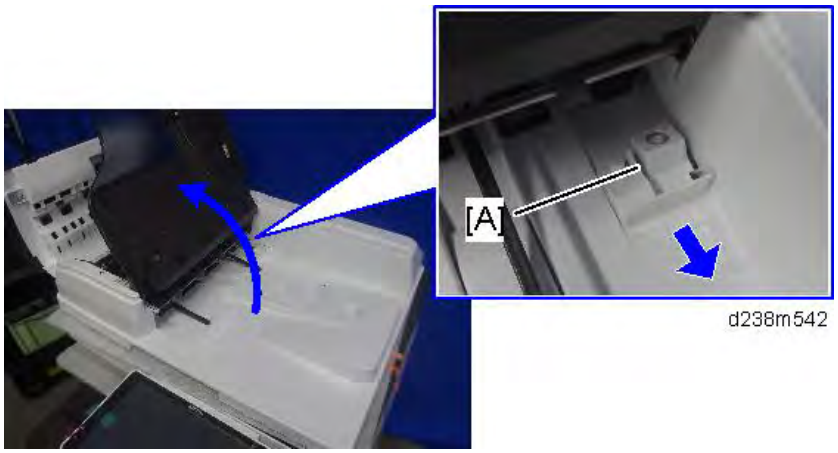
17. Execute SP3-102-000 in the fax SP mode and enter the serial number for the fax unit.

18. Enter the correct country code with SP1101-016(SYS OF): Country/area code for functional setting.

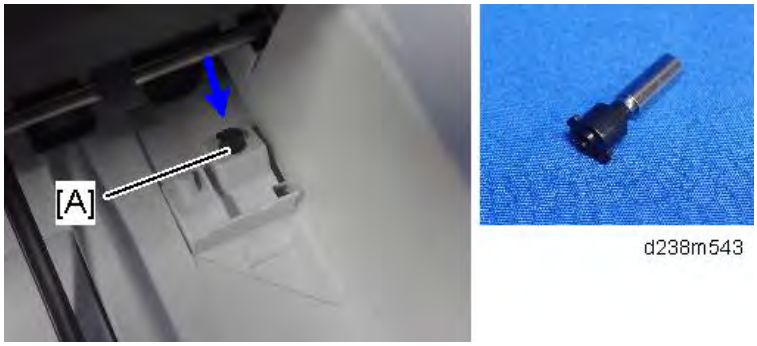
Fax Stamp Installation

This procedure is needed only for machines with ARDF DF3090.

1. Open the ARDF original cover and stamp holder [A].

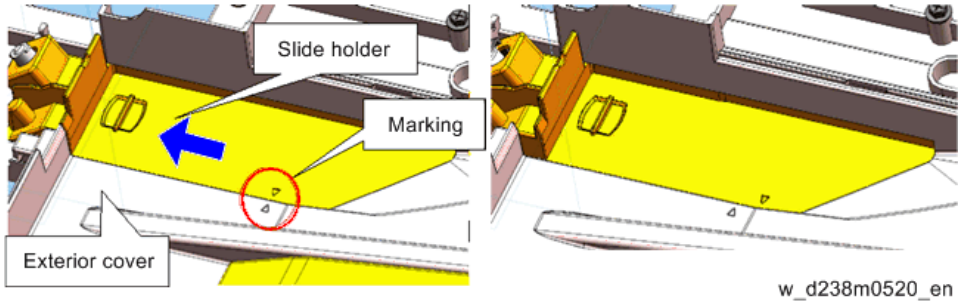


2. Install the fax stamp [A] provided with the machine.



3. Close the holder.

Make sure that the holder is pushed into the position where the marks on the holder and the exterior cover face each other. If not, jam detection (J001) will occur.



4. Close the ARDF.

5. As an operation test, place the original on ARDF tray, and send it with the memory sending/fax stamp function ON.

- Set the sending time to a time when nobody uses the machine (such as 11 PM).
- Check if the fax stamp is marked on the trailing edge of the original.

Adding Fax Application Icons to the Home Screen

The fax application icon is normally added automatically. However, if it is missing from the Home screen, add it as follows:

1. Press the [Application List] key [A].

2. Press and hold the Fax application from the app list.

d238m0744

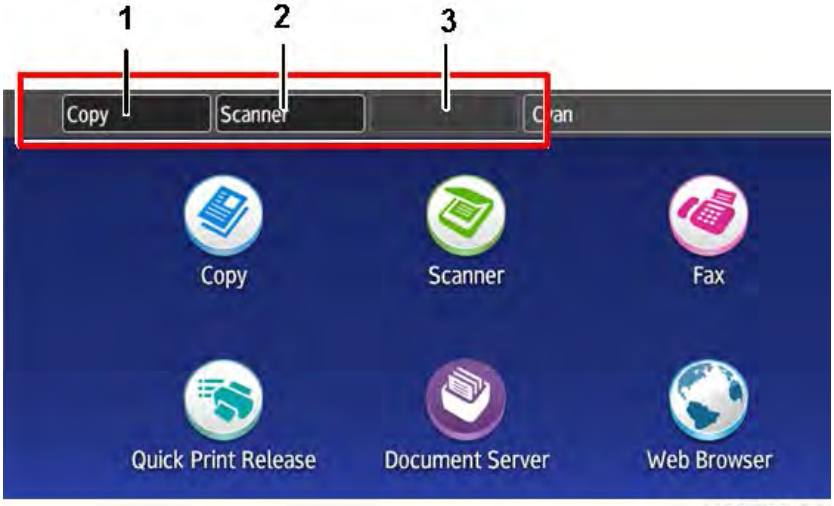
3. Drag and position the application on the home screen.

d238m0745

Registering the Function key

By registering a fax application to a function key on the Home screen, you can open the application from any page. Specify the setting as required.

Function Keys 1, 2, and 3 are from the left, as shown:



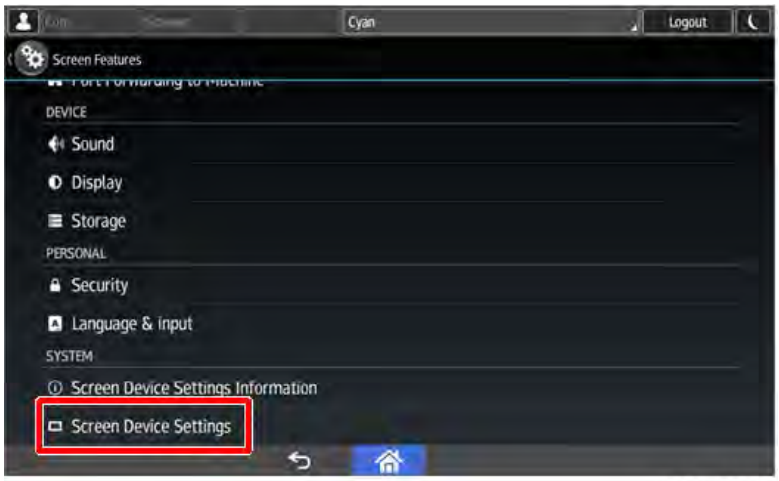
d238m0991e

Allocate an application to a function key as follows:

1. Login as the machine administrator

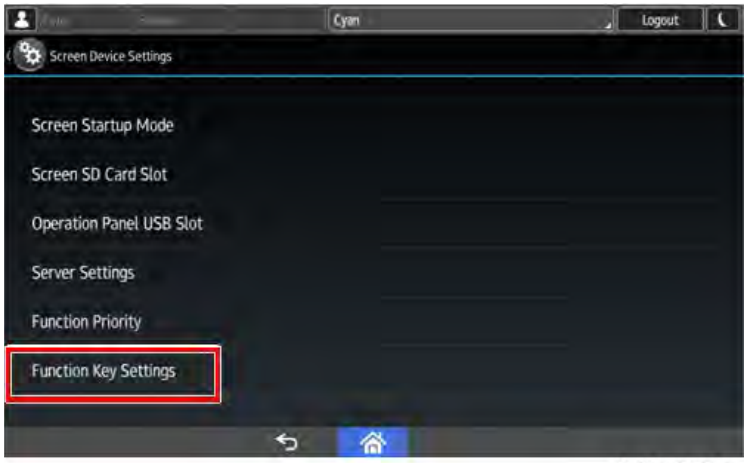
2. Press “User Tools” icon > “Screen Features”.

3. Press [Screen Device Settings].



d238m0988e

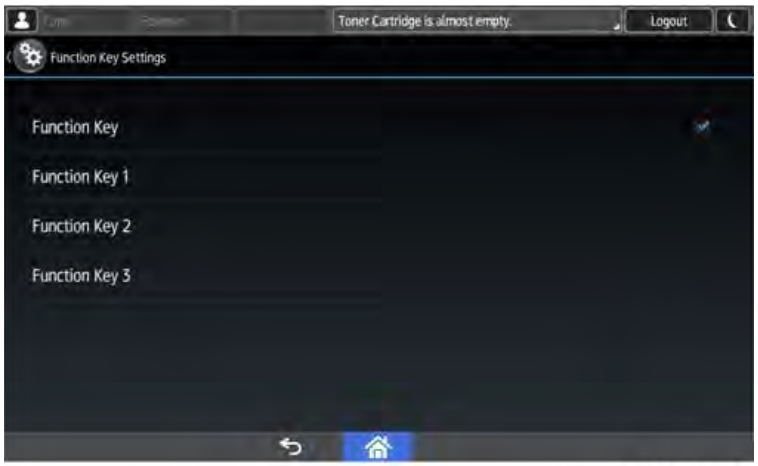
4. Press [Function Key Settings].



d238m0994e

5. Select the key to register.

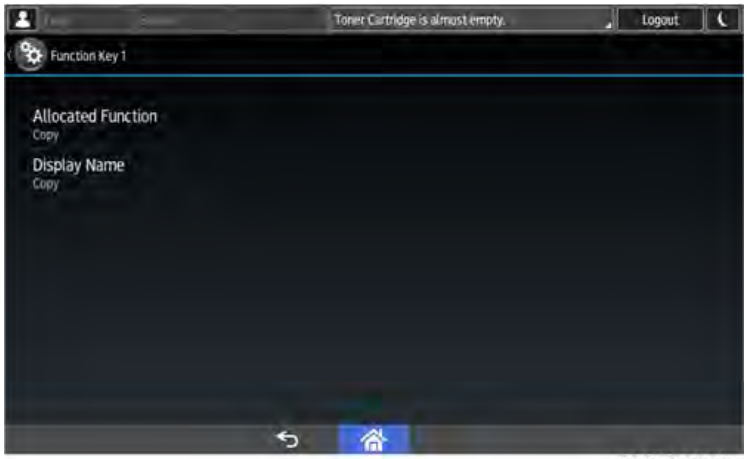
To disable a function key, deselect the corresponding function key check box.



d238m0992e

6. Press [Allocated Function], and then select the fax application.

In [Display Name], you can change the name of the icon on the Home screen (using up to 64 characters).

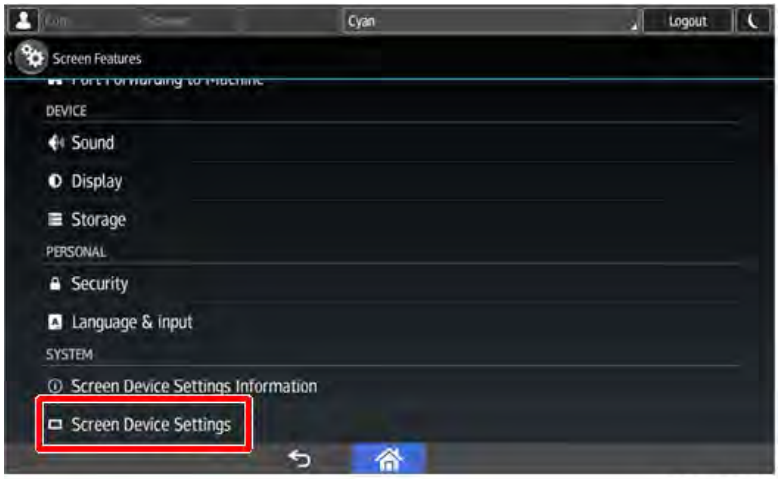


d238m0993e

Function Priority Setting

You can specify whether the fax application appears on the operation panel just after turning the power on or just after the system is reset automatically.

1. Login as the machine administrator
2. Press “User Tools” icon > “Screen Features”.
3. Press [Screen Device Settings].



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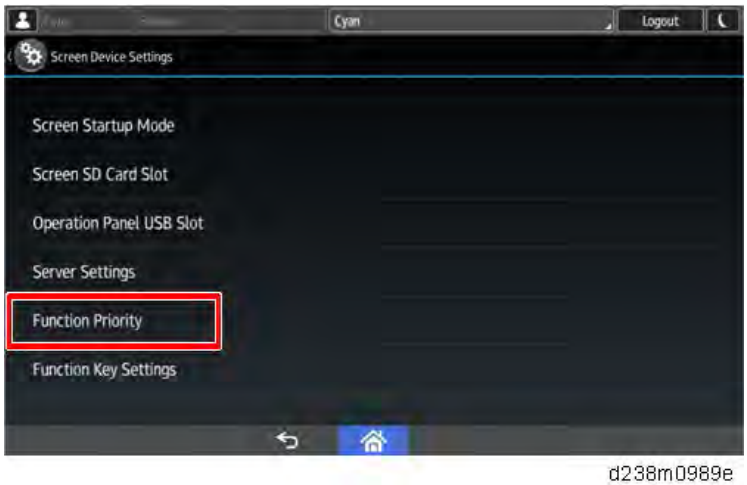
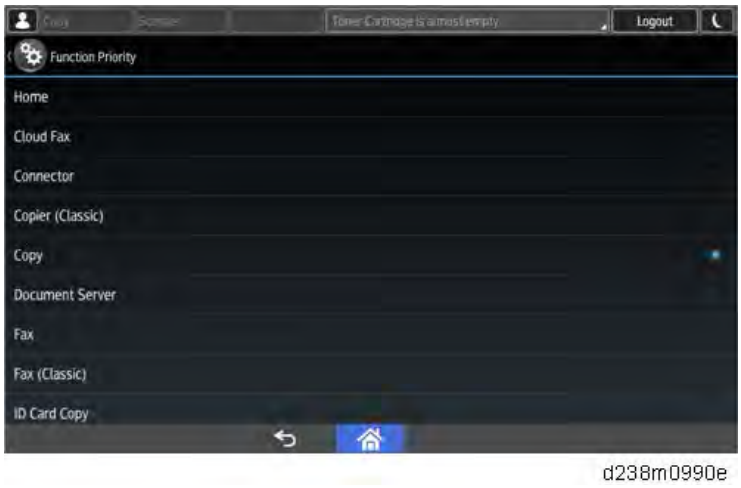
4. Press [Function Priority].



d238m0989e

5. Select the fax application.



Notes for Connecting the Telephone Line

Checking the following before connecting the telephone line:

If a phone line dedicated to business phones is connected to the MFP, the fax board may be damaged. Make sure that the connecting phone line is for fax.

Reasons why the Fax Board may be damaged

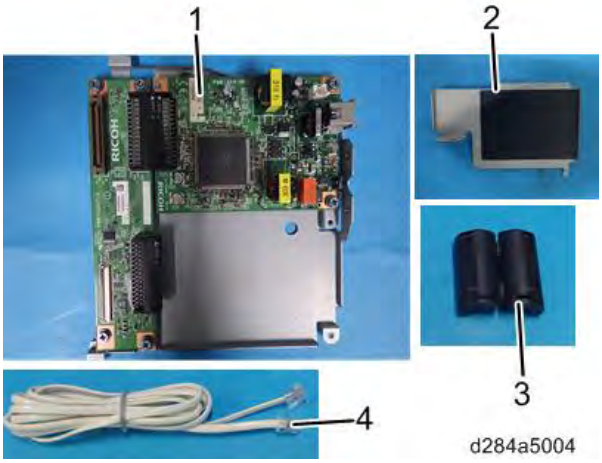
Business phones have various functions. To operate those functions, a high current is supplied to a business phone line. This may damage components on the Fax board.

G3 Interface Unit Type M29 (D3DX-05, -06, -07, -13)

Accessory Check

Check the quantity and condition of the accessories against the following list.

No.	Description	Q'ty
1	PCB:SG3-ND:DOM:ASS'Y	1
2	SEPARATION PLATE:G3G4:ASS'Y	1
3	FERRITE CORE:K3 NF-75(N)BK0	1
4	MODULAR CORD:6P2C:DOM	1
-	DECAL:SERIAL NUMBER SHEET:FJI	1
-	HARNESS:FCU-CCU:CORC15	1
-	SCREW:M3X6	3
-	MY BANK & QA REGISTRATION CARD	1



Installation Procedure

⚠CAUTION

- Before installing this fax unit, print out all data in the printer buffer. Turn the main power to OFF and disconnect the power cord and the network cable.

An additional two SG3 boards can be added for this model. Follow the procedures for installing a single SG3 board or double SG3 board as required.

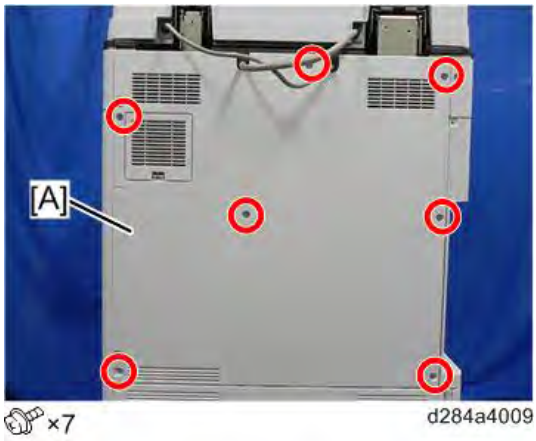
Single G3 Board

Preparation

- If the Fax Option Type M19 is not installed in the machine, install the Fax Option Type M19 first (Fax Option Type M29 (D3DX-01, -02, -03)).

1. Remove the I/F cover [A].

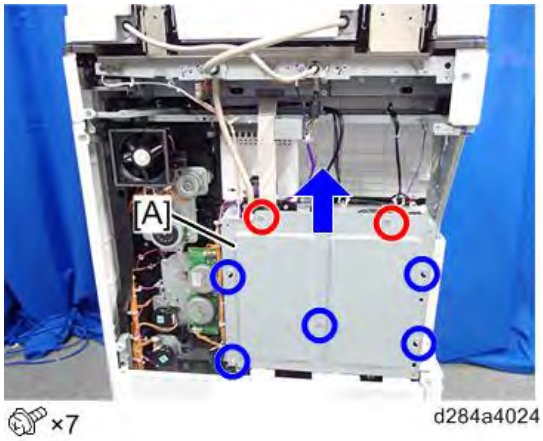
2. Remove the rear cover [A].



3. Remove the controller box cover [A].

Red circle: remove

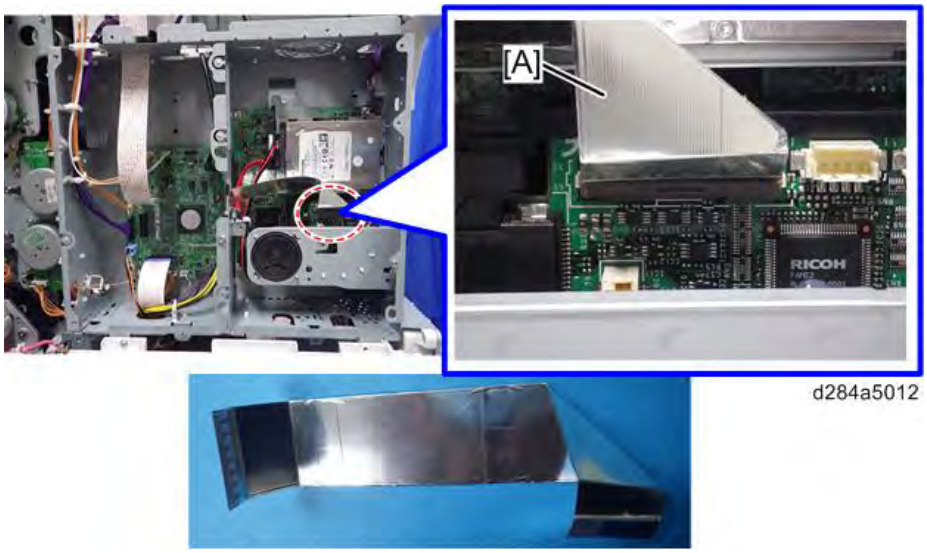
Blue circle: loosen



4. Remove the "LINE2" [A] cover using a screwdriver.

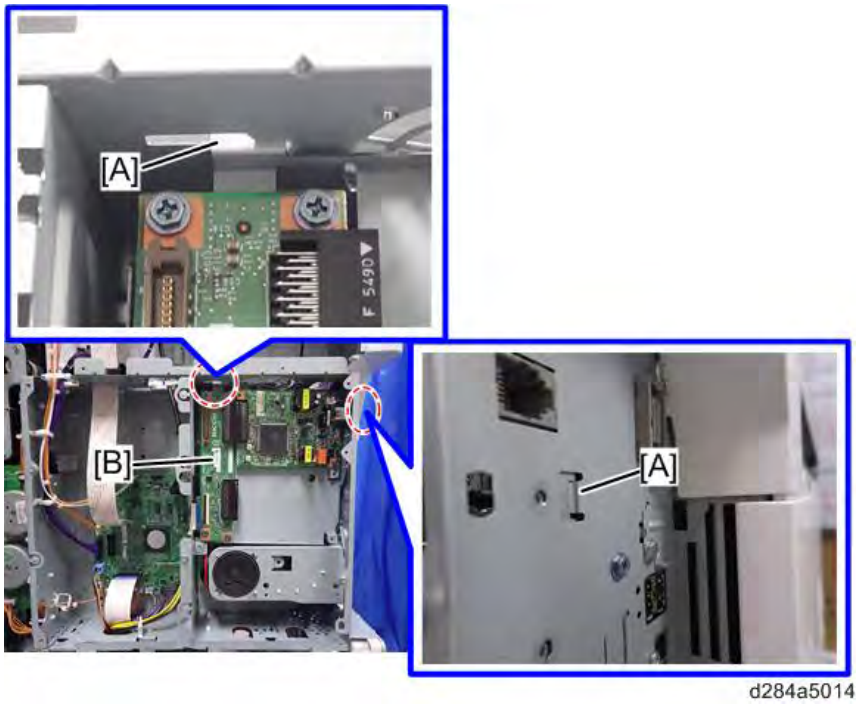
5. Connect the FFC [A] to the FCU.

- The FFC should be connected at this point (because it is difficult to connect the FFC after installing the G3 interface unit).
- Connect the FFC in the direction as the photo below.

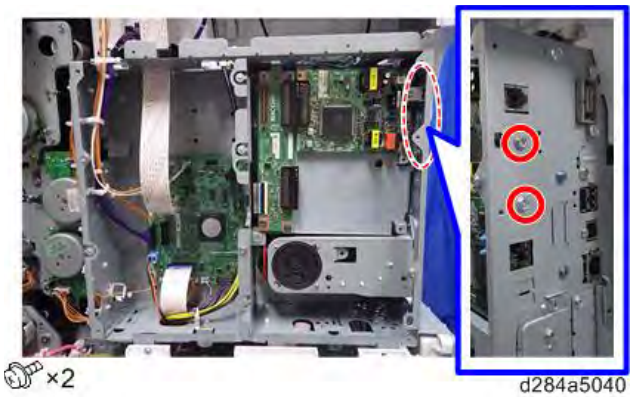


- Release the connector lock [A] and connect the FFC, and then lock the FFC.

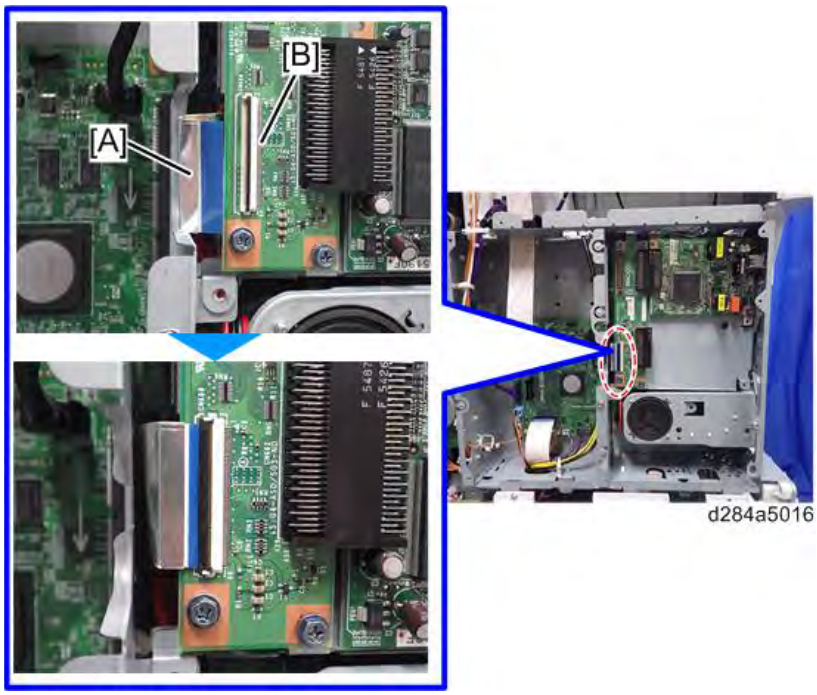
6. Insert the tab [A] of the bracket into the.cutout, and attach the G3 interface unit [B].



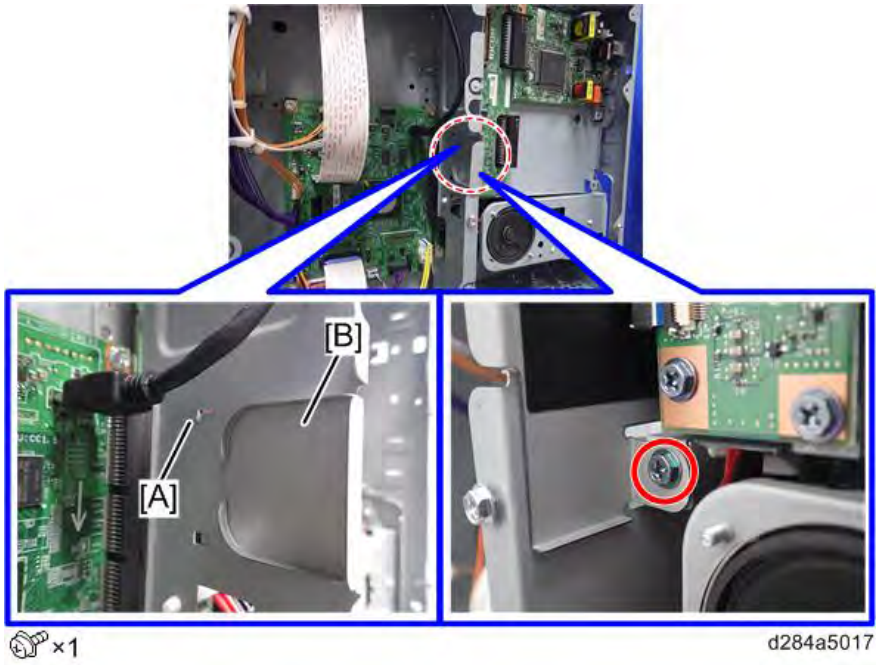
7. Attach the screws.



8. Take the FFC [A] out and connect the CCU interface board connector [B].

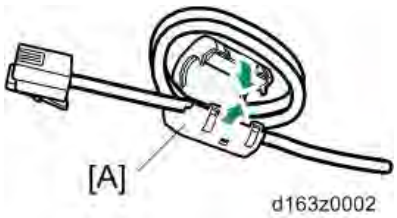


9. Insert the tab [A] and attach the partition board [B].



10. Reinstall the controller box cover, rear cover and I/F cover.

11. Make two loops with the telephone cord, and then attach the ferrite core [A].



12. Connect the telephone cord to the "LINE 2" jack.

13. Attach the clamp [A] as shown in the picture below, and put the cable in the narrow space [B].

14. Insert the power plug into the outlet. Turn ON the main power of the machine.

15. Enter the service mode. Set Bit 1 of Communication Switch 16 to "1" (SP1-104-023).

16. Exit the service mode.

17. Turn OFF then ON the main power.

18. Print out the system parameter list. Check that "G3" is displayed as an option.

19. Set up and program the items required for PSTN-2 communications.

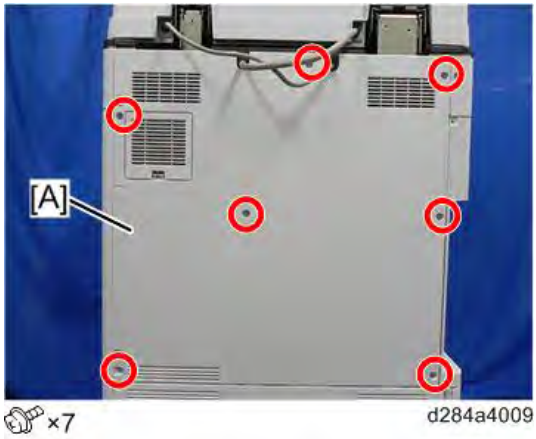
Double G3 Boards

Preparation

- If the Fax Option Type M19 is not installed in the machine, install the Fax Option Type M19 first. (Fax Option Type M29 (D3DX-01, -02, -03))

1. Remove the I/F cover [A].

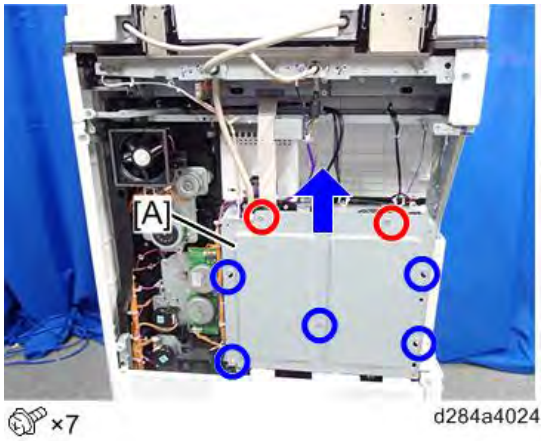
2. Remove the rear cover [A].



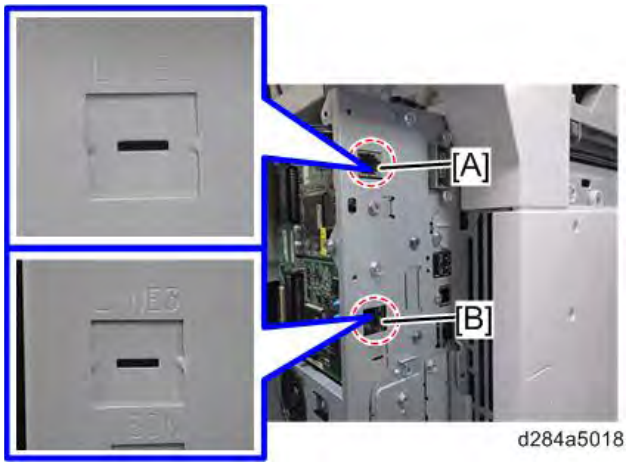
3. Remove the controller box cover [A].

Red circle: remove

Blue circle: loosen



4. Remove the "LINE2" [A] and "LINE3" [B] covers using a screwdriver.

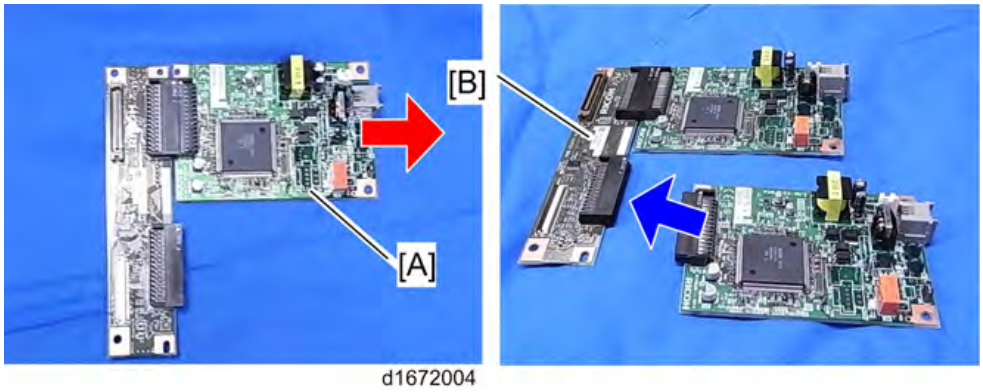


5. Remove the CCU I/F board and SG3 board [A] from the SG3 interface unit.

Repeat the same procedure for the second SG3 interface unit.

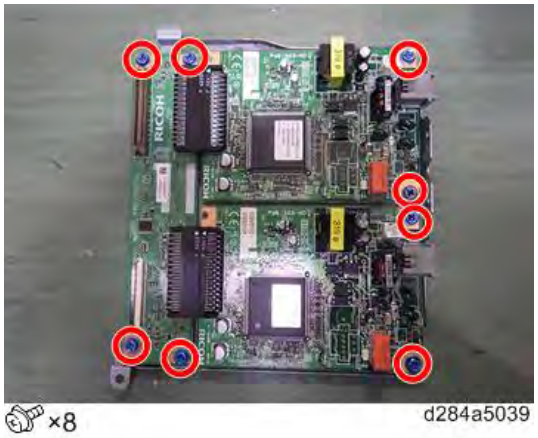
6. Remove the SG3 board [A] from one of the CCU I/F and SG3 board assemblies removed in step 5.

7. Attach the SG3 board removed in step 6 to the other CCU I/F and SG3 board assembly [B].



8. Attach the boards (CCU I/F board and two SG3 boards) to the SG3 interface unit bracket.

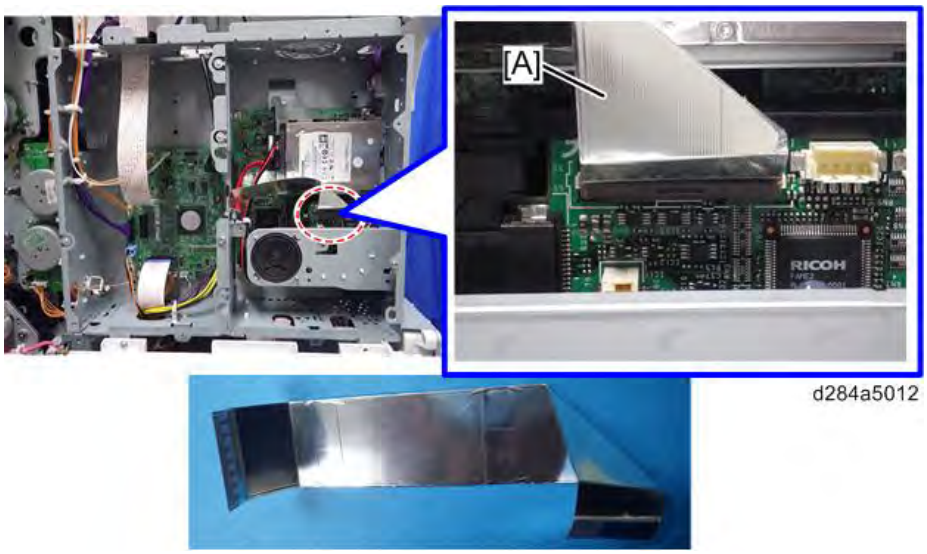
- Use two screws from the six screws removed in step 5.



9. Connect the FFC [A] to the FCU.

- The FFC should be connected at this point (because it is difficult to connect the FFC after installing the G3 interface unit).

- Connect the FCC in the direction as the photo below.

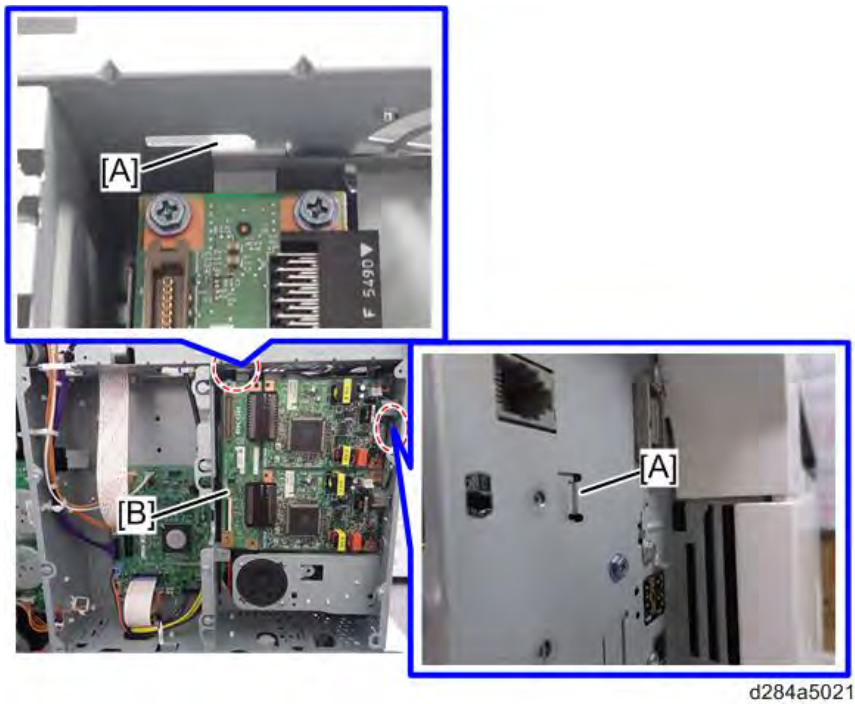


d284a5012

- Release the connector lock [A] and connect the FFC, and then lock the FFC.

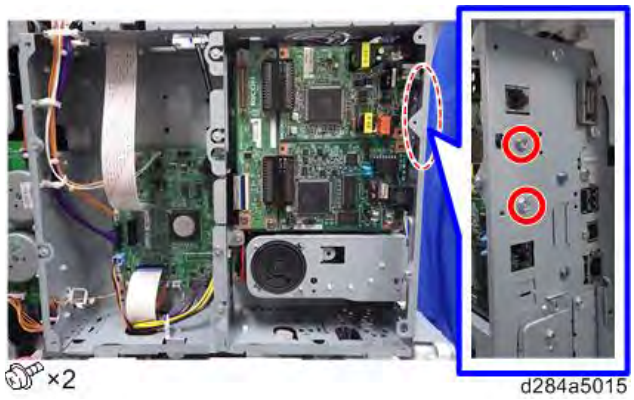
d284a5013

10. Insert the tab [A] of the bracket into the.cutout, and attach the G3 interface unit [B].

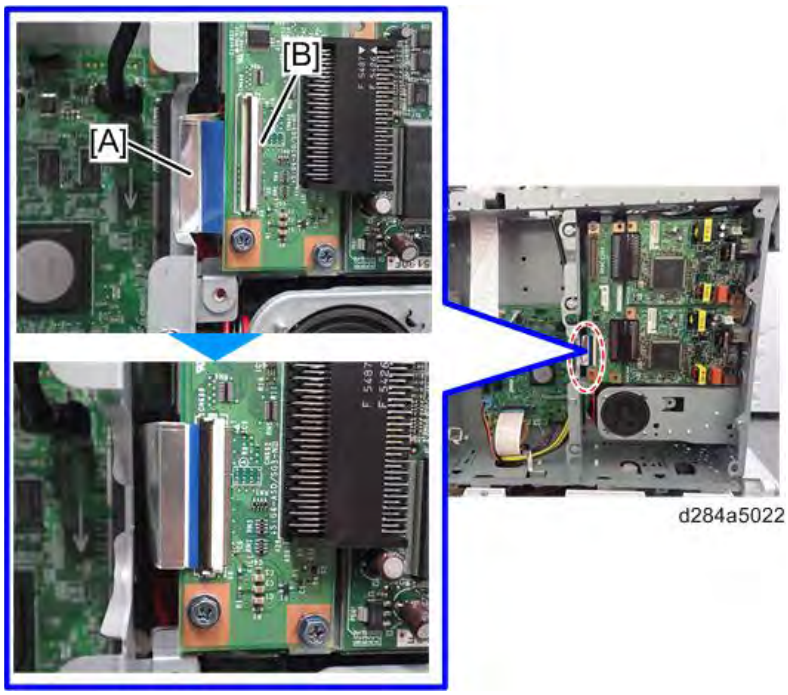


d284a5021

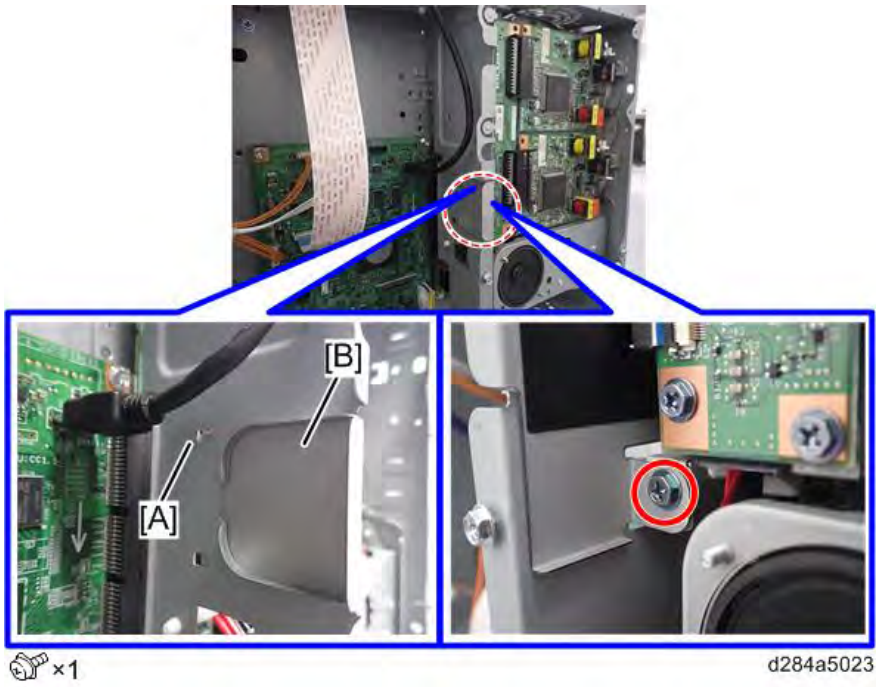
11. Attach the screws.



12. Take the FFC [A] out and connect the CCU interface board connector [B].

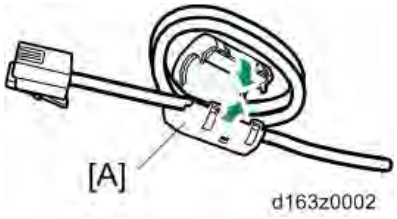


13. Insert the tab [A] and attach the partition board [B].



14. Reinstall the controller box cover, rear cover and I/F cover.

15. Make two loops with the telephone cord for each telephone line (LINE2, LINE3). Attach the ferrite core [A] to each telephone line.



16. Connect the telephone cords to the "LINE2" and "LINE3" jacks.

17. Attach the clamp [A] as shown in the picture below, and put the cable in the narrow space [B].

18. Insert the power plug into the outlet. Turn ON the main power of the machine.

19. Enter the service mode. Set Bit 1 of Communication Switch 16 to "1" (SP1-104-023).

20. Set Bit 3 of Communication Switch 16 to "1" (SP1-104-023).

21. Exit the service mode.

22. Turn ON then OFF the main power.

23. Print out the system parameter list. Check that "G3" is displayed as an option.

24. Set up and program the items required for PSTN-2 communications.

Notes for Connecting the Telephone Line

Checking the following before connecting the telephone line:

If a phone line dedicated to business phones is connected to the MFP, the fax board may be damaged. Make sure that the connecting phone line is for fax.

Reasons why the Fax Board may be damaged

Business phones have various functions. To operate those functions, a high current is supplied to a business phone line. This may damage components on the Fax board.

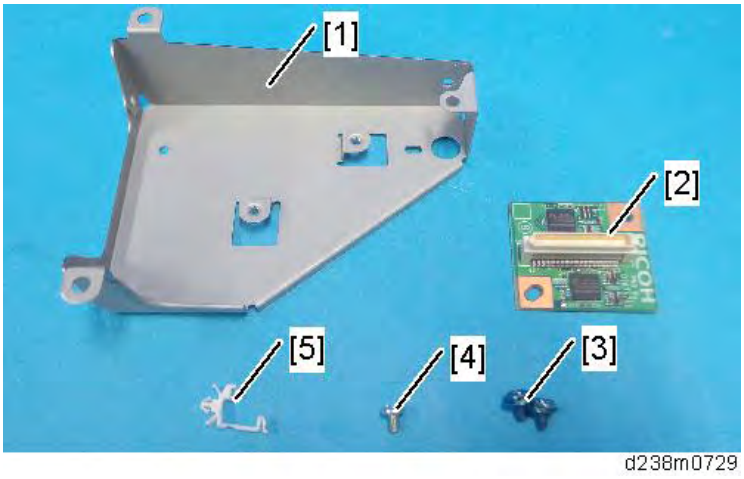
Fax Unit Options

Fax Memory Unit Type M19 64MB (D3BZ)

Accessory Check

Check the quantity and condition of the accessories against the following list.

No.	Description	Q'ty
1	Bracket (Not used for this machine)	1
2	Memory unit	1
3	Screws M3x6	2
4	Screws	1
5	Clamp	1



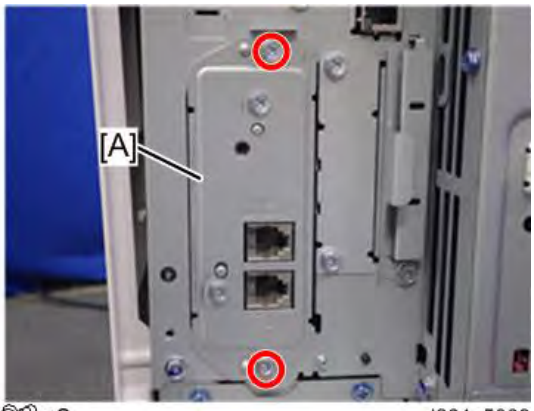
Installation Procedure

⚠CAUTION

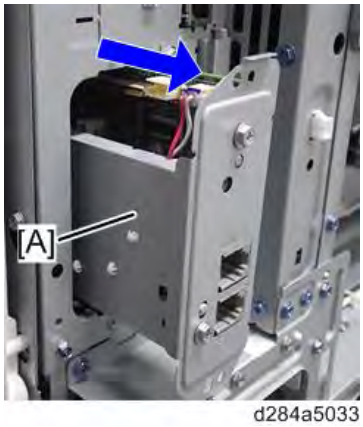
- Before installing this fax unit, print out all data in the printer buffer. Turn the main power to OFF and disconnect the power cord and the network cable.

1. Remove the controller cover [A].

2. Remove the slot cover [A].

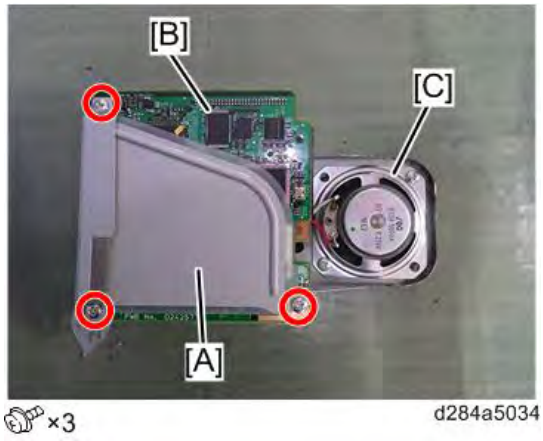


3. Remove the fax option unit [A] (Fax Option Type M29 (D3DX-01, -02, -03)).



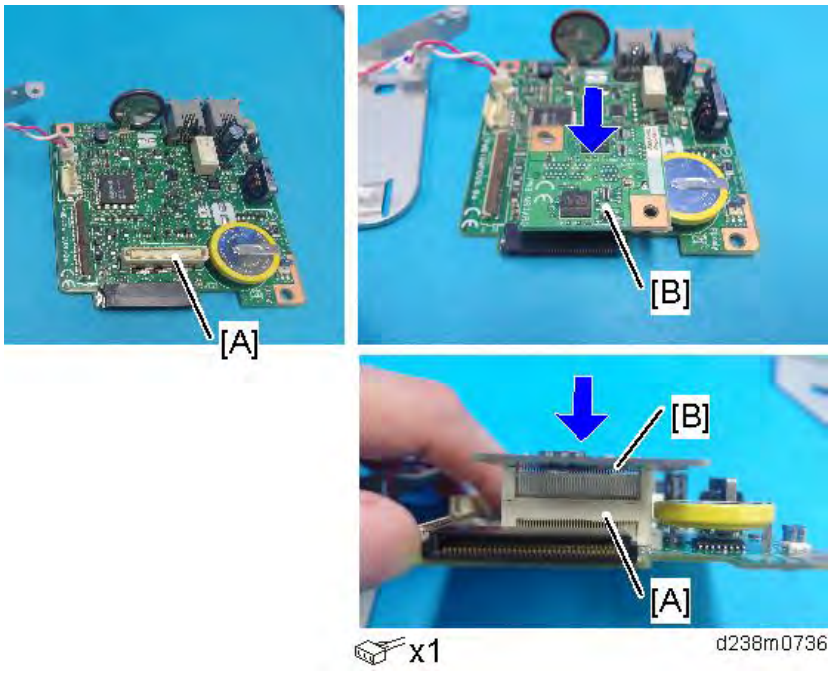
4. Remove the slot cover [A].

5. Separate the shield [A], FCU [B], and speaker bracket [C].

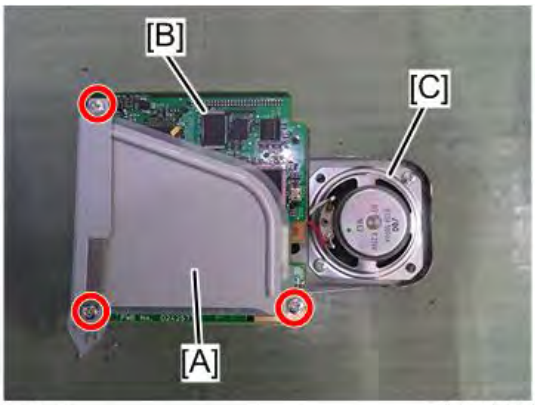


6. Attach the supplied clamp [B] to the speaker bracket [A].

7. Attach the memory unit [B] to the FCU connector [A]

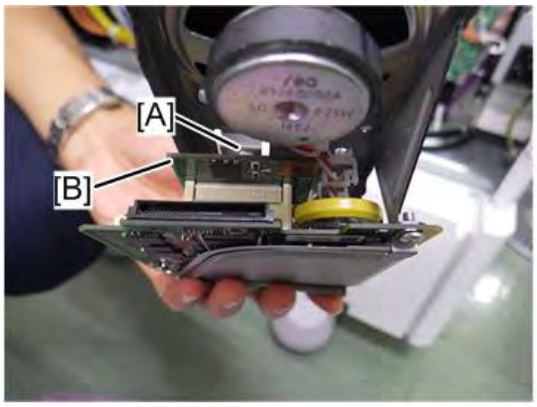


8. Re-assemble the shield [A], FCU [B], and speaker bracket [C].



Note

- Make sure that the clamp [B] is pressing the memory unit [A] and holding it in place.



9. Reinstall the FCU in the interface slot.

10. Re-assemble the machine.

Handset HS3020 (D739)

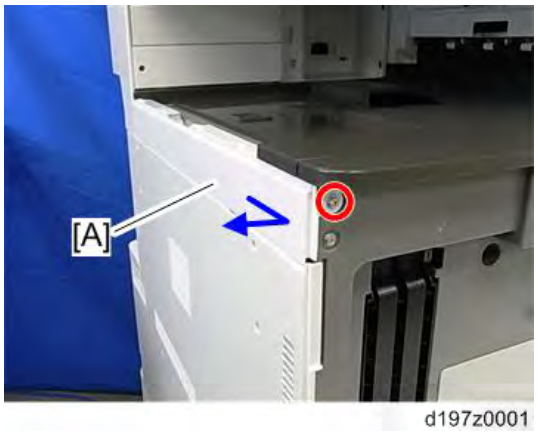
The optional handset is available for NA only.

1. Open the front cover [A].

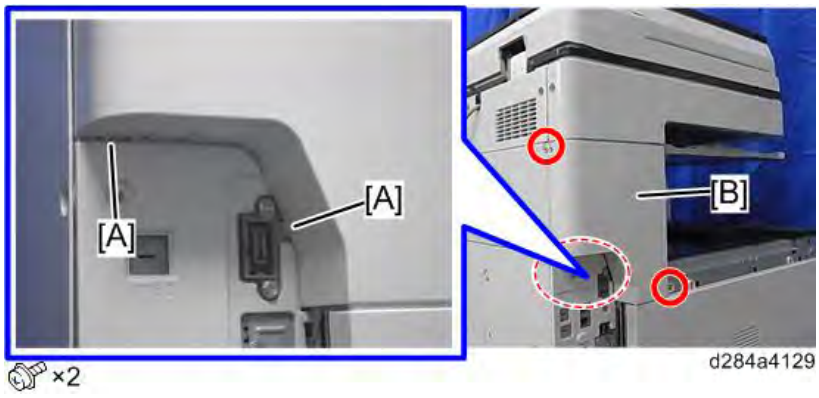
2. Remove the paper exit tray [A].

3. Remove the upper left cover [A] (×1).

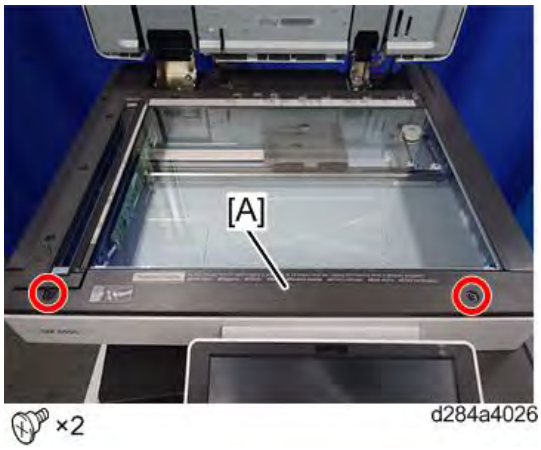
Slide the cover in the direction of the blue arrow.



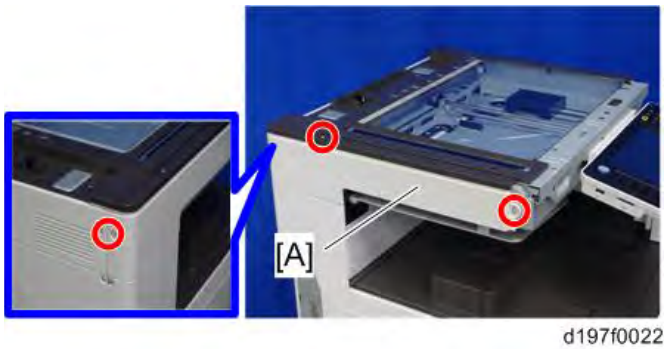
4. Remove the hooks [A], and remove the left rear cover [B].



5. Remove the scanner front cover [A].



6. Remove the scanner left cover [A](×2).



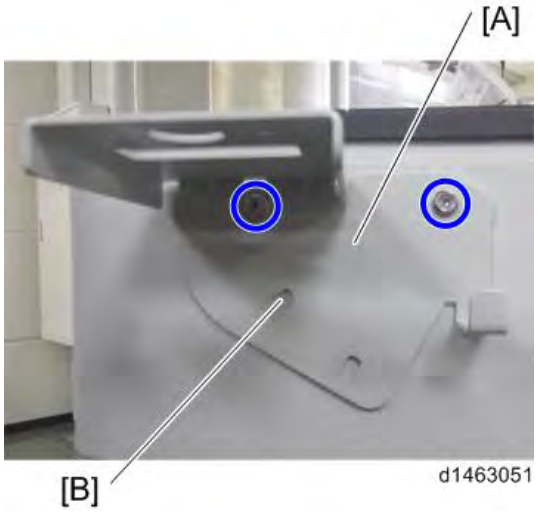
7. Make two holes in the scanner left cover.

8. Reattach the scanner left cover (x 3).

9. Re-assemble the machine.

10. Attach the bracket [A] enclosed with the fax unit (x 2: M3 x 12) as shown.

For machines with the single pass ADF, the bracket can be attached slanted using the hole [B].



11. Attach the cradle [A] to the handset bracket (x 2).

12. Make two loops with the telephone cord, and then attach the ferrite core [A] to the cable.

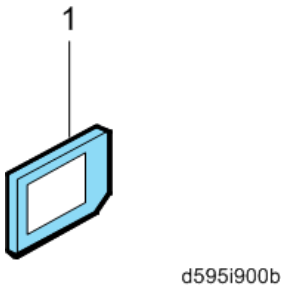
13. Connect the cable to the "TEL" jack [A] on the left side of the controller box.

Fax Connection Unit Type M29 (D3DW-01, -02, -03)

Accessory Check

Check the quantity and condition of the accessories against the following list.

No.	Description	Q'ty
1	Fax Connection Unit SD card	1



Installation Procedure

This unit allows a machine without the fax unit installed (client machine) to send and receive faxes via a machine with the fax unit installed (remote machine).

Requirements

- Up to six machines can be registered as the client machines.
- Machines that already have a fax unit installed cannot be used as client machines.
- Only one machine can be registered as the remote machine.
- Firmware for this unit: “aics” (software number: D3DW5759)
- Remote Fax transmission is possible using a G3 line.
- The Remote Fax function does not support User Code Authentication. Disable the User Code Authentication on the remote machine.
- Use this function to check the contents of a file that is stored in memory and not yet sent. Also, use this function to cancel a transmission from the client machine.

Order of installation

1. Install the Fax Connection Unit in the remote machine (fax unit already installed).
2. Install the Fax Connection Unit in the client machine (no fax unit is installed).
3. Register the client machine on the remote machine.

   Important

   - Do not register the remote machine before the client machine is registered on the remote machine. Otherwise, the remote machine cannot be registered.
4. Register the remote machine in the client machine.

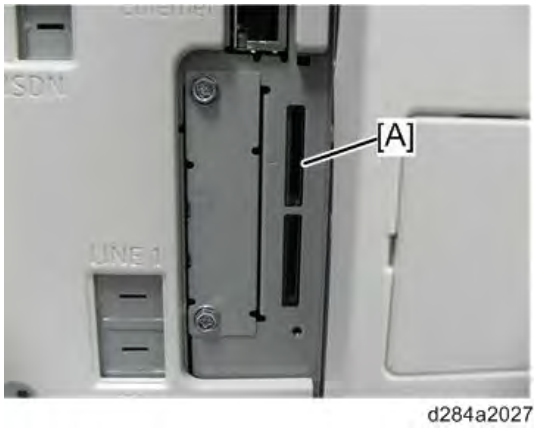
Installing the fax connection unit

Note

- Before starting this procedure, connect the network cable to the target machine(s), and then configure the network settings.
- When installing more than one SD card, perform the merge operation. For details about how to merge, refer to "Card Appli Move" in the field service manual for the main frame.

1. Remove the SD card slot covers [A].

2. Insert the Fax Connection Unit SD card into SD card slot 1 [A: Upper Slot].



3. Reattach the SD-card slot cover (x 1).

4. Turn ON the main power.

5. Make sure that the machine can recognize the option (See 'Self-Diagnosis Report' and check whether the aics (D3DW5759) is listed in [Loading Program].)

Registering the client machine(s)

Note

- Before starting this procedure, connect the network cable to the target machine(s), and then configure the network settings.

1. On the remote machine, press the [User Tools/Counter] key on the operation panel.

2. Press [System Settings].

3. Press [Administrator Tools].

4. Press [Program/Change/Delete Remote machine].

5. Enter the IP address or host name of the client machines.

Note

- Up to six machines can be registered as the client machines.

6. Press [OK] to set after “connection test”.
7. Press the [User Tools/Counter] key on the operation panel to terminate System Settings.

Registering the remote machine

Note

- Only one machine can be registered as the remote machine.
- Before starting this procedure, connect the network cable to the target machine(s), and then configure the network settings.

1. On the client machine, press the [User Tools/Counter] key on the operation panel
2. Press [System Settings].
3. Press [Administrator Tools].
4. Press [Program/Change/Delete Remote machine].
5. Enter the IP address or host name of the remote machine.
6. Press [OK] to set after “connection test”.
7. Press [Exit].

Configuring the Remote Reception Settings

Perform the following procedure to enable the client machine(s) to receive faxes via the remote machine. You can forward or route received documents per line or to a specific sender.

Note

- Before starting this procedure, connect the network cable to the target machine(s), and then configure the network settings.
- By performing procedures #1-3 above, the client machines can send faxes via the remote machine. The procedures shown below are necessary to enable the client machines to receive faxes.

This procedure is performed on the remote machine.

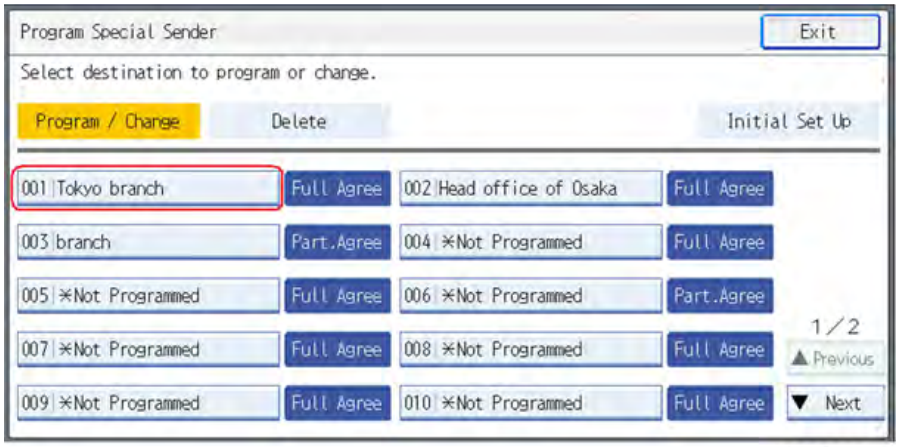
Using "Remote Reception Setting per Line"

1. Press [Facsimile Features].
2. Press [Remote Reception Setting per Line] in [Reception Settings].
3. Enter an IP address or a host name of the client-side machine to connect.
4. Press [Set], and [Exit] to exit from the setting.

Using "Remote Reception per Sender"

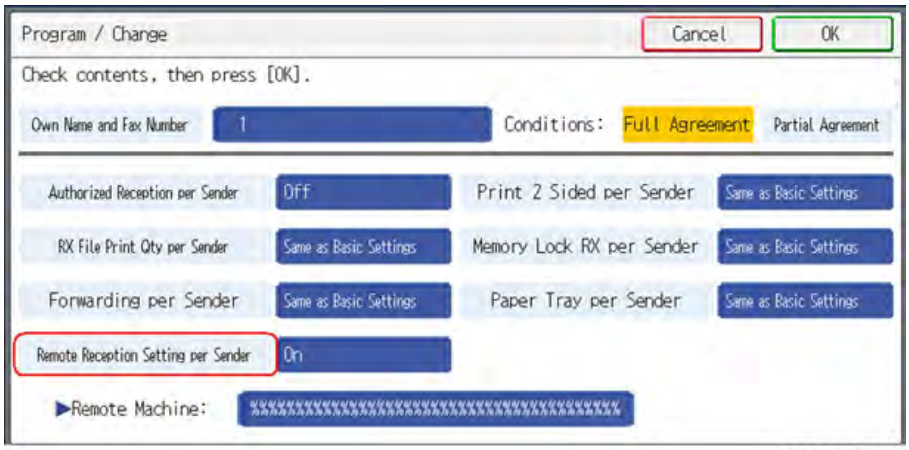
1. Press [Facsimile Features].
2. Press [Program Special Sender] in [Reception Settings].

3. Select the Special Sender.



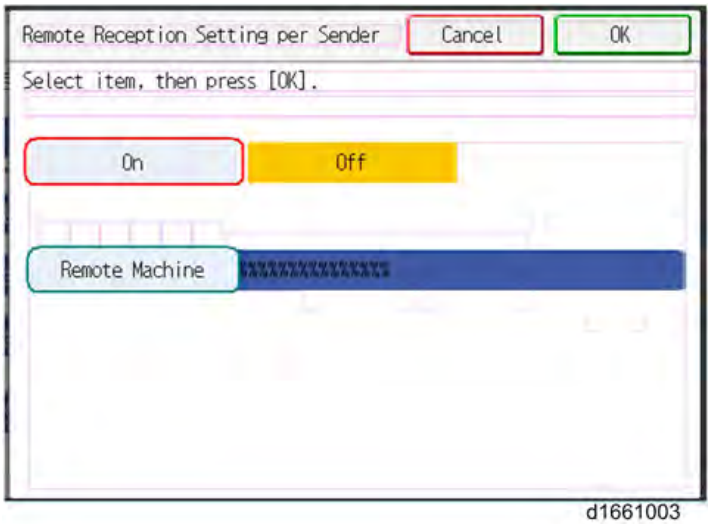
d1661001

4. Press [Remote Reception Setting per Sender].



d1661002

5. Press [On] and [Remote machine].



d1661003

6. Enter an IP address or a host name of the client machine to connect.

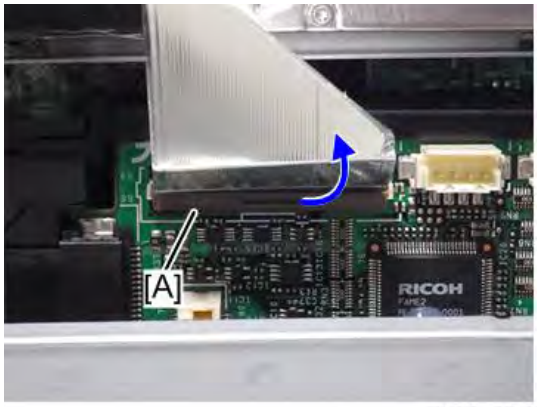
7. Press [OK] to exit from the setting.

2. Replacement and Adjustment

FCU

⚠CAUTION

- When removing the FFC, lift the lever [A] to release the lock.



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SRAM Data Transfer Procedure

When you replace the FCU board, transfer the SRAM data from the old FCU board to the new FCU board. Do the following procedure to back up the SRAM data.

Note

- The following data can be transferred: TTI, RTI, CSI, Fax bit switch settings, RAM address settings, NCU parameter settings.

Preparation

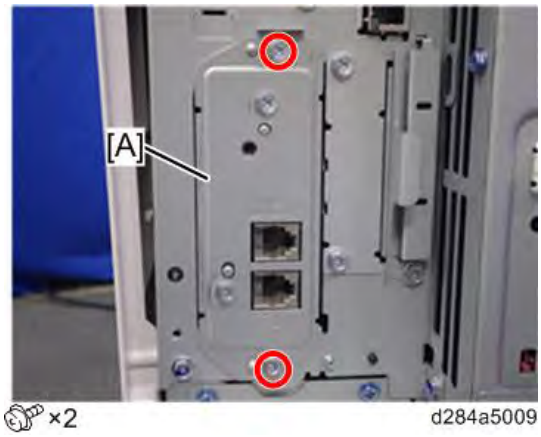
- Remove the G3 Unit and disconnect the FFC connection. (See the installation in G3 Interface Unit Type M29 (D3DX-05, -06, -07, -13))

Check "LINE2" to see if the G3 unit is installed.

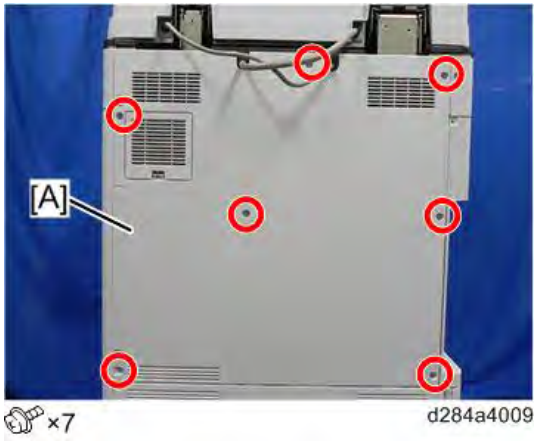
G3 Unit Installed	No G3 Unit Installed
d284a5045	d284a5046

1. Remove the controller box cover [A].

2. Remove the interface slot cover [A].



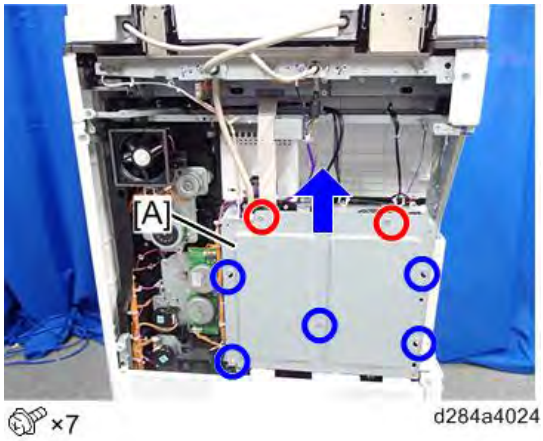
3. Remove the rear cover [A].



4. Remove the controller box cover [A].

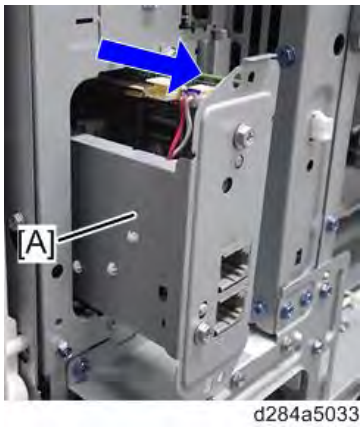
Red circle: remove

Blue circle: loosen

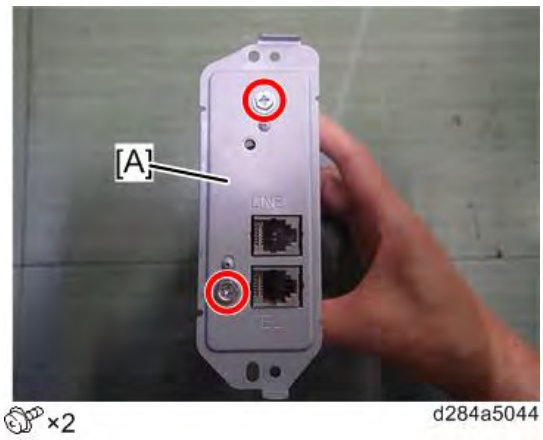


5. If the optional G3 interface unit is installed, remove the FFC from the FCU.

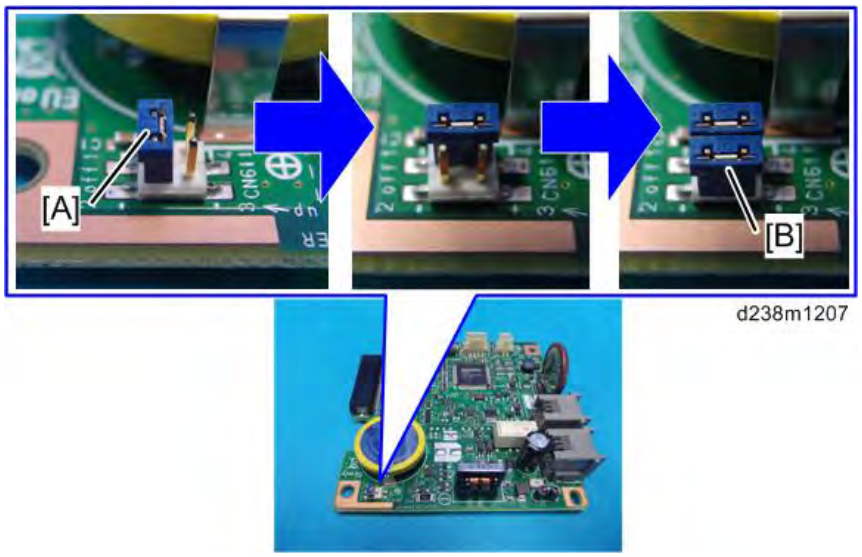
6. Pull out the FCU [A] from the interface slot.



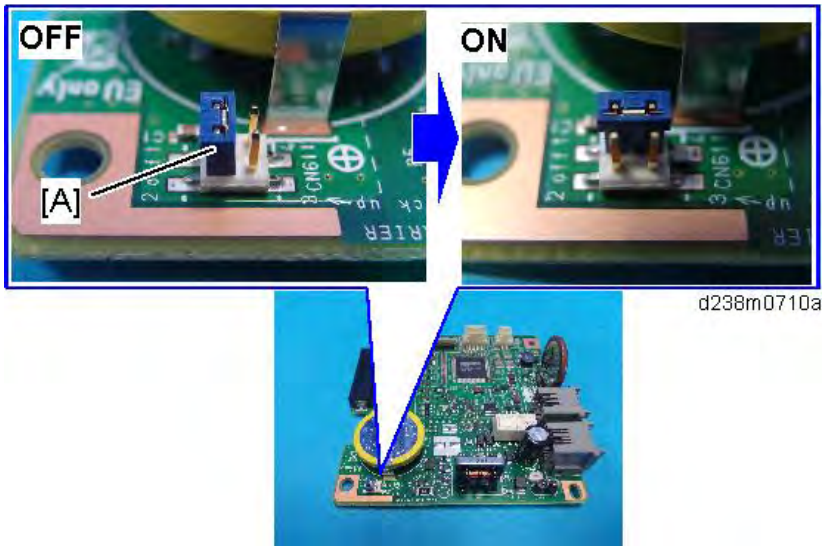
7. Remove the slot cover [A].



8. Change the orientation of the battery jumper switch [A] on the removed FCU board, and then attach the battery jumper switch [B] on the FCU board to switch to the Restore mode.
The battery jumper switch [B] is supplied with the new FCU board.



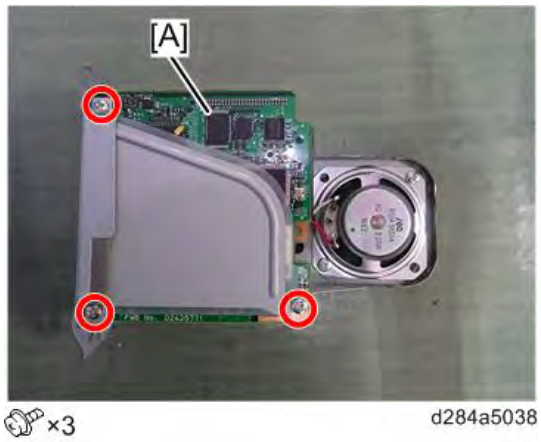
9. Switch the battery jumper switch [A] of the new fax unit to the "ON" position before installing.



Note

- If the battery jumper switch is not in the correct position, SC820 will occur.

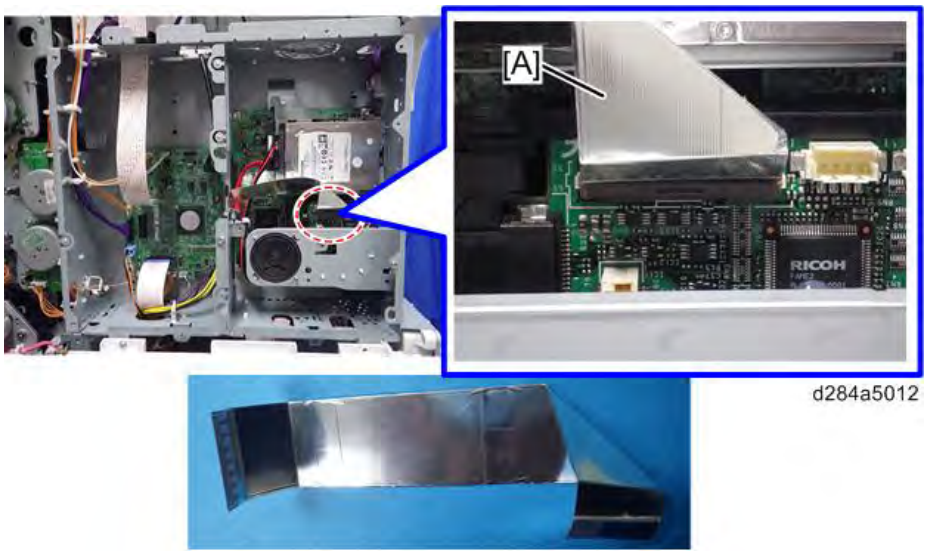
10. Replace the installed FCU board [A] with a new FCU board.



11. Reinstall the new fax unit, and then the slot cover (x 2).

12. Attach one end of the flat cable [A] to CN603 of the new fax unit.

- When inserting the cable, make sure that it is not slanted.
- Connect the FFC in the direction as photo below.



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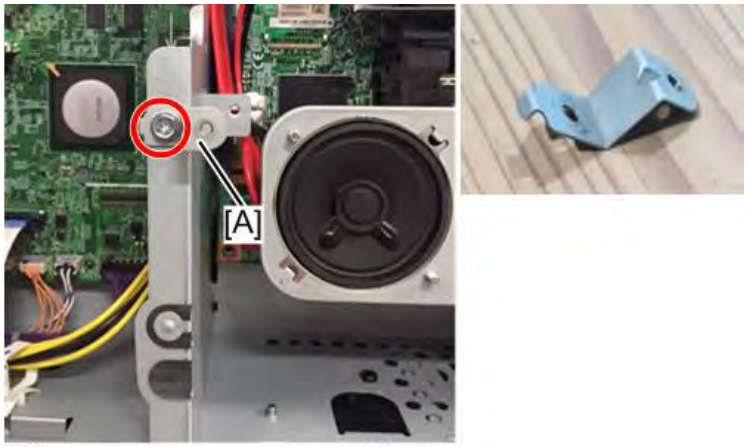
13. Attach the bracket [A] (provided as a service part) to the center frame of the controller box.

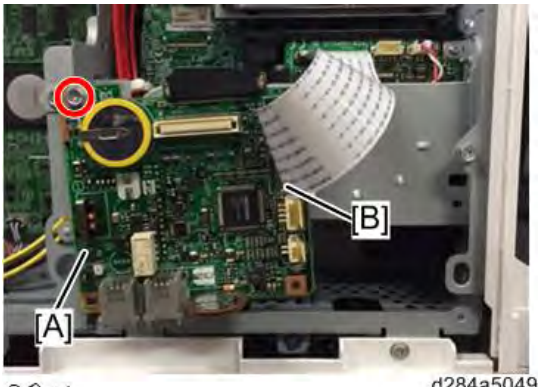


×1 d284a5048

14. Attach the removed FCU board [A] to the bracket.

Then attach the other end of the flat cable to the connector [B] of CN603 on the removed FCU board.

- When inserting the cable, make sure that it is not slanted.
- Make sure that the blue tape of the flat cable faces outward.



×1 d284a5049

⚠CAUTION

- Keep the removed FCU board away from the metal frames. Otherwise, the removed FCU board may have a short circuit.

15. Turn ON the main power.

SRAM data transmission starts. When the transmission is completed, you will hear a beeper sound.

Note

- The beeper sound is at the same volume as the speaker sound.
- The beeper sounds even if the speaker sound is turned off.
- If the beeper does not sound, repeat main power OFF/ON until the beeper sounds, and then perform the transmission procedure. If the data cannot be transmitted, repeat transmission 2 or 3 times.

16. When "Ready" is displayed on the display panel, turn OFF the main power. Disconnect the flat cable from the removed FCU board.

17. Remove the removed FCU board (☞ x 1).

18. Remove the bracket from the center frame of the controller box (☞ x 1).

19. Disconnect the flat cable from the new FCU board.

20. Re-assemble the machine.

21. Turn ON the main power. Execute SP6-101 to print the system parameter list.

22. Check the system parameter list to make sure that the data is transferred correctly.

23. Set the correct date and time with the User Tools: User Tools > System Settings > Timer Setting > Set Date/Time.

3. Troubleshooting

Error Codes

If an error code is displayed, retry communication. If the same problem occurs, try to fix the problem as suggested below.

Note

- Error codes appear in the error code display and on the service report.

Code	Meaning	Suggested Cause/Action
0-00	DIS/NSF not detected within 40 s of Start being pressed	• Check the connection. • The other party may be incompatible. • Replace the FCU. • Check for DIS/NSF with an oscilloscope. • If the RX signal is weak, there may be a bad connection.
0-01	DCN received unexpectedly	• The other party is out of paper or has a paper jam. • The other party pressed the Stop button during communication.
0-03	Incompatible modem at the other end	The other party is incompatible.
0-04	CFR or FTT not received after modem training	• Check the connection. • Try changing the TX level and/or cable equalizer settings. • Replace the FCU. • The other machine may be defective. Try sending to another machine. • If the RX signal is weak or defective, there may be a bad connection. **Reference:** • TX level: NCU Parameter 01 (PSTN) • Cable equalizer: G3 Switch 07 (PSTN) • Dedicated TX parameters in Service Program Mode
0-05	Modem training fails even G3 shifts down to 2400 bps.	• Check the connection. • Try adjusting the TX level and/or cable equalizer. • Replace the FCU. • Check for line problems. **Reference:** See error code 0-04.
0-06	The other terminal did not reply to DCS	• Check the connection.

Code	Meaning	Suggested Cause/Action
		• Try adjusting the TX level and/or cable equalizer settings. • Replace the FCU. • The other end may be defective or incompatible; try sending to another machine. • Check for line problems. **Reference:** See error code 0-04.
0-07	No post-message response from the other end after a page was sent	• Check the connection. • Replace the FCU. • The other party is out of paper or has a paper jam. • The other party may have disconnected the call. • Check for a bad line. • The other machine may be defective. Try sending to another machine.
0-08	The other end sent RTN or PIN after receiving a page, because there were too many errors	• Check the connection. • Replace the FCU. • The other end may have jammed, or run out of paper or memory space. • Try adjusting the TX level and/or cable equalizer settings. • The other end may have a defective modem/FCU; try sending to another machine. • Check for line problems and noise. **Reference:** • TX level: NCU Parameter 01 (PSTN) • Cable equalizer: G3 Switch 07 (PSTN) • Dedicated TX parameters in Service Program Mode
0-14	Non-standard post message response code received	• Incompatible or defective remote terminal; try sending to another machine. • Noisy line; resend. • Try adjusting the TX level and/or cable equalizer settings. • Replace the FCU. **Reference:** See error code 0-08.
0-15	The other terminal is not capable of specific functions.	The other party is unable to accepting the following functions, or the other party's memory is full.

Code	Meaning	Suggested Cause/Action
		• Confidential RX • Transfer function • SEP/SUB/PWD/SID
0-16	CFR or FTT not detected after modem training in confidential or transfer mode	• Check the connection. • Replace the FCU. • Try adjusting the TX level and/or cable equalizer settings. • The other machine may have disconnected, or it may be defective. Try sending to another machine. • If the ax signal level is too low, there may be a line problem. **Reference:** See error code 0-08.
0-17	Communication was interrupted by pressing the Stop key	If the Stop key was not pressed and this error keeps occurring, replace the operation panel or the operation panel drive board.
0-20	Facsimile data not received within 6 s of retraining	• Check the connection. • Replace the FCU. • Check for line problems. • Try calling another fax machine. • Try adjusting the reconstruction time for the first line and/or RX cable equalizer setting. **Reference:** Reconstruction time - G3 Switch 0A, Bit 6 Rx cable equalizer - G3 Switch 07 (PSTN)
0-21	EOL signal (end-of-line) from the other end not received within 5 s of the previous EOL signal	• Check the connection between the FCU and line. • Check for line noise or other line problems. • Replace the FCU. • The remote machine may be defective or may have been disconnected. **Reference:** Maximum interval between EOLs and between ECM frames - G3 Bit Switch 0A, Bit 4
0-22	The signal from the other end was interrupted for more than the acceptable modem carrier drop time (default: 200 ms)	• Check the connection. • Replace the FCU. • The remote machine may be defective. • Check for line noise or other line problems. • Try adjusting the acceptable modem carrier drop time.

Code	Meaning	Suggested Cause/Action
		Reference: Acceptable modem carrier drop time: G3 Switch 0A, Bits 0 and 1
0-23	Too many errors during reception	• Check the connection. • Replace the FCU. • The remote machine may be defective. • Check for line noise or other line problems. • Try asking the other party to adjust their TX level. • Try adjusting the RX cable equalizer setting and/or RX error criteria. **Reference:** Rx cable equalizer: G3 Switch 07 (PSTN) Rx error criteria: Communication Switch 02, Bits 0 and 1
0-29	Data block format failure in ECM reception	• Check for line noise or other line problems. • Check the FCU - NCU connectors. • Replace the NCU or FCU.
0-30	The other terminal did not reply to NSS(A) in AI short protocol mode	• Check the connection. • Try adjusting the TX level and/or cable equalizer settings. • The other terminal may not be compatible. **Reference:** Dedicated TX parameters - Section 4
0-32	The other terminal sent a DCS, which contained functions that the receiving machine cannot handle.	• Check the protocol dump list. • Ask the other party to contact the manufacturer.
0-33	The data reception (not ECM) is not completed within 10 minutes.	• Check the connection. • The other terminal may have a defective modem/FCU.
0-52	Polarity changed during communication	• Check the connection. Retry communication.
0-55	FCU does not detect the SG3.	• FCU firmware or board defective. • SG3 firmware or board defective.
0-56	The stored message data exceeds the capacity of the mailbox in the SG3.	SG3 firmware or board defective.
0-70	The communication mode specified in CM/JM was not available (V.8 calling and called terminal)	• The other terminal did not have a compatible communication mode (e.g., the other terminal was a V.34 data modem and not a fax modem.) • A polling TX file was not ready at the other terminal when polling RX was initiated from the calling

Code	Meaning	Suggested Cause/Action
		terminal.
0-74	The calling terminal fell back to T.30 mode, because it could not detect ANSam after sending CI.	• The calling terminal could not detect ANSam due to noise, etc. • ANSam was too short to detect. • Check the connection. and condition. • Try making a call to another V.8/V.34 fax.
0-75	The called terminal fell back to T.30 mode, because it could not detect a CM in response to ANSam (ANSam timeout).	• The terminal could not detect ANSam. • Check the connection. and condition. • Try receiving a call from another V.8/V.34 fax.
0-76	The calling terminal fell back to T.30 mode, because it could not detect a JM in response to CM (CM timeout).	• The called terminal could not detect a CM due to noise, etc. • Check the connection. and condition. • Try making a call to another V.8/V.34 fax.
0-77	The called terminal fell back to T.30 mode, because it could not detect a CJ in response to JM (JM timeout).	• The calling terminal could not detect a JM due to noise, etc. • A network that has narrow bandwidth cannot pass JM to the other end. • Check the connection. and condition. • Try receiving a call from another V.8/V.34 fax.
0-79	The called terminal detected CI while waiting for a V.21 signal.	• Check for line noise or other line problems. • If this error occurs, the called terminal falls back to T.30 mode.
0-80	The line was disconnected due to a timeout in V.34 phase 2 – line probing.	• The guard timer expired while starting these phases. Serious noise, narrow bandwidth, or low signal level can cause these errors. If these errors happen at the transmitting terminal: • Try making a call later. • Try using V.17 or a slower modem using dedicated TX parameters. • Try increasing the TX level. • Try adjusting the TX cable equalizer setting. If these errors happen at the receiving terminal: • Try adjusting the RX cable equalizer setting. • Try increasing the TX level. • Try using V.17 or a slower modem if the same error is frequent when receiving from multiple senders.
0-81	The line was disconnected due to a timeout in V.34 phase 3 – equalizer training.	
0-82	The line was disconnected due to a timeout in the V.34 phase 4 – control channel start-up.	
0-83	The line was disconnected due to a timeout in the V.34 control channel restart sequence.	
0-84	The line was disconnected due to	• The signal did not stop within 10 s.

Code	Meaning	Suggested Cause/Action
	abnormal signaling in V.34 phase 4 – control channel start-up.	• Turn off the main power switch, and then turn it back on. • If the same error is frequent, replace the FCU.
0-85	The line was disconnected due to abnormal signaling in V.34 control channel restart.	• The signal did not stop within 10 s. • Turn off the main power switch, and then turn it back on. • If the same error is frequent, replace the FCU.
0-86	The line was disconnected because the other terminal requested a data rate using MPh that was not available in the currently selected symbol rate.	• The other terminal was incompatible. • Ask the other party to contact the manufacturer.
0-87	The control channel started after an unsuccessful primary channel.	• The receiving terminal restarted the control channel because data reception in the primary channel was not successful. • This does not result in an error communication.
0-88	The line was disconnected because PPR was transmitted/received 9 (default) times within the same ECM frame.	• Try using a lower data rate at the start. • Try adjusting the cable equalizer setting.
2-11	Only one V.21 connection flag was received	• Replace the FCU.
2-12	Modem clock irregularity	• Replace the FCU.
2-13	Modem initialization error	• Turn off the machine, and then turn it back on. • Update the modem ROM. • Replace the FCU.
2-22	Counter overflow error of JBIG chip	If error occurs frequently, change the settings for resolution, paper size, and compression type.
2-23	JBIG compression or reconstruction error	Turn off the machine, and then turn it back on.
2-24	JBIG ASIC error	• Turn off the machine, and then turn it back on.
2-25	JBIG data reconstruction error (BIH error)	• JBIG data error • Check the sender's JBIG function. • Update the FCU ROM.
2-26	JBIG data reconstruction error (Float marker error)	
2-27	JBIG data reconstruction error (End marker error)	
2-28	JBIG data reconstruction error (Timeout)	

Code	Meaning	Suggested Cause/Action
2-29	JBIG trailing edge maker error	• FCU defective • Check the destination device.
2-50	The machine resets itself for a fatal FCU system error	• If this is frequent, update the ROM, or replace the FCU.
2-51	The machine resets itself because of a fatal communication error	• If this is frequent, update the ROM, or replace the FCU.
2-53	Snd msg() in the manual task is an error because the mailbox for the operation task is full.	• The user did the same operation many times, and this gave too much load to the machine.
4-01	Line current was cut	• Check the line connector. • Check for line problems. • Replace the FCU.
4-10	Communication failed because of an ID Code mismatch (Closed Network) or Tel. No./CSI mismatch (Protection against Wrong Connections)	• Get the ID Codes the same and/or the CSIs programmed correctly, and then resend. • The machine at the other end may be defective.
5-00	Data reconstruction not possible	Replace the FCU.
5-10	DCR timer expired	• Replace the FCU.
5-20	Storage impossible because of a lack of memory	• Temporary memory shortage. • Test the SAF memory.
5-21	Memory overflow	
5-23	Print data error when printing a substitute RX or confidential RX message	• Test the SAF memory. • Ask the other end to resend the message.
5-25	SAF file access error	• Replace an SD card or HDD. • Replace the FCU.
6-00	G3 ECM - T1 time out during reception of facsimile data	• Try adjusting the RX cable equalizer. • Replace the FCU.
6-01	G3 ECM - no V.21 signal was received	
6-02	G3 ECM - EOR was received	
6-04	G3 ECM - RTC not detected	• Check the connection. • Check for a bad line or defective remote terminal. • Replace the FCU.
6-05	G3 ECM - facsimile data frame not received within 18 s of CFR, but there was no line fail	• Check the connection. • Check for a bad line or defective remote terminal. • Replace the FCU. • Try adjusting the RX cable equalizer

Code	Meaning	Suggested Cause/Action
		Reference: • RX cable equalizer - G3 Switch 07 (PSTN)
6-06	G3 ECM - coding/decoding error	• Defective FCU. • The other terminal may be defective.
6-08	G3 ECM - PIP/PIN received in reply to PPS.NULL	• The other end pressed Stop during communication. • The other terminal may be defective.
6-09	G3 ECM - ERR received	• Check for a noisy line. • Adjust the TX levels of the communicating machines. • See code 6-05.
6-10	G3 ECM - error frames still received at the other end after all communication attempts at 2400 bps	• Check for line noise. • Adjust the TX level (use NCU parameter 01 or the dedicated TX parameter for that address). • Check the connection. • Defective remote terminal.
6-21	V.21 flag detected during high speed modem communication	• The other terminal may be defective or incompatible.
6-22	The machine resets the sequence because of an abnormal handshake in the V.34 control channel	• Check for line noise. • If the same error occurs frequently, replace the FCU. • Defective remote terminal.
6-99	V.21 signal not stopped within 6 s	Replace the FCU.
9-30	HDD write error	• Check the connection of the HDD. • If the problem persists, replace the HDD and/or harness.
9-31	HDD control error	
9-32	HDD read error	
9-33	HDD fatal error	
13-17	SIP user name registration error	• Double registration of the SIP user name. • Capacity for user-name registration in the SIP server is not sufficient.
13-18	SIP server access error	• Incorrect initial setting for the SIP server. • Defective SIP server.
13-24	SIP authentication error	• Registered password in the device does not match the password in the SIP server.
13-25	Network I/F setting error	• IPV4 is not active in the active protocol setting. • IP address of the device is not registered.
13-26	Network I/F setting error at power on	• Active protocol setting does not match the I/F setting for SIP server. • IP address of the device is not registered.
13-	IP address setting error	• IP address of the device is not registered.

Code	Meaning	Suggested Cause/Action
27		
14-00	SMTP Send Error	• Error occurred during sending to the SMTP server. Occurs for any error other than 14-01 to 16. For example, the mail address of the system administrator is not registered.
14-01	SMTP Connection Failed	• Failed to connect to the SMTP server (timeout) because the server could not be found. • The PC is not ready to transfer files. • SMTP server not functioning correctly. • The DNS IP address is not registered. • Network not operating correctly. • Destination folder selection not correct.
14-02	No Service by SMTP Service (421)	• SMTP server operating incorrectly or the destination for direct SMTP sending is not correct. • Contact the system administrator and check that the SMTP server has the correct settings and operates correctly. • Contact the system administrator for direct SMTP sending and check the sending destination.
14-03	Access to SMTP Server Denied (450)	• Failed to access the SMTP server because the access is denied. • SMTP server operating incorrectly. Contact the system administrator to determine if there is a problem with the SMTP server and to check that the SMTP server settings are correct. • Folder send destination is incorrect. Contact the system administrator to determine that the SMTP server settings and path to the server are correct. • Device settings incorrect. Confirm that the user name and password settings are correct. • Direct SMTP destination incorrect. Contact the system administrator to determine if there is a problem at the destination and that the settings at the destination are correct.
14-04	Access to SMTP Server Denied (550)	• SMTP server operating incorrectly • Direct SMTP sending not operating correctly
14-05	SMTP Server HDD Full (452)	• Failed to access the SMTP server because the HDD on the server is full.

Code	Meaning	Suggested Cause/Action
		• Insufficient free space on the HDD of the SMTP server. Contact the system administrator and check the amount of space remaining on the SMTP server HDD. • Insufficient free space on the HDD where the destination folder is located. Contact the system administrator and check the amount of space remaining on the HDD where the target folder is located. • Insufficient free space on the HDD at the target destination for SMTP direct sending. Contact the system administrator. Check the amount of space remaining on the target HDD or check if the mail size setting is the default value (2MB). • Check the size of the original data. For example, if the original has too many pages, the data size can be too big to send.
14-06	User Not Found on SMTP Server (551)	• The designated user does not exist. • The designated user does not exist on the SMTP server. • The designated address is not for use with direct SMTP sending.
14-07	Data Send to SMTP Server Failed (4XX)	• Failed to access the SMTP server because the transmission failed. • PC not operating correctly. • SMTP server operating incorrectly • Network not operating correctly. • Destination folder setting incorrect. • Direct SMTP sending not operating correctly.
14-08	Data Send to SMTP Server Failed (5XX)	• Failed to access the SMTP server because the transmission failed. • SMTP server operating incorrectly • Destination folder setting incorrect. • Direct SMTP sending not operating correctly. • Software application error.
14-09	Authorization Failed for Sending to SMTP Server	• POP-Before-SMTP or SMTP authorization failed. • Incorrect setting for file transfer
14-10	Addresses Exceeded	• Number of broadcast addresses exceeded the limit for the SMTP server.
14-11	Buffer Full	• The send buffer is full so the transmission could not be completed. Buffer is full due to using Scan-to-Email

Code	Meaning	Suggested Cause/Action
		while the buffer is being used send mail at the same time.
14-12	Data Size Too Large	• Transmission was cancelled because the detected size of the file was too large.
14-13	Send Cancelled	• Processing is interrupted because the user pressed Stop.
14-14	Security Locked File Error	• Update the software because of the defective software.
14-15	Mail Data Error	• The transmitting a mail is interrupted via DCS due to the incorrect data. • Update the software because of the defective software.
14-16	Maximum Division Number Error	• When a mail is divided for the mail transmission and the division number of a mail are more than the specified number, the mail transmission is interrupted. • Update the software because of the defective software.
14-17	Incorrect Ticket	• Update the software because of the defective software.
14-18	Access to MCS File Error	• The access to MCS file is denied due to the no permission of access. • Update the software because of the defective software.
14-20	SMTP Authentication error	Make sure the administrator's e-mail address is same as the SMTP authentication address or POP before SMTP address.
14-21	Transmission error of S/MIME	Register the correct user certificate and device certificate.
14-30	MCS File Creation Failed	Failed to create the MCS file because: • The number of files created with other applications on the Document Server has exceeded the limit. • HDD is full or not operating correctly. • Software error.
14-31	UFS File Creation Failed	UFS file could not be created: • Not enough space in UFS area to handle both Scan-to-Email and IFAX transmission. • HDD full or not operating correctly. • Software error.
14-32	Cancelled the Mail Due to Error Detected by NFAX	• Error detected with NFAX and send was cancelled due to a software error.
14-	No Mail Address For the Machine	• Neither the mail address of the machine nor the mail

Code	Meaning	Suggested Cause/Action
33		address of the network administrator is registered.
14-34	Address designated in the domain for SMTP sending does not exist	• Operational error in normal mail sending or direct SMTP sending. • Check the address selected in the address book for SMTP sending. • Check the domain selection.
14-50	Mail Job Task Error	Due to an FCU mail job task error, the send was cancelled: • Address book was being edited during creation of the notification mail. • Software error.
14-51	UCS Destination Download Error	Not even one return notification can be downloaded: • The address book was being edited. • The number for the specified destination does not exist (it was deleted or edited after the job was created).
14-60	Send Cancel Failed	• The cancel operation by the user failed to cancel the send operation.
14-61	Notification Mail Send Failed for All Destinations	• All addresses for return notification mail failed.
14-62	Transmission Error due to the existence of zero line page	• When the 0 line page exists in received pages with G3 communication, the transmission is interrupted.
14-63	Fax Communication Unit: Transmission Error	Check the followings. • Name of SMTP server • Port number of SMTP • DNS setting • Server name (FTP) • Path name (computer name and shared folder name at SMTP/ NCP) • Active protocol setting (Netware/ NCP) • NW flame type (NCP) • Log-on mode (NDS tree/ bindery)
-		Check the SMTP server. • Check if the SMTP server works normally and is connected to the network. • Check if the settings of the SMTP are correct.
-		Check the DNS server. • Check if the DNS server works normally and is connected to the network. • Check if the settings of the DNS server are correct.

Code	Meaning	Suggested Cause/Action
-		Check the network. • Check if the LAN works normally. • Check if the no firewall exists.
-		Check the destination folder for the data transfer. • Check if the destination folder works normally. • Check if the settings of the destination folder are correct.
-		Ask an administrator of the direct SMTP server in which the data is supposed to be transferred. • Check if the destination SMTP server works normally. • Check if the settings of the destination SMTP server are correct.
15-01	POP3/IMAP4 Server Not Registered	• At startup, the system detected that the IP address of the POP3/IMAP4 server has not been registered in the machine.
15-02	POP3/IMAP4 Mail Account Information Not Registered	• The POP3/IMAP4 mail account has not been registered.
15-03	Mail Address Not Registered	• The mail address has not been registered.
15-10	DCS Mail Receive Error	• Error other than 15-11 to 15-18.
15-11	Connection Error	The DNS or POP3/IMAP4 server could not be found: • The IP address for DNS or POP3/IMAP4 server is not stored in the machine. • The DNS IP address is not registered. • Network not operating correctly.
15-12	Authorization Error	POP3/IMAP4 send authorization failed: • Incorrect IFAX user name or password. • Another device, such as the PC, attempted access. • POP3/IMAP4 settings incorrect.
15-13	Receive Buffer Full	• Occurs only during manual reception. Transmission cannot be received due to insufficient buffer space. The buffer is being used for mail send or Scan-to-Email.
15-14	Mail Header Format Error	• The mail header is not standard format. For example, the Date line description is incorrect.
15-15	Mail Divide Error	• The e-mail is not in standard format. There is no boundary between parts of the e-mail, including the header.

Code	Meaning	Suggested Cause/Action
15-16	Mail Size Receive Error	• The mail cannot be received because it is too large.
15-17	Receive Timeout	• May occur during manual receiving only because the network is not operating correctly.
15-18	Incomplete Mail Received	• Only one portion of the mail was received.
15-31	Final Destination for Transfer Request Reception Format Error	• The format of the final destination for the transfer request was incorrect.
15-39	Send/Delivery Destination Error	The transmission cannot be delivered to the final destination: • Destination file format is incorrect. • Could not create the destination for the file transmission.
15-41	SMTP Receive Error	• Reception rejected because the transaction exceeded the limit for the “Auth. E-mail RX” setting.
15-42	Off Ramp Gateway Error	• The delivery destination address was specified with Off Ramp Gateway OFF.
15-43	Address Format Error	• Format error in the address of the Off Ramp Gateway.
15-44	Addresses Over	• The number of addresses for the Off Ramp Gateway exceeded the limit of 30.
15-61	Attachment File Format Error	• The attached file is not TIFF format.
15-62	TIFF File Compatibility Error	Could not receive transmission due to: • Resolution error • Image of resolution greater than 200 dpi without extended memory. • Resolution is not supported. • Page size error • The page size was larger than A3. • Compression error • File was compressed with other than MH, MR, or MMR.
15-63	TIFF Parameter Error	The TIFF file sent as the attachment could not be received because the TIFF header is incorrect: • The TIFF file attachment is a type not supported. • The TIFF file attachment is corrupted. • Software error.

Code	Meaning	Suggested Cause/Action
15-64	TIFF Decompression Error	The file received as an attachment caused the TIFF decompression error: • The TIFF format of the attachment is corrupted. • Software error.
15-71	Not Binary Image Data	• The file could not be received because the attachment was not binary image data.
15-73	MDN Status Error	• The disposition line in the header of the Return Receipt could not be found, or there is a problem with the firmware.
15-74	MDN Message ID Error	• Could not find the Original Message ID line in the header of the Return Receipt, or there is a problem with the firmware.
15-80	Mail Job Task Read Error	• Could not receive the transmission because the destination buffer is full and the destination could not be created (this error may occur when receiving a transfer request or a request for notification of reception).
15-81	Repeated Destination Registration Error	• Could not repeat receive the transmission because the destination buffer is full and the destination could not be created (this error may occur when receiving a transfer request or a request for notification of reception).
15-91	Send Registration Error	Could not receive the file for transfer to the final destination: • The format of the final destination or the transfer destination is incorrect. • Destinations are full so the final and transfer destinations could not be created.
15-92	Memory Overflow	• Transmission could not be received because memory overflowed during the transaction.
15-93	Memory Access Error	• Transaction could not complete due to a malfunction of SAF memory.
15-94	Incorrect ID Code	• The machine rejected an incoming e-mail for transfer request, because the ID code in the incoming e-mail did not match the ID code registered in the machine.
15-95	Transfer Station Function	• The machine rejected an incoming e-mail for transfer because the transfer function was unavailable.
16-	No IP address registered	• The machine does not get an IP address because the

Code	Meaning	Suggested Cause/Action
00		DNS server has not been registered for the remote machine or IP address of the remote machine has not been registered. • Register the DNS server for the remote machine or configure an IP address of the remote machine.
22-00	Original length exceeded the maximum scan length	• Divide the original into more than one page. • Check the resolution used for scanning. Lower the scan resolution if possible. • Add optional page memory.
22-01	Memory overflow while receiving	• Wait for the files in the queue to be sent. • Delete unnecessary files from memory. • Transfer the substitute reception files to another fax machine, if the machine's printer is busy or out of order. • Add an optional SAF memory card or hard disk.
22-02	TX or RX job stalled due to line disconnection at the other end	• The job started normally but did not finish normally; data may or may not have been received fully. • Restart the machine.
22-04	The machine cannot store received data in the SAF	• Update the ROM • Replace the FCU.
22-05	No G3 parameter confirmation answer	• Defective FCU board or firmware.
23-00	Data read timeout during construction	• Restart the machine. • Replace the FCU.
25-00	The machine software resets itself after a fatal transmission error occurred	• Update the ROM • Replace the FCU.
F0-xx	V.34 modem error	• Replace the FCU.
F6-xx	SG3 modem error	• Update the SG3 modem ROM. • Replace the SG3 board. • Check for line noise or other line problems. • Try communicating another V.8/V.34 fax.

Fax Connection Unit Error Codes

Error Code - 01

Error Code	Possible Causes	Troubleshooting Procedures
01(1)	IPv4/IPv6 not enabled	Enable IPv4 and IPv6
01(3)	“Cancel” is pressed by user.	-
01(4)	A false connection ID is being used.	Check that the network is established.
01(5)	Network is disconnected because of no response within a specified time.	
01(14)	• Either this machine or the machine at the other end has entered SP or Initial settings. • An established connection exists.	• Exit SP or initial settings. • Wait until the connection has finished.

Error Code - 02

Error Code	Possible Causes	Troubleshooting Procedures
02(5)	• Wrong IP address/host name was used. • The main power of the other machine at destination is OFF. • LAN cable is disconnected. • Network is rebooting.	• Enter the correct IP address/host name • Turn ON the main power. • Connect the LAN cable • Wait until rebooting has finished.

Error Code - 03

<table>
<tr><th>Error Code</th><th>Possible Causes</th><th colspan="2">Troubleshooting Procedures</th></tr>
<tr><td rowspan="6">03</td><td rowspan="6">• No user authentication (i.e. Basic/Windows/LDAP/Custom Auth.) applies to fax application.
• Settings other than user authentication are applied to the fax application.</td><td colspan="2">Configure the user authentication setting for client and remote machines as follows:</td></tr>
<tr><td>Client Machine</td><td>Remote Machine</td></tr>
<tr><td>OFF</td><td>OFF</td></tr>
<tr><td>ON</td><td>OFF</td></tr>
<tr><td>ON</td><td>ON</td></tr>
<tr><td colspan="2"></td></tr>
</table>

Error Code - 04

Error Code	Possible Causes	Troubleshooting Procedures
04	Although the same user is registered on the remote machine and client machine, the user name and login password do not match.	• Register the same user to both the remote machine and client machine. • Make sure to match the username and login password.

Error Code - 05

Error Code	Possible Causes	Troubleshooting Procedures
05	An unauthorized user tried to connect.	Authorize the user to use fax connection.

Error Code - 06

Error Code	Possible Causes	Troubleshooting Procedures
06	Timeout error on the node authentication	Adjust the value of SP5-741-001 to prolong the timeout for node authentication.

Error Code - 07

Error Code	Possible Causes	Troubleshooting Procedures
07	Multiple destinations are set in the client machine.	On the client machine, execute SP5-801-021 to clear AICS memory

Error Code - 08

Error Code	Possible Causes	Troubleshooting Procedures
08(1)	• A client machine connects to another client machine. • The client machine is not registered on the remote machine as destinations.	• Connect to the remote machine. • Register the client machine to the remote machine as a destination.
08(2)	• A remote machine connects to another Remote Machine. • The wrong remote machine is registered on the client machine.	• Connect to the client machine. • Check the remote machine registered on the client machine.

Error Code - 09

Error Code	Suggested Cause	Action
09	Capacity of the HDD of the Remote Machine is full.	Increase the remaining capacity of the HDD of the Remote Machine.

IFAX Troubleshooting

Use the following procedures to determine whether the machine or another part of the network is causing the problem.

Communication Route	Item	Troubleshooting Procedures
General LAN	1. Connection with the LAN	• Check that the LAN cable is connected to the machine. • Check that the LEDs on the hub are lit.
	2. LAN activity	Check that other devices connected to the LAN can communicate through the LAN.
Between IFAX and PC	1. Network settings on the PC	• Check the network settings on the PC. • Check with the network administrator for the IP address. (Is the IP address registered in the TCP/IP properties in the network setup correct?)
	2. Check that PC can connect with the machine	Use the “ping” command on the PC to contact the machine. At the MS-DOS prompt, type ping then the IP address of the machine, then press Enter.
	3. LAN settings in the machine	• Check the LAN parameters • Check if there is an IP address conflict with other PCs. Use the “Network” function in the User Tools. If there is an IP address conflict, inform the administrator.
Between machine and e-mail server	1. LAN settings in the machine	• Check the LAN parameters • Check if there is an IP address conflict with other PCs. Use the “Network” function in the User Tools. If there is an IP address conflict, inform the administrator.
	2. E-mail account on the server	• Make sure that the machine can log into the e-mail server. • Check that the account and password stored in the server are the same as in the machine. Ask the administrator to check.
	3. E-mail server	Make sure that the client devices which have an account in the server can send/receive e-mail. Ask the administrator to check. Send a test e-mail with the machine’s own number as the

Communication Route	Item	Troubleshooting Procedures
		destination. The machine receives the returned e-mail if the communication is performed successfully.
Between e-mail server and internet	1. E-mail account on the Server	• Make sure that the PC can log into the e-mail server. • Check that the account and password stored in the server are the same as in the machine. Ask the administrator to check.
	2. E-mail server	Make sure that the client devices which have an account in the server can send/receive e-mail. Ask the administrator to check. Send a test e-mail with the machine's own number as the destination. The machine receives the returned e-mail if the communication is performed successfully.
	3. Destination e-mail address	• Make sure that the e-mail address is actually used. • Check that the e-mail address contains no incorrect characters such as spaces.
	4. Router settings	• Use the "ping" command to contact the router. • Check that other devices connected to the router can sent data over the router. Ask the administrator of the server to check.
	5. Error message by e-mail from the network of the destination.	• Check whether e-mail can be sent to another address on the same network, using the application e-mail software. • Check the error e-mail message. Inform the administrator of the LAN.

IP-Fax Troubleshooting

IP-Fax Transmission

Cannot send by IP Address/Host Name

Check Point		Troubleshooting Procedures
1	LAN cable connected?	Check the LAN cable connection.
2	Specified IP address/hostname correct?	Check the IP address/host name.
3	Firewall/NAT installed?	The firewall cannot be breached. Send by another method (Fax, Internet Fax)
4	Transmission sent manually?	Manual sending not supported.
5	IP address of local machine registered?	Register the IP address.
6	Remote terminal port number setting other than 1720 (when using H.323) or 5060 (when using SIP)?	Send by specifying the port number.
7	Specified port number correct?	Confirm the port number of the remote fax.
8	DNS server registered when host name specified?	Contact the network administrator.
9	Remote fax a T.38 terminal?	Check whether the remote fax is a T38 terminal.
10	Remote fax switched off or busy?	Check that the remote fax is ON.
11	Network bandwidth too narrow?	Request the network administrator to increase the bandwidth.
		Raise the delay level. (IPFAX SW 01 Bit 0 to 3)
		IP-Fax bandwidth is the same as the DCS speed. Set IP-Fax SW00 Bit 6 to 1.
12	Remote fax cancelled transmission?	Check whether the remote fax cancelled the transmission.

Cannot send via VoIP Gateway

Check Point		Troubleshooting Procedures
1	LAN cable connected?	Check the LAN cable connection.
2	VoIP Gateway T.38 standard?	Contact the network administrator.
3	VoIP Gateway installed correctly?	Contact the network administrator.
4	VoIP Gateway power switched on?	Contact the network administrator.
5	Is the IP address/host name of the specified Gateway correct?	Check the IP address/host name.
6	Number of the specified fax correct?	Check the remote fax number.
7	Firewall/NAT installed?	The firewall cannot be breached. Send by another method (Fax, Internet Fax)

8	Transmission sent manually?	Manual sending not supported.
9	IP address of local fax registered?	Register the IP address.
10	DNS registered when host name specified?	Contact the network administrator.
11	Remote fax a G3 fax?	Check that the remote fax is a G3 fax.
12	G3 fax connected to VoIP gateway?	Check that G3 fax is connected.
13	Remote G3 fax turned ON?	Check that G3 fax is ON.
14	Network bandwidth too narrow?	Request the network administrator to increase the bandwidth.
		Raise the network delay level. (IPFAX SW 01 Bit 0 to 3)
		IP-Fax bandwidth is the same as the DCS speed. Set IP-Fax SW00 Bit 6 to 1.

Cannot send by Alias Fax number.

Check Point		Troubleshooting Procedures
1	LAN cable connected?	Check the LAN cable connection.
2	Number of specified Alias fax correct?	Confirm the Alias of the remote fax. Error Code: 13-14
3	Firewall/NAT installed?	The firewall cannot be breached. Send by another method (Fax, Internet Fax)
4	Transmission sent manually?	Manual sending not supported.
5	Gatekeeper/SIP server installed correctly?	Contact the network administrator.
6	Gatekeeper/SIP server power turned ON?	Contact the network administrator.
7	IP address/host name of Gatekeeper/SIP server correct?	Check the IP address/host name.
8	DNS server registered when Gatekeeper/SIP server host name specified?	Contact the network administrator.
9	Enable H.323/Enable SIP SW is set to on?	Check the settings. See User Parameter SW 34 Bit 0/SW 34 Bit 1
10	IP address of local fax registered?	Register the IP address of the local fax.
11	Alias number of local fax registered?	Register the Alias number of the local fax.
12	Remote fax registered in Gatekeeper?	Contact the network administrator.
13	Remote fax a T.38 terminal?	Check whether the remote fax is a T38 terminal.
14	Remote fax switched off or busy?	Contact the network administrator.
15	Network bandwidth too narrow?	Request the system administrator to increase the bandwidth.
		Raise the delay level. (IPFAX SW 01 Bit 0 to 3)

		Lower the modem transmission baud rate. (IPFAX SW 05)
16	Remote fax cancelled transmission?	Check whether the remote fax cancelled the transmission.

IP-Fax Reception

Cannot receive via IP Address/Host Name.

Check Point		Troubleshooting Procedures
1	LAN cable connected?	Check the LAN cable connection.
2	Firewall/NAT installed?	The firewall cannot be breached. Send by another method (Fax, Internet Fax)
3	IP address of local fax registered?	Register the IP address.
4	Port number specified at remote sender fax (if required)?	Request the sender to specify the port number.
5	Specified port number correct (if required)?	Request the sender to check the port number.
6	DNS server registered when host name specified on sender side?	Contact the network administrator. Note • The sender machine displays this error code if the sender fax is a Ricoh model.
7	Network bandwidth too narrow?	Request the system administrator to increase the bandwidth.
		Lower the start modem reception baud rate on the receiving side. (IPFAX SW06)
8	Remote fax cancelled transmission?	Check whether the remote fax cancelled the transmission.

Cannot receive by VoIP Gateway.

Check Point		Troubleshooting Procedures
1	LAN cable connected?	Check the LAN cable connection.
2	Firewall/NAT installed?	The firewall cannot be breached. Send by another method (Fax, Internet Fax)
3	VoIP Gateway installed correctly?	Contact the network administrator.
4	VoIP Gateway power turned ON?	Contact the network administrator.
5	IP address/host name of specified VoIP Gateway correct on sender's side?	Request the remote fax to check the IP address/host name.
6	DNS server registered when host name specified on sender side?	Contact the network administrator.
7	Network bandwidth too narrow?	Request the network administrator to increase the bandwidth.

8	G3 fax connected?	Check that G3 fax is connected.
9	G3 fax power turned ON?	Check that G3 fax is ON.

Cannot receive by Alias Fax number.

Check Point		Troubleshooting Procedures
1	LAN cable connected?	Check the LAN cable connection.
2	Firewall/NAT installed?	The firewall cannot be breached. Send by another method (Fax, Internet Fax)
3	Gatekeeper/SIP server installed correctly?	Contact the network administrator. Note • The sender machine displays this error code when the sender fax is a Ricoh model.
4	Power to Gatekeeper/SIP server turned ON?	Contact the network administrator. Note • The sender machine displays this error code when the sender fax is a Ricoh model.
5	IP address/host name of Gatekeeper/SIP server correct on the sender's side?	Request the sender to check the IP address/host name. Note • The sender machine displays this error code when the sender fax is a Ricoh model.
6	DNS server registered when Gatekeeper/SIP server host name specified on sender's side?	Contact the network administrator. Note • The sender machine displays this error code when the sender fax is a Ricoh model.
7	Enable H.323/Enable SIP SW set to on?	Request the sender to check the settings. User Parameter SW 34 Bit 0/SW 34 Bit 1 Note • Only if the remote sender fax is a Ricoh fax.
8	Local fax IP address registered?	Register the IP address.
9	Local fax Alias number registered?	Register the Alias number.
10	Network bandwidth too narrow?	Request the system administrator to increase the bandwidth.
		Lower the start modem reception baud rate on the receiving side. (IPFAX SW06)
11	Remote fax cancelled transmission?	Check whether the remote fax cancelled the transmission.

12	Local fax registered in Gatekeeper/SIP server?	Contact the network administrator. Note • The sender machine displays this error code when the sender fax is a Ricoh model.

4. Service Tables

Cautions

Important

- Never turn off the main power switch when the power LED is lit or flashing. To avoid damaging the hard disk or memory, press the operation power switch to switch the power off, wait for the power LED to go off, and then switch the main power switch off.

Note

- The main power LED lights or flashes while the platen cover or ARDF is open, while the main machine is communicating with a facsimile or the network server, or while the machine is accessing the hard disk or memory for reading or writing data.

Service Program Tables

SP1-XXX (BIT Switches)

1	Mode No.		Function
101	System Switch		
	001 – 032	00 – 1F	Change the bit switches for system settings for the fax option "Bit Switches - 1" : "System Switches"
102	Ifax Switch		
	001 – 016	00 – 0F	Change the bit switches for internet fax settings for the fax option "Bit Switches - 2" : "I-Fax Switches"
103	Printer Switch		
	001 – 016	00 – 0F	Change the bit switches for printer settings for the fax option "Bit Switches - 2": "Printer Switches"
104	Communication Switch		
	001 – 032	00 – 1F	Change the bit switches for communication settings for the fax option "Bit Switches - 3" : "Communication Switches"
105	G3-1 Switch		
	001 – 016	00 – 0F	Change the bit switches for the protocol settings of the standard G3 board "Bit Switches - 4" : "G3 Switches"
106	G3-2 Switch		
	001 – 016	00 – 0F	Change the bit switches for the protocol settings of the optional G3 board "Bit Switches - 5" : "G3-2 and G3-3 Switches"
107	G3-3 Switch		
	001 – 016	00 – 0F	Change the bit switches for the protocol settings of the optional G3 board "Bit Switches - 5": "G3-2 and G3-3 Switches"
108	G4 Internal Switch		
	001 – 032	00 – 1F	**Not used** (Do not change the bit switches)
109	G4 Parameter Switch		
	001 – 016	00 – 0F	**Not used** (Do not change the bit switches)
111	IP fax Switch		
	001 – 016	00 – 0F	Change the bit switches for optional IP fax parameters "Bit Switches - 6" : "IP Fax Switches"

SP2-XXX (RAM)

2	Mode No.		Function
101	RAM Read/Write		
	001		Change RAM data for the fax board directly.

			"Service RAM Addresses"
102	Memory Dump		
	001	G3-1 Memory Dump	Print out RAM data for the fax board. "Service RAM Addresses"
	002	G3-2 Memory Dump	Print out RAM data for the optional SG3 board.
	003	G3-3 Memory Dump	Print out RAM data for the optional SG3 board.
	004	G4 Memory Dump	Not used
103	G3-1 NCU Parameters		
	001 – 023	CC, 01 – 22	NCU parameter settings for the standard G3 board. "NCU Parameters"
104	G3-2 NCU Parameters		
	001 – 023	CC, 01 – 22	NCU parameter settings for the optional G3 board. "NCU Parameters"
105	G3-3 NCU Parameters		
	001 – 023	CC, 01 – 22	NCU parameter settings for the optional G3 board. "NCU Parameters"

SP3-XXX (Machine Set)

3	Mode No.		Function
101	Service Station		
	001	Fax Number	Enter the fax number of the service station.
	002	Select Line	Select the line type.
102	Serial Number		
	000		Enter the fax unit's serial number.
103	PSTN-1 Port Settings		
	001	Select Line	Select the line type setting for the G3-1 line. If the machine is installed on a PABX line, select "PABX", "PABX (GND)" or "PABX (FLASH)".
	002	PSTN Access Number	Enter the PSTN access number for the G3-1 line.
	003	Memory Lock Disabled	Not used
104	PSTN-2 Port Settings		
	001	Select Line	Select the line setting for the G3-2 line. If the machine is installed on a PABX line, select "PABX", "PABX (GND)" or "PABX (FLASH)".
	002	PSTN Access Number	Enter the PSTN access number for the G3-2 line.

	003	Memory Lock Disabled	Not used
	004	Transmission Disabled	If you turn this SP on, the machine does not send any fax messages on the G3-2 line.
105	PSTN-3 Port Settings		
	001	Select Line	Select the line setting for the G3-3 line. If the machine is installed on a PABX line, select "PABX", "PABX (GND)" or "PABX (FLASH)".
	002	PSTN Access Number	Enter the PSTN access number for the G3-3 line.
	003	Memory Lock Disabled	Not used
	004	Transmission Disabled	If you turn this SP on, the machine does not send any fax messages on the G3-3 line.
106	ISDN Port Settings		
	001	Select Line	**Not used** (Do not change the settings.)
	002	PSTN Access Number	
	003	Memory Lock Disabled	
	004	Transmission Disabled	
107	IPFAX Port Settings		
	001	H323 Port	Sets the H323 port number.
	002	SIP Port	Sets the SIP port number.
	003	RAS Port	Sets the RAS port number.
	004	Gatekeeper port	Sets the Gatekeeper port number.
	005	T.38 Port	Sets the T.38 port number.
	006	SIP Server Port	Sets the SIP port number.
	007	IPFAX Protocol Priority	Select "H323" or "SIP".
201	FAX SW		
	001 – 032	00 – 1F	

SP4-XXX (ROM Versions)

4	Mode No.		Function
101	001	FCU ROM Version	Displays the FCU ROM version.
102	001	Error Codes	Displays the latest 64 fax error codes.

103	001	G3-1 ROM Version	Displays the G3-1 modem version.
104	001	G3-2 ROM Version	Displays the G3-2 modem version.
105	001	G3-3 ROM Version	Displays the G3-3 modem version.
106	001	G4 ROM Version	**Not used** (Do not change the settings.)

SP5-XXX (RAM Clear)

5	Mode No.	Function
101	Initialize SRAM (except Secure)	
	000	Initializes the bit switches and user parameters, user data in the SRAM, files in the SAF memory, and clock.
102	Erase All Files	
	000	Erases all files stored in the SAF memory.
103	Reset Bit Switches (except Secure)	
	000	Resets the bit switches and user parameters.
104	Factory Setting	
	000	Resets the bit switches and user parameters, user data in the SRAM and files in the SAF memory.
105	Reset All Bit Switches	
	000	Resets all the current bit switch settings.
106	Reset Security Bit Switches	
	000	Resets only the security bit switches. If you select automatic output/display for the user parameter switches, the security settings are initialized.

SP6-XXX (Reports)

6	Mode No.		Function
101	System Parameter List		
	000	-	Touch the “ON” button to print the system parameter list.
102	Service Monitor Report		
	000	-	Touch the “ON” button to print the service monitor report.
103	G3 Protocol Dump List		
	001	G3 All Communications	Prints the protocol dump list of all communications for all G3 lines.
	002	G3-1 (All Communications)	Prints the protocol dump list of all communications for the G3-1 line.
	003	G3-1 (1 Communication)	Prints the protocol dump list of the last communication for the G3-1 line.

	004	G3-2 (All Communications)	Prints the protocol dump list of all communications for the G3-2 line.
	005	G3-2 (1 Communication)	Prints the protocol dump list of the last communication for the G3-2 line.
	006	G3-3 (All Communications)	Prints the protocol dump list of all communications for the G3-3 line.
	007	G3-3 (1 Communication)	Prints the protocol dump list of the last communication for the G3-3 line.
104	G4 Protocol Dump List		
	001	Dch + Bch 1	**Not used** (Do not change the settings.)
	002	Dch	
	003	Bch 1 Link Layer	
	004	Dch Link Layer	
	005	Dch +Bch 2	
	006	Bch 2 Link Layer	
105	All Files print out		
	000	-	Prints out all the user files in the SAF memory, including confidential messages. Note • Do not use this function, unless the customer is having trouble printing confidential messages or recovering files stored using the memory lock feature.
106	Journal Print out		
	001	All Journals	The machine prints all the communication records on the report.
	002	Specified Date	The machine prints all communication records after the specified date.
107	Log List Print out		
	001	All log files	These log print out functions are for designer use only.
	002	Printer	
	003	SC/TRAP Stored	
	004	Decompression	
	005	Scanner	
	006	JOB/SAF	
	007	Reconstruction	
	008	JBIG	
	009	Fax Driver	
	010	G3CCU	

	011	Fax Job	
	012	CCU	
	013	Scanner Condition	
108	IP Protocol Dump List		
	001	All Communications	Prints the protocol dump list of all communications for the IP fax line.
	002	1 Communication	Prints the protocol dump list of the last communication for the IP fax line.

SP7-XXX (Tests)

These are the test modes for PTT approval.

7	Function
101	G3-1 Modem Tests
102	G3-1 DTMF Tests
103	Ringer Test
104	G3-1 V34 (S2400baud)
105	G3-1 V34 (S2800baud)
106	G3-1 V34 (S3000baud)
107	G3-1 V34 (S3200baud)
108	G3-1 V34 (S3429baud)
109	Recorded Message Test
110	G3-2 Modem Tests
111	G3-2 DTMF Tests
112	G3-2 V34 (S2400baud)
113	G3-2 V34 (S2800baud)
114	G3-2 V34 (S3000baud)
115	G3-2 V34 (S3200baud)
116	G3-2 V34 (S3429baud)
117	G3-3 Modem Tests
118	G3-3 DTMF Tests
119	G3-3 V34 (S2400baud)
120	G3-3 V34 (S2800baud)
121	G3-3 V34 (S3000baud)
122	G3-3 V34 (S3200baud)
123	G3-3 V34 (S3429baud)
124	IG3-1 Modem Tests - **Not used**
125	IG3-1 DTMF Tests - **Not used**
126	IG3-1 V34 (S2400baud) - **Not used**
127	IG3-1 V34 (S2800baud) - **Not used**
128	IG3-1 V34 (S3000baud) - **Not used**

129	IG3-1 V34 (S3200baud) - **Not used**
130	IG3-1 V34 (S3429baud) - **Not used**
131	IG3-2 Modem Tests - **Not used**
132	IG3-2 DTMF Tests - **Not used**
133	IG3-2 V34 (S2400baud) - **Not used**
134	IG3-2 V34 (S2800baud) - **Not used**
135	IG3-2 V34 (S3000baud) - **Not used**
136	IG3-2 V34 (S3200baud) - **Not used**
137	IG3-2 V34 (S3429baud) - **Not used**

Bit Switches - 1

Important

- Do not adjust a bit switch or use a setting that is described as "Not used", as this may cause the machine to malfunction or to operate in a manner that is not accepted by local regulations. Such bits are for use only in other areas, such as Japan.

Default settings for bit switches are not listed in this manual. Refer to the System Parameter List printed by the machine.

System Switches

System Switch 00 (SP No. 1-101-001)		
No	**Function**	**Comments**
0	Dedicated transmission parameter programming 0: Disabled 1: Enabled	Set this bit to 1 before changing any dedicated transmission parameters. This setting is automatically reset to "0" after turning off and on.
1	Not used	Do not change this setting.
2	Technical data printout on the journal 0: Disabled 1: Enabled	1: Instead of the personal name, the following data are listed in the journal for each G3 communication.
	Example: **0000 32V34 288/264 L0100 03 04** (1) (2)(3) (4) (5) (6) (7) (8) (1): EQM value (Line quality data). A larger number means more errors. (2): Symbol rate (V.34 only) (3): Final modem type used (4): Starting data rate (for example, 288 means 28.8 kbps) (5): Final data rate (6): RX level (see below for how to read the RX level) (7): Total number of error lines that occurred during non-ECM reception. (8): Total number of burst error lines that occurred during non-ECM reception. Note • EQM and RX level are fixed at "FFFF" in TX mode. • The seventh and eighth numbers are fixed at "00" for transmission records and ECM reception records.	
	RX level calculation Example:	

	0000 32V34 288/264 L0100 03 04 (1) (2)(3) (4) (5) (6) (7) (8) The four-digit hexadecimal value (N) after "L" indicates the RX level. The **high** byte is given first, followed by the **low** byte. Divide the decimal value of N by -16 to get the RX level. In the above example, the decimal value of N (= 0100 [H]) is 256. So, the actual RX level is 256/-16 = -16 dB	
3	Not used	Do not change this setting.
4	Line error mark print 0: OFF, 1: ON (print)	When "1" is selected, a line error mark is printed on the printout if a line error occurs during reception. This shows error locations when ECM is turned off.
5	G3 communication parameter display 0: Disabled 1: Enabled	This is a fault-finding aid. The LCD shows the key parameters (see "G3 Communication Parameters" below this table). This is normally disabled because it cancels the CSI display for the user. Be sure to reset this bit to "0" after testing.
6	Protocol dump list output after each communication 0: Off 1: On	This is only used for communication troubleshooting. It shows the content of the transmitted facsimile protocol signals. Always reset this bit to 0 after finishing testing. If system switch 09 bit 6 is at "1", the list is only printed if there was an error during the communication.
7	Not used	Do not change the setting.

G3 Communication Parameters

Modem rate	336: 33600 bps	168: 16800 bps
	312: 31200 bps	144: 14400 bps
	288: 28800 bps	120: 12000 bps
	264: 26400 bps	96: 9600 bps
	240: 24000 bps	72: 7200 bps
	216: 21600 bps	48: 4800 bps
	192: 19200 bps	24: 2400 bps
Resolution	S: Standard (8 x 3.85 dots/mm) D: Detail (8 x 7.7 dots/mm) F: Fine (8 x 15.4 dots/mm) SF: Superfine (16 x 15.4 dots/mm) 21: Standard (200 x 100 dpi) 22: Detail (200 x 200 dpi) 44: Superfine (400 x 400 dpi)	
Compression mode	MMR: MMR compression MR: MR compression MH: MH compression	

	JBO: JBIG compression (Optional mode) JBB: JBIG compression (Basic mode)
Communication mode	ECM: With ECM NML: With no ECM
Width and reduction	A4: A4 (8.3"), no reduction B4: B4 (10.1"), no reduction A3: A3 (11.7"), no reduction
I/O rate	0: 0 ms/line 5: 5 ms/line 10: 10 ms/line 20: 20 ms/line 25: 2.5 ms/line 40: 40 ms/line Note • "40" is displayed while receiving a fax message using AI short protocol.

System Switch 01 - Not used (Do not change the factory settings.)

System Switch 02 (SP No. 1-101-003)		
No	**Function**	**Comments**
0-1	Not used	Do not change these settings.
2	Forced reset after transmission stalls 0: Off 1: On	With this setting on, the machine resets itself automatically if a transmission stalls and fails to complete the job.
3	Not used	Do not change these settings.
4	File retention time 0: Depends on User Parameter 24 [18(H)] 1: No limit	1: A file that had a communication error will not be erased unless the communication is successful.
5-7	-	Do not change this setting

System Switch 03 - Not used (Do not change the factory settings.)

System Switch 04 (SP No. 1-101-005)		
No	**Function**	**Comments**

0-2	Not used	Do not change these settings.
3	Printing dedicated TX parameters on Quick/Speed Dial Lists 0: Disabled 1: Enabled	1: Each Quick/Speed dial number on the list is printed with the dedicated TX parameters (10 bytes each). The first 10 bytes of data are the programmed dedicated TX parameters; 34 bytes of data are printed (the other 24 bytes have no use for service technicians).
4-7	Not used	Do not change these settings.

System Switch 05 - Not used (Do not change the factory settings.)
System Switch 06 - Not used (Do not change the factory settings.)
System Switch 07 - Not used (Do not change the factory settings.)
System Switch 08 - Not used (Do not change the factory settings.)

System Switch 09 (SP No. 1-101-010)		
No	**Function**	**Comments**
0	Addition of image data from confidential transmissions on the transmission result report 0: Disabled 1: Enabled	If this feature is enabled, the top half of the first page of confidential messages will be printed on transmission result reports.
1	Print timing of communication reports on the Journal when no image data was exchanged. 0: After DCS/NSS communication (default), 1: After polling	0: The Journal is printed only when image data is sent. 1: The Journal is printed when any data is sent.
2	Automatic error report printout 0: Disabled 1: Enabled	0: Error reports will not be printed. 1: Error reports will be printed automatically after failed communications.
3	Printing of the error code on the error report 0: No 1: Yes	1: Error codes are printed on the error reports. This can be used for detecting an error which occurs rarely.
4	Not used	Do not change this setting.
5	Power failure report 0: Disabled 1: Enabled (default)	1: A power failure report will be automatically printed after the power is turned ON if a fax message disappeared from the memory when the power was turned off last. **NOTE:** If "0" is selected, no reports are printed and no one

		may recognize that fax data is gone due to a power failure.
6	Conditions for printing the protocol dump list 0: Print for all communications 1: Print only when there is a communication error	This switch becomes effective only when system switch 00 bit 6 is set to 1. 1: Set this bit to 1 when you wish to print a protocol dump list only for communications with errors. **NOTE:** The memory size is limited. Use this bit switch only when some log reports are necessary.
7	Not used	Do not change this setting.

System Switch 0A (SP No. 1-101-011)		
No	**Function**	**Comments**
0	Automatic port selection 0: Disabled, 1: Enabled	When "1" is selected, a suitable port is automatically selected if the selected port is not used. **NOTE:** This bit is useful if all communication lines at a customer site are not the same quality
1-3	Not used	Do not change these settings.
4	Dialing on the ten-key pad when the external telephone is off-hook 0: Disabled 1: Enabled	0: Prevents dialing from the ten-key pad while the external telephone is off-hook. Use this setting when the external telephone is not by the machine, or if a wireless telephone is connected as an external telephone. 1: The user can dial on the machine's ten-key pad when the handset is off-hook.
5	On hook dial 0: Disabled 1: Enabled	0: On hook dial is disabled.
6-7	Not used	Do not change these settings

System Switch 0B - Not used (Do not change the factory settings.)
System Switch 0C - Not used (Do not change the factory settings.)
System Switch 0D - Not used (Do not change the factory settings.)

System Switch 0E (SP No. 1-101-015)		
No	**Function**	**Comments**
0-1	Not used	Do not change the settings.
2	Enable/disable for direct sending selection 0: Direct sending off	Direct sending cannot operate when the capture function is on during sending. Setting this switch to "1" enables direct sending without capture.

	1: Direct sending on	Setting this switch to "0" masks the direct sending function on the operation panel so direct sending with ScanRouter cannot be selected.
3	Action when the external handset goes off-hook 0: Manual TX and RX operation 1: Memory TX and RX operation (the display remains the same)	0: Manual TX is possible while the external handset is off-hook. However, manual TX during handset off-hook may not be sent to a correct direction. Manual TX is not possible. 1: The display stays in standby mode even when the external handset is used, so that other people can use the machine for memory TX operation. Note that manual TX and RX are not possible with this setting.
4-7	Not used	Do not change these settings.

System Switch 0F (SP No. 1-101-016)

No	Function		Comments
0 to 7	Country/area code for functional settings (Hex)		This country/area code determines the factory settings of bit switches and RAM addresses. However, it has no effect on the NCU parameter settings and communication parameter RAM addresses. Cross reference NCU country code: SP No. 2-103-001 for G3-1 SP No. 2-104-001 for G3-2 SP No. 2-105-001 for G3-3
	00: France	12: Asia	
	01: Germany	13: Japan	
	02: UK	14: Hong Kong	
	03: Italy	15: South Africa	
	04: Austria	16: Australia	
	05: Belgium	17: New Zealand	
	06: Denmark	18: Singapore	
	07: Finland	19: Malaysia	
	08: Ireland	1A: China	
	09: Norway	1B: Taiwan	
	0A: Sweden	1C: Korea	
	0B: Switz.	1D: Brazil	
	0C: Portugal	20: Turkey	
	0D: Holland	21: Greece	
	0E: Spain	22: Hungary	
	0F: Israel	23: Czech	

	10: ---	24: Poland	
	11: USA		

System Switch 10 (SP No. 1-101-017)		
No	**Function**	**Comments**
0-7	Threshold memory level for parallel memory transmission	Threshold = N x 128 KB + 256 KB N can be between 00 - FF(H) Default setting: 02(H) = 512 KB

System Switch 11 (SP No. 1-101-018)		
No	**Function**	**Comments**
0	TTI printing position 0: Superimposed on the page data 1: Printed before the data leading edge	Change this bit to 1 if the TTI overprints information that the customer considers to be important (G3 transmissions). **NOTE:** If "1" is selected, it is possible that sent data is printed on two sheets of paper.
1-2	Not used	Do not change these settings.
3	TTI used for broadcasting 0: The TTIs selected for each Quick/Speed dial are used 1: The same TTI is used for all destinations	1: The TTI (TTI_1 or TTI_2) which is selected for all destinations during broadcasting.
4-7	Not used	Do not change these settings.

System Switch 12 (SP No. 1-101-019)		
No	**Function**	**Comments**
0-7	TTI printing position in the main scan direction	TTI: 08 to 92 (BCD) mm Input even numbers only. This setting determines the print start position for the TTI from the left edge of the paper. If the TTI is moved too far to the right, it may overwrite the file number which is on the top right of the page. On an A4 page, if the TTI is moved over by more than 50 mm, it may overwrite the page number.

System Switch 13 - Not used (do not change these settings)
System Switch 14 - Not used (do not change these settings)

System Switch 15 (SP No. 1-101-022)

<table>
<tr><th>No</th><th>Function</th><th>Comments</th></tr>
<tr><td>0</td><td>Not used</td><td>Do not change the settings.</td></tr>
<tr><td>1</td><td>Going into the Energy Saver mode automatically
0: Enabled
1: Disabled</td><td>1: The machine will restart from the Energy Saver mode quickly, because the +5V power supply is active even in the Energy Saver mode. The LED of the operation switch is flashing instead of entering Energy Saver mode.
Use this setting if an external telephone has to be used when the machine is in the Energy Saver mode.</td></tr>
<tr><td>2-3</td><td>Not used</td><td>Do not change these settings.</td></tr>
<tr><td>4-5</td><td>Interval for preventing the machine from entering Energy Saver mode if there is a pending transmission file.
<table>
<tr><th>Bit 5</th><th>Bit 4</th><th>Setting</th></tr>
<tr><td>0</td><td>0</td><td>1 min</td></tr>
<tr><td>0</td><td>1</td><td>30 min</td></tr>
<tr><td>1</td><td>0</td><td>1 hour</td></tr>
<tr><td>1</td><td>1</td><td>24 hours</td></tr>
</table></td><td>If there is a file waiting for transmission, the machine does not go to Energy Saver mode during the selected period.
After transmitting the file, if there is no file waiting for transmission, the machine goes to the Energy Saver mode.</td></tr>
<tr><td>6-7</td><td>Not used</td><td>Do not change</td></tr>
</table>

<table>
<tr><th colspan="3">System Switch 16 (SP No. 1-101-023)</th></tr>
<tr><th>No</th><th>Function</th><th>Comments</th></tr>
<tr><td>0</td><td>Parallel Broadcasting
0: Disabled
1: Enabled</td><td>1: The machine sends messages simultaneously using all available ports during broadcasting.
NOTE: If a customer wants to keep a line available for fax reception or other reasons, select "0" (Disable).</td></tr>
<tr><td>1</td><td>Priority setting for the G3 line.
0: PSTN-1 > PSTN-2 or 3
1: PSTN-2 or 3 > PSTN-1</td><td>This function allows the user to select the default G3 line type. The optional SG3 units are required to use the PSTN-2 or 3 setting.</td></tr>
<tr><td>2-7</td><td>Not used</td><td>Do not change these settings.</td></tr>
</table>

<table>
<tr><td>System Switch 17 - Not used (do not change these settings)</td></tr>
<tr><td>System Switch 18 - Not used (do not change these settings)</td></tr>
</table>

System Switch 19 (SP No. 1-101-026)		
No	**Function**	**Comments**
0-5	Not used	Do not change the settings.
6	Extended scanner page memory after memory option is installed 0: Disabled 1: Enabled	0: After installing the memory expansion option, the scanner page memory is extended to 4 MB from 2 MB. 1: If this bit is set to 1 after installing the memory expansion option, the scanner page memory is extended to 12 MB. But the SAF memory decreases to 18 MB.
7*	Special Original mode 0: Disabled 1: Enabled	1: If the customer frequently wishes to transmit a form or letterhead which has a colored or printed background, change this bit to "1". "Original 1" and "Original 2" can be selected in addition to the "Text", "Text/Photo" and "Photo" modes.

* This setting can be used for the client machine which has no FCU.

System Switch 1A (SP No. 1-101-027)		
No	**Function**	**Comments**
0 to 7	LS RX memory capacity threshold setting 00-FF (0-1020 Kbyte: Hex)	Sets the value to x4KB. When the amount of available memory drops below this setting, RX documents are printed to conserve memory. Initial setting 0x80 (512 KB) Note • If a customer wants available memory size to be larger, decrease this threshold.

System Switch 1B - Not used (do not change these settings)
System Switch 1C - Not used (do not change these settings)

System Switch 1D (SP No. 1-101-030)		
No	**Function**	**Comments**
0	RTI/CSI/CPS code display 0: Enable 1: Disable	0: RTI, CSI, CPS codes are displayed on the top line of the LCD panel during communication. 1: Codes are switched off (no display)
1-7	Not used	Do not change these settings.

System Switch 1E (SP No. 1-101-031)		
No	**Function**	**Comments**

0	Communication after the Journal data storage area has become full 0: Impossible 1: Possible	0: When this switch is on and the journal history becomes full, the next report prints. If the journal history is not deleted, the next transmission cannot be received. This prevents overwriting communication records before the machine can print them. 1: If the buffer memory of the communication records for the Journal is full, fax communications are still possible. But the machine will overwrite the oldest communication records. Note • This setting is effective only when Automatic Journal printout is enabled but the machine cannot print the report (e.g., no paper).
1*	Action when the SAF memory has become full during scanning 0: The current page is erased. 1: The entire file is erased.	0: If the SAF memory becomes full during scanning for a memory transmission, the successfully scanned pages are transmitted. 1: If the SAF memory becomes full during scanning for a memory transmission, the file is erased and no pages are transmitted. Note • This setting is effective only when Automatic Journal printout is enabled but the machine cannot print the report (e.g., no paper).
2	RTI/CSI display priority 0: RTI 1: CSI	This bit determines which identifier, RTI or CSI, is displayed on the LCD while the machine is communicating in G3 non-standard mode.
3	File No. printing 0: Enabled 1: Disabled	1: File numbers are not printed on any reports. **NOTE:** The file numbers may not be printed in the sequential order. If a customer does not like this numbering, select "0".
4	Action when authorized reception is enabled but authorized RTIs/CSIs are not yet programmed 0: All fax reception is disabled 1: Faxes can be received if the sender has an RTI or CSI	0: If the user has stored no acceptable sender RTIs or CSIs, the user can select “ON” in the authorized reception setting but the setting becomes invalid (“OFF”). The machine will not be able to receive any fax messages. If the customer wishes to receive messages from any sender that includes an RTI or CSI, and to block messages from senders that do not include an RTI or CSI, change this bit to "0", then enable Authorized Reception. Otherwise, keep this bit at "1 (default setting)".
5-7	Not used	Do not change the settings

* This setting can be used for the client machine which has no FCU.

System Switch 1F (SP No. 1-101-032)		
No	**Function**	**Comments**
0	Not used	Do not change the settings.

1	Report printout after an original jam during SAF storage or if the SAF memory fills up 0: Enabled 1: Disabled	0: When an original jams, or the SAF memory overflows during scanning, a report will be printed. Change this bit to "1" if the customer does not want to have a report in these cases. Memory TX – Memory storage report Parallel memory TX – Transmission result report
2	Not used	Do not change the settings.
3	Received fax print start timing (G3 reception) 0: After receiving each page 1: After receiving all pages	0: The machine prints each page immediately after the machine receives it. 1: The machine prints the complete message after the machine receives all the pages in the memory.
4-6	Not used	Do not change the factory settings.
7	Action when a fax SC has occurred 0: Automatic reset 1: Fax unit stops	0: When the fax unit detects a fax SC code other than SC1201 and SC1207, the fax unit automatically resets itself. 1: When the fax unit detects any fax SC code, the fax unit stops. **Reference:** For fax SC codes, see "Troubleshooting".

Bit Switches - 2

Important

- Do not adjust a bit switch or use a setting that is described as "Not used", as this may cause the machine to malfunction or to operate in a manner that is not accepted by local regulations. Such bits are for use only in other areas, such as Japan.

Default settings for bit switches are not listed in this manual. Refer to the System Parameter List printed by the machine.

I-Fax Switches

I-fax Switch 00 (SP No. 1-102-001)		
No	**Function**	**Comments**
Original Width of TX Attachment File		This setting sets the maximum size of the original that the destination can receive. (Bits 3 to 6 are reserved for future use or not used.)
0	A4	-
1	B4	
2	A3	
3-6	Reserved	
7	Not used	
	0: Off (not selected), 1: On (selected) If more than one of these three bits is set to "1", the larger size has priority. For example, if both Bit 2 and Bit 1 are set to "1" then the maximum size is "A3" (Bit 2). When mail is sent, there is no negotiation with the receiving machine at the destination, so the sending machine cannot make a selection for the receiving capabilities (original width setting) of the receiving machine. The original width selected with this switch is used as the RX machine's original width setting, and the original is reduced to this size before sending. The default is A4. If the width selected with this switch is higher than the receiving machine can accept, the machine detects this and this causes an error.	

I-fax Switch 01 (SP No. 1-102-002)		
No	**Function**	**Comments**
Original Line Resolution of TX Attachment File		These settings set the maximum resolution of the original that the destination can receive.
0	200x100 Standard	0: Not selected 1: Selected If more than one of these three bits is set to "1", the higher resolution has priority. For example, if both Bit 0 and Bit 2 are set to "1" Then The Resolution is set for "Bit 2 200 x 400.
1	200x200 Detail	
2	200x400 Fine	
3	300 x 300 Reserve	
4	400 x 400 Super Fine	

5	600 x 600 Reserve	
6	Reserve	
7	mm/inch	
	This setting selects mm/inch conversion for mail transmission. 0: Off (No conversion), 1: On (Conversion) When on (set to "1"), the machine converts millimeters to inches for sending mail. There is no switch for converting inches to millimeters. Unlike G3 fax transmissions which can negotiate between sender and receiver to determine the setting, mail cannot negotiate between terminals; the mm/inch selection is determined by the sender fax. When this switch is Off (0): • Images scanned in inches are sent in inches. • Images scanned in mm are sent in mm. • Images received in inches are transmitted in inches. • Images received in mm are transmitted in mm. When this switch is On (1): • Images scanned in inches are sent in inches. • Images scanned in mm are converted to inches. • Images received in inches are transmitted in inches. • Images received in mm are converted to inches.	

I-fax Switch 02 (SP No. 1-102-003)		
No	**Function**	**Comments**
0	RX Text Mail Header Processing	
	This setting determines whether the header information is printed with text e-mails when they are received. 0: Prints only text mail. 1: Prints mail header information attached to text mail. When a text mail is received with this switch On (1), the "From" address and "Subject" address are printed as header information. When a mail with only binary data is received (a TIFF-F file, for example), this setting is ignored and no header is printed.	
1	Output from Attached Document at E-mail TX Error	
	This setting determines whether only the first page or all pages of an e-mail attachment are printed at the sending station when a transmission error occurs. This allows the customer to see which documents have not reached their intended destinations if sent to the wrong e-mail addresses, for example. 0: Prints 1st page only. 1: Prints all pages.	
2-3	Text String for Return Receipt	
	This setting determines the text string output for the Return Receipt that confirms the transmission was	

	received normally at the destination.
	00: "Dispatched" Sends from PC mail a request for a Return Receipt. Receives the Return Receipt with "dispatched" in the 2nd part: Disposition: Automatic-action/MDN-send automatically; dispatched The "dispatched" string is included in the Subject string. 01: "Displayed" Sends from PC mail a request for a Return Receipt. Receives the Return Receipt with "displayed" in the 2nd part: Disposition: Automatic-action/MDN-send automatically; displayed The "displayed" string is included in the Subject string. 10: Reserved 11: Reserved A mail requesting a Return Receipt sent from an IFAX with this switch set to "00" (for "dispatched") received by Microsoft Outlook 2000 may cause an error. If any setting other than "displayed" (01) causes a problem, change the setting to "01" to enable normal sending of the Return Receipt.
4	Media accept feature
	This setting adds or does not add the media accept feature to the answer mail to confirm a reception. 0: Does not add the media accept feature to the answer mail 1: Adds the media accept feature to the answer mail. Use this bit switch if a problem occurs when the machine receives an answer mail, which contains the media accept feature field.
5-6	Not Used
7	Image Resolution of RX Text Mail
	This setting determines the image resolution of the received mail. 0: 200 x 200 1: 400 x 400 The "1" setting requires installation of the Memory Unit in order to have enough SAF (Store and Forward) memory to receive images at 400 x 400 resolution.

I-fax Switch 03 - Not used (do not change these settings)

I-fax Switch 04 (SP No. 1-102-005)		
No	**Function**	**Comments**
0	Subject for Delivery TX/Memory Transfer	
	This setting determines whether the RTI/CSI registered on this machine or the RTI/CSI of the originator is used in the subject lines of transferred documents. 0: Puts the RTI/CSI of the originator in the Subject line. If this is used, either the RTI or CSI is used.	

	Only one of these can be received for use in the subject line. 1: Puts the RTI/CSI registered on this machine in the Subject line. When this switch is used to transfer and deliver mail to a PC, the information in the Subject line that indicates where the transmission originated can be used to determine automatically the destination folder for each e-mail.
1	Subject corresponding to mail post database 0: Standard subject 1: Mail post database subject The standard subject is replaced by the mail post database subject in the following three cases: 1) When the service technician sets the service (software) switch. 2) When memory sending or delivery specified by F code is applied by the SMTP server 3) With relay broadcasting (1st stage without the Schmidt 4 function). Note • This switch does not apply for condition 3) when the RX system is set up for memory sending, delivery by F-code, sending with SMTP RX and when operators are using FOL (to prevent problems when receiving transmissions).
2-7	Not Used

I-fax Switch 05 (SP No. 1-102-006)		
No	**Function**	**Comments**
0	Mail Addresses of SMTP Broadcast Recipients	
	Determines whether the e-mail addresses of the destinations that receive transmissions broadcasted using SMTP protocol are recorded in the Journal. For example: "1st destination + Total number of destinations: 9" in the Journal indicates a broadcast to 9 destinations. 0: Not recorded 1: Recorded	
1	IFAXTX Retries	
	Determines whether the machine retries sending IFAX when connection and transmission fails due to errors. 0: Disabled 1: Enabled	
2-7	Not Used	

I-fax Switch 06 - Not used (do not change the settings)
I-fax Switch 07 - Not used (do not change the settings)

I-fax Switch 08 (SP No. 1-102-009)

No	Function	Comments
0-7	Memory Threshold for POP Mail Reception	
	This setting determines the amount of SAF (Store and Forward) memory. (SAF stores fax messages to send later for transmission to more than one location, and also holds incoming messages if they cannot be printed.) When the amount of SAF memory available falls below this setting, mail can no longer be received; received mail is then stored on the mail server. 00-FF (0 to 1024 KB: HEX) The hexadecimal number you enter is multiplied by 4 KB to determine the amount of memory.	

I-fax Switch 09 (SP No. 1-102-010)		
No	**Function**	**Comments**
0-3	Not used	Do not change the settings
4-7	Restrict TX Retries	This setting determines the number of retries when connection and transmission fails due to errors. 01-F (1-15 Hex)

I-fax Switch 0A - Not used (do not change the settings)
I-fax Switch 0B - Not used (do not change the settings)
I-fax Switch 0C - Not used (do not change the settings)

I-fax Switch 0D (SP No. 1-102-014)				
No	**Function**			**Comments**
0-1	Not used			Do not change the settings
2-3	Select the signature when sending mail notification of the send results			In response to IEEE2600.1.
	Bit 2	Bit 3	Setting	
	0	0	No sign	
	0	1	No setting	
	1	**0**	Individual setting	
	1	1	Always sign	
4-5	Select the signature when sending mail.			In response to IEEE2600.1.
	Bit 5	Bit 4	Setting	
	0	0	No sign	
	0	1	No setting	
	1	**0**	Individual setting	

	1	1	Always sign	
6-7	Not used			Do not change the settings.

I-fax Switch 0E - Not used (do not change the settings)

I-fax Switch 0F (SP No. 1-102-016)		
No	**Function**	**Comments**
0	Delivery Method for SMTP RX Files	
	This setting determines whether files received with SMTP protocol are delivered or output immediately. 0: Off. Files received via SMTP are output immediately without delivery. 1: On. Files received via SMTP are delivered immediately to their destinations.	
1	Set to select the signature when receiving SMTP mail.	
	0: No sign 1: Always sign	
2	Set to encrypt the data when receiving SMTP mail.	
	0: No encryption 1: Encryption	
3-7	Not used	

Printer Switches

Printer Switch 00 (SP No. 1-103-001)		
No	**Function**	**Comments**
0	Select page separation marks 0: Off 1: On	0: If a 2 page RX transmission is split, [*] is printed in the bottom right corner of the 1st page and only a [2] is printed in the upper right corner of the 2nd page. 1: If a 2 page RX transmission is split into two pages, for example, [*] [2] is printed in the bottom right corner of the 1st page and only a [2] is printed in the upper right corner of the 2nd page. Note • This helps the user to identify pages that have been split because the size of the paper is smaller than the size of the document received. (When A5 is used to print an A4 size document, for example.)
1	Repetition of data when the received page is longer than the printer paper 0: Off	1: Default. 10 mm of the trailing edge of the previous page are repeated at the top of the next page. 0: The next page continues from where the previous page stopped without any repeated text.

	1: On	
2	Prints the date and time on received fax messages 0: Disabled 1: Enabled	This switch is only effective when user parameter 02 - bit 2 (printing the received date and time on received fax messages) is enabled. 1: The machine prints the received and printed date and time at the bottom of each received page.
3-7	Not used	Do not change the settings.

Printer Switch 01 (SP No. 1-103-002)

No	Function			Comments
0-2	Not used			Do not change the settings.
3-4	Maximum print width used in the setup protocol			These bits are only effective when bit 7 of printer switch 01 is "1".
	Bit 4	Bit 3	Setting	
	0	0	Not used	
	0	1	A3	
	1	0	B4	
	1	1	A4	
5-6	Not used			Do not change the settings.
7	Received message width restriction in the protocol signal to the sender 0: Disabled 1: Enabled			0: The machine informs the transmitting machine of the print width depending on the paper size available from the paper feed stations. Refer to the table on the next page for how the machine chooses the paper width used in the setup protocol (NSF/DIS). 1: The machine informs the transmitting machine of the fixed paper width which is specified by bits 3 and 4 above.

Relationship between available paper sizes and printer width used in the setup protocol

Available Paper Size	Printer width used in the Protocol (NSF/DIS)
A4 or 8.5" x 11"	297 mm width
B5	256 mm width
A5 or 8.5" x 5.5"	216 mm width
No paper available (Paper end)	216 mm width

Printer Switch 02 (SP No. 1-103-003)

No	Function	Comments
0*	1st paper feed station	0: The paper feed station can be used to print fax messages and reports.

	usage for fax printing 0: Enabled 1: Disabled	1: The specified paper feed station will not be used for printing fax messages and reports. Note • Do not disable usage for a paper feed station which has been specified by User Parameter Switch 0F (15), or which is used for the Specified Cassette Selection feature.
1*	2nd paper feed station usage for fax printing 0: Enabled 1: Disabled	
2*	3rd paper feed station usage for fax printing 0: Enabled 1: Disabled	
3*	4th paper feed station usage for fax printing 0: Enabled 1: Disabled	
4*	LCT usage for fax printing 0: Enabled 1: Disabled	
5-7	Not used	Do not change the settings.

* This setting can be used for the client machine which has no FCU.

Printer Switch 03 (SP No. 1-103-004)		
No	**Function**	**Comments**
0*	Length reduction of received data 0: Disabled 1: Enabled	0: Incoming pages are printed without length reduction. (Page separation threshold: Printer Switch 03, bits 4 to 7) 1: Incoming page length is reduced when printing. (Maximum reducible length: Printer Switches 04, bits 0 to 4)
1-3	Not used	Do not change the settings
4 to 7	Page separation setting when sub scan compression is forbidden 00-0F (0-15 mm: Hex) Default: 6 mm	Page separation threshold (with reduction disabled with switch 03-0 above). For example, if this setting is set to "10", and A4 is the selected paper size: If the received document is 10 mm or less longer than A4, then the 10 mm are cut and only 1 page prints. If the received document is 10 mm longer than A4, then the document is split into 2 pages.

* This setting can be used for the client machine which has no FCU.

Printer Switch 04 (SP No. 1-103-005)						
No	**Function**			**Comments**		
0 to 4	Maximum reducible length when length reduction is enabled with switch 03-0 above. [Maximum reducible length] = [Paper length] + (N x 5mm) "N" is the decimal value of the binary setting of bits 0 to 4.					
	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0	Setting
	0	0	0	0	0	0 mm
	0	0	0	0	1	5 mm
	0	0	1	0	0	20 mm
	1	1	1	1	1	155 mm
	For A5 sideways and B5 sideways paper [Maximum reducible length] = [Paper length] + 0.75 x (N x 5mm)					
5 6	Length of the duplicated image on the next page, when page separation has taken place.					
	Bit 6		Bit 5		Setting	
	0		0		4 mm	
	0		1		10 mm	
	1		0		15 mm	
	1		1		Not used	
7	Not used.			Do not change the setting.		

Printer Switch 05 - Not used (do not change the settings)

Printer Switch 06 (SP No. 1-103-007)		
No	**Function**	**Comments**
0*	Printing while a paper cassette is pulled out, when the Just Size Printing feature is enabled. 0: Printing will not start 1: Printing will start if another cassette has a suitable size of paper, based on the paper size selection priority tables.	**Reference:** Just size printing on/off – User switch 05, bit 5
1-7	Not used.	Do not change the settings.

* This setting can be used for the client machine which has no FCU.

Printer Switch 07 (SP No. 1-103-008)		
No	**Function**	**Comments**
0-3	Not used.	Do not change the settings.
4	Receiver name printed on the transmission result report	Selects the printing target on the transmission result report.

		0: All receivers 1: Printing only receivers which have received fax transmission.
5-7	Not used.	Do not change the settings.

Printer Switch 08 - Not used (do not change the settings)
Printer Switch 09 - Not used (do not change the settings)
Printer Switch 0A - Not used (do not change the settings)
Printer Switch 0B - Not used (do not change the settings)
Printer Switch 0C - Not used (do not change the settings)

Printer Switch 0E (SP No. 1-103-015)				
No	**Function**			**Comments**
0*	Paper size selection priority 0: Width 1: Length			0: A paper size that has the same width as the received data is selected first. 1: A paper size which has enough length to print all the received lines without reduction is selected first.
1*	Paper size selected for printing A4 width fax data 0: 8.5" x 11" size 1: A4 size			This switch determines which paper size is selected for printing A4 width fax data, when the machine has both A4 and 8.5" x 11" size paper.
2	Page separation 0: Enabled 1: Disabled			1: If all paper sizes in the machine require page separation to print a received fax message, the machine does not print the message (Substitute Reception is used). After a larger size of paper is set in a cassette, the machine automatically prints the fax message.
3-4	Printing the sample image on reports			"Same size" means the sample image is printed at 100%, even if page separation occurs. User Parameter Switch 19 (13H) bit 4 must be set to "0" to enable this switch. Refer to “Detailed Descriptions” for more details.
	Bit 4	Bit 3	Setting	
	0	0	The upper half only	
	0	1	50% reduction (sub-scan only)	
	1	0	Same size	
	1	1	Not used	
5-	Not used			Do not change the settings.

6		
7	Equalizing the reduction ratio among separated pages (Page Separation) 0: Enabled 1: Disabled	0: When page separation has taken place, all the pages are reduced with the same reduction ratio. 1: Only the last page is reduced to fit the selected paper size when page separation has taken place. Other pages are printed without reduction.

* This setting can be used for the client machine which has no FCU.

Printer Switch 0F (SP No. 1-103-016)

No	Function			Comments
0-1*	Smoothing feature			(0, 0) (0, 1): Disable smoothing if the machine receives halftone images from other manufacturers fax machines frequently.
	Bit 1	Bit 0	Setting	
	0	0	Disabled	
	0	1	Disabled	
	1	0	Enabled	
	1	1	Not used	
2*	Duplex printing 0: Disabled 1: Enabled			1: The machine always prints received fax messages in duplex printing mode:
3	Binding direction for Duplex printing 0: Left binding 1: Top binding			0: Sets the binding for the left edge of the stack. 1: Sets the binding for the top of the stack.
4-7	Not used			Do not change the settings.

* This setting can be used for the client machine which has no FCU.

Bit Switches - 3

Important

- Do not adjust a bit switch or use a setting that is described as "Not used", as this may cause the machine to malfunction or to operate in a manner that is not accepted by local regulations. Such bits are for use only in other areas, such as Japan.

Default settings for bit switches are not listed in this manual. Refer to the System Parameter List printed by the machine.

Communication Switches

<table>
<tr><th colspan="5">Communication Switch 00 (SP No. 1-104-001)</th></tr>
<tr><th>No</th><th colspan="3">Function</th><th>Comments</th></tr>
<tr><td rowspan="6">0-1</td><td colspan="3">Compression modes available in receive mode</td><td rowspan="6">These bits determine the compression capabilities to be declared in phase B (handshaking) of the T.30 protocol.</td></tr>
<tr><td>Bit 1</td><td>Bit 0</td><td>Modes</td></tr>
<tr><td>0</td><td>0</td><td>MH only</td></tr>
<tr><td>0</td><td>1</td><td>MH/MR</td></tr>
<tr><td>1</td><td>0</td><td>MH/MR/MMR</td></tr>
<tr><td>1</td><td>1</td><td>MH/MR/MMR/JBIG</td></tr>
<tr><td rowspan="6">2-3</td><td colspan="3">Compression modes available in transmit mode</td><td rowspan="6">These bits determine the compression capabilities to be used in the transmission and to be declared in phase B (handshaking) of the T.30 protocol.</td></tr>
<tr><td>Bit 3</td><td>Bit 2</td><td>Modes</td></tr>
<tr><td>0</td><td>0</td><td>MH only</td></tr>
<tr><td>0</td><td>1</td><td>MH/MR</td></tr>
<tr><td>1</td><td>0</td><td>MH/MR/MMR</td></tr>
<tr><td>1</td><td>1</td><td>MH/MR/MMR/JBIG</td></tr>
<tr><td>4</td><td colspan="3">Not used</td><td>Do not change the settings.</td></tr>
<tr><td>5</td><td colspan="3">JBIG compression method: Reception
0: Only basic supported
1: Basic and optional both supported</td><td>Change the setting when communication problems occur using JBIG compression.</td></tr>
<tr><td>6</td><td colspan="3">JBIG compression method: Transmission
0: Basic mode priority
1: Optional mode priority</td><td>Change the setting when communication problems occur using JBIG compression.</td></tr>
<tr><td>7</td><td colspan="3">Closed network (reception)
0: Disabled</td><td>1: Reception will not go ahead if the polling ID code of the remote terminal does not match the polling ID code of the local</td></tr>
</table>

	1: Enabled	terminal. This function is only available in NSF/NSS mode.

Communication Switch 01 (SP No. 1-104-002)

No	Function	Comments
0	ECM 0: Off 1: On	If this bit is set to 0, ECM is switched off for all communications. In addition, V.8 protocol and JBIG compression are switched off automatically.
1	Not used	Do not change the setting.
2-3	Wrong connection prevention method Bit 3 / Bit 2 / Setting: 0 / 0 / None 0 / 1 / 8 digit CSI 1 / 0 / 4 digit CSI 1 / 1 / CSI/RTI	(0,1): The machine will disconnect the line without sending a fax message, if the last 8 digits of the received CSI do not match the last 8 digits of the dialed telephone number. This does not work when manually dialed. (1,0): The same as above, except that only the last 4 digits are compared. (1,1): The machine will disconnect the line without sending a fax message, if the other end does not identify itself with an RTI or CSI. (0,0): Nothing is checked; transmission will always go ahead. Note • This function does not work when dialing is done from the external telephone.
4-5	Not used	Do not change the setting.
6-7	Maximum printable page length available Bit 7 / Bit 6 / Setting: 0 / 0 / No limit 0 / 1 / B4 (364 mm) 1 / 0 / A4 (297 mm) 1 / 1 / Not used	The setting determined by these bits is informed to the transmitting terminal in the pre-message protocol exchange (in the DIS/NSF frames).

Communication Switch 02 (SP No. 1-104-003)

No	Function	Comments	
0	G3 Burst error threshold 0: Low 1: High	If there are more consecutive error lines in the received page than the threshold, the machine will send a negative response. The Low and High threshold values depend on the sub-scan resolution, and are as follows.	
		100 dpi	6(L) →12(H)
		200 dpi	12(L) →24(H)

		300 dpi	18(L) →36(H)
		400 dpi	24(L) →48(H)
1	Acceptable total error line ratio 0: 5% 1: 10%	If the error line ratio for a page exceeds the acceptable ratio, RTN will be sent to the other end.	
2	Treatment of pages received with errors during G3 reception 0: Deleted from memory without printing 1: Printed	0: Pages received with errors are not printed.	
3	Hang-up decision when a negative code (RTN or PIN) is received during G3 immediate transmission 0: No hang-up, 1: Hang-up	0: The next page will be sent even if RTN or PIN is received. 1: The machine will send DCN and hang up if it receives RTN or PIN. This bit is ignored for memory transmissions or if ECM is being used.	
4-7	Not used	Do not change these settings.	

Communication Switch 03 (SP No. 1-104-004)		
No	**Function**	**Comments**
0-7	Maximum number of page retransmissions in a G3 memory transmission	00 - FF (Hex) times. This setting is not used if ECM is switched on. Default setting - 03(H)

Communication Switch 04 (SP No. 1-104-005)		
No	**Function**	**Comments**
0	Remote mode switch (TEL mode) 0: Disable 1: Enable (Active)	Set this bit to ON when you wish to switch TEL mode to FAX mode remotely.
1	Remote mode switch (FAX mode) 0: Disable 1: Enable (Active)	Set this bit to ON when you wish to turn on the remote mode switch after automatic reception with FAX mode.
2	Remote mode switch (AUTO mode) 0: Disable 1: Enable (Active)	Set this bit to ON when you wish to turn on the remote mode switch after automatic reception with AUTO mode.

3-7	Not used	Do not change the settings.

Communication Switch 05 (SP No. 1-104-006)		
No	**Function**	**Comments**
0-3	Remote mode switch number 00-09 (0-9:HEX)	Enter the number to switch between TEL/FAX modes using the external phone.
4-7	Not used	Do not change the settings.

Communication Switch 06 - Not used (do not change the settings)
Communication Switch 07 - Not used (do not change the settings)
Communication Switch 08 - Not used (do not change the settings)

Communication Switch 09 (SP No. 1-104-009)		
No	**Function**	**Comments**
0-7	Minimum interval between automatic dialing attempts	This value is the minimum time that the machine waits before it dials the next destination.

Communication Switch 0A (SP No. 1-104-011)		
No	**Function**	**Comments**
0	Point of resumption of memory transmission upon redialing 0: From the error page 1: From page 1	0: The transmission begins from the page where transmission failed the previous time. 1: Transmission begins from the first page, using normal memory transmission.
1-7	Not used	Do not change these settings.

Communication Switch 0B (SP No. 1-104-012)		
No	**Function**	**Comments**
0-3	Not used	Do not change these settings.
4	Printout of the message when acting as a Transfer Station 0: Disabled, 1: Enabled	When the machine is acting as a Transfer Station, this bit determines whether the machine prints the fax message coming in from the Requesting Terminal.
5-7	Not used	Do not change the settings.

Communication Switch 0C - Not used (do not change the settings)

Communication Switch 0D (SP No. 1-104-014)		
No	**Function**	**Comments**
0-7	The available memory threshold, below which ringing detection (and therefore reception into memory) is disabled	00 to FF (Hex), unit = 4 Kbytes (e.g., 06(H) = 24 Kbytes) One page is about 24 Kbytes. The machine refers to this setting before each fax reception. If the amount of remaining memory is below this threshold, the machine cannot receive any fax messages. If this setting is kept at 0, the machine will detect ringing signals and go into receive mode even if there is no memory available. This will result in communication failure.

Communication Switch 0E (SP No. 1-104-015)		
No	**Function**	**Comments**
0-7	Minimum interval between automatic dialing attempts	06 to FF (Hex), unit = 2 s (e.g., 06(H) = 12 s) This value is the minimum time that the machine waits before it dials the next destination.

Communication Switch 0F – Not used (do not change the settings.)

Communication Switch 10 (SP No. 1-104-017)		
No	**Function**	**Comments**
0-7	Memory transmission: Maximum number of dialing attempts to the same destination	01 – FE (Hex) times

Communication Switch 11 – Not used (do not change the settings.)

Communication Switch 12 (SP No. 1-104-019)		
No	**Function**	**Comments**
0-7	Memory transmission: Interval between dialing attempts to the same destination	01 – FF (Hex) minutes

Communication Switch 13 – Not used (do not change the settings.)

Communication Switch 14 (SP No. 1-104-021)

<table>
<tr><th>No</th><th>Function</th><th>Comments</th></tr>
<tr><td>0</td><td>Inch-to-mm conversion during transmission
0: Disabled, 1: Enabled</td><td>0: In immediate transmission, data scanned in inch format are transmitted without conversion.
In memory transmission, data stored in the SAF memory in mm format are transmitted without conversion.
Note: When storing the scanned data into SAF memory, the fax unit always converts the data into mm format.
1: The machine converts the scanned data or stored data in the SAF memory to the format which was specified in the set-up protocol (DIS/NSF) before transmission.</td></tr>
<tr><td>1-5</td><td>Not used</td><td>Do not change the factory settings.</td></tr>
<tr><td>6-7</td><td>Available unit of resolution in which fax messages are received
<table>
<tr><th>Bit 7</th><th>Bit 6</th><th>Unit</th></tr>
<tr><td>0</td><td>0</td><td>mm</td></tr>
<tr><td>0</td><td>1</td><td>inch</td></tr>
<tr><td>1</td><td>0</td><td>mm and inch</td></tr>
<tr><td>1</td><td>1</td><td>Not used</td></tr>
</table></td><td>For the best performance, do not change the factory settings.
The setting determined by these bits is informed to the transmitting terminal in the pre-message protocol exchange (in the DIS/NSF frames).</td></tr>
</table>

Communication Switch 15 – Not used (do not change the settings)

<table>
<tr><th colspan="3">Communication Switch 16 (SP No. 1-104-023)</th></tr>
<tr><th>No</th><th>Function</th><th>Comments</th></tr>
<tr><td>0</td><td>Not used</td><td>Do not change the settings.</td></tr>
<tr><td>1</td><td>Optional G3 unit (G3-2)
0: Not installed
1: Installed</td><td>Change this bit to 1 when installing the first optional G3 unit.</td></tr>
<tr><td>2</td><td>Not used</td><td></td></tr>
<tr><td>3</td><td>Select PSTN connection
0: Off
1: On</td><td>This switch enables the G3-2.
0: Off, no connection
1: Recognizes and enables G3-2.
This switch can be used only after G3-2 has been installed.</td></tr>
<tr><td>4-7</td><td>Not used</td><td>Do not change the settings.</td></tr>
</table>

<table>
<tr><th colspan="3">Communication Switch 17 (SP No. 1-104-024)</th></tr>
<tr><th>No</th><th>Function</th><th>Comments</th></tr>
<tr><td>0</td><td>SEP reception</td><td>0: Polling transmission to another maker's machine using the SEP</td></tr>
</table>

	0: Disabled 1: Enabled	(Selective Polling) signal is disabled.
1	SUB reception 0: Disabled 1: Enabled	0: Confidential reception to another maker's machine using the SUB (Sub-address) signal is disabled.
2	PWD reception 0: Disabled 1: Enabled	0: Disables features that require PWD (Password) signal reception.
3-4	Not used	Do not change the settings.
5	PSTN dial-in routing setting 0: OFF 1: ON	1: The machine sets multiple PSTN dial-in numbers in the PSTN dial-in line and transfers received data from each PSTN dial-in number to each address.
6	Not used	Do not change the settings.
7	Action when there is no box with an F-code that matches the received SUB code 0: Disconnect the line 1: Receive the message (using normal reception mode)	Change this setting when the customer requires.

Communication Switch 18 (SP No. 1-104-025)		
No	**Function**	**Comments**
0-4	Not used	Do not change the settings.
5	IP-Fax dial-in routing selection 0: Off 1: On	1: Transfers received data to each IP-Fax dial-in number. IP-Fax dial-in number is a 4-digit number.
6	PSTN 2 dial-in routing 0: Off 1: On	Enables or disables dial-in routing for the PSTN 2 connection.
7	PSTN 3 dial-in routing 0: Off 1: On	Enables or disables dial-in routing for the PSTN 3 connection.

Communication Switch 19 - Not used (do not change the settings)
Communication Switch 1A - Not used (do not change the settings)

Communication Switch 1B (SP No. 1-104-028)

No	Function	Comments
0-7	Extension access code (0 to 7) to turn V.8 protocol On/Off 0: On 1: Off	If the PABX does not support V.8/V.34 protocol procedure, set this bit to "1" to disable V.8. Example: If "0" is the PSTN access code, set bit 0 to 1. When the machine detects "0" as the first dialed number, it automatically disables V.8 protocol. (Alternatively, if "3" is the PSTN access code, set bit 3 to 1.)

Communication Switch 1C (SP No. 1-104-029)		
No	**Function**	**Comments**
0-1	Extension access code (8 and 9) to turn V.8 protocol On/Off 0: On 1: Off	Refer to communication switch 1B. Example: If "8" is the PSTN access code, set bit 0 to 1. When the machine detects "8" as the first dialed number, it automatically disables V.8 protocol. (If "9" is the PSTN access code, use bit 1.)
2-7	Not used	Do not change the settings.

Communication Switch 1D - Not used (do not change the settings)
Communication Switch 1E - Not used (do not change the settings)
Communication Switch 1F - Not used (do not change the settings)

Bit Switches - 4

Important

- Do not adjust a bit switch or use a setting that is described as "Not used", as this may cause the machine to malfunction or to operate in a manner that is not accepted by local regulations. Such bits are for use only in other areas, such as Japan.

Default settings for bit switches are not listed in this manual. Refer to the System Parameter List printed by the machine.

G3 Switches

G3 Switch 00 (SP No. 1-105-001)

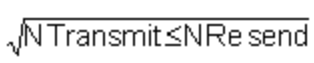
No	Function	Comments
0 1	Monitor speaker during communication (TX and RX) Bit 1 / Bit 0 / Setting 0 / 0 / Disabled 0 / 1 / Up to Phase B 1 / 0 / All the time 1 / 1 / Not used	(0, 0): The monitor speaker is disabled all through the communication. (0, 1): The monitor speaker is on up to phase B in the T.30 protocol. (1, 0): Used for testing. The monitor speaker is on all through the communication. Make sure that you reset these bits after testing.
2	Monitor speaker during memory transmission 0: Disabled 1: Enabled	1: The monitor speaker is enabled during memory transmission.
3-5	Not used	Do not change the settings.
6	Dedicated G3 line mode selection 0: Off 1: On (Dedicated)	Set this bit to 1 when you wish to dedicate a line for G3.
7	Not used	Do not change this setting.

G3 Switch 01 (SP No. 1-105-002)

No	Function	Comments
0-3	Not used	Do not change the settings.
4	DIS frame length 0: 10 bytes 1: 4 bytes	1: The bytes in the DIS frame after the 4th byte will not be transmitted (set to 1 if there are communication problems with PC-based faxes which cannot receive the extended DIS frames).
5	Not used	Do not change the setting.
6	Forbid	Do not change this setting (Default: 0: Off), unless communication problem is

	CED/ANsam output 0: Off 1: On (Forbid output)	caused by a CED or ANSam transmission.
7	Not used	Do not change this setting.

G3 Switch 02 (SP No. 1-105-003)		
No	**Function**	**Comments**
0	G3 protocol mode used 0: Standard and non-standard 1: Standard only	Change this bit to 1 only when the other end can only communicate with machines that send T.30-standard frames only. 1: Disables NSF/NSS signals (these are used in non-standard mode communication)
1-6	Not used	Do not change the settings.
7	Short preamble 0: Disabled 1: Enabled	Refer to Appendix B in the Group 3 Facsimile Manual for details about Short Preamble.

G3 Switch 03 (SP No. 1-105-004)		
No	**Function**	**Comments**
0	DIS detection number (Echo countermeasure) 0: 1 1: 2	0: The machine will hang up if it receives the same DIS frame twice. 1: Before sending DCS, the machine will wait for the second DIS which is caused by echo on the line.
1	Not Used	Do not change the settings.
2	Not Used	Do not change the settings.
3	ECM frame size 0: 256 bytes 1: 64 bytes	Keep this bit at "0" in most cases.
4	CTC transmission conditions 0: After one PPR signal received 1: After four PPR signals received (ITU-T standard)	0: When using ECM in non-standard (NSF/NSS) mode, the machine sends a CTC to drop back the modem rate after receiving a PPR, if the following condition is met in communications at 14.4, 12.0, 9.6, and 7.2 kbps.  NTransmit- Number of transmitted frames

		NResend- Number of frames to be retransmitted 1: When using ECM, the machine sends a CTC to drop back the modem rate after receiving four PPRs. PPR, CTC: These are ECM protocol signals. This bit is not effective in V.34 communications.
5	Modem rate used for the next page after receiving a negative code (RTN or PIN) 0: No change 1: Fallback	1: The machine's TX modem rate will fall back before sending the next page if a negative code is received. This bit is ignored if ECM is being used.
6	Not used	Do not change the settings
7	Select detection of reverse polarity in ringing 0: Off 1: On	This switch is used to prevent reverse polarity in ringing on the phone line (applied to PSTN-G3 ringing). Do not change this setting 0: No detection 1: Detection (Japan and Korea only)

G3 Switch 04 (SP No. 1-105-005)		
No	**Function**	**Comments**
0-3	Training error detection threshold	0 - F (Hex); 0 - 15 bits If the number of error bits in the received TCF is below this threshold, the machine informs the sender that training has succeeded.
4-7	Not used	Do not change the settings.

G3 Switch 05 (SP No. 1-105-006)

No	**Function**					**Comments**
0-3	Initial TX modem rate (kbps)					These bits set the initial starting modem rate for transmission. Use the dedicated transmission parameters if you need to change this for specific receivers. If a modem rate 14.4 kbps or slower is selected, V.8 protocol should be disabled manually. Cross reference V.8 protocol on/off - G3 switch 03, bit 2
	Bit 3	Bit 2	Bit 1	Bit 0	kbps	
	0	0	0	1	2.4	
	0	0	1	0	4.8	
	0	0	1	1	7.2	
	0	1	0	0	9.6	
	0	1	0	1	12.0	
	0	1	1	0	14.4	
	0	1	1	1	16.8	
	1	0	0	0	19.2	
	1	0	0	1	21.6	
	1	0	1	0	24.0	

	1	0	1	1	26.4	
	1	1	0	0	28.8	
	1	1	0	1	31.2	
	1	1	1	0	33.6	
	Other settings - Not used					
4-5	Initial modem type for 9.6 k or 7.2 kbps.					These bits set the initial modem type for 9.6 and 7.2 kbps, if the initial modem rate is set at these speeds.
	Bit 5	Bit 4	Setting			
	0	0	V.29			
	0	1	V.17			
	1	0	V.34			
	1	1	Not used			
6-7	Not used					Do not change the settings.

G3 Switch 06 (SP No. 1-105-007)						
No	**Function**					**Comments**
0-3	Initial RX modem rate(kbps)					These bits set the initial starting modem rate for reception. Use a lower setting if high speeds pose problems during reception. If a modem rate 14.4 kbps or slower is selected, V.8 protocol should be disabled manually. Cross reference V.8 protocol on/off - G3 switch 03, bit2
	Bit 3	Bit 2	Bit 1	Bit 0	kbps	
	0	0	0	1	2.4	
	0	0	1	0	4.8	
	0	0	1	1	7.2	
	0	1	0	0	9.6	
	0	1	0	1	12.0	
	0	1	1	0	14.4	
	0	1	1	1	16.8	
	1	0	0	0	19.2	
	1	0	0	1	21.6	
	1	0	1	0	24.0	
	1	0	1	1	26.4	
	1	1	0	0	28.8	
	1	1	0	1	31.2	
	1	1	1	0	33.6	
	Other settings - Not used					
4-7	Modem types available for reception The setting of these bits is used to inform the transmitting terminal of the available modem type for the					

machine in receive mode.

If V.34 is not selected, V.8 protocol must be disabled manually.

Cross reference

V.8 protocol on/off - G3 switch 03, bit 2

Bit 7	Bit 6	Bit 5	Bit 4	Types
0	0	0	1	V.27ter
0	0	1	0	V.27ter, V.29
0	0	1	1	V.27ter, V.29, V.33
0	1	0	0	V.27ter, V.29, V.17
0	1	0	1	V.27ter, V.29, V.17, V.34

Other settings - Not used

G3 Switch 07 (SP No. 1-105-008)

No	Function	Comments
0-1	PSTN cable equalizer (TX mode: Internal)	Use a higher setting if there is signal loss at higher frequencies because of the length of wire between the modem and the telephone exchange. Use the dedicated transmission parameters for specific receivers. Also, try using the cable equalizer if one or more of the following symptoms occurs. Communication error Modem rate fallback occurs frequently. Note • This setting is not effective in V.34 communications.
2-3	PSTN cable equalizer (RX mode: Internal)	Use a higher setting if there is signal loss at higher frequencies because of the length of wire between the modem and the telephone exchange. Also, try using the cable equalizer if one or more of the following symptoms occurs. Communication error with error codes such as 0-20, 0-23, etc. Modem rate fallback occurs frequently. Note • This setting is not effective in V.34 communications.
4	PSTN cable equalizer (V.8/V.17 RX mode: External) 0: Disabled 1: Enabled	Keep this bit at "1".

Bit 1	Bit 0	Setting
0	0	None
0	1	Low
1	0	Medium
1	1	High

Bit 3	Bit 2	Setting
0	0	None
0	1	Low
1	0	Medium
1	1	High

5	Not used	Do not change the settings.
6	Parameter selection for dial tone detection 0: Normal parameter 1: Specific parameter	0: This uses the fixed table in the ROM for dial tone detection. 1: This uses the specific parameter adjusted with SRAM (69ECBEH - 69ECDEH). Select this if the dial tone cannot be detected when the "Normal parameter: 0" is selected.
7	Not used	Do not change the settings.

G3 Switch 08 - Not used (do not change the settings)
G3 Switch 09 - Not used (do not change the settings)

G3 Switch 0A (SP No. 1-105-011)

No	Function			Comments
0-1	Maximum allowable carrier drop during image data reception			These bits set the acceptable modem carrier drop time. Try a longer setting if error code 0-22 is frequent.
	Bit 1	Bit 0	Value (ms)	
	0	0	200	
	0	1	400	
	1	0	800	
	1	1	Not used	
2	Select cancellation of high-speed RX if carrier signal lost while receiving 0: Off 1: On			This switch setting determines if high-speed receiving ends if the carrier signal is lost when receiving during non-ECM mode
3	Not used			Do not change the settings
4	Maximum allowable frame interval during image data reception. 0: 5 s 1: 13 s			This bit set the maximum interval between EOL (end-of-line) signals and the maximum interval between ECM frames from the other end. Try using a longer setting if error code 0-21 is frequent.
5	Not used			Do not change the settings.
6	Reconstruction time for the first line in receive mode 0: 6 s 1: 12 s			When the sending terminal is controlled by a computer, there may be a delay in receiving page data after the local machine accepts set-up data and sends CFR. This is outside the T.30 recommendation. But, if this delay occurs, set this bit to 1 to give the sending machine more time to send data. Refer to error code 0-20.

		ITU-T T.30 recommendation: The first line should come within 5 s of CFR.
7	Not used	Do not change the settings.

G3 Switch 0B Not used (do not change the settings).

G3 Switch 0E (SP No. 1-105-013)		
No	**Function**	**Comments**
0-1	Not used	Do not change these settings.
4-5	Select detection of DTMF/DP detection when using remote switch. 00: DTMF+PSTN (Simultaneous detection) 01: DTMF 10: DP (10 PPPS) 11: DP (20 PPS)	This setting determines how to detect the signals from the handset when remote switch is active.

G3 Switch 0D Not used (do not change the settings).

G3 Switch 0E (SP No. 1-105-015)		
No	**Function**	**Comments**
0-7	Set CNG send time interval Some machines on the receiving side may not be able to automatically switch the 3-second CNG interval.	
	High order bit	3000-2250ms: 3000-50xNms 3000 – 50 x Nms 0F (3000 ms) <= N <= FF (2250 ms)
	Low order bit	00-0E(3000-3700ms: 3000+50xNms 3000 – 50 x Nms 0F (3000 ms) <= N <= 0F (3700 ms)

G3 Switch 0F (SP No. 1-105-016)		
No	**Function**	**Comments**
0	Alarm when an error occurred in Phase C or later 0: Disabled 1: Enabled	If the customer wants to hear an alarm after each error communication, change this bit to "1".
1	Alarm when the handset is off-hook at the end of communication 0: Disabled 1: Enabled	If the customer wants to hear an alarm if the handset is off-hook at the end of fax communication, change this bit to "1".

2-3	Not used	Do not change these settings.
4	Manual calibration setting 0: Off 1: On	1: manually calibrates for communication with a line whose current change occurs such as an optical fiber line.
5-7	Not used	Do not change the settings.

Bit Switches - 5

Important

- Do not adjust a bit switch or use a setting that is described as "Not used", as this may cause the machine to malfunction or to operate in a manner that is not accepted by local regulations. Such bits are for use only in other areas, such as Japan.

Default settings for bit switches are not listed in this manual. Refer to the System Parameter List printed by the machine.

G3-2 and G3-3 Switches

These switches require an optional G3 interface unit.

G3-3 switches are the same as for G3-2 switches.

G3-2 Switch 00 (SP No. 1-106-001)

No	Function			Comments
0 1	Monitor speaker during communication (TX and RX)			(0, 0): The monitor speaker is disabled all through the communication. (0, 1): The monitor speaker is on up to phase B in the T.30 protocol. (1, 0): Used for testing. The monitor speaker is on all through the communication. Make sure that you reset these bits after testing.
	Bit 1	Bit 0	Setting	
	0	0	Disable	
	0	1	Up to Phase B	
	1	0	All the time	
	1	1	Not used	
2	Monitor speaker during memory transmission 0: Disabled 1: Enabled			1: The monitor speaker is enabled during memory transmission.
3-7	Not used			Do not change the settings.

G3-2 Switch 01 (SP No. 1-106-002)

No	Function	Comments
0-3	Not used	Do not change the settings.
4	DIS frame length 0: 10 bytes 1: 4 bytes	1: The bytes in the DIS frame after the 4th byte will not be transmitted (set to 1 if there are communication problems with PC-based faxes which cannot receive the extended DIS frames).
5	Not used	Do not change the setting.
6	Forbid CED/ANSam output	Do not change this setting (Default: 0: Off), unless communication problem is caused by a CED or ANSam transmission.

	0: Off 1: On (Forbid output)	
7	Not used	Do not change the setting.

G3-2 Switch 02 (SP No. 1-106-003)		
No	**Function**	**Comments**
0	G3 protocol mode used 0: Standard and non-standard 1: Standard only	Change this bit to 1 only when the other end can only communicate with machines that send T.30-standard frames only. 1: Disables NSF/NSS signals (these are used in non-standard mode communication)
1-4	Not used	Do not change the settings.
5	AI modem rate selection 0: OFF, 1: ON	Selects if the AI modem rate is ON or OFF.
6	Not used	Do not change the settings.
7	Short preamble 0: Disabled 1: Enabled	Refer to Appendix B in the Group 3 Facsimile Manual for details about Short Preamble.

G3-2 Switch 03 (SP No. 1-106-004)		
No	**Function**	**Comments**
0	DIS detection number (Echo countermeasure) 0: 1 1: 2	0: The machine will hang up if it receives the same DIS frame twice. 1: Before sending DCS, the machine will wait for the second DIS which is caused by echo on the line.
1	Not Used	Do not change the settings.
2	Not Used	Do not change the settings.
3	ECM frame size 0: 256 bytes 1: 64 bytes	Keep this bit at "0" in most cases.
4	CTC transmission conditions 0: After one PPR signal received 1: After four PPR signals received (ITU-T standard)	0: When using ECM in non-standard (NSF/NSS) mode, the machine sends a CTC to drop back the modem rate after receiving a PPR, if the following condition is met in communications at 14.4, 12.0, 9.6, and 7.2 kbps.

		$\sqrt{N\,Transmit \leq N\,Resend}$ Ntransmit = Number of transmitted frames Nresend = Number of frames to be retransmitted 1: When using ECM, the machine sends a CTC to drop back the modem rate after receiving four PPRs. PPR, CTC: These are ECM protocol signals. This bit is not effective in V.34 communications.
5	Modem rate used for the next page after receiving a negative code (RTN or PIN) 0: No change 1: Fallback	1: The machine's TX modem rate will fall back before sending the next page if a negative code is received. This bit is ignored if ECM is being used.
6	Not used	Do not change the settings
7	Select detection of reverse polarity in ringing 0: Off 1: On	This switch is used to prevent reverse polarity in ringing on the phone line (applied to PSTN-G3 ringing). Do not change this setting 0: No detection 1: Detection (Japan and Korea only)

G3-2 Switch 04 (SP No. 1-106-005)		
No	**Function**	**Comments**
0-3	Training error detection threshold	0 - F (Hex); 0 - 15 bits If the number of error bits in the received TCF is below this threshold, the machine informs the sender that training has succeeded.
4-7	Not used	Do not change the settings.

G3-2 Switch 05 (SP No. 1-106-006)						
No	**Function**					**Comments**
0-3	Initial TX modem rate (kbps)					These bits set the initial starting modem rate for transmission. Use the dedicated transmission parameters if you need to change this for specific receivers. If a modem rate 14.4 kbps or slower is selected, V.8 protocol should be disabled manually. Cross reference V.8 protocol on/off - G3 switch 03, bit 2
	Bit 3	Bit 2	Bit 1	Bit 0	kbps	
	0	0	0	1	2.4	
	0	0	1	0	4.8	
	0	0	1	1	7.2	
	0	1	0	0	9.6	
	0	1	0	1	12.0	
	0	1	1	0	14.4	
	0	1	1	1	16.8	

	1	0	0	0	19.2	
	1	0	0	1	21.6	
	1	0	1	0	24.0	
	1	0	1	1	26.4	
	1	1	0	0	28.8	
	1	1	0	1	31.2	
	Other settings - Not used					

4-5	Initial modem type for 9.6 k or 7.2 kbps.			These bits set the initial modem type for 9.6 and 7.2 kbps, if the initial modem rate is set at these speeds.
	Bit 5	Bit 4	Setting	
	0	0	V.29	
	0	1	V.17	
	1	0	V.34	
	1	1	Not used	
6-7	Not used			Do not change the settings.

G3-2 Switch 06 (SP No. 1-106-007)						
No	**Function**					**Comments**
0-3	Initial RX modem rate(kbps)					These bits set the initial starting modem rate for reception. Use a lower setting if high speeds pose problems during reception. If a modem rate 14.4 kbps or slower is selected, V.8 protocol should be disabled manually. Cross reference V.8 protocol on/off - G3 switch 03, bit2
	Bit 3	Bit 2	Bit 1	Bit 0	kbps	
	0	0	0	1	2.4	
	0	0	1	0	4.8	
	0	0	1	1	7.2	
	0	1	0	0	9.6	
	0	1	0	1	12.0	
	0	1	1	0	14.4	
	0	1	1	1	16.8	
	1	0	0	0	19.2	
	1	0	0	1	21.6	
	1	0	1	0	24.0	
	1	0	1	1	26.4	
	1	1	0	0	28.8	
	1	1	0	1	31.2	
	Other settings - Not used					
4-7	Modem types available for reception					

The setting of these bits is used to inform the transmitting terminal of the available modem type for the machine in receive mode.

If V.34 is not selected, V.8 protocol must be disabled manually.

Cross reference

V.8 protocol on/off - G3 switch 03, bit 2

Bit 7	Bit 6	Bit 5	Bit 4	Types
0	0	0	1	V.27ter
0	0	1	0	V.27ter
0	0	1	1	V.27ter
0	1	0	0	V.27ter
0	1	0	1	V.27ter

Other settings - Not used

G3-2 Switch 07 (SP No. 1-106-008)

No	Function	Comments
0-1	PSTN cable equalizer (TX mode: Internal)	Use a higher setting if there is signal loss at higher frequencies because of the length of wire between the modem and the telephone exchange.
	Bit 1 / Bit 0 / Setting: 0 / 0 / None; 0 / 1 / Low; 1 / 0 / Medium; 1 / 1 / High	Use the dedicated transmission parameters for specific receivers. Also, try using the cable equalizer if one or more of the following symptoms occurs. Communication error Modem rate fallback occurs frequently. Note • This setting is not effective in V.34 communications.
2-3	PSTN cable equalizer (RX mode: Internal)	Use a higher setting if there is signal loss at higher frequencies because of the length of wire between the modem and the telephone exchange. Also, try using the cable equalizer if one or more of the following symptoms occurs. Communication error with error codes such as 0-20, 0-23, etc. Modem rate fallback occurs frequently. Note • This setting is not effective in V.34 communications.
	Bit 3 / Bit 2 / Setting: 0 / 0 / None; 0 / 1 / Low; 1 / 0 / Medium; 1 / 1 / High	
4	PSTN cable equalizer (V.8/V.17 RX mode: External)	Keep this bit at "1".

	0: Disabled 1: Enabled	
5- 7	Not used	Do not change the settings.

G3-2 Switch 08 - Not used (do not change the settings)
G3-2 Switch 09 - Not used (do not change the settings)

G3-2 Switch 0A (SP No. 1-106-011)

No	Function			Comments
0- 1	Maximum allowable carrier drop during image data reception			These bits set the acceptable modem carrier drop time. Try a longer setting if error code 0-22 is frequent.
	Bit 1	Bit 0	Value (ms)	
	0	0	200	
	0	1	400	
	1	0	800	
	1	1	Not used	
2- 3	Not used			Do not change the settings
4	Maximum allowable frame interval during image data reception. 0: 5 s 1: 13 s			This bit set the maximum interval between EOL (end-of-line) signals and the maximum interval between ECM frames from the other end. Try using a longer setting if error code 0-21 is frequent.
5	Not used			Do not change the settings.
6	Reconstruction time for the first line in receive mode 0: 6 s 1: 12 s			When the sending terminal is controlled by a computer, there may be a delay in receiving page data after the local machine accepts set-up data and sends CFR. This is outside the T.30 recommendation. But, if this delay occurs, set this bit to 1 to give the sending machine more time to send data. Refer to error code 0-20. ITU-T T.30 recommendation: The first line should come within 5 s of CFR.
7	Not used			Do not change the settings.

G3-2 Switch 0B- Not used (do not change the settings)
G3-2 Switch 0C- Not used (do not change the settings)
G3-2 Switch 0E- Not used (do not change the settings)
G3-2 Switch 0F- Not used (do not change the settings)

G4 Internal Switches

The G4 internal switches (SW00 to 1F) are displayed but do not change these settings.

G4 Parameter Switches

The G4 parameter switches (SW00 to 0F) are displayed but do not change these settings.

Bit Switches - 6

Important

- Do not adjust a bit switch or use a setting that is described as "Not used", as this may cause the machine to malfunction or to operate in a manner that is not accepted by local regulations. Such bits are for use only in other areas, such as Japan.

Default settings for bit switches are not listed in this manual. Refer to the System Parameter List printed by the machine.

IP Fax Switches

IP Fax Switch 00 (SP No. 1-111-001)		
No.	**Function**	**Comments**
0	Not used	Do not change this setting.
1	IP Fax Transport 0: TCP, 1: UDP	Selects TCP or UDP protocol for IP-Fax
2	IP Fax single port selection 0: OFF, 1: ON (enable)	Selects single data port.
3	IP Fax double ports (single data port) selection 0: OFF, 1: ON (enable)	Selects whether IP-Fax uses a double port.
4	IP Fax Gatekeeper 0: OFF, 1: ON (enable)	Enables/disables the gatekeeper for IP-Fax.
5	IP Fax T30 bit signal reverse 0: LSB first, 1: MSB first	Reverses the T30 bit signal.
6	IP Fax max bit rate setting 0: Not affected, 1: Affected	When "0" is selected, the max bit rate does not affect the value of the DIS/DCS. When "1" is selected, the max bit rate affects the value of the DIS/DCS.
7	IP Fax received telephone number confirmation 0: No confirmation, 1: Confirmation	When "0" is selected, fax data is received without checking the telephone number. When "1" is selected, fax data is received only when confirming that the telephone number from the sender matches the registered telephone number in this machine. If this confirmation fails, the line is disconnected.

IP Fax Switch 01 (SP No. 1-111-002)

<table>
<tr><th>No.</th><th colspan="5">Function</th><th>Comments</th></tr>
<tr><td>0-3</td><td colspan="5">IP Fax delay level setting
Selects the acceptable delay level.
Level 0 is the highest quality
Default is "0000" (level 0).</td><td></td></tr>
<tr><td></td><td>Bit 3</td><td>Bit 2</td><td>Bit 1</td><td>Bit 0</td><td></td><td></td></tr>
<tr><td></td><td>0</td><td>0</td><td>0</td><td>0</td><td>Level 0</td><td></td></tr>
<tr><td></td><td>0</td><td>0</td><td>0</td><td>1</td><td>Level 1</td><td></td></tr>
<tr><td></td><td>0</td><td>0</td><td>1</td><td>0</td><td>Level 2</td><td></td></tr>
<tr><td></td><td>0</td><td>0</td><td>1</td><td>1</td><td>Level 3</td><td></td></tr>
<tr><td>4-7</td><td colspan="3">IP Fax preamble wait time setting</td><td colspan="3">Selects the preamble wait time.
[00 to 0f]
There are 16 values in this 4-bit binary switch combination.
Waiting time: set value level x 100 ms
Max: 0f (1500 ms) Min: 00 (No wait time)
The default is "0000" (00H).</td></tr>
</table>

IP Fax Switch 02 (SP No. 1-111-003)		
No.	**Function**	**Comments**
0	IP Fax bit signal reverse setting 0: Maker code setting 1: Internal bit switch setting	When "0" is selected, the bit signal reverse method is decided by the maker code. When "1" is selected, the bit signal reverse method is decided by the internal bit switch. When communicating between IP Fax devices, LSB first is selected.)
1	IP Fax transmission speed setting 0: Modem speed 1: No limitation	Selects the transmit speed for IP Fax communication.
2	SIP transport setting 0: TCP 1: UDP	This bit switch sets the transport that has priority for receiving IP Fax data. This function is activated only when the sender has both TCP and UDP.
3	CCM connection 0: No CCM connection 1: CCM connection	When "1" is selected, only the connection call message with H.323 or no tunneled H.245 is transmitted via CCM.
4	Message reception selection from non-registered SIP server 0: Answer	0: This answers the INVITE message from the SIP server not registered for the machine. 1: This does not receive the INVITE message from the SIP server

	1: Not answer	not registered for the machine and send a refusal message.
5	ECM communication setting 0: No limit for image compression 1: Limit for image compression	0: This does not limit the type of the image compression with ECM communication. 1: When the other end machine is Ciscco, this permits the image compression other than JBIG or MMR with ECM communication.
6-7	Not used	Do not change these settings.

IP Fax Switch 03 (SP No. 1-111-004)		
No.	**Function**	**Comments**
0	Effective field limitation for G3 standard function information 0: OFF, 1: 4byte (DIS)	Limits the effective field for standard G3 function information.
1	Switching between G3 standard and G3 non standard 0: Enable switching 1: G3 standard only	Enables/disables switching between G3 standard and G3 non-standard.
2	Not used	Do not change this setting.
3	ECM frame size selection at transmitting 0: 256byte, 1: 64byte	Selects the ECM frame size for sending.
4	DIS detection times for echo prevention 0: 1 time, 1: 2 times	Sets the number of times for DIS to detect echoes.
5	CTC transmission selection 0: PPRx1 1: PPRx4	When "0" is selected, the transmission condition is decided by error frame numbers. When "1" is selected, the transmission condition is based on the ITU-T method.
6	Shift down setting at receiving negative code 0: OFF, 1: ON	Selects whether to shift down when negative codes are received.
7	Not used	Do not change this setting.

IP Fax Switch 04 (SP No. 1-111-005)		
No.	**Function**	**Comments**
0-3	TCF error threshold	Sets the TCF error threshold level. [00 to 0f] The default is "1111" (0fH).
4-7	Not used	Do not change these settings.

IP Fax Switch 05 (SP No. 1-111-006)		
No.	**Function**	**Comments**

<table>
<tr><td>0-3</td><td colspan="5">Modem bit rate setting for transmission (kbps)<table><tr><th>Bit 3</th><th>Bit 2</th><th>Bit 1</th><th>Bit 0</th><th>kbps</th></tr><tr><td>0</td><td>0</td><td>0</td><td>1</td><td>2.4</td></tr><tr><td>0</td><td>0</td><td>1</td><td>1</td><td>4.8</td></tr><tr><td>0</td><td>0</td><td>1</td><td>1</td><td>7.2</td></tr><tr><td>0</td><td>1</td><td>0</td><td>0</td><td>9.6</td></tr><tr><td>0</td><td>1</td><td>0</td><td>1</td><td>12.0</td></tr><tr><td>0</td><td>1</td><td>1</td><td>0</td><td>14.4</td></tr></table></td><td>Sets the modem bit rate for transmission. The default is "0110" (14.4K bps).</td></tr>
<tr><td>4-5</td><td colspan="5">Modem setting for transmission<table><tr><th>Bit 5</th><th>Bit 4</th><th>Types</th></tr><tr><td>0</td><td>0</td><td>V29</td></tr><tr><td>0</td><td>1</td><td>V17</td></tr><tr><td>1</td><td>0</td><td>Not used</td></tr><tr><td>1</td><td>1</td><td>Not used</td></tr></table></td><td>Sets the modem type for transmission.
The default is "00" (V29).</td></tr>
<tr><td>6-7</td><td colspan="5">Not used</td><td>Do not change these settings.</td></tr>
</table>

<table>
<tr><th colspan="7">IP Fax Switch 06 (SP No. 1-111-007)</th></tr>
<tr><th>No.</th><th colspan="5">Function</th><th>Comments</th></tr>
<tr><td>0-3</td><td colspan="6">Modem bit rate setting for reception
Sets the modem bit rate for reception. The default is "0110" (14.4K bps).</td></tr>
<tr><td>4-7</td><td colspan="6">Modem setting for reception
Sets the modem type for reception. The default is "0100" (V27ter, V29, V17).<table><tr><th>Bit 7</th><th>Bit 6</th><th>Bit 5</th><th>Bit 4</th><th>Types</th></tr><tr><td>0</td><td>0</td><td>0</td><td>1</td><td>V.27ter</td></tr><tr><td>0</td><td>0</td><td>1</td><td>0</td><td>V.27ter, V.29</td></tr><tr><td>0</td><td>0</td><td>1</td><td>1</td><td>V.27ter, V.29, V.33</td></tr><tr><td>0</td><td>1</td><td>0</td><td>0</td><td>V.27ter, V.29, V.17/V.33</td></tr></table>Other settings - Not used</td></tr>
</table>

IP Fax Switch 07 (SP No. 1-111-008)		
No.	**Function**	**Comments**
0	TSI information 0: Not added, 1: Added	Adds or does not add TSI information to NSS(S).
1	DCN transmission setting at T1 timeout 0: Not transmitted 1: Transmitted	Transmits or does not transmit DCN at T1 timeout.
2	Not used	Do not change this setting.

3	Hang up setting at DIS reception disabled 0: No hang up 1: Hang up after transmitting DCN	Sets whether the machine disconnects after DIS reception.
4	Number of times for training 0: 1 time, 1: 2 times	Selects the number of times training is done at the same bit rate.
5	Space CSI transmission setting at no CSI registration 0: Not transmitted 1: Transmitted	When "0" is selected, frame data is enabled. When "1" is selected, the transmitted data is all spaces.
6-7	Not used	Do not change these settings.

IP Fax Switch 08 (SP No. 1-111-009)

No.	Function			Comments
0-1	T1 timer adjustment			Adjusts the T1 timer. The default is "00" (35 seconds).
	Bit 1	Bit 0		
	0	0	35 s	
	0	1	40 s	
	1	0	50 s	
	1	1	60 s	
2-3	T4 timer adjustment			Adjust the T4 timer. The default is "00" (3 seconds).
	Bit 3	Bit 2		
	0	0	3 s	
	0	1	3.5 s	
	1	0	4 s	
	1	1	5 s	
4-5	T0 timer adjustment			Adjusts the fail safe timer. This timer sets the interval between "setup" data transmission and T.38 phase decision. If your destination return is late on the network or G3 fax return is late, adjust the longer interval timer. The default is "00" (75 seconds).
	Bit 5	Bit 4		
	0	0	75 s	
	0	1	120 s	
	1	0	180 s	
	1	1	240 s	
6-7	Not used			Do not change these settings.

IP Fax Switch 09 (SP No. 1-111-010)

<table>
<tr><th>No.</th><th>Function</th><th>Comments</th></tr>
<tr><td>0</td><td>Network I/F setting for SIP connection
0: IPv4
1: IPv6.</td><td>Selects the connection type (IPV4 or IPV6) to connect to the SIP server.</td></tr>
<tr><td>1</td><td>Network I/F setting for Fax communication
0: Same setting as SIP server connection
1: Automatic setting</td><td>0: The I/F setting for fax communication follows the setting for SIP server connection.
1: The negotiation between the SIP server and the device decides whether IPv4 or IPv6 is used for the I/F setting for fax communication.</td></tr>
<tr><td>2</td><td>Record-route setting
0: Disable
1: Enable</td><td>0: Disables the record-route function of the SIP server.
1: Enables the record-route function of the SIP server.</td></tr>
<tr><td>3-4</td><td>re-INVITE transmission delay timer setting
<table><tr><td>Bit 4</td><td>Bit 3</td><td></td></tr><tr><td>0</td><td>0</td><td>No delay</td></tr><tr><td>0</td><td>1</td><td>1 sec</td></tr><tr><td>1</td><td>0</td><td>2 sec</td></tr><tr><td>1</td><td>1</td><td>3 sec</td></tr></table></td><td>This changes the interval for transmit re-INVITE after receiving the ACK message transmitted by T.38 device.</td></tr>
<tr><td>5</td><td>SIP-IPFAX: Adding vender information selection
0: Declare T38VendorInfo=RICOH
1: Not declare T38VendorInfo=RICOH</td><td>0: Use this setting normally.
1: This setting is used only when a customer wants to connect the machine with SIP server + VOIP-GW provided by AVAYA Inc.</td></tr>
<tr><td>6-7</td><td>Not used.</td><td>Do not change these settings.</td></tr>
</table>

IP Fax Switch 0A - Not used (do not change the settings)
IP Fax Switch 0B - Not used (do not change the settings)
IP Fax Switch 0C - Not used (do not change the settings)
IP Fax Switch 0D - Not used (do not change the settings)

IP Fax Switch 0E (SP No. 1-111-013)		
No.	**Function**	**Comments**
0-1	SIP: IP-FAX port mode (UDP) 00: 3 port mode	Switch the port mode for IP-FAX (T38 transport: UDP) at SIP call control.

	01: 2 port mode 10: 1 port mode	
2-3	SIP: IP-FAX port mode (TCP) 00: 3 port mode 01: 2 port mode 10: 1 port mode	Switch the port mode for IP-FAX (T38 transport: TCP) at SIP call control.
4-7	Not used.	Do not change these settings.

NCU Parameters

NCU Parameters

The following tables give the RAM addresses and the parameter calculation units that the machine uses for ringing signal detection and automatic dialing. The factory settings for each country are also given. Most of these must be changed by RAM read/write (SP2-102), but some can be changed using NCU Parameter programming (SP2-103, 104 and 105); if SP2-103, 104 and 105 can be used, this will be indicated in the Remarks column. The RAM is programmed in hex code unless (BCD) is included in the Unit column.

Note

- The following addresses describe settings for the standard NCU.
- Change the fourth digit from "5" to "6" (e.g. 680500 to 680600) for the settings for the first optional G3 interface unit and from "5" to "7" (e.g. 680700) for the settings for the second optional G3 interface unit.

Address	Function					
680500	Country/Area code for NCU parameters					
	Use the Hex value to program the country/area code directly into this address, or use the decimal value to program it using SP2-103-001					
	Country /Area	**Decimal**	**Hex**	**Country /Area**	**Decimal**	**Hex**
	France	00	00	Asia	18	12
	Germany	01	01	Japan	19	13
	UK	02	02	Hong Kong	20	14
	Italy	03	03	South Africa	21	15
	Austria	04	04	Australia	22	16
	Belgium	05	05	New Zealand	26	17
	Denmark	06	06	Singapore	24	18
	Finland	07	07	Malaysia	25	19
	Ireland	08	08	China	26	1A
	Norway	09	09	Taiwan	27	1B
	Sweden	10	0A	Korea	28	1C
	Switzerland	11	0B	Brazil	29	1D
	Portugal	12	0C	Turkey	32	20
	Holland	13	0D	Greece	33	21
	Spain	14	0E	Hungary	34	22
	Israel	15	0F	Czech	35	23
	USA	17	11	Poland	36	24

Address	Function	Unit	Remarks
680501	Line current detection time	20 ms	Line current detection is disabled.

Address	Function	Unit	Remarks
680502	Line current wait time		Line current is not detected if 680501 contains FF.
680503	Line current drop detect time		
680504	PSTN dial tone frequency upper limit (high byte)	Hz (BCD)	If both addresses contain FF (H), tone detection is disabled.
680505	PSTN dial tone frequency upper limit (low byte)		
680506	PSTN dial tone frequency lower limit (high byte)	Hz (BCD)	If both addresses contain FF (H), tone detection is disabled.
680507	PSTN dial tone frequency lower limit (low byte)		
680508	PSTN dial tone detection time	20 ms	If 680508 contains FF (H), the machine pauses for the pause time (address 68050D / 68050E). Italy: See Note 2.
680509	PSTN dial tone reset time (LOW)		
68050A	PSTN dial tone reset time (HIGH)		
68050B	PSTN dial tone continuous tone time		
68050C	PSTN dial tone permissible drop time		
68050D	PSTN wait interval (LOW)		-
68050E	PSTN wait interval (HIGH)		
68050F	PSTN ring-back tone detection time	20 ms	Detection is disabled if this contains FF.
680510	PSTN ring-back tone off detection time	20 ms	-
680511	PSTN detection time for silent period after ring-back tone detected (LOW)	20 ms	-
680512	PSTN detection time for silent period after ring-back tone detected (HIGH)	20 ms	-
680513	PSTN busy tone frequency upper limit (high byte)	Hz (BCD)	If both addresses contain FF (H), tone detection is disabled.
680514	PSTN busy tone frequency upper limit (low byte)		
680515	PSTN busy tone frequency lower limit (high byte)	Hz (BCD)	If both addresses contain FF (H), tone detection is disabled.
680516	PSTN busy tone frequency lower limit (low byte)		
680517	PABX dial tone frequency upper limit (high byte)	Hz (BCD)	If both addresses contain FF (H), tone detection is disabled.
680518	PABX dial tone frequency upper limit (low byte)		
680519	PABX dial tone frequency lower limit	Hz (BCD)	If both addresses contain FF (H), tone

Address	Function	Unit	Remarks
	(high byte)		detection is disabled.
68051A	PABX dial tone frequency lower limit (low byte)		
68051B	PABX dial tone detection time	20 ms	If 68051B contains FF, the machine pauses for the pause time (680520 / 680521).
68051C	PABX dial tone reset time (LOW)		
68051D	PABX dial tone reset time (HIGH)		
68051E	PABX dial tone continuous tone time		
68051F	PABX dial tone permissible drop time		
680520	PABX wait interval (LOW)		-
680521	PABX wait interval (HIGH)		
680522	PABX ringback tone detection time	20 ms	If both addresses contain FF (H), tone detection is disabled.
680523	PABX ringback tone off detection time	20 ms	
680524	PABX detection time for silent period after ringback tone detected (LOW)	20 ms	If both addresses contain FF (H), tone detection is disabled.
680525	PABX detection time for silent period after ringback tone detected (HIGH)	20 ms	
680526	PABX busy tone frequency upper limit (high byte)	Hz (BCD)	If both addresses contain FF (H), tone detection is disabled.
680527	PABX busy tone frequency upper limit (low byte)		
680528	PABX busy tone frequency lower limit (high byte)	Hz (BCD)	If both addresses contain FF (H), tone detection is disabled.
680529	PABX busy tone frequency lower limit (low byte)		
68052A	Busy tone ON time: range 1	20 ms	-
68052B	Busy tone OFF time: range 1		
68052C	Busy tone ON time: range 2		
68052D	Busy tone OFF time: range 2		
68052E	Busy tone ON time: range 3		
68052F	Busy tone OFF time: range 3	20 ms	
680530	Busy tone ON time: range 4		
680531	Busy tone OFF time: range 4		
680532	Busy tone continuous tone detection time		

Address	Function	Unit	Remarks
680533	Busy tone signal state time tolerance for all ranges, and number of cycles required for detection (a setting of 4 cycles means that ON-OFF-ON or OFF-ON-OFF must be detected twice). Tolerance (±) Bit 1: 0, Bit 0: 0 = 75% Bits 2 and 3 must always be kept at 0. Bit 1: 0, Bit 0: 0 = 50% Bits 2 and 3 must always be kept at 0. Bit 1: 0, Bit 0: 0 = 25% Bit 1: 0, Bit 0: 0 = 12.5% Bits 7, 6, 5, 4 - number of cycles required for cadence detection		
680534	International dial tone frequency upper limit (high byte)	Hz (BCD)	If both addresses contain FF (H), tone detection is disabled.
680535	International dial tone frequency upper limit (low byte)		
680536	International dial tone frequency lower limit (high byte)	Hz (BCD)	If both addresses contain FF (H), tone detection is disabled.
680537	International dial tone frequency lower limit (low byte)		
680538	International dial tone detection time	20 ms	If 680538 contains FF, the machine pauses for the pause time (68053D / 68053E). Belgium: See Note 2.
680539	International dial tone reset time (LOW)		
68053A	International dial tone reset time (HIGH)		
68053B	International dial tone continuous tone time		
68053C	International dial tone permissible drop time		
68053D	International dial wait interval (LOW)		-
68053E	International dial wait interval (HIGH)		
68053F	Country dial tone upper frequency limit (HIGH)	Hz (BCD)	If both addresses contain FF (H), tone detection is disabled.
680540	Country dial tone upper frequency limit (LOW)		
680541	Country dial tone lower frequency limit (HIGH)		If both addresses contain FF (H), tone detection is disabled.
680542	Country dial tone lower frequency limit (LOW)		
680543	Country dial tone detection time	20 ms	If 680543 contains FF, the machine pauses for the pause time (680548 / 680549).
680544	Country dial tone reset time (LOW)		

Address	Function	Unit	Remarks
680545	Country dial tone reset time (HIGH)		
680546	Country dial tone continuous tone time	-	-
680547	Country dial tone permissible drop time	20 ms	-
680548	Country dial wait interval (LOW)		
680549	Country dial wait interval (HIGH)		
68054A	Time between opening or closing the DO relay and opening the OHDI relay	1 ms	See Notes 3, 6 and 8. SP2-103-012 (parameter 11).
68054B	Break time for pulse dialing	1 ms	See Note 3. SP2-103-013 (parameter 12).
68054C	Make time for pulse dialing	1 ms	See Note 3. SP2-103-014 (parameter 13).
68054D	Time between final OHDI relay closure and DO relay opening or closing	1 ms	See Notes 3, 6 and 8. SP2-103-015 (parameter 14). This parameter is only valid in Europe.
68054E	Minimum pause between dialed digits (pulse dial mode)	20 ms	See Note 3 and 8. SP2-103-016 (parameter 15).
68054F	Time waited when a pause is entered at the operation panel		SP2-103-017 (parameter 16). See Note 3.
680550	DTMF tone on time	1 ms	SP2-103-018 (parameter 17).
680551	DTMF tone off time		SP2-103-019 (parameter 18).
680552	Tone attenuation level of DTMF signals while dialing	-N x 0.5 –3.5 dBm	SP2-103-020 (parameter 19). See Note 5.
680553	Tone attenuation value difference between high frequency tone and low frequency tone in DTMF signals	-dBm x 0.5	SP2-103-021 (parameter 20). The setting must be less than –5dBm, and should not exceed the setting at 680552h above. See Note 5.
680554	PSTN: DTMF tone attenuation level after dialing	-N x 0.5 –3.5 dBm	SP2-103-022 (parameter 21). See Note 5.
680555	ISDN: DTMF tone attenuation level after dialing	-dBm x 0.5	See Note 5
680556	Not used	-	Do not change the settings.
680557	Time between 68054Dh (NCU parameter 14) and 68054Eh (NCU parameter 15)	1 ms	This parameter takes effect when the country code is set to France.

Address	Function	Unit	Remarks
680558	Not used	-	Do not change the setting.
680559	Grounding time (ground start mode)	20 ms	The Gs relay is closed for this interval.
68055A	Break time (flash start mode)	1 ms	The OHDI relay is open for this interval.
68055B	International dial access code (High)	BCD	For a code of 100: 68055B - F1 68055C - 00
68055C	International dial access code (Low)		
68055D	PSTN access pause time	20 ms	This time is waited for each pause input after the PSTN access code. If this address contains FF [H], the pause time stored in address 68054F is used. Do not set a number more than 7 in the UK.
68055E	Progress tone detection level, and cadence detection enable flags		Bit 7: 0, Bit 6: 0, Bit 5: 0 = -25.0 dBm Bit 7: 0, Bit 6: 0, Bit 5: 1 = -35.0 dBm Bit 7: 0, Bit 6: 1, Bit 5: 0 = -30.0 dBm Bit 7: 1, Bit 6: 0, Bit 5: 0 = -40.0 dBm Bit 7: 1, Bit 6: 1, Bit 5: 0 = -49.0 dBm Bits 2, 0 - See Note 2.
68055F To 680564	**Not used**	-	Do not change the settings.
680565	Long distance call prefix (HIGH)	BCD	For a code of 0: 680565 – FF 680566 - FF
680566	Long distance call prefix (LOW)	BCD	
680567 to 680571	**Not used**	-	Do not change the settings.
680572	Acceptable ringing signal frequency: range 1, upper limit	1000/ N (Hz).	SP2-103-003 (parameter 02).
680573	Acceptable ringing signal frequency: range 1, lower limit		SP2-103-004 (parameter 03).
680574	Acceptable ringing signal frequency: range 2, upper limit		SP2-103-005 (parameter 04).
680575	Acceptable ringing signal frequency: range 2, lower limit		SP2-103-006 (parameter 05).
680576	Number of rings until a call is detected	1	SP2-103-007 (parameter 06). The setting must not be zero.

Address	Function	Unit	Remarks
680577	Minimum required length of the first ring	20 ms	See Note 4. SP2-103-008 (parameter 07).
680578	Minimum required length of the second and subsequent rings	20 ms	SP2-103-009 (parameter 08).
680579	Ringing signal detection reset time (LOW)	20 ms	SP2-103-010 (parameter 09).
68057A	Ringing signal detection reset time (HIGH)		SP2-103-011 (parameter 10).
68057B to 680580	**Not used**	-	Do not change the settings.
680581	Interval between dialing the last digit and switching the Oh relay over to the external telephone when dialing from the operation panel in handset mode.	20 ms	Factory setting: 500 ms
680582	Bits 0 and 1 - Handset off-hook detection time Bit 1:0, Bit 0: 0 = 200 ms Bit 1:0, Bit 0: 1 = 800 ms Other Not used Bits 2 and 3 - Handset on-hook detection time Bit 3: 0, Bit 2: 0 = 200 ms Bit 3: 0, Bit 2: 1 = 800 ms Other Not used Bits 4 to 7 - **Not used**		-
680583 To 6805A0	**Not used**	-	Do not change the settings.
6805A1	Acceptable CED detection frequency upper limit (high byte)	BCD (Hz)	If both addresses contain FF (H), tone detection is disabled.
6805A2	Acceptable CED detection frequency upper limit (low byte)		
6805A3	Acceptable CED detection frequency lower limit (high byte)	BCD (Hz)	If both addresses contain FF (H), tone detection is disabled.
6805A4	Acceptable CED detection frequency lower limit (low byte)		
6805A5	CED detection time	20 ms ± 20 ms	Factory setting: 200 ms

Address	Function	Unit	Remarks
6805A6	Acceptable CNG detection frequency upper limit (high byte)	BCD (Hz)	If both addresses contain FF (H), tone detection is disabled.
6805A7	Acceptable CNG detection frequency upper limit (low byte)		
6805A8	Acceptable CNG detection frequency lower limit (high byte)	BCD (Hz)	If both addresses contain FF (H), tone detection is disabled.
6805A9	Acceptable CNG detection frequency lower limit (low byte)		
6805AA	**Not used**	-	Do not change the setting.
6805AB	CNG on time	20 ms	Factory setting: 500 ms
6805AC	CNG off time	20 ms	Factory setting: 3000 ms
6805AD	Number of CNG cycles required for detection	-	The data is coded in the same way as address 680533.
6805AE	**Not used**	-	Do not change the settings.
6805AF	Acceptable AI short protocol tone (800Hz) detection frequency upper limit (high byte)	Hz (BCD)	If both addresses contain FF (H), tone detection is disabled.
6805B0	Acceptable AI short protocol tone (800Hz) detection frequency upper limit (low byte)		
6805B1	Acceptable AI short protocol tone (800Hz) detection frequency lower limit (high byte)	Hz(BCD)	If both addresses contain FF (H), tone detection is disabled.
6805B2	Acceptable AI short protocol tone (800Hz) detection frequency lower limit (low byte)		
6805B3	Detection time for 800 Hz AI short protocol tone	20 ms	Factory setting: 360 ms
6805B4	PSTN: TX level from the modem	-N – 3 dBm	SP2-103-002 (parameter 01).
6805B5	PSTN: 1100 Hz tone transmission level	- N 6805B4 - 0.5N 6805B5 –3.5 (dB) See Note 7.	
6805B6	PSTN: 2100 Hz tone transmission level	- N6805B4 - 0.5N 6805B6 –3 (dB) See Note 7.	
6805B7	PABX: TX level from the modem	- dBm	
6805B8	PABX: 1100 Hz tone transmission level	- N 6805B7 - 0.5N 6805B8 (dB)	

Address	Function	Unit	Remarks
6805B9	PABX: 2100 Hz tone transmission level	- N 6805B7 - 0.5N 6805B9 (dB)	
6805BD	Modem turn-on level (incoming signal detection level)	-37-0.5N (dBm)	
6805BE to 6805C6	**Not used**	-	Do not change the settings.
6805C7	Bits 0 to 3 – **Not used** Bit 4 = V.34 protocol dump 0: Simple, 1: Detailed (default) Bits 5 to 7 – **Not used.**		
6805C8 to 6805D9	**Not used**	-	Do not change the settings.
6805DA	T.30 T1 timer	1 s	
6805E0 bit 3	Maximum wait time for post message	0: 12 s 1: 30 s	1: Maximum wait time for post message (EOP/EOM/MPS) can be changed to 30 s. Change this bit to “1” if communication errors occur frequently during V.17 reception.
6805E3	Bits 0 and 1 – DCV (TIP/RING) Voltage Bit 1:0, Bit 0: 0 = 3.1 V Bit 1:0, Bit 0: 1 = 3.2 V Bit 1:1, Bit 0: 0 = 3.35 V Bit 1:1, Bit 0: 1 = 3.5 V Bits 2 and 3 – MINI (minimum loop electric current) Bit 2:0, Bit 3: 0 = 10 mA Bit 2:0, Bit 2: 1 = 12 mA Bit 2:1, Bit 3: 0 = 14 mA Bit 2:1, Bit 3: 1 = 16 mA Bits 6 and 7 – ACIM (AC impedance) Bit 7:0, Bit 6: 0 Bit 5:0, Bit 4: 0= 600 Bit 7:0, Bit 6: 0 Bit 5:1, Bit 4: 0= TBR21		
6805E4	Bit 0 – OHS (on hook speed) 0: OHS=0 1: OHS=1 Bit 1 – SQ (spark quench) 0: SQ=00 1: SQ=11 Bit 2 – RZ (call signal Impedance) 0: RZ=0 (high)		

Address	Function	Unit	Remarks
	1: RZ=1 (low) Bit 3 – RT (call signal detection level) 0: RT=0 (low) 1: RT=1 (high) Bit 4 – ILIM (DC limitation) 0: ILIM=0 (CTR 21) 1: ILIM=1 (other than CTR 21) Bit 5 –FILTER 0: FILTER=0 (around 5Hz) 1: FILTER=1 (around 200Hz) Bits 6 to 7 – Calibration in off hook state Bit 6:0, Bit 7: 0 = off hook to ACAL:128 ms, off hook to MCAL: 1000 ms Bit 6:1, Bit 7: 0 = off hook to ACAL:128 ms, off hook to MCAL: 500 ms Bit 6:0, Bit 7: 1 = off hook to ACAL:128 ms (no MCAL) Bit 6:1, Bit 7: 1 = off hook to ACAL:8 ms (no MCAL)		
6805E5	Bits 0 to 6 – **Not used** Bits 7 – Energy saving for DSP, COMBLK, SiDAA 0: Does not save energy 1: Saves energy		

NOTES

1. If a setting is not required, store FF in the address.
2. Italy and Belgium only

   RAM address 68055E: the lower four bits have the following meaning.

   Bit 2 - 1: International dial tone cadence detection enabled (Belgium)

   Bit 1 - Not used

   Bit 0 - 1: PSTN dial tone cadence detection enabled (Italy)

   If bit 0 or bit 2 is set to 1, the functions of the following RAM addresses are changed.

   680508 (if bit 0 = 1) or 680538 (if bit 2 = 1): tolerance for on or off state duration (%), and number of cycles required for detection, coded as in address 680533.

   68050B (if bit 0 = 1) or 68053B (if bit 2 = 1): on time, hex code (unit = 20 ms)

   68050C (if bit 0 = 1) or 68053C (if bit 2 = 1): off time, hex code (unit = 20 ms)
3. Pulse dial parameters (addresses 68054A to 68054F) are the values for 10 pps. If 20 pps is used, the machine automatically compensates.
4. The first ring may not be detected until 1 to 2.5 wavelengths after the time specified by this parameter.
5. The calculated level must be between 0 and 10.

   The attenuation levels calculated from RAM data are:

   High frequency tone:

   - $-0.5 \times N_{680552/680554} - 3.5$ dBm

- – 0.5 x N_{680555} dBm

Low frequency tone:

- – 0.5 x (N_{680552}/$_{680554}$ + N_{680553}) –3.5 dBm
- – 0.5 x (N_{680555} + N_{680553}) dBm

Note

- N_{680552}, for example, means the value stored in address 680552(H)

6. 68054A: Europe - Between Ds opening and Di opening, France - Between Ds closing and Di opening
   68054D: Europe - Between Ds closing and Di closing, France - Between Ds opening and Di closing
7. Tone signals which frequency is lower than 1500Hz (e.g., 800Hz tone for AI short protocol) refer to the setting at 6805B5h. Tones which frequency is higher than 1500Hz refer to the setting at 6805B6h.
8. 68054A, 68054D, 68054E: The actual inter-digit pause (pulse dial mode) is the sum of the period specified by the RAM addresses 68054A, 68054D, and 68054E.

Dedicated Transmission Parameters

There are two sets of transmission parameters: Fax and E-mail

Each Quick Dial Key and Speed Dial Code has eight bytes of programmable parameters allocated to it. If transmissions to a particular machine often experience problems, store that terminal's fax number as a Quick Dial or Speed Dial, and adjust the parameters allocated to that number.

The programming procedure will be explained first. Then, the eight bytes will be described.

Programming Procedure

1. Set the bit 0 of System Bit Switch 00 to 1.
2. Enter Address Book Management mode ([User Tools]> System Settings> Key Operator> Address Book Management).
3. Select the address book that you want to program.
4. For the fax parameter, select "Fax Dest.", for the E-mail parameter, select "E-mail", then press "Start". Make sure that the LED of the Start button lights green.
5. The settings for the switch 00 are now displayed. Press the bit number that you wish to change.
6. To scroll through the parameter switches, either:
7. Select the next switch: press "Next" or Select the previous switch: "Prev." until the correct switch is displayed. Then go back to step 6.
8. After the setting is changed, press "OK".
9. After finishing, reset bit 0 of System Bit Switch 00 to 0.

Parameters

Fax Parameters

The initial settings of the following fax parameters are all FF (H) - all the parameters are disabled.

Switch 00
FUNCTION AND COMMENTS
ITU-T T1 time (for PSTN G3 mode) If the connection time to a particular terminal is longer than the NCU parameter setting, adjust this byte. The T1 time is the value stored in this byte (in hex code), multiplied by 1 second. **Range:** 0 to 120 s (00h to 78h) FFh - The local NCU parameter factory setting is used. Do not program a value between 79h and FEh.

Switch 01		
No	**FUNCTION**	**COMMENTS**
0-	TX level	If communication with a particular remote terminal often

<table>
<tr><td>4</td><td>
<table>
<tr><td>Bit4</td><td>Bit3</td><td>Bit2</td><td>Bit1</td><td>Bit0</td><td></td></tr>
<tr><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>–1</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>–2</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>–3</td></tr>
<tr><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td><td>–4</td></tr>
<tr><td>↓</td><td>↓</td><td>↓</td><td>↓</td><td>↓</td><td>↓</td></tr>
<tr><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>–15</td></tr>
<tr><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>Disabled</td></tr>
</table>
</td><td>contains errors, the signal level may be inappropriate. Adjust the TX level for communications with that terminal until the results are better.
If the setting is "Disabled", the NCU parameter 01 setting is used.
Note
• Do not use settings other than listed on the left.</td></tr>
<tr><td>5-7</td><td>Cable equalizer
Bit 7: 0, Bit 6: 0, Bit 5: 0 = None
Bit 7: 0, Bit 6: 0, Bit 5: 1 = Low
Bit 7: 0, Bit 6: 1, Bit 5: 0 = Medium
Bit 7: 0, Bit 6: 1, Bit 5: 1 = High
Bit 7: 1, Bit 6: 1, Bit 5: 1 = Disabled</td><td>Use a higher setting if there is signal loss at higher frequencies because of the length of wire between the modem and the telephone exchange when calling the number stored in this Quick/Speed Dial.
Also, try using the cable equalizer if one or more of the following symptoms occurs.
Communication error with error codes such as 0-20, 0-23, etc.
Modem rate fallback occurs frequently.
Note
• Do not use settings other than listed on the left.
If the setting is "Disabled", the bit switch setting is used.</td></tr>
</table>

<table>
<tr><td colspan="3">Switch 02</td></tr>
<tr><td>No</td><td>FUNCTION</td><td>COMMENTS</td></tr>
<tr><td>0-3</td><td>
Initial TX modem rate
<table>
<tr><td>Bit3</td><td>Bit2</td><td>Bit1</td><td>Bit0</td><td>bps</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td>0</td><td>Not used</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td>1</td><td>2400</td></tr>
<tr><td>0</td><td>0</td><td>1</td><td>0</td><td>4800</td></tr>
<tr><td>0</td><td>0</td><td>1</td><td>1</td><td>7200</td></tr>
<tr><td>0</td><td>1</td><td>0</td><td>0</td><td>9600</td></tr>
<tr><td>0</td><td>1</td><td>0</td><td>1</td><td>12000</td></tr>
<tr><td>0</td><td>1</td><td>1</td><td>0</td><td>14400</td></tr>
<tr><td>0</td><td>1</td><td>1</td><td>1</td><td>16800</td></tr>
<tr><td>1</td><td>0</td><td>0</td><td>0</td><td>19200</td></tr>
<tr><td>1</td><td>0</td><td>0</td><td>1</td><td>21600</td></tr>
<tr><td>1</td><td>0</td><td>1</td><td>0</td><td>24000</td></tr>
</table>
</td><td>If training with a particular remote terminal always takes too long, the initial modem rate may be too high. Reduce the initial TX modem rate using these bits.
For the settings 14.4 or kbps slower, Switch 04 bit 4 must be changed to 0.
Note
• Do not use settings other than listed on the left. If the setting is "Disabled", the bit switch setting is used.</td></tr>
</table>

	1	0	1	1	26400	
	1	1	0	0	28800	
	1	1	0	1	31200	
	1	1	1	0	33600	
	1	1	1	1	Disabled	
	Other settings: **Not used**					
4-7	**Not used**					Do not change the settings.

Switch 03		
No	**FUNCTION**	**COMMENTS**
0-1	Inch-mm conversion before TX Bit 1: 0, Bit 0: 0 = Inch-mm conversion available Bit 1: 0, Bit 0: 1 = Inch only Bit 1: 1, Bit 0: 0 = Not used Bit 1: 1, Bit 0: 1 = Disabled	If "inch only" is selected on the machine uses inch-based resolutions for scanning, the printed copy may be slightly distorted at the other end if that machine uses mm-based resolutions. If the setting is "Inch-mm conversion available ", Inch-mm conversion become effective to the special senders. If the setting is "Disabled", the bit switch setting is used.
2-3	DIS/NSF detection method Bit 3: 0, Bit 2: 0 = First DIS or NSF Bit 3: 0, Bit 2: 1 = Second DIS or NSF Bit 3: 1, Bit 2: 0 = Not used Bit 3: 1, Bit 2: 1 = Disabled	(0, 1): Use this setting if echoes on the line are interfering with the set-up protocol at the start of transmission. The machine will then wait for the second DIS or NSF before sending DCS or NSS. If the setting is "Disabled", the bit switch setting is used.
4	V.8 protocol 0: Off 1: Disabled	If transmissions to a specific destination always end at a lower modem rate (14,400 bps or lower), disable V.8 protocol so as not to use V.34 protocol. 0: V.34 communication will not be possible. If the setting is "Disabled", the bit switch setting is used.
5	Compression modes available in transmit	This bit determines the capabilities that are informed to the other terminal during transmission.

	mode 0: MH only 1: Disabled	If the setting is "Disabled", the bit switch setting is used.
6-7	ECM during transmission Bit 7: 0, Bit 6: 0 = Off Bit 7: 0, Bit 6: 1 = On Bit 7: 1, Bit 6: 0 = Not used Bit 7: 1, Bit 6: 1 = Disabled	For example, if ECM is switched on but is not wanted when sending to a particular terminal, use the (0, 0) setting. Note • V.8/V.34 protocol and JBIG compression are automatically disabled if ECM is disabled. • If the setting is "Disabled", the bit switch setting is used.

Switch 04 - Not used (do not change the settings)
Switch 05 - Not used (do not change the settings)
Switch 06 - Not used (do not change the settings)
Switch 07 - Not used (do not change the settings)
Switch 08 - Not used (do not change the settings)
Switch 09 - Not used (do not change the settings)

E-mail Parameters

The initial settings of the following e-mail parameters are all "0" (all parameters disabled).

Switch 00		
No	**FUNCTION**	**COMMENTS**
0	MH Compression mode for e-mail attachments **0**: Off 1: On	Switches MH compression on and off for files attached to e-mails for sending.
1	MR Compression mode for e-mail attachments **0**: Off 1: On	Switches MR compression on and off for files attached to e-mails for sending.
2	MMR Compression mode for e-mail attachments **0**: Off 1: On	Switches MMR compression on and off for files attached to e-mails for sending.
3-6	**Not used**	Do not change these settings.
7	Designates the bits to reference for compression method of e-mail	The "0" selection (default) references the settings for Bits 00, 01, 02 above. The "1" selection ignores the selections of Bits

	attachments **0**: Registered (Bit 0 to 6) 1: No registration.	00, 01, 02.

Switch 01		
No	**FUNCTION**	**COMMENTS**
0	Original width of e-mail attachment: A4 **0**: Off 1: On	Sets the original width of the e-mail attachment as A4.
1	Original width of e-mail attachment: B4 **0**: Off 1: On	Sets the original width of the e-mail attachment as B4.
2	Original width of e-mail attachment: A3 **0**: Off 1: On	Sets the original width of the e-mail attachment as A3.
3-6	**Not used**	Do not change these settings.
7	Designates the bits to reference for original size of e-mail attachments **0**: Registered (Bit 0 to 6) 1: No registration.	The "0" selection (default) references the settings for Bits 00, 01, 02 above. The "1" selection ignores the selections of Bits 00, 01, 02.

Switch 02		
No	**FUNCTION**	**COMMENTS**
0	Line resolution of e-mail attachment: 200 x 100 **0**: Off 1: On	Sets the line resolution of the e-mail attachment as 200 x100.
1	Line resolution of e-mail attachment: 200 x 200 **0**: Off 1: On	Sets the line resolution of the e-mail attachment as 200 x 200.
2	Line resolution of e-mail attachment: 200 x 400 **0**: Off	Sets the line resolution of the e-mail attachment as 200 x 400.

	1: On	
3	Not used	Do not change these settings.
4	Line resolution of e-mail attachment: 400 x 400 **0**: Off 1: On	Sets the line resolution of the e-mail attachment as 400 x 400.
5-6	**Not used**	Do not change these settings.
7	Designates the bits to reference for original size of e-mail attachments **0**: Registered (Bit 0 to 6) 1: No registration.	The "0" selection (default) references the settings for Bits 00, 01, 02, 04 above. The "1" selection ignores the selections of Bits 00, 01, 02, 04.

Switch 03 - Not used (do not change the settings)

Switch 04		
No	**FUNCTION**	**COMMENTS**
0	Full mode address selection 0: Full mode address 1: No full mode (simple mode)	If the other ends have the addresses, which have the full mode function flag ("0"), this machine determines them as full mode standard machines. • This machine attaches the "demand of reception confirmation" to a message when transmitting. • This machine updates the reception capability to the address book when receiving.
1-7	**Not used**	Do not change these settings.

Switch 05		
No	**FUNCTION**	**COMMENTS**
0	Directr transmission selection to SMTP server 0: ON 1: OFF	Allows or does not allow the direct transmission to SMTP server.
1-7	Not used	Do not change these settings.

Switch 06 - Not used (do not change the settings)
Switch 07 - Not used (do not change the settings)
Switch 08 - Not used (do not change the settings)

Switch 09 - Not used (do not change the settings)

Service RAM Addresses

Service RAM Addresses

Important

- Do not change the settings that are marked as “Not used” or “Read only.”

680001 to 680004(H) - ROM version (Read only)

680001(H) - Revision number (BCD)

680002(H) - Year (BCD)

680003(H) - Month (BCD)

680004(H) - Day (BCD)

680006 to 680015(H) - Machine’s serial number (16 digits - ASCII)

680016(H) - Language code

0: Japanese, 1: UK English, 2: US English, 3: French, 4: German, 5: Spanish, 6: Italian, 7: Dutch, 8: Swedish, 9: Norwegian, 10: Danish, 11: Finnish, 12: Czech, 13: Hungarian, 14: Polish, 15: Portuguese, 16: Russian, 17: Traditional Chinese, 18: Simplified Chinese, 19: Korean

680018(H) - Total program checksum (low)

680019(H) - Total program checksum (high)

680020 to 68003F(H) - System bit switches

680050 to 68005F(H) - Printer bit switches

680060 to 68007F(H) - Communication bit switches

680080 to 68008F(H) - G3 bit switches

680090 to 68009F(H) - G3-2 bit switches: Not used

6800A0 to 6800AF(H) - G3-3 bit switches: Not used

6800D0(H) - User parameter switch 00 (SWUER_00): Not used

6800D1(H) - User parameter switch 01 (SWUSR_01): Not used

6800D2(H) - User parameter switch 02 (SWUSR_02)

Bit 0: Forwarding mark printing on forwarded messages 0: Disabled, 1: Enabled

Bit 1: Center mark printing on received copies

(This switch is not printed on the user parameter list.)

0: Disabled, 1: Enabled

Bit 2: Reception time printing

(This switch is not printed on the user parameter list.)

0: Disabled, 1: Enabled

Bit 3: TSI print on received messages 0: Disabled, 1: Enabled

Bit 4: Checkered mark printing

(This switch is not printed on the user parameter list.)

0: Disabled, 1: Enabled

Bit 5: Not used

Bit 6: Not used

Bit 7: Not used

6800D3(H) - User parameter switch 03 (SWUSR_03: Automatic report printout)

Bit 0: Transmission result report (memory transmissions) 0: Off, 1: On

Bit 1: Not used

Bit 2: Memory storage report 0: Off, 1: On

Bit 3: Polling reserve report (polling reception) 0: Off, 1: On

Bit 4: Polling result report (polling reception) 0: Off, 1: On

Bit 5: Transmission result report (immediate transmissions) 0: Off, 1: On

Bit 6: Not used

Bit 7: Journal 0: Off, 1: On

6800D4(H) - User parameter switch 04 (SWUSR_04: Automatic report printout)

Bit 0: Not used

Bit 1: Automatic communication failure report and transfer result report output 0: Off, 1: On

Bits 2 to 3: Not used

Bit 4: Indicates the parties 0: Not indicated, 1: Indicated

Bit 5: Include sender's name on reports 0: Off, 1: On

Bit 6: Not used

Bit 7: Inclusion of a sample image on reports 0: Off, 1: On

6800D5(H) - User parameter switch 05 (SWUSR_05)

Bit 0: Substitute reception when the base copier is in an SC condition

0: Enabled, 1: Disabled

Bits 1 and 2: Condition for substitute RX when the machine cannot print messages (Paper end, toner end, jam, and during night mode)

Bit 2: 0, Bit 1: 0 = The machine receives all the fax messages.

Bit 2: 0, Bit 1: 1 = The machine receives the fax messages with RTI or CSI.

Bit 2: 1, Bit 1: 0 = The machine receives the fax messages with the same ID code.

Bit 2: 1, Bit 1: 1 = The machine does not receive anything.

Bit 3: Not used

Bit 4: Not used

Bit 5: Just size printing 0: Off, 1: On

Bit 6: Not used

Bit 7: Add paper display when a cassette is empty 0: Off, 1: On

6800D6(H) - User parameter switch 06 (SWUSR_06)

Bit 0:

Bit 1: V8 protocol (G3-1: Super G3) 0: Off, 1: On

Bit 2: V8 protocol (G3-2: Super G3) 0: Off, 1: On

Bit 3: V8 protocol (G3-3: Super G3) 0: Off, 1: On

6800D7(H) - User parameter switch 07 (SWUSR_07)

Bit 0 Ringing 0: Off, 1: On

Bit1: Automatic answering message 0: Off, 1: On

Bit 2: Parallel memory transmission 0: Off, 1: On

Bits 3 and 4: Not used

Bit 5: Remote control 0: Off, 1: On

Bits 6 and 7: Not used

6800D8(H) - User parameter switch 08 (SWUSR_08)

Bits 0 and 1: Not used.

Bit 2: Authorized reception

0: Only faxes from senders whose RTIs/CSIs are specified for this feature are accepted.

1: Only faxes from senders whose RTIs/CSIs are not specified for this feature are accepted.

Bits 3 to 7: Not used.

6800D9(H) - User parameter switch 09 (SWUSR_09): Not used

6800DA(H) - User parameter switch 10 (SWUSR_0A)

Bits 0 to 2: Not used

Bit 3: Page reduction 0: Off, 1: On

Bits 4 and 5: Not used

Bit 6: Use both e-mail notification and printed reports to confirm the transmission results 0: Off, 1: On

Bit 7: Not used

6800DB(H) - User parameter switch 11 (SWUSR_0B)

Bits 0 and 1: Not used

Bit 2: White original detection 0: Off, 1: On (alarm and alert message on the LCD)

Bit 3: Receive rejection for 1300 Hz transmission 0: Off (receive), 1: On (not receive)

Bit 5: Not used

Bit 6: Printout of messages received while acting as a forwarding station 0: Off, 1: On

Bit 7: Not used

6800DC(H) - User parameter switch 12 (SWUSR_0C): Not used

6800DD(H) - User parameter switch 13 (SWUSR_0D): Not used

6800DE(H) - User parameter switch 14 (SWUSR_0E)

Bit 0: Message printout while the machine is in Night Printing mode 0: On, 1: Off

Bit 1: Maximum document length detection 0: Double letter, 1: Longer than double-letter (well log) – up to 1,200 mm

Bit 2: Not used

Bit 3: Fax mode settings, such as resolution, before a mode key (Copy/Fax/Printer/Scanner) is pressed 0: Not cleared, 1: Cleared

Bits 4 to 6: Not used

Bit 7: Not used

6800DF(H) - User parameter switch 15 (SWUSR_0F)

(This switch is not printed on the user parameter list.)

Bits 0, 1 and 2: Cassette for fax printout

Bit 2: 0, Bit 1: 0, Bit 0: 1 = 1st paper feed station

Bit 2: 0, Bit 1: 1, Bit 0: 0 = 2nd paper feed station

Bit 2: 0, Bit 1: 1, Bit 0: 1 = 3rd paper feed station

Bit 2: 1, Bit 1: 0, Bit 0: 0 = 4th paper feed station

Bit 2: 1, Bit 1: 0, Bit 0: 1 = LCT

Other settings Not used

Bits 3 and 4: Not used

Bit 5: Using the cassette specified by bits 0, 1 and 2 above only 0: On, 1: Off

Bits 6 and 7: Not used

6800E0(H) – User parameter switch 16 (SWUSR_10)

(This switch is not printed on the user parameter list.)

Bits 0 and 1: Not used

Bit 2: Paper size selection priority for an A4 size fax message when A4/LT size paper is not available. 0: A3 has priority, 1: B4 has priority

Bits 3 to 7: Not used

6800E1(H) – User parameter switch 17 (SWUSR_11)

Bit 0: Not used

Bit 1: Not used

Bit 2: Inclusion of the “Add” button when a sequence of Quick/Speed dials is selected for broadcasting 0: Not needed, 1: Needed

Bits 3 to 6: Not used

Bit 7: Press “Start” key without an original when using the on hook dial or the external telephone,

0: displays “Cannot detect original size”. 1: Receives fax messages.

6800E2(H) - User parameter switch 18 (SWUSR_12)

Bit 0: TTI date 0: Off, 1: On

Bit 1: TTI sender 0: Off, 1: On

Bit 2: TTI file number 0: Off, 1: On

Bit 3: TTI page number 0: Off, 1: On

Bits 4 to 6: Not used

Bit 7: Japan only

6800E3(H) - User parameter switch 19 (SWUSR_13)

Bit 0: Not used

Bit 1: Journal format

0: The Journal is separated into transmissions and receptions

1: The Journal is separated into G3-1, G3-2, and G3-3 communications

Bit 2: Not used

Bit 3: 90° image rotation during B5 portrait TX (This switch is not printed on the user parameter list.) 0: Off, 1: On

Bit 4: Reduction of sample images on reports to 50% in the main scan and sub-scan directions. (This switch is not

printed on the user parameter list.) 0: Technician adjustment (printer switch 0E bits 3 and 4), 1: 50% reduction

Bit 5: Use of A5 size paper for reports (This switch is not printed on the user parameter list.) 0: Off, 1: On

Bits 6 and 7: Not used

6800E4(H) - User parameter switch 20 (SWUSR_14)

Bit 0: Automatic printing of the LAN fax result report 0: Off, 1: On

Bit 1: Not used.

Bits 2 to 5: Store documents in memory, which could not be printed from PC fax (LAN fax) driver

Bit 5	Bit 4	Bit 3	Bit 2	Setting
0	0	0	0	0 min.
0	0	0	1	1 min.
↓	↓	↓	↓	↓
1	1	1	0	14 min.
1	1	1	1	15 min.

Bits 6 and 7: Not used.

6800E5(H) - User parameter switch 21 (SWUSR_15)

Bit 0: Print results of sending reception notice request message 0: Disabled (print only when error occurs), 1: Enabled

Bit 1: Respond to e-mail reception acknowledgment request 0: Disabled, 1: Enabled

Bit 2: Not used

Bit 3: File format for forwarded folders 0: TIFF, 1: PDF

Bit 4: Transmit Journal by E-mail 0: Disabled, 1: Enabled

Bit 5: Not used

Bit 6: Network error display 0: Displayed, 1: Not displayed

Bit 7: Transmit error mail notification 0: Enabled, 1: Disabled

6800E6(H) - User parameter switch 22 (SWUSR_16)

(This switch is not printed on the user parameter list.)

Bit 0: Dial tone detection (PSTN 1) 0: Disabled, 1: Enabled

Bits 1 to 7: Not used

6800E7(H) – User parameter switch 23 (SWUSR_17): Not used

6800E8(H) - User parameter switch 24 (SWUSR_18): Not used

6800E9(H) - User parameter switch 25 (SWUSR_19)

Bit 0: Not used

Bit 1: Reception mode switch timer 0: Off, 1: On (switching Fax or Fax/Tel)

Bit 2: Mode priority switch 0: Fax first, 1: Tel first

Bit 3: Dial in function (Japan Only)

Bit 4: **Do not Change this Bit.**

Bits 5 to 7: Not used

6800EA(H) and 6800EB(H) - User parameter switches 26 and 27 (SWUSR_1A and 1B): Not used

6800EC(H) - User parameter switch 28(SWUSR_1C): Not used

6800ED(H) - User parameter switch 29(SWUSR_1D): Not used

6800EE(H) and 6800EF(H) - User parameter switches 30 and 31 (SWUSR_1E and 1F): Not used

6800F0(H) - User parameter switch 32 (SWUSR_20)

Bit 0: Quotation priority for a destination when there is no destination of the specified type

0: Paper output priority = Priority order: 1. IP-fax destination, 2. Fax Number, 3. E-mail address, 4. Folder

1: Electric putout order = Priority order: 1. E-mail address, 2. Folder, 3. IP-fax destination, 4. Fax number

Bits 1 to 7: Not used

6800F1(H) - User parameter switch 33 (SWUSR_21): Not used

6800F2(H) - User parameter switch 34 (SWUSR_22)

Bit 0: Gatekeeper server used with IP-Fax 0: Disabled, 1: Enabled

Bit 1: SIP server used with IP-Fax 0: Disabled, 1: Enabled

Bits 2 to 7: Not used

6800F3(H) - User parameter switch 35 (SWUSR_23)

Redial interval when sending a backup file

6800F4(H) - User parameter switch 36 (SWUSR_24)

Maximum number of redials when sending a backup file

6800F5(H) - User parameter switch 37 (SWUSR_25)

Bit 0: Whether to stop sending a backup file if the destination folder becomes full while the machine is sending or waiting to send a fax or the backup file. 0: No, • 1: Yes

Bit 2 and 3: Backup file is printed along with the TX communication failure report when a backup file transmission failure occurs. 00: Do not print, 01: Print first page only, 10: Print whole file

Bit 4: Display the sender's information in the file name of documents that are forwarded to folder destinations. 0: Disabled, 1: Enabled

Bit 5: Limit the file names of documents that are forwarded to folder destinations to plain characters only. 0: Disabled, 1: Enabled

Bit 6: When using the remote fax function, the sub-machine beeps to let you know when it has printed a received document (If you specify "On", the machine will beep according to the setting of [Panel Key Sound] under [System Settings].) 0: On, 1: Off

Bit 7: Not used

6800F6(H) - User parameter switch 38 (SWUSR_26)

Maximum number of transmissions the machine attempts before determining that a fax cannot be forwarded from a sender (including special senders) to a folder destination

6800F7(H) - User parameter switch 39 (SWUSR_27)

Interval (in minutes) between resend attempts after failing to forward a fax from a sender (including special senders) to a folder destination

6800F8(H) - User parameter switch 40 (SWUSR_28)

Bit 0: When memory space is insufficient, the machine prints and then deletes the oldest faxes, creating memory space for storage of new faxes. 0: Disabled, 1: Enabled

Bit 1 to 7: Not used

6800FD(H) - User parameter switch 45 (SWUSR_2D)

Bit 0 and 1:

Bit 2: File format for files transmitted to e-mail addresses and folders registered as forwarding, destinations of backup file transmission, receivers for Personal Box, or end receivers for Transfer Box. 0: PDF 1: PDF/A

Bit 3:

Bit 4 to 7: Not used

680100 to 68010F(H) - G4 Parameter Switches – Not used

680110 to 68012F(H) - G4 Internal Switches – Not used

680130 to 68016F(H) - Service Switches

680170 to 68017F(H) - IFAX Switches

680180 to 68018F(H) - IP-FAX Switches

680190 to 6801A3(H) - PSTN-1 RTI (Max. 20 characters - ASCII) - See the following note.

6801A4 to 6801B7(H) - PSTN-2 RTI (Max. 20 characters - ASCII)

6801B8 to 6801CB(H) - PSTN-3 RTI (Max. 20 characters - ASCII)

6801CF to 68020E(H) - TTI 1 (Max. 64 characters - ASCII) - See the following note.

68020F to 68024E(H) - TTI 2

68024F to 68028E(H) - TTI 3

68028F to 6802CE(H) - TTI 4

6802CF to 68030E(H) - TTI 5

68030F to 68034E(H) - TTI 6

68034F to 68038E(H) - TTI 7

68038F to 6803CE(H) - TTI 8

6803CF to 68040E(H) - TTI 9

68040F to 68044E(H) - TTI 10

Note

- If the number of characters is less than the maximum (20 for RTI, 32 for TTI), add a stop code (00[H]) after the last character.

68044F(H)

Printing format for TTI 1

0: DOM (Japan), 1:EXP (Export)

680450(H)

Printing format for TTI 2

0: DOM, 1: EXP

680451(H)

Printing format for TTI 3

0: DOM, 1:EXP

680452(H)

Printing format for TTI 4

0: DOM, 1:EXP

680453(H)

Printing format for TTI 5

0: DOM, 1:EXP

680454(H)

Printing format for TTI 6

0: DOM, 1:EXP

680455(H)

Printing format for TTI 7

0: DOM, 1:EXP

680456(H)

Printing format for TTI 8

0: DOM, 1:EXP

680457(H)

Printing format for TTI 9

0: DOM, 1:EXP

680458(H)

Printing format for TTI 10

0: DOM, 1: EXP

680459 to 68046C(H) - PSTN-1 CSI (Max. 20 characters - ASCII)

68046D to 680480(H) - PSTN-2 CSI (Max.20 characters - ASCII)

680481 to 680494(H) - PSTN-3 CSI (Max.20 characters - ASCII)

680495(H) - Number of PSTN-1 CSI characters (Hex)

680496(H) - Number of PSTN-2 CSI characters (Hex)

680497(H) - Number of PSTN-3 CSI characters (Hex)

6804C6(H) - Memory Lock ID (BCD)

6804D2 to 6804D9(H) - Last power off time (Read only)

6804D2(H) - 01(H) - 24-hour clock, 00(H) - 12-hour clock (AM), 02(H) - 12-hour clock (PM)

6804D3(H) - Year (BCD)

6804D4(H) - Month (BCD)

6804D5(H) - Day (BCD)

6804D6 (H) – Hour

6804D7 (H) – Minute

6804D8(H) – Second

6804D8 (H) - 00: Monday, 01: Tuesday, 02: Wednesday, ///, 06: Sunday

6804E6(H) - Optional equipment (Read only – Do not change the settings)

Bit 0: Page Memory 0: Not installed, 1: Installed

Bit 1: SAF Memory (4M) 0: Not installed, 1: Installed

Bit 2: SAF Memory 0: Not installed, 1: Installed

Bits 3 to 7; Not used

6804E7(H) - Optional equipment (Read only – Do not change the settings)

Bits 0 to 3: Not used

Bit 4: G3-2 0: Not installed, 1: Installed

Bit 5: G3-3 0: Not installed, 1: Installed

Bit 6 and 7: Not used

6804EE(H) - Machine code (Check ram 3)

680500(H) - Start address of G3 table for G3-1

680600(H) - Start address of G3 table for G3-2

680700(H) - Start address of G3 table for G3-3

680800 to 68081F(H) - Service station's fax number (SP3-101)

680820 to 680829(H) - Own fax PABX extension number – Not used

68082A to 680833(H) - Own fax number (PSTN) – Not used

680834 to 680847(H) - Own fax number (ISDN G4) – Not used

680848 to 680853(H) - The first subscriber number (ISDN G3) – Not used

680854 to 68085F(H) - The second subscriber number (ISDN G3) – Not used

680860 to 68086B(H) - The first subscriber number (ISDN G4) – Not used

68086C to 680877(H) - The second subscriber number (ISDN G4) – Not used

6808A0 to 6808B7(H) - G4TID registered information (Max.24 characters - ASCII)

6808B8 to 6808CB(H) - ISDN CSI (Max.20 characters - ASCII)

6808CC(H) - Number of ISDN CSI characters (Hex)

6808D1 to 6808D4(H) - ISDN G3 sub address registered information

6808D5 to 6808D8(H) - G4 sub address registered information

6808DE to 6808E2 – Option G3 board (G3-2) ROM information (Read only)

6808DE(H) - Suffix (BCD)

6808DF(H) - Version (BCD)

6808E0(H) - Year (BCD)

6808E1(H) - Month (BCD)

6808E2(H) - Day (BCD)

6808E3 to 6808E7 – Option G3 board (G3-3) ROM information (Read only)

6808E3(H) - Suffix (BCD)

6808E4(H) - Version (BCD)

6808E5(H) - Year (BCD)

6808E6(H) - Month (BCD)

6808E7(H) - Day (BCD)

6808E8(H) - G3-1 Modem ROM version (Read only)

6808EA(H) - G3-2 Modem ROM version (Read only)

6808EC(H) - G3-3 Modem ROM version (Read only)

6808F8(H) - Number of multiple sets print (Read only)

68094E(H) - Time for economy transmission (Not used)

68094F(H) - Time for economy transmission (Not used)

68096A(H) - Transmission monitor volume 00 - 07(H)

68096B(H) - Reception monitor volume 00 - 07(H)

68096C(H) - On-hook monitor volume 00 - 07(H)

68096D(H) - Dialing monitor volume 00 - 07(H)

68096E(H) - Buzzer volume 00 - 07(H)

68096F(H) - Beeper volume 00 - 07(H)

680980(H) - Machine code (Check ram 4)

680982(H) - Machine serial number (ASCII)

687178 to 68717B(H) - Transmission counter (Max.24 characters - ASCII)

68717C to 68717F(H) - Reception counter (Max.24 characters - ASCII)

6871E8 to 6871EB(H) - Mail transmission counter (Max.24 characters - ASCII)

6871EC to 6871EF(H) - Mai reception counter (Max.24 characters - ASCII)

6A6DEE(H) to 6A70ED(H) - SIP server address (Read only)

6A6DEE(H) - Proxy server - Main (Max. 128 characters - ASCII)

6A6E6E(H) - Proxy server - Sub (Max. 128 characters - ASCII)

6A6EEE(H) - Redirect server - Main (Max. 128 characters - ASCII)

6A6F6E(H) - Redirect server - Sub (Max. 128 characters - ASCII)

6A6FEE(H) - Registrar server - Main (Max. 128 characters - ASCII)

6A706E(H) - Registrar server - Sub (Max. 128 characters - ASCII)

6A70EE(H) - Gatekeeper server address - Main (Max. 128 characters - ASCII)

6A716E(H) - Gatekeeper server address - Sub (Max. 128 characters - ASCII)

6A71EE(H) - Alias Number (Max. 128 characters - ASCII)

6A726E(H) - SIP user name (Max. 128 characters - ASCII)

6A72EE(H) - **SIP digest authentication password** (Max. 128 characters - ASCII)

6A736E(H) - Gateway address information (Max. 7100 characters - ASCII)

6A8F2A(H) - NGN initial setting method 0: Simple, 1: Manual

6A8F2B(H) - SIP digest authentication user name (Max. 128 characters - ASCII)

6A8FAB(H) - NGN-SIP domain name (Max. 64 characters - ASCII)

6A8FEB(H) - NGN-home gateway address (Max. 128 characters - ASCII)

6A906C(H) - Stand-by port number for H.323 connection

6A906E(H) - Stand-by port number for SIP connection

6A9070(H) - RAS port number

6A9072(H) - Gatekeeper port number

6A9074(H) - Port number of data waiting for T.38

6A9076(H) - Port number of SIP server

6A9078(H) - Priority for SIP and H.323 0: H.323, 1: SIP

6A9079(H) - SIP function 0: Disabled, 1: Enabled

6A907A(H) - H.323 function 0: Disabled, 1: Enabled

6A907B(H) - SIP digest authentication function 0: Disabled, 1: Enabled

6B3AE4(H) - 6B3B04 (H) - Dial tone detection parameter (Max. 11 x 3 lines)

This initializes following order. [0x04, 0x40, 0x03, 0x60, 0x64, 0xf4, 0x01,0x64, 0x04, 0xc8, 0x00]

6B3AE4(H) – Dial tone detection frequency – Upper limit (High)

Defaults: NA: 06, EU: 06, ASIA: 06

6B3AE5(H) – Dial tone detection frequency – Upper Limit (Low)

Defaults: NA: 50, EU: 50, ASIA: 50

6B3AE6(H) – Dial tone detection frequency – Lower Limit (High)

Defaults: NA: 03, EU: 02, ASIA: 02

6B3AE7(H) – Dial tone detection frequency – Lower Limit (Low)

Defaults: NA: 60, EU: 90, ASIA: 90

6B3AE8(H) –Dial tone detection waiting time (20 ms)

Defaults: NA: 64, EU 64, ASIA: 64

6B3AE9 to 6B3AEA – Dial tone detection monitoring time (20 ms)

Defaults

Area	6B35A9	6B35AA
NA	F4	01
EU	F4	01
ASIA	F4	01

6B3AEB(H) – Dial tone detect judge time (20 ms)

Defaults: NA: 64, EU: 1B, ASIA: 32

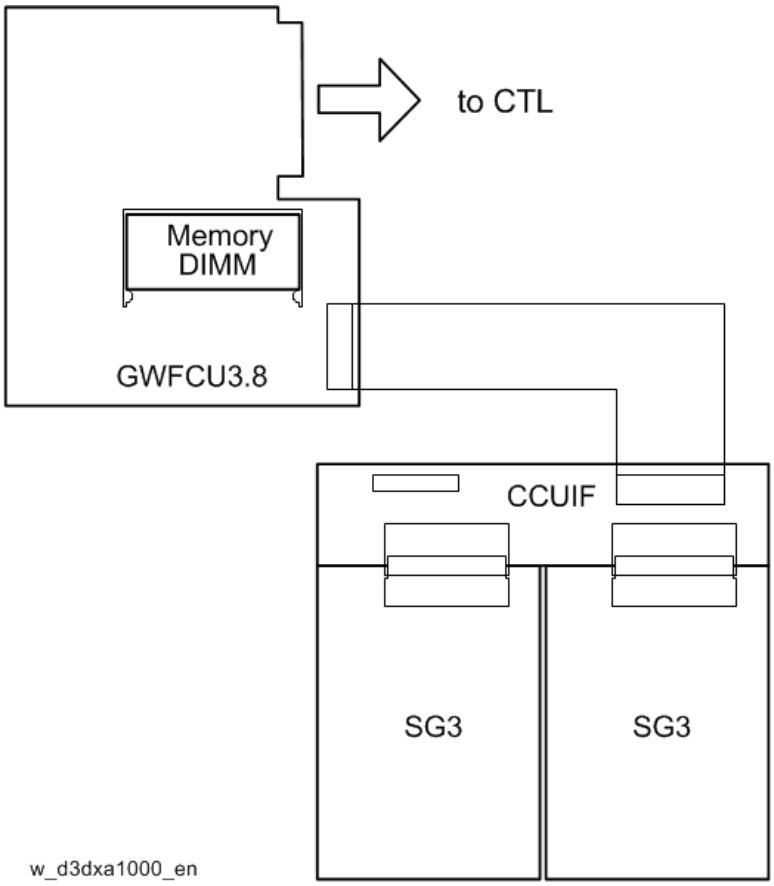
6B3AEC(H) – Dial tone disconnect permission time (20 ms)

Defaults: NA: 11, EU: 0F, ASIA: 11

5. Detailed Section Descriptions

Overview

Overview



Together with the controller board, the FCU controls all the fax communications and fax features. The FCU also contains the ROM, SRAM and NCU circuits.

Fax Options

- Extra G3 Interface option

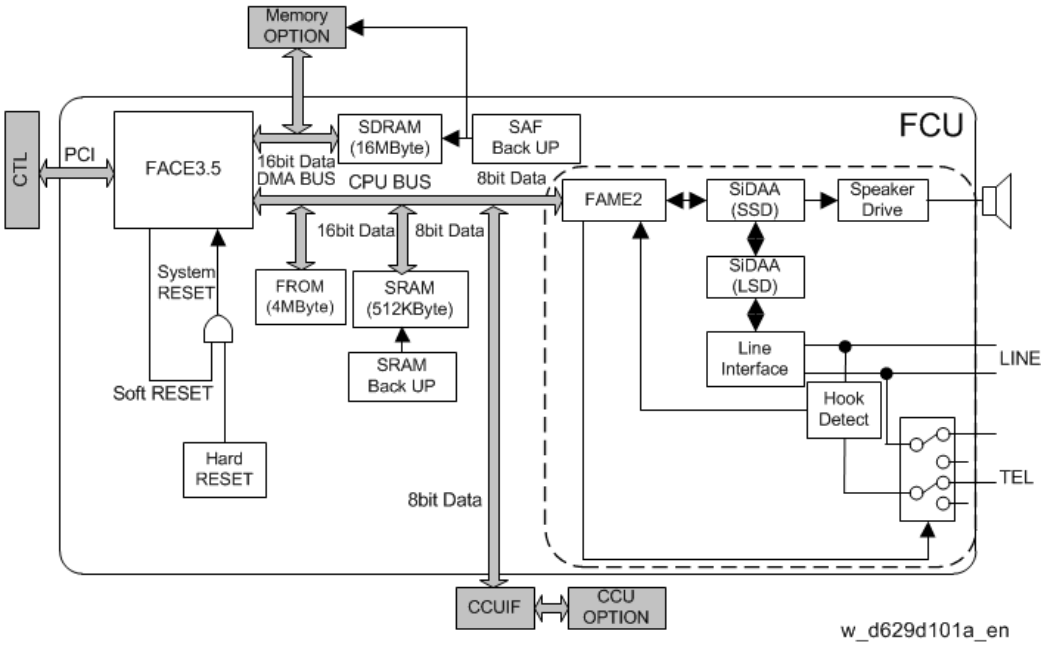
This provides one more analog line interface. This allows full dual access. Two extra G3 interface options can be installed.

- Memory Expansion

This expands the SAF memory and the page memory (used for image rotation); without this expansion, the page memory is not big enough for image rotation at 400 dpi, so transmission at 400 dpi is not possible.

Boards

FCU



The FCU (Facsimile Control Unit) controls fax communications, the video interface to the base copier's engine, and all the fax options.

FACE3.5 (Fax Application Control Engine)

- CPU
- Data compression and reconstruction (DCR)
- DMA control
- Clock generation
- DRAM backup control

Modem (FAME2)

- V.34, V33, V17, V.29, V.27ter, V.21, and V.8

DRAM

- The 16 MB of DRAM is shared as follows.
  - SAF memory: 4MB
  - Working memory: 4MB
  - Page memory: 8MB
  - The SAF memory is backed up by a rechargeable battery.

ROM

- 4MB flash ROMs for system software storage

SRAM

- The 512 KB SRAM for system and user parameter storage is backed up by a lithium battery.

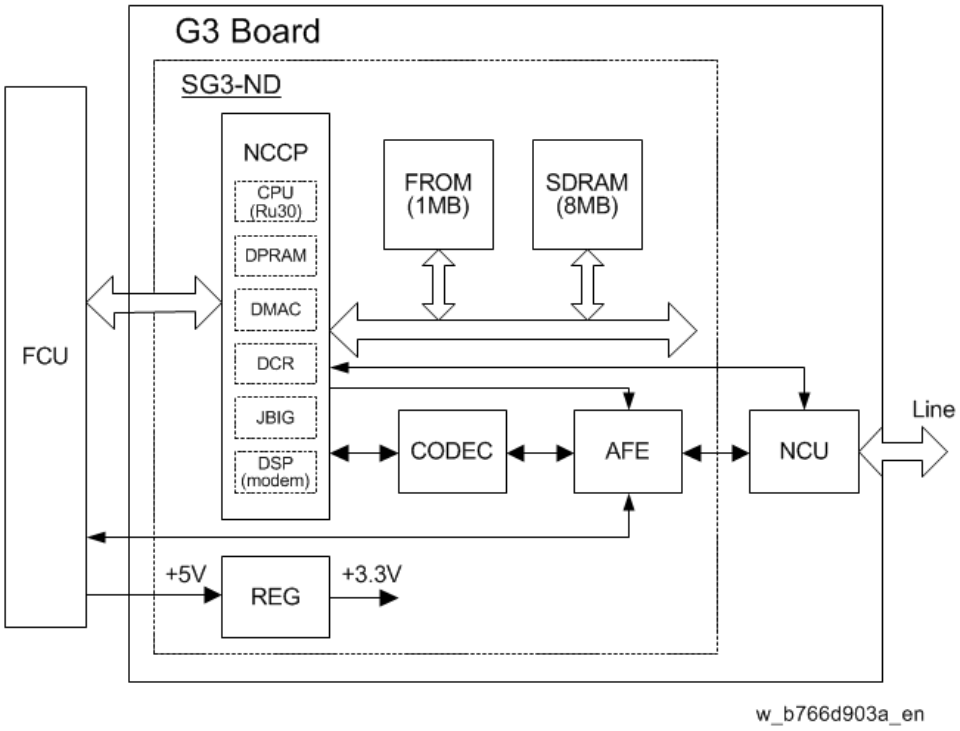
Memory Back-up

- A rechargeable battery backs up the SAF memory (DRAM) for 12 hours.
- A lithium battery backs up the system parameters and programmed items in the SRAM, in case the base copier's main switch is turned off.

Switches

Item	Description
SW1	Switches the SRAM backup battery on/off.

SG3 Board



The SG3 board allows up to three simultaneous communications when used in combination with the FCU and optional G3 boards. The NCU is on the same board as the common SG-3 board. This makes the total board structure smaller. But, the specifications of the SG3 board do not change.

NCCP (New Communication Control Processor)

- Controls the SG3 board.
- CPU (RU30)
- DPRAM (Dual Port RAM): Handshaking with the FCU is done through this block.
- DMA controller
- JBIG
- DSP V34 modem (RL5T892): Includes the DTMF Receiver function
- DCR for MH, MR, MMR, and JBIG compression and decompression

FROM

- 1Mbyte flash ROM for SG3 software storage and modem software storage

SDRAM

- 4Mbyte DRAM shared between ECM buffer, line buffer, and working memory

AFE (Analog Front End)

- Analog processing

CODEC (COder-DECoder)

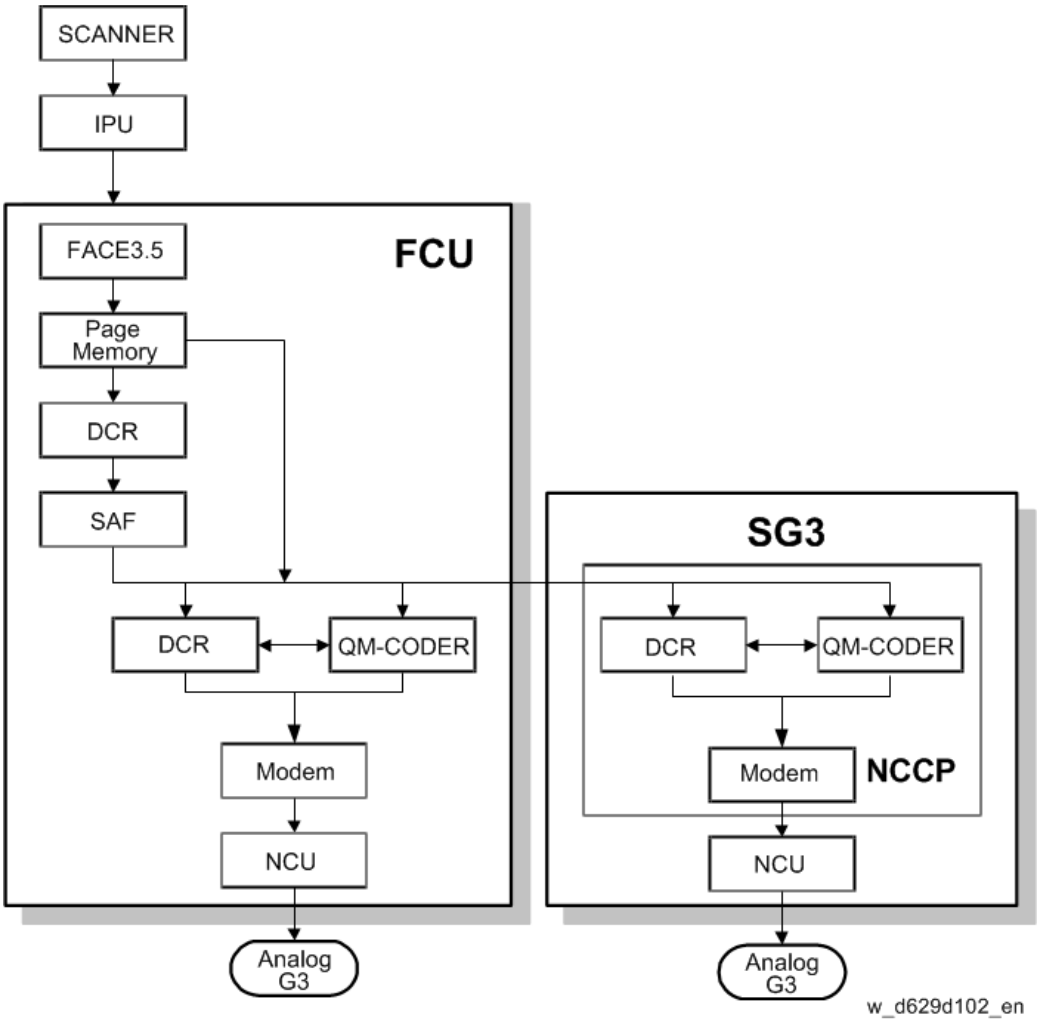
- A/D & D/A conversions for modem

REG

- Generates +3.3 V from the +5V from the FCU

Video Data Path

Transmission



Memory Transmission and Parallel Memory Transmission

The base copier's scanner scans the original at the selected resolution in inch format. The IPU processes the data and transfers it to the FCU.

Note

- When scanning a fax original, the IPU uses the MTF, independent dot erase and thresholding parameter settings programmed in the fax unit's scanner bit switches, not the copier's SP modes.

Then, the FCU converts the data to mm format, and compresses the data in MMR or raw format to store it in the SAF memory. If image rotation will be done, the image is rotated in page memory before compression.

At the time of transmission, the FCU decompresses the stored data, then re-compresses and/or reduces the data if necessary for transmission. The NCU transmits the data to the line.

Immediate Transmission

The base copier's scanner scans the original at the resolution agreed with the receiving terminal. The IPU video processes the data and transfers it to the FCU.

Note

- When scanning a fax original, the IPU uses the MTF, independent dot erase and thresholding parameter settings programmed in the fax unit's scanner bit switches, not the copier's SP modes.

Then the FCU stores the data in page memory, and compresses the data for transmission. The NCU transmits the data to the line.

JBIG Transmission

Memory transmission

If the receiver has JBIG compression, the data goes from the DCR to the QM-Coder. Then the NCU transmits the data to the line. When an optional G3 unit (SG3) is installed and PSTN2 is selected as the line type, JBIG compression is available, but only for the PSTN-2 line.

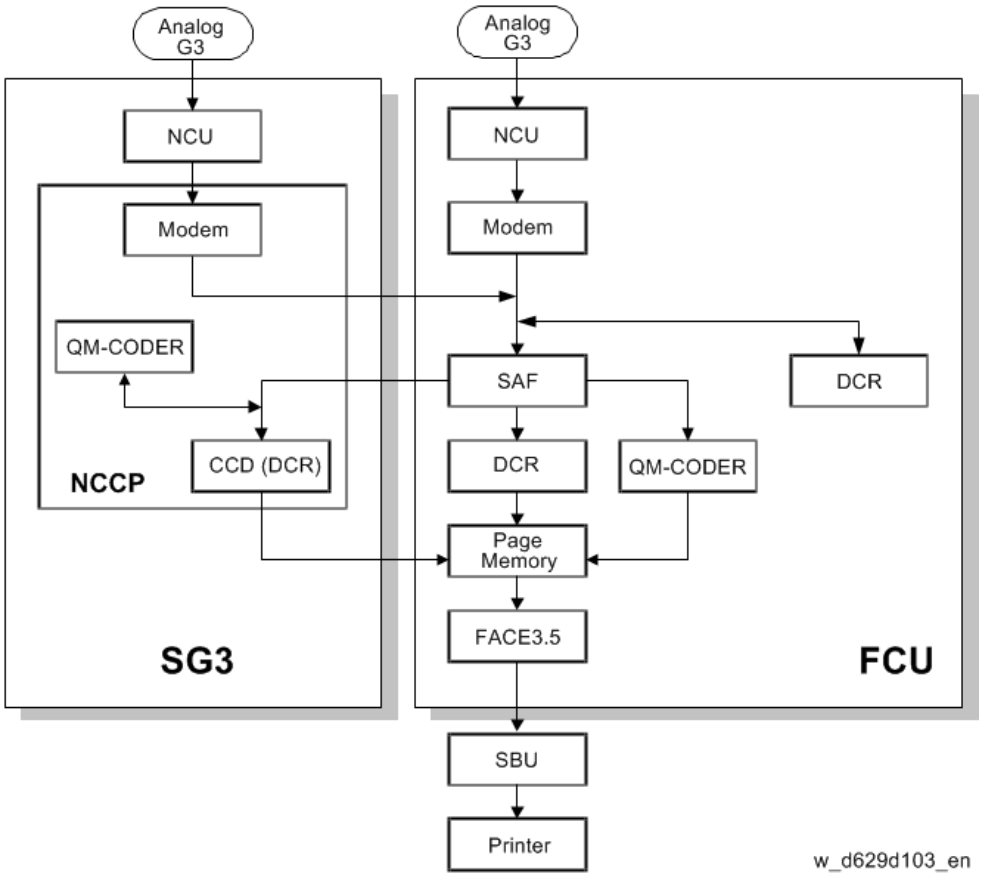
Immediate transmission

If the receiver has JBIG compression, the data goes from the page memory to the QM-Coder. Then the NCU transmits the data to the line. When an optional G3 unit (SG3) is installed and PSTN2 is selected as the line type, JBIG compression is available, but only for the PSTN-2 line.

Adjustments

- Priority for the line used for G3 transmissions (PSTN 1/PSTN 2 or 3): System switch 16 bit 1

Reception



First, the FCU stores the incoming data from either an analog line to the SAF memory. (The data goes to the FACE3 at the same time, and is checked for error lines/frames.)
The FCU then decompresses the data and transfers it to page memory. If image rotation will be done, the image is rotated in the page memory. The data is transferred to the IPU.
If the optional G3 unit is installed, the line that the message comes in on depends on the telephone number dialed by the other party (the optional G3 unit has a different telephone number from the main fax board).

JBIG Reception

When data compressed with JBIG comes in on PSTN-1 (the standard analog line), the data is sent to the QM-CODER for decompression. Then the data is stored in the page memory, and transferred to the IPU.
When data compressed with JBIG comes in on PSTN-2 (optional extra analog line), the data is sent to the QM-CODER on the SG3 board for decompression.

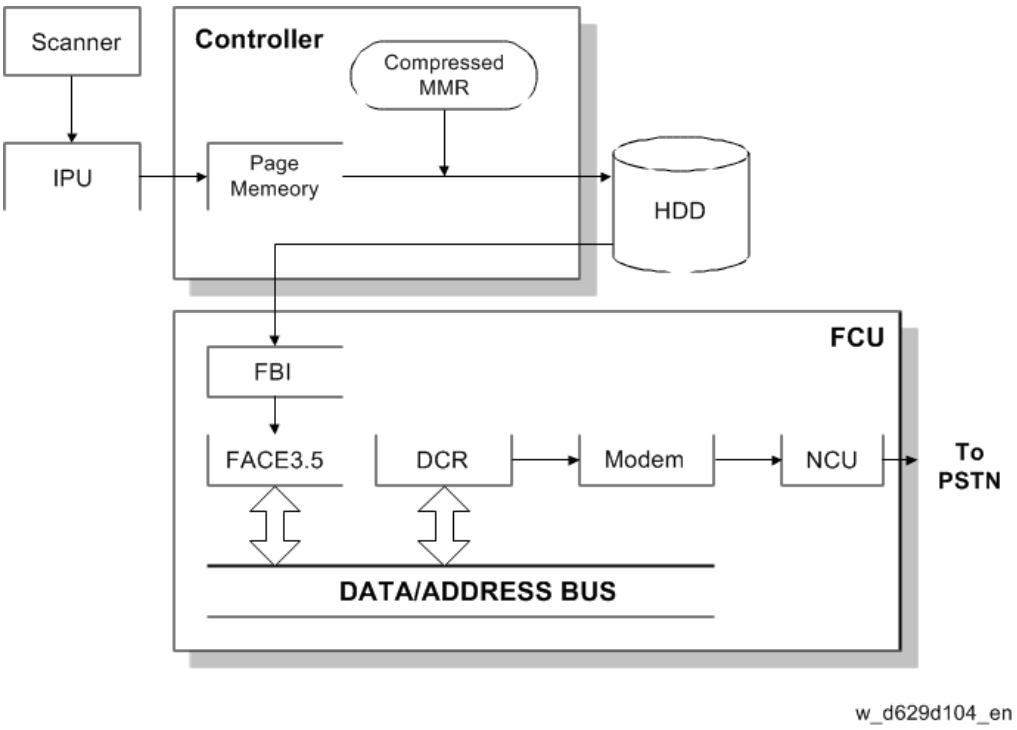
Fax Communication Features

Multi-port

When the optional extra G3 Interface Unit is installed, communication can take place at the same time through the two or three lines at once.

Option	Available Line Type	Available protocol Combinations
Standard only	PSTN	G3
Extra G3 Interface Unit (single)	PSTN + PSTN	G3 + G3
Extra G3 Interface Unit (double)	PSTN + PSTN +PSTN	G3 + G3 +G3

Document Server



The base copier's scanner scans the original at the selected resolution. The IPU video processes the data and transfers it to the controller board.

Then the controller stores the data in the page memory for the copier function, and compresses the data in MMR (by software) to store it in the HDD. If image rotation will be done, the image is rotated in the page memory before compression.

For transmission, the stored image data is transferred to the FCU. The FCU decompresses the image data, then recompresses and/or reduces the data if necessary for transmission. The NCU transmits the data to the line.

The documents can be stored in the HDD (Document Server) from the fax application. The stored documents in the document sever can be used for the fax transmission in many times. More than one document and the scanned document can be combined into one file and then the file can be transmitted.

- When using the document server, the SAF memory is not used.
- The document is compressed with MMR and stored.
- Up to 9,000 pages can be stored (1 file: Up to 1,000 pages) from the fax application.
- Only stored documents from the fax application can be transmitted.
- Scanned documents are given a name automatically, such as "FAX001". But it is possible to change the file name, user name and password.
- Up to 30 files can be selected at once.

Note

- The compression method of the fax application is different from the copy application. The storing time is longer than the copier storing.
- When selecting "Print 1st page", the stored document will be reduced to A4 size.

Internet Mail Communication

Mail Transmission

T.37 simple and full modes

This machine supports T.37 full mode. (ITU-T Recommendation, RFC2532). The difference between T.37 simple mode and full mode is as follows.

Function	T.37 Simple Mode	T.37 Full Mode
Resolution	200 x 100 200 x 200	200 x100 200 x 200 200 x 400 400 x 400 (if available)
RX Paper Width	A4	A4, B4, A3
RX Data Compression Method	MH	MH (default), MR, MMR,
Signals	Image data transmission only	Image data transmission, exchange of capability information between the two terminals, and acknowledgement of receipt of fax messages

Data Formats

The scanned data is converted into a TIFF-F formatted file.

The fields of the e-mail and their contents are as follows:

Field	Content
From	Mail address of the sender
Reply To	Destination requested for reply
To	Mail address of the destination
Bcc	Backup mail address

Field	Content
Subject	From CSI or RTI (Fax Message No. xxxx)
Content Type	Multipart/mixed Attached files: image/tiff
Content Transfer Encoding	Base 64, 7-bit, 8-bit, Quoted Printable
Message Body	MIME-converted TIFF-F (MIME standards specify how files are attached to e-mail messages)

Direct SMTP Transmission

Internet Fax documents can be sent directly to their destinations without going through the SMTP server. (Internet Faxes normally transmit via the SMTP server.)

For example:

e-mail address:	gts@ricoh.co.jp
SMTP server address:	gts.abcd.com

In this case, this feature destination e-mail address (gts@ricoh.co.jp) is read as the SMTP server address "gts.abcd.com", and the transmissions bypass the SMTP server. This leads to decrease the server load and to reduce the time lag during transferring the mail.

- Requirements for destination server:
  - Supports with Internet FAX (as a destination of Internet FAX)
  - Can receive mails (as a destination of mail)
  - Is installed in the same LAN as this machine
  - Supports with the SMTP mail reception, and the reception protocol is set to SMTP

Note

- Set the port number for [SMTP server] to “25” to enable this feature.
- If the sender server sends an Internet FAX or a mail using this feature, the SMTP authentication is disabled even if the server sets it.
- Using this feature, error notification mail will not be sent even if the mail is not properly received.
- Also, error mail will not be sent even if the mail is not sent properly.
- This feature refers to A records (not supported with MX records).

Selectable Options

These options are available for selection:

- With the default settings, the scan resolution can be either standard or detail. Inch-mm conversion before TX depends on IFAX SW01 Bit 7. Detail resolution will be used if Super Fine resolution is selected, unless Fine resolution is enabled with IFAX SW01.
- The requirements for originals (document size, scan width, and memory capacity) are the same as for G3 fax memory TX.
- The default compression is TIFF-F format.

- IFAX SW00: Acceptable paper widths for sending
- IFAX SW09: Maximum number of attempts to the same destination

Secure Internet Transmission

- SMTP Authentication:
  User Tools> System Settings> File Transfer> SMTP Authentication
- POP Before SMTP:
  User Tools> System Settings> File Transfer> POP Before SMTP

Mail Reception

Three Types

This machine supports three types of e-mail reception:

- POP3 (Post Office Protocol Ver. 3.)
- IMAP4 (Internet Messaging Access Protocol)
- SMTP (Simple Mail Transfer Protocol)

Note

- For details: Core Technology Manual – Facsimile Processes – Faxing from a PC – Internet/LAN Fax Boards – Mail Reception

POP3/IMAP4 Mail Reception Procedure

The machine automatically picks up e-mail from the server at an interval which is adjustable in the range 2 to 1440 min. in 1-minute steps:

- User Tools> System Settings> File Transfer> E-mail Reception Interval

SMTP Reception

1. The IFAX must be registered as an SMTP server in the MX record of the DNS server, and the address of the received mail must specify the IFAX.
2. To enable SMTP reception: User Tools> System Settings> File Transfer> Reception Protocol
   - Even if the MX record on the DNS server includes the IFAX, mail cannot be received with SMTP until SMTP reception is enabled:
   - However, if SMTP reception is selected and the machine is not registered in the MX record of the DNS server, then either IMAP4 or POP3 is used, depending on the setting: User Tools> System Settings> File Transfer> Reception Protocol

Note

- An error will be issued and error mail will be sent to the mail source when the reception protocol is not set to SMTP even If you configure to enable SMTP reception in the DNS server.
- If the received mail contains error, the reception operation is stopped, the mail is discarded and error report is output. Error mail is also sent to the mail source.
- When a mail is received from SMTP server during sending a mail in the machine, the SMTP server will give a “Busy” response. The SMTP server will usually try to send the mail again later until the time-out

is reached.

- This feature cannot be used with the POP server.

Mail Delivery Conditions: Transferring Mail Received With SMTP

1. The machine must be set up for SMTP mail delivery:
   - User Tools> Facsimile Features> Reception Settings> SMTP RX File Delivery Settings
2. If the user wishes to limit this feature so that the machine will only deliver mail from designated senders, the machine's "Auth. E-mail RX" feature must be set (User Tools> Facsimile Features> Reception Settings> SMTP RX File Delivery Settings).
3. If the "SMTP RX File Delivery Setting" is set to “Off” to prohibit SMTP receiving, and if there is mail designated for delivery, then the machine responds with an error. (User Tools> Facsimile Features> Reception Settings> SMTP RX File Delivery Settings)
4. If the quick dial, speed dial, or group dial entry is incorrect, the mail transmission is lost, and the IFAX issues an error to the SMTP server and outputs an error report.

Auth. E-mail RX

In order to limit access to mail delivery with IFAX, the addresses of senders must be limited using the Access Limit Entry. Only one entry can be registered.

1. Access Limit Entry

   For example, to limit access to @IFAX.ricoh.co.jp:

gts@IFAX.ricoh.co.jp	Matches and is delivered.
gts@IFAX.abcde.co.jp	Does not match and is not delivered.
IFAX@ricoh.co.jp	Does not match and is not delivered.

2. Conditions
   - The length of the Access Limit Entry is limited to 127 characters.
   - If the Access Limit Entry address and the mail address of the incoming mail do not match, the incoming mail is discarded and not delivered, and the SMTP server responds with an error. However, in this case an error report is not output.
   - If the Access Limit Entry address is not registered, and if the incoming mail specifies a delivery destination, then the mail is delivered unconditionally.

Handling Mail Reception Errors

Abnormal files

When an error of this type occurs, the machine stops receiving and commands the server to erase the message. Then the machine prints an error report and sends information about the error by e-mail to the sender address (specified in the "From" or "Reply-to" field of the message). If there is an incomplete received message in the machine memory, it will be erased.

The machine prints an error message when it fails to send the receive error notification after a certain number of

attempts.

The following types of files are judged to be abnormal if one or more of the following are detected:

1. Unsupported MIME headers.

   Supported types of MIME header

Header	Supported Types
Content-Type	Multipart/mixed, text/plain, message/rfc822 Image/tiff
Charset	US-ASCII, ISO 8859 X. Other types cannot be handled, and some garbage may appear in the data.
Content-Transfer-Encoding	Base 64, 7-bit, 8-bit, Quoted Printable

2. MIME decoding errors
3. File format not recognized as TIFF-F format
4. Resolution, document size, or compression type cannot be accepted

Remaining SAF capacity error

The machine calls the server but does not receive e-mail if the remaining SAF capacity is less than a certain value (the value depends on IFAX Switch 08. The e-mail will be received when the SAF capacity increases (for example, after substitute reception files have been printed). The error handling method for this type of error is the same as for "Abnormal files".

If the capacity of the SAF memory drops to zero during reception, the machine operates in the same way as when receiving an abnormal file (refer to "Abnormal files" above).

Secure Internet Reception

To enable password encryption and higher level security: User Tools> System Settings> File Transfer> POP3/IMAP4 Settings> Encryption (set to "On")

Transfer Request: Request By Mail

For details: Core Technology Manual – Facsimile Processes – Faxing from a PC – Internet/LAN Fax Boards – Transfer Request

The fields of the e-mail and their contents are as follows:

Field	Content
From	E-mail address of the requesting terminal
To	Destination address (Transfer Station address)
Bcc	Backup mail address
Subject	From TSI (Fax Message No. xxxx)
Content-Type	Multipart/mixed Text/Plain (for a text part), image/tiff (for attached files)
Content-Transfer-Encoding	Base 64, 7-Bit, 8-bit, Quoted Printable
Mail body (text part)	RELAY-ID-: xxxx (xxxx: 4 digits for an ID code)

Field	Content
	RELAY: #01#*X#**01….
Message body	MIME-converted TIFF-F.

E-Mail Options (Sub TX Mode)

The following features are available as options for mail sending: entering a subject, designating the level of importance, confirming reception of the mail.

Subject and Level of Importance

You can enter a subject message with: TX Mode> Subject

The Subject entry for the mail being sent is limited to 128 characters. The subject can also be prefixed with a "Confidential", "Urgent", "Please phone" or "Copy to corres. Section" notation.

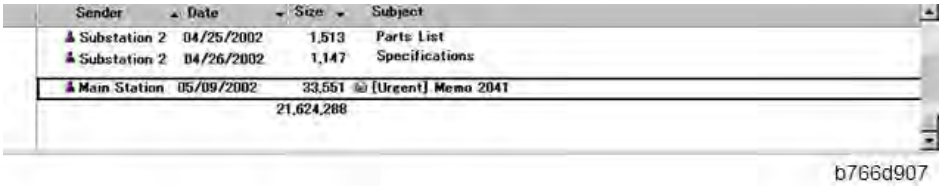
- How the Subject Differs According to Mail Type -

Mail Type	Item 1	Item 2		Item 3
Subject Entry	---	Entry Condition		Fax Message No. + File No.
No Subject Entry		1. "CSI" ("RTI")		
		2. "RTI"	CSI not registered	
		3. "CSI"	RTI not registered	
		4. None	CSI, RTI not registered	
Confirmation of Reception	From	1. "CSI" ("RTI")		Normal: Return Receipt (dispatched). You can select "displayed" with IFAX SW02 Bits 2 and 3.
		2. "RTI"	CSI not registered	
		3. "CSI"	RTI not registered	Error: Return Receipt (processed/error)
		4. None	CSI, RTI not registered	
Mail delivery, memory transfer, SMTP receiving and delivery	From	RTI or CSI of the station designated for delivery	Mail delivery	Fax Message No. + File Number
		RTI or CSI of sender	Mail sending from G3 memory	
		Mail address of sender	Memory sending	
		Mail address of sender	SMTP receiving and delivery (Off Ramp	

Mail Type	Item 1	Item 2		Item 3
			Gateway)	
Mail error notification	---	Error Message No. xxxx From CSI (RTI)		

Items 1, 2, and 3 in the table above are in the Subject.

- Subjects Displayed on the PC -



E-mail Messages

After entering the subject, you can enter a message with: TX Mode> Text

An e-mail message (up to 5 lines) can be pre-registered with: User Tools> System Settings> File Transfer> Program/Change/Delete E-mail Message

- Limitations on Entries -

Item	Maximum
Number of Lines	5 lines
Line Length	80 characters
Name Length	20 characters

Message Disposition Notification (MDN)

For details: Core Technology Manual – Facsimile Processes – Faxing from a PC – Internet/LAN Fax Boards – E-mail Options

The network system administrator can confirm whether a sent mail has been received correctly or not. This confirmation is done in four steps.

1. Send request for confirmation of mail reception. To enable or disable this request (known as MDN): TX Mode> Reception Notice
2. Mail reception (receive confirmation request)
3. Send confirmation of mail reception
4. Receive confirmation of mail reception

The other party's machine will not respond to the request unless the two conditions below are met:

- The other party's machine must be set up to respond to the confirmation request.
- The other party's machine must support MDN (Message Disposition Notification).

- Setting up the Receiving Party -

The receiving party will respond to the confirmation request if:

1. The "Disposition Notification To" field is in the received mail header (automatically inserted in the 4th line in the upper table on the previous page, if MDN is enabled), and
2. Sending the disposition notification must be enabled (User Parameter Setting SW21 (15 [H]) Bit 1 for this

model). The content of the response is as follows:

Normal reception:	"Return Receipt (dispatched)" in the Subject line
IFAX SW02 (Bit 2, 3)	"Return Receipt (displayed)" in the Subject line
Error:	"Return Receipt (processed/error)" in the Subject line

Handling Reports

- Sending a Request for a Return Receipt by Mail -

After the mail sender transmits a request for a return receipt, the mail sender's journal is annotated with two hyphens (--) in the Result column and a "Q" in the Mode column.

- Mail Receipt (Request for Receipt Confirmation) and Sending Mail Receipt Response -

After the mail receiver sends a response to the request for a return receipt, the mail receiver's journal is annotated with two hyphens (--) in the Result column and an "A" in the Mode column.

- Receiving the Return Receipt Mail -

- After the mail sender receives a return receipt, the information in the mail sender's journal about the receipt request is replaced, i.e. the journal is annotated with "OK" in the Result column.
- When the return receipt reports an error, the journal is annotated with an "E" in the Result column.
- The arrival of the return receipt is not recorded in the journal as a separate communication. Its arrival is only reported by the presence of "OK" or "E" in the Result column.
- If the mail address used by the sender specifies a mailing list (i.e., a Group destination; the machine sends the mail to more than one location. See "How to set up Mail Delivery"), the Result column of the Journal is updated every time a return receipt is received. For example, if the mailing list was to 5 destinations, the Result column indicates the result of the communication with the 5th destination only. The results of the communications to the first 4 destinations are not shown.

  Exceptions:

  If one of the communications had an error, the Result column will indicate E, even if subsequent communications were OK.

  If two of the communications had an error, the Journal will indicate the destination for the first error only.

- Report Sample -

```
 DATE     TIME   ADDRESS                      MODE      TIME      PAGE   RESULT
-------------------------------------------------------------------------------
 MAY. 5  10:15   fuser_01@dom1g. ricoh. co.  Mail SM  0'09"       2       --
         10:16   fuser_01@dom1g. ricoh. co.  Mail SMQ 0'05"       1       --
         10:17   s_tadashi@dom1g. ricoh. co. Mail SMQ 0'09"       2       OK
         10:19   m_masataka@dom1g. ricoh. co. Mail SMA 0'05"      1       --
```

b771d506

IP-Fax

What is IP-FAX?

For details: Core Technology Manual – Facsimile Processes – Faxing from a PC – Internet/LAN Fax Boards – IP-FAX

T.38 Packet Format

TCP is selected by default for this machine, but you can change this to UDP with IPFAX SW 00 Bit 1.

UDP Related Switches

<table>
<tr><th colspan="7">IP-Fax Switch 01</th></tr>
<tr><th>No.</th><th colspan="5">Function</th><th>Comments</th></tr>
<tr><td rowspan="7">0-3</td><td colspan="5">Select IP FAX Delay Level</td><td rowspan="7">Raise the level by selecting a higher setting if too many transmission errors are occurring on the network.
If TCP/UDP is enabled on the network, raise this setting on the T.30 machine. Increasing the delay time allows the recovery of more lost packets.
If only UDP is enabled, increase the number of redundant packets.
Level 1~2: 3 Redundant packets
Level 3: 4 Redundant packets</td></tr>
<tr><td>Bit 3</td><td>Bit 2</td><td>Bit 1</td><td>Bit 0</td><td>Level</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td></tr>
<tr><td>0</td><td>0</td><td>1</td><td>0</td><td>2</td></tr>
<tr><td>0</td><td>0</td><td>1</td><td>1</td><td>3</td></tr>
</table>

Settings

User parameter switch 34 (22[H]), bit 0

IP-Fax Gate Keeper usage, 0: No, 1: Yes

IP Fax Switches: Various IP-FAX settings (see the bit switch table)

6. Specifications

General Specifications

FCU

Type:	Desktop type transceiver
Circuit:	PSTN (max. 3ch.) PABX
Connection:	Direct couple
Original Size:	Book (Face down) Maximum Length: 432 mm [17 ins] Maximum Width: 297 mm [11.7 ins] ARDF (Face up) (Single-sided document) Length: 128 - 1200 mm [5.0 - 47.2 ins] Width: 105 - 297 mm [4.1 - 11.7 inch] (Double-sided document) Length: 128 - 432 mm [5.0 - 17 inch] Width: 105 - 297 mm [4.1 - 11.7 inch]
Scanning Method:	Flat bed, with CCD
Resolution:	G3 8 x 3.85 lines/mm (Standard) 8 x 7.7 lines/mm (Detail) 8 x 15.4 line/mm (Fine) See Note1 16 x15.4 line/mm (Super Fine) See Note 1 200 x 100 dpi (Standard) 200 x 200 dpi (Detail) 400 x 400 dpi (Super Fine) See Note 1 Note • Optional Expansion Memory required
Transmission Time:	G3: 3 s at 28800 bps; Measured with G3 ECM using memory for an ITU-T #1 test document (Slerexe letter) at standard resolution
Data Compression:	MH, MR, MMR, JBIG
Protocol:	Group 3 with ECM
Modulation:	V.34, V.33, V.17 (TCM), V.29 (QAM),

	V.27ter (PHM), V.8, V.21 (FSK)
Data Rate:	G3: 33600/31200/28800/26400/24000/21600/ 19200/16800/14400/12000/9600/7200/4800/2400 bps Automatic fallback
I/O Rate:	With ECM: 0 ms/line Without ECM: 2.5, 5, 10, 20, or 40 ms/line
Memory Capacity:	SAF Standard: 4 MB With optional Expansion Memory: 60 MB (4 MB+ 56 MB) Page Memory Standard: 8 MB (Print: 4 MB + Scanner: 4 MB) With optional Expansion Memory: 16 MB (8 MB + 8 MB) (Print 8 MB + Scanner: 8 MB)

Capabilities of Programmable Items

The following table shows the capabilities of each programmable items.

Item	Standard
Quick Dial	2000
Groups	100
Destination per Group	500
Programs	100
Communication records for Journal stored in the memory	200
Specific Senders	30
Memory Transmission file	800

The following table shows how the capabilities of the document memory will change after the Expansion Memory are installed.

	Without the Expansion Memory	With the Expansion Memory
Memory capacity for memory transmission (Note1)	320	4800

Note

- Measured using an ITU-T #1 test document (Slerexe letter) at the standard resolution, the auto image density mode and the Text mode.

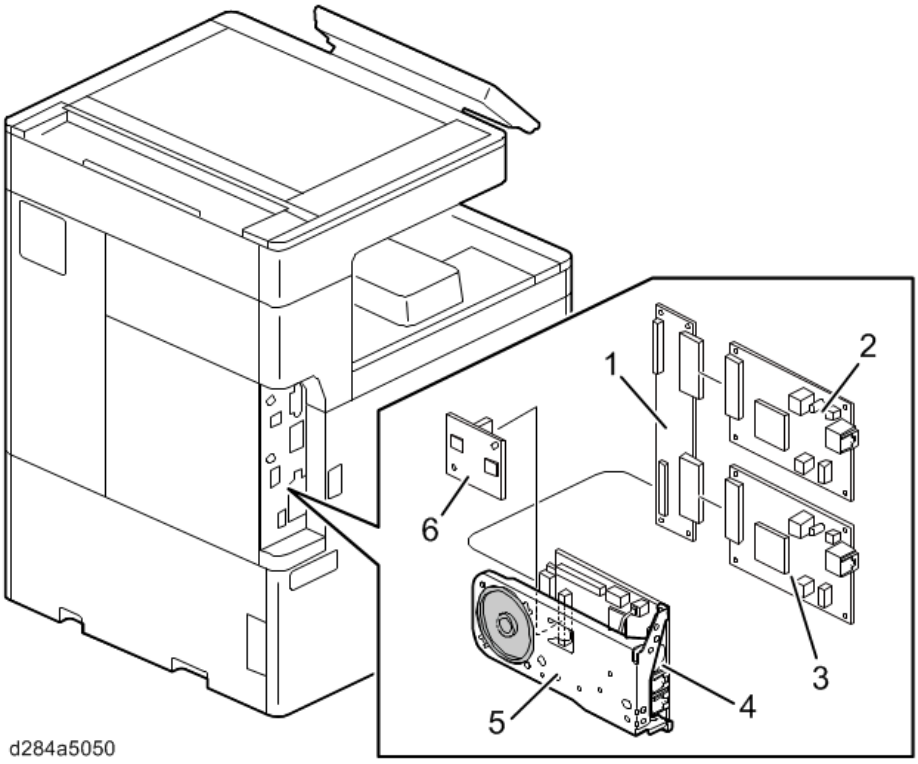
IFAX Specifications

Item	Spec.
Connectivity:	Local area network Ethernet 100base-Tx/10base-T Gigabit Ethernet 1000 Base-T IEEE802.11a/b/g/n (wireless LAN)
Resolution:	200 x 100 dpi (Standard resolution), 200 x 200 dpi (Detail resolution), 200 x 400 dpi (Fine resolution), 400 x 400 dpi (Super Fine resolution) Note To use 200 × 400 dpi and 400 × 400 dpi, IFAX SW01 Bit 2 and/or bit 4 must be set to "1".
Transmission Time:	1 s (through a LAN to the server) Condition: ITU-T #1 test document (Selerexe Letter) MTF correction: OFF TTI: None Resolution: 200 x 100 dpi Communication speed: 10 Mbps Correspondent device: E-mail server Line conditions: No terminal access
Document Size:	Maximum Original Size: A3/DLT. Note To use B4 and A3 width, IFAX SW00 Bit 1 (B4) and/or Bit 2 (A3) must be set to "1".
E-mail File Format:	Single/multi-part MIME conversion Image: TIFF-F (MH, MR, MMR)
Protocol:	Transmission: SMTP, TCP/IP Reception: POP3, SMTP, IMAP4, TCP/IP
Data Rate:	1000 Mbps (1000 Base-T) 100 Mbps (100base-Tx) 10 Mbps (10base-T)
Authentication Method:	SMTP-AUTH POP before SMTP A-POP
Remark:	The machine must be set up as an e-mail client before installation. Any client PCs connected to the machine through a LAN must also be e-mail clients, or some features will not work (e.g. Autorouting).

IP-FAX Specifications

Item	Spec.
Network:	Standard: Ethernet interface (1000 Base-T/100 Base-TX/10 Base-T) Optional: IEEE802.11a/b/g/n wireless LAN interface
Scan line density:	8 x 3.85 lines/mm, 200 x 100dpi (standard character), 8 x 7.7lines/mm, 200 x 200dpi (detail character), 8 x 15.4lines/mm (fine character: optional expansion memory required), 16 x 15.4lines/mm, 400 x 400dpi (super fine character: optional expansion memory required)
Maximum original size:	Standard: A3 SEF, 11 x 17 SEF Custom: 297 x 1,200 mm (11.7 x 47.3 inches)
Maximum scanning size:	297 x 1,200 mm (11.7 x 47.3 inches)
Transmission protocol:	Recommendation: T.38, TCP, UDP/IP communication, SIP (RFC 3261 compliant), H.323 v2
Compatible machines:	IP-Fax compatible machines
IP-Fax transmission function:	Specify an IP address and send faxes to an IP-Fax compatible fax through a network. Also capable of sending faxes to a G3 fax connected to a telephone line via a VoIP gateway.
IP-Fax reception function:	Receive faxes sent from an IP-Fax compatible fax through a network. Also capable of receiving faxes from a G3 fax connected to a telephone line via a VoIP gateway.

Fax Unit Configuration



Component	Code	No.	Remarks
FCU	D3DX-01 (NA)	4	Included with the fax unit
Speaker	D3DX-02 (EU) D3DX-03 (AP/KOR) D3DX-11 (TWN) D3DX-11 (CHN)	5	
Expansion Memory	D3BZ-17	6	Optional
SG3 Board	D3DX-05 (NA)	2	Optional
SG3 Board (2nd)	D3DX-06 (EU/AP/KOR)	3	Optional
CCU I/F Board	D3DX-07 (TWN) D3DX-13 (CHN)	1	Included with optional G3 unit

Bridge Unit BU3070
Machine Code: D685
Field Service Manual

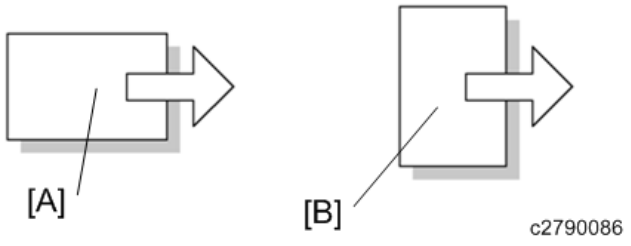
May, 2016

Symbols, Abbreviations and Trademarks

Symbols, Abbreviations

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

Symbol	What it means
	Clip ring
	Screw
	Connector
	Clamp
	E-ring
	Flat Flexible Cable
	Timing Belt
SEF	Short Edge Feed [A]
LEF	Long Edge Feed [B]
K	Black
C	Cyan
M	Magenta
Y	Yellow
B/W, BW	Black and White
FC	Full color



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  Microsoft® Windows Vista® Home Premium

  Microsoft® Windows Vista® Home Basic

  Microsoft® Windows Vista® Enterprise
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  Microsoft® Windows® 7 Professional

  Microsoft® Windows® 7 Ultimate

  Microsoft® Windows® 7 Enterprise
- The product names of Windows 8 are as follows:

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  Microsoft® Windows® 8 Pro

  Microsoft® Windows® 8 Enterprise
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  Microsoft® Windows® 8.1 Pro

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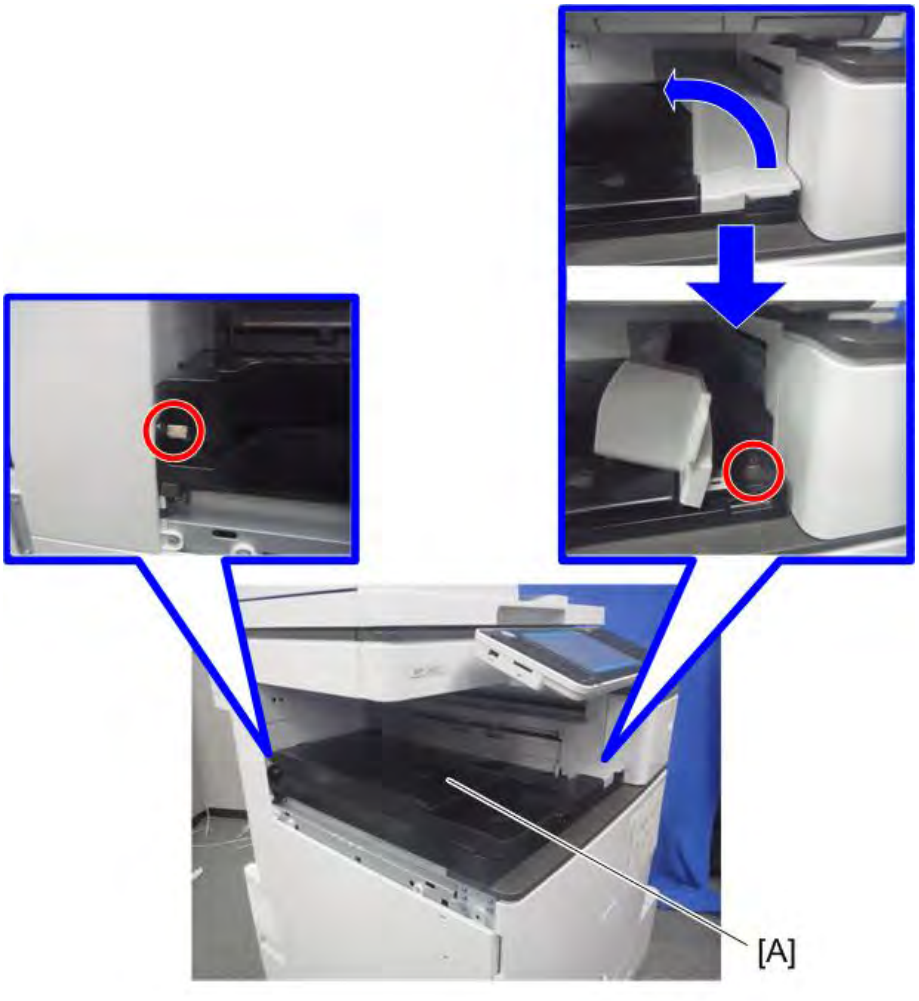
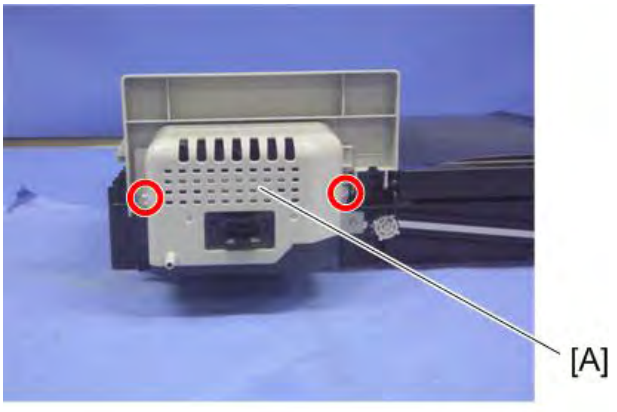
1. Replacement and Adjustment

Drive Motor Unit

1. Separate the finisher, and remove the connecting bracket.
2. Bridge unit [A] (×2).

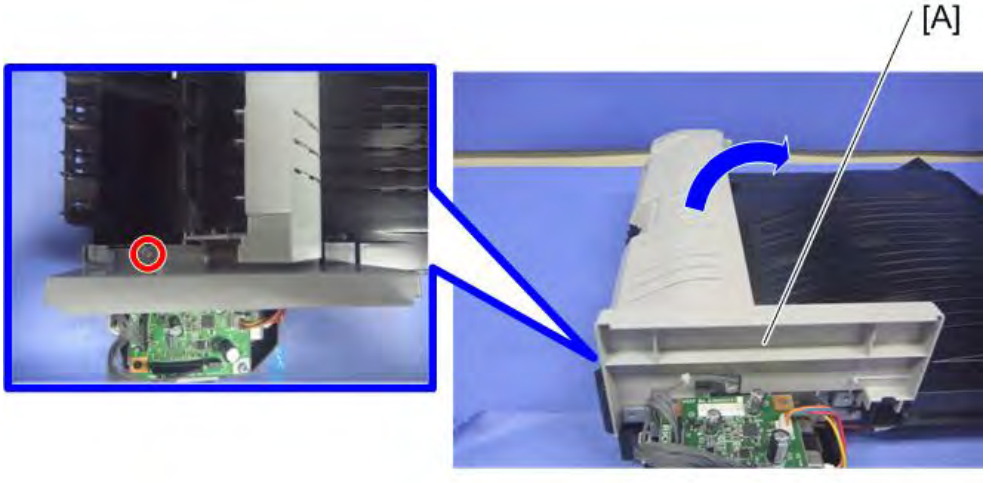


3. **Drive motor unit cover [A] (×2).**



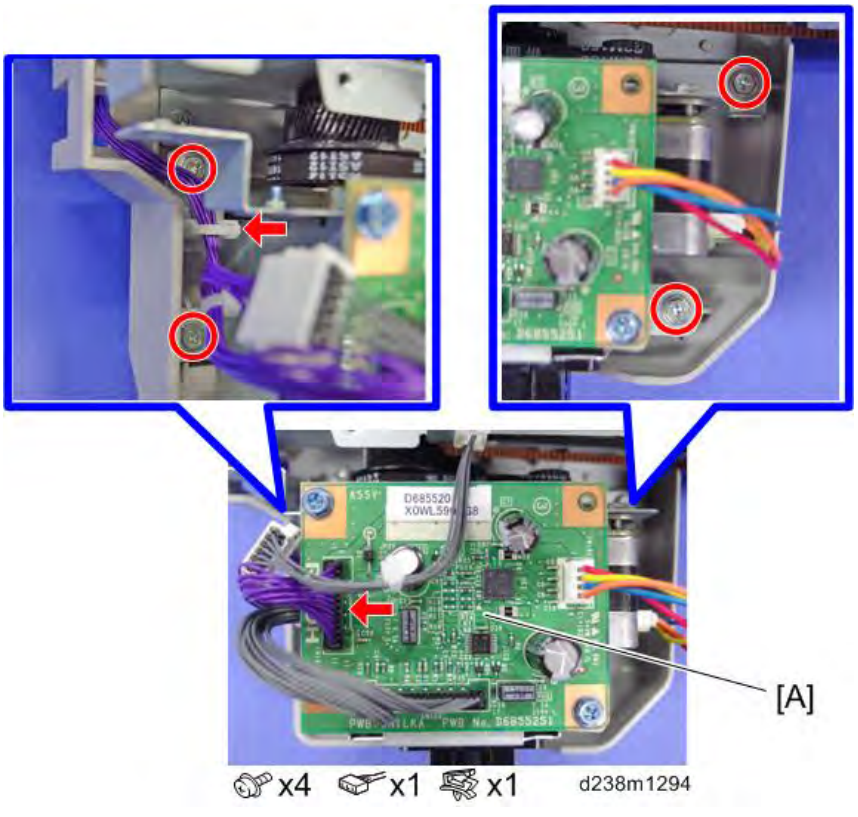
d1462821

4. **Bridge unit rear cover [A] (×1).**



d1462822

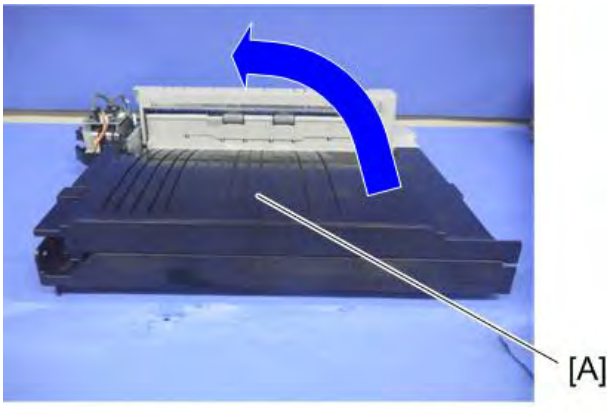
5. Drive motor unit [A]



d238m1295

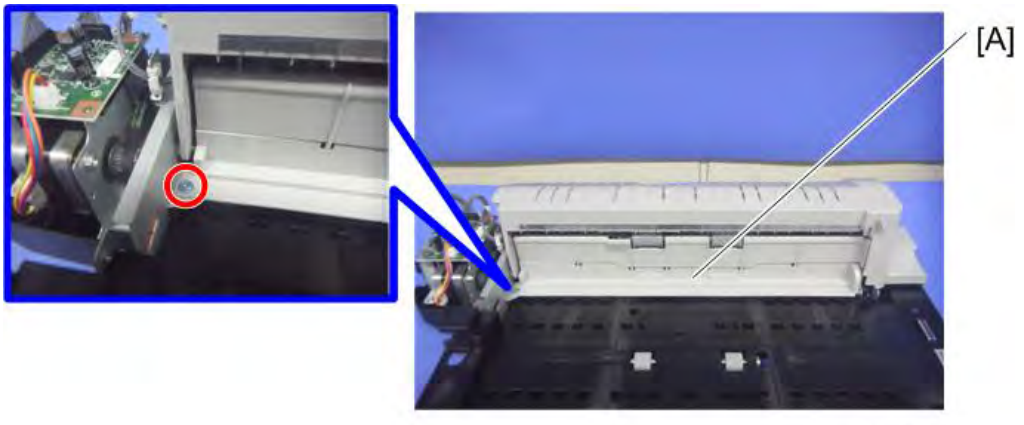
Paper Exit Sensor

1. **Bridge unit (page 7)**
2. **Drive motor unit cover (page 7)**
3. **Bridge unit rear cover (page 7)**
4. **Paper exit tray [A]**



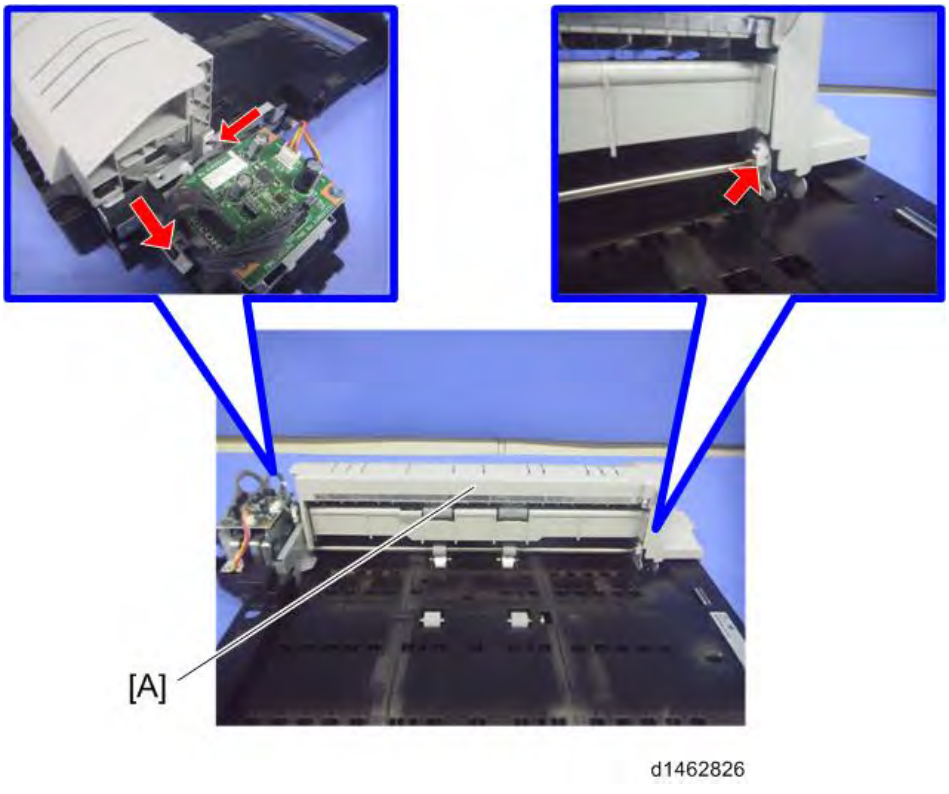
d1462824

5. **Paper exit cover [A] (×1)**

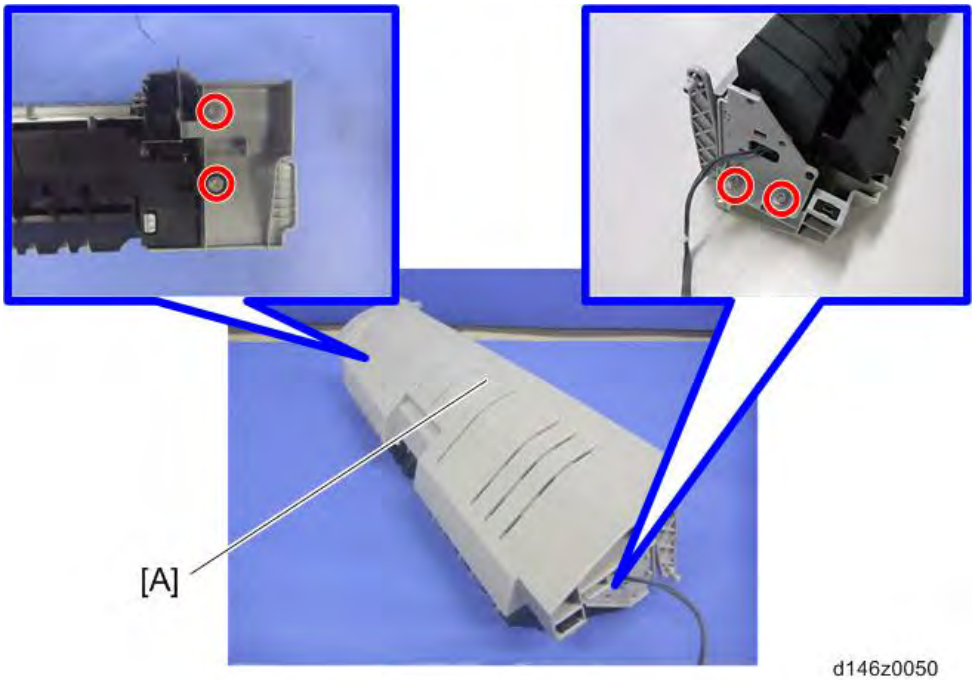


d1462825

6. **Relay transport unit [A] (×1, ×1, ×1)**



7. **Relay transport unit cover [A] (×4)**

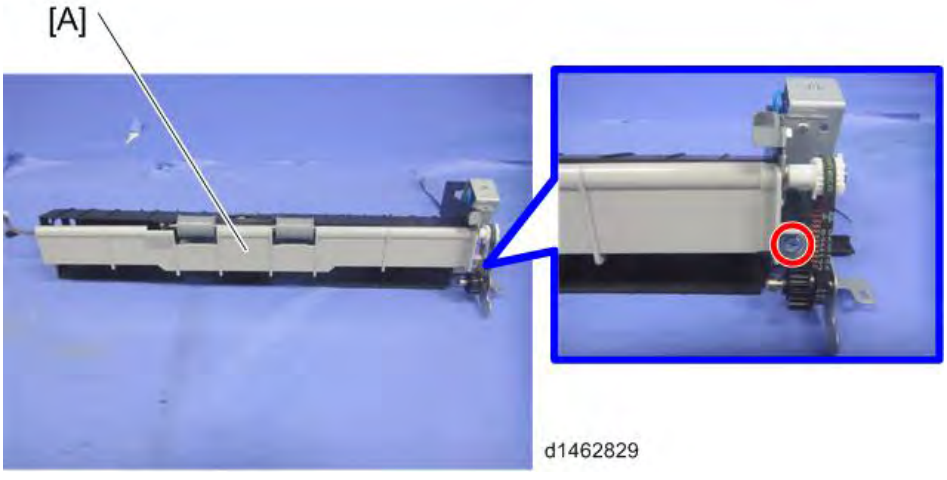


d146z0050

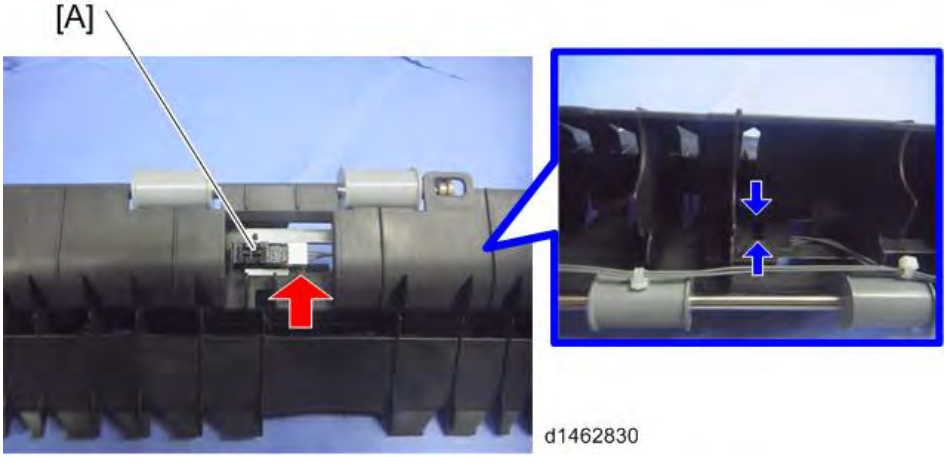
8. **Guide plate [A]**

d1462828

9. Guide plate [A] (×1)



10. Paper exit sensor [A] (×1)

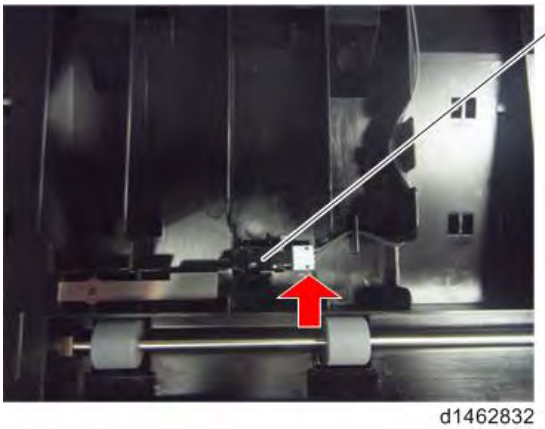


Relay Transport Sensor

1. **Bridge unit (page 7)**
2. **Place the unit upside down.**

d1462831

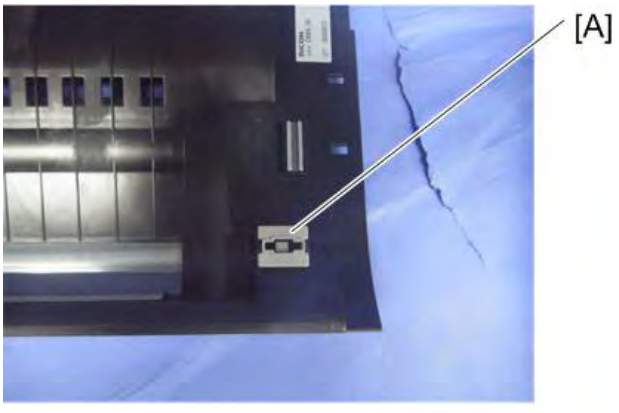
3. **Relay transport sensor [A] (×1)**



d1462832

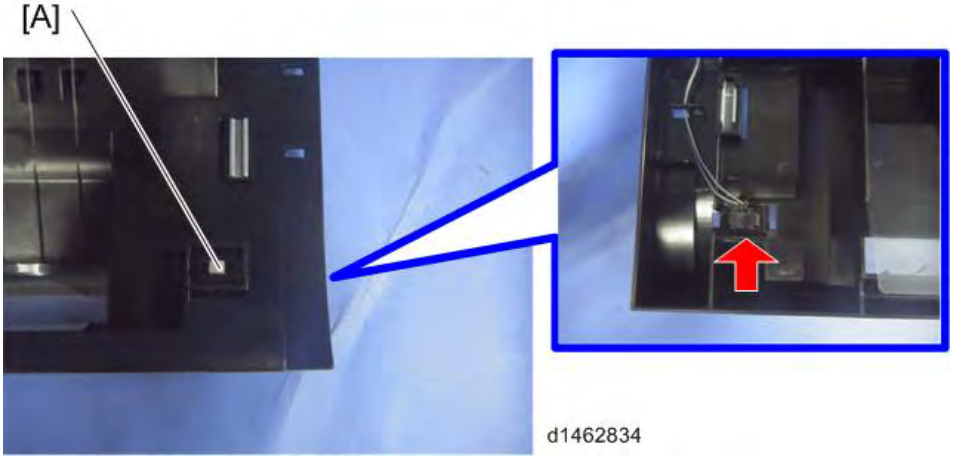
Paper Exit Tray Set Switch

1. Paper exit tray (page 10)
2. Paper exit tray set switch cover [A]



d1462833

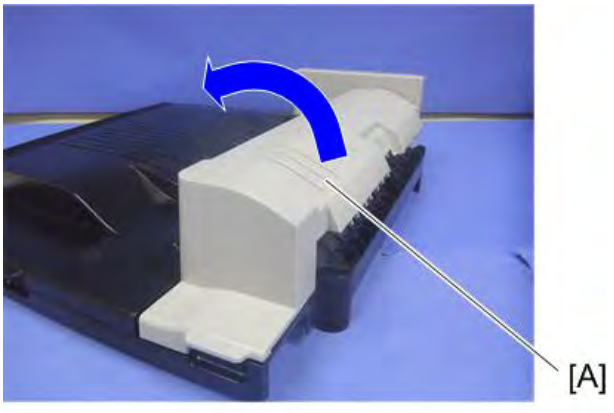
3. Paper exit tray set switch [A] (×1)



d1462834

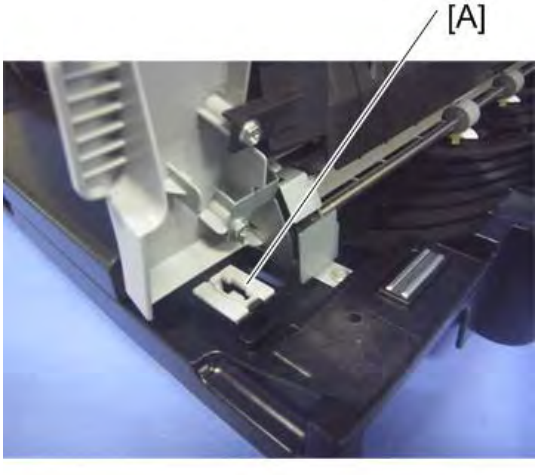
Relay Transport Unit Set Switch

1. Bridge Unit (page 7)
2. Open the relay transport unit cover [A].



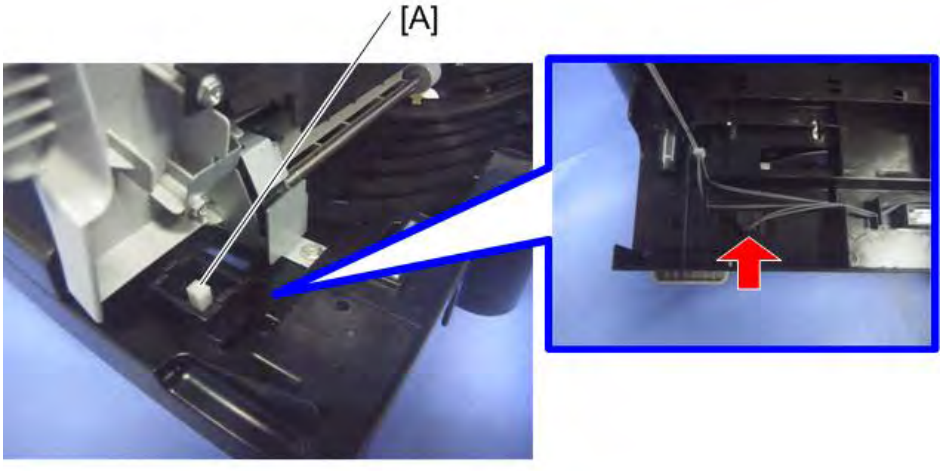
d1462835

3. Relay transport unit set switch cover [A]



d1462836

4. **Relay transport unit set switch [A] (×1)**

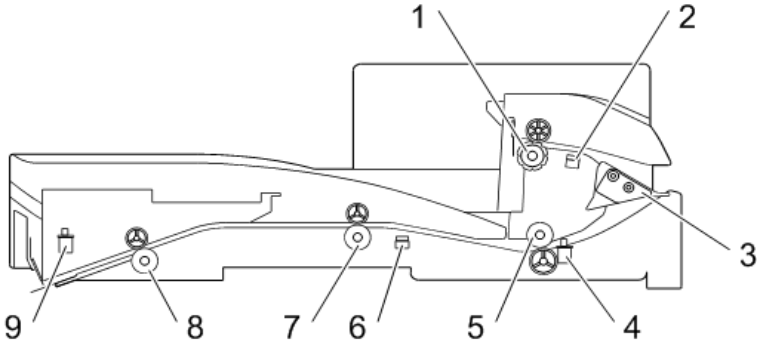


d1462837

2. Detailed Descriptions

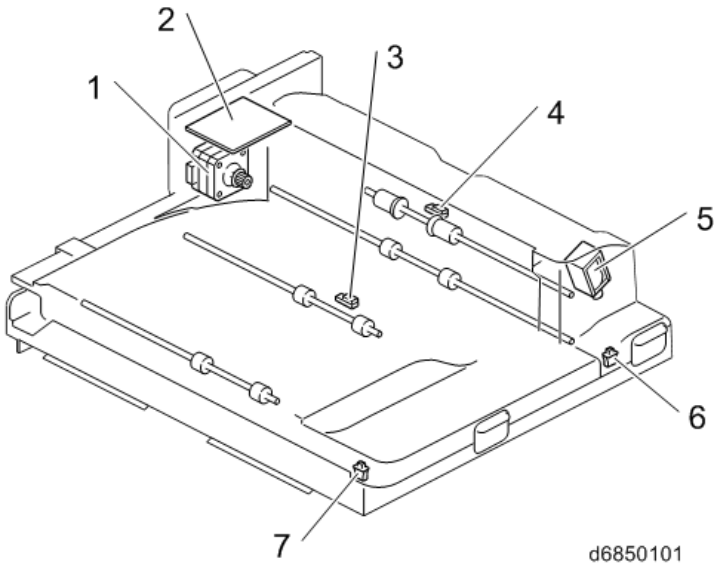
Bridge Unit BU3070 (D685)

Parts Layout



d6850001

No.	Description	No.	Description
1	Paper exit roller	6	Relay transport sensor
2	Paper exit sensor	7	Transport roller 2
3	Relay junction gate	8	Transport roller 3
4	Relay transport unit set switch	9	Paper exit tray set switch
5	Transport roller 1		

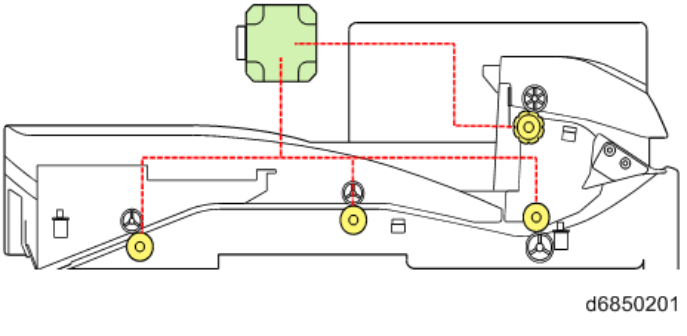


No.	Description	No.	Description
1	Drive motor	5	Relay junction gate solenoid
2	Controller board	6	Relay transport unit set switch
3	Relay transport sensor	7	Paper exit tray set switch
4	Paper exit sensor		

Mechanism

Drive Mechanism

The paper exit roller and transport rollers 1-3 are driven by the relay drive motor through gears and a timing belt.

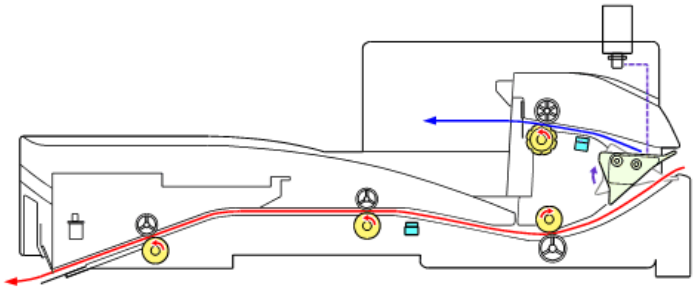


Paper Transport Mechanism

Paper transported from the main printer paper exit is changed over between the relay paper exit tray and relay transport unit by the relay junction gate.

Paper is output to the relay paper exit tray by a paper exit roller. The paper exit sensor in the paper exit transport path detects paper jams.

On the other hand, paper sent to the relay transport unit is sent to the finisher by the transport rollers. The relay sensor in the relay transport path adjusts the timing of feed to the finisher, and detects paper jams.



MEMO

MEMO

MEMO

Internal Finisher SR3130
Machine Code: D690
Field Service Manual

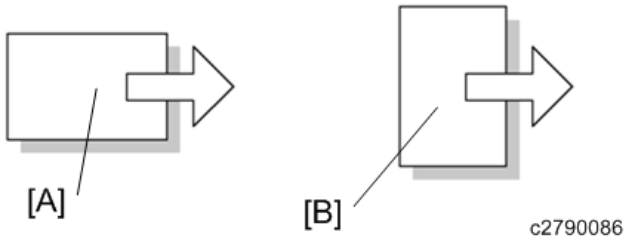
May, 2016

Symbols, Abbreviations and Trademarks

Symbols, Abbreviations

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

Symbol	What it means
	Clip ring
	Screw
	Connector
	Clamp
	E-ring
	Flat Flexible Cable
	Timing Belt
SEF	Short Edge Feed [A]
LEF	Long Edge Feed [B]
K	Black
C	Cyan
M	Magenta
Y	Yellow
B/W, BW	Black and White
FC	Full color



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Microsoft® Windows® 10 Enterprise

Microsoft® Windows® 10 Education

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  Microsoft® Windows Server® 2012 R2 Standard

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1. Replacement and Adjustment

Main Unit

Internal Finisher

1. Disconnect the interface cable connected to the main machine.
2. Open the front cover [A]

d1462870

3. Left upper cover [A] (×1)

d197f0109

4. Left rear cover [A] (×2, hook×1)

d197f0043

5. Internal finisher [A] (×1)

d197z8004

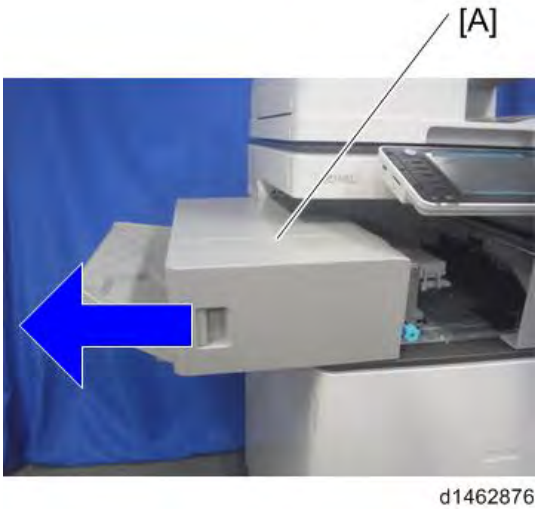
6. Bridge guide plate [A] (×2)

d1462875

Exterior Covers and Trays

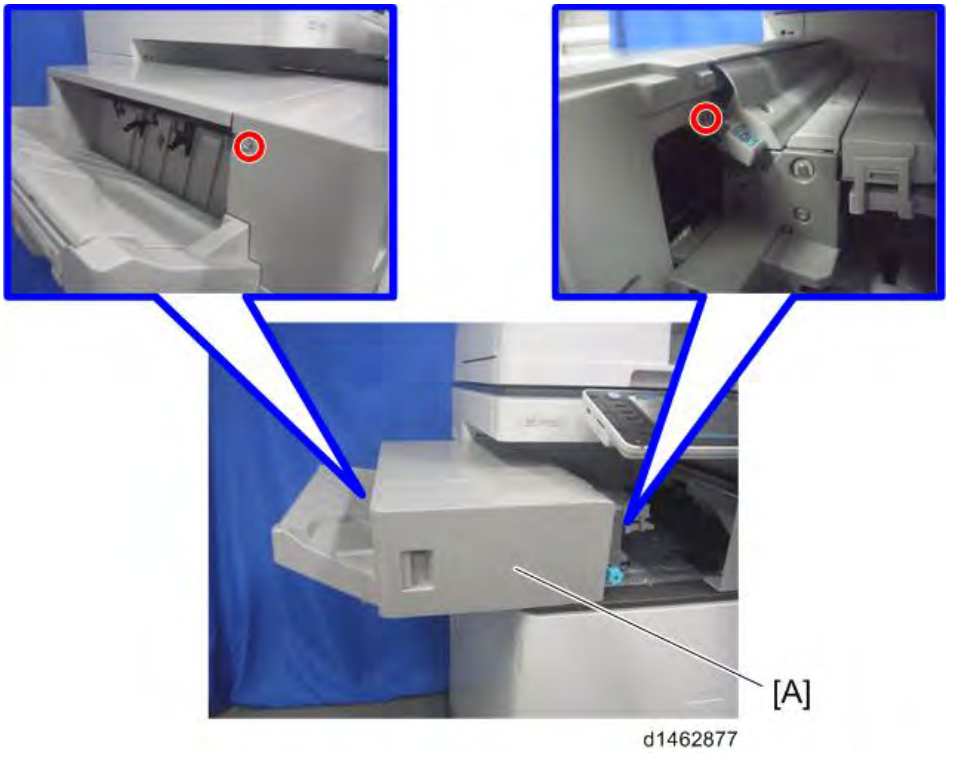
Finisher Front Cover

1. Pull the finisher [A]



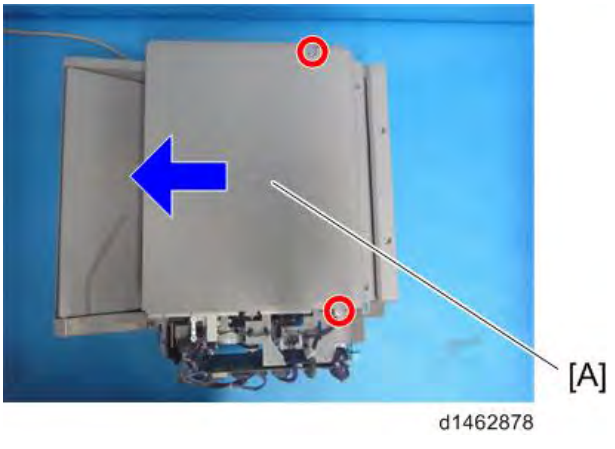
d1462876

2. Finisher front cover [A] (×2)



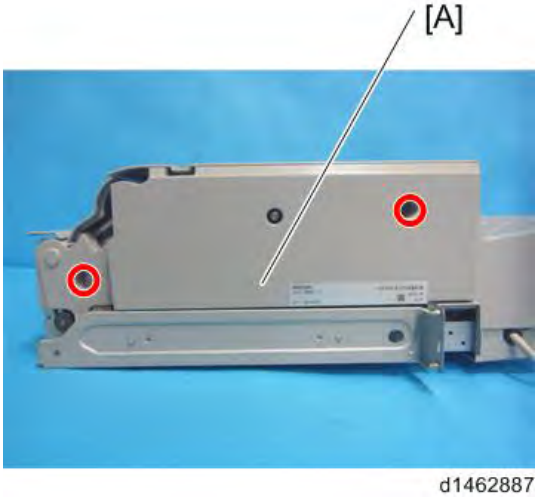
Finisher Upper Cover

1. Finisher front cover (page 9)
2. Finisher upper cover [A] (×2)



Finisher Rear Cover

1. Internal finisher (page 7)
2. Finisher rear cover [A] (×2)



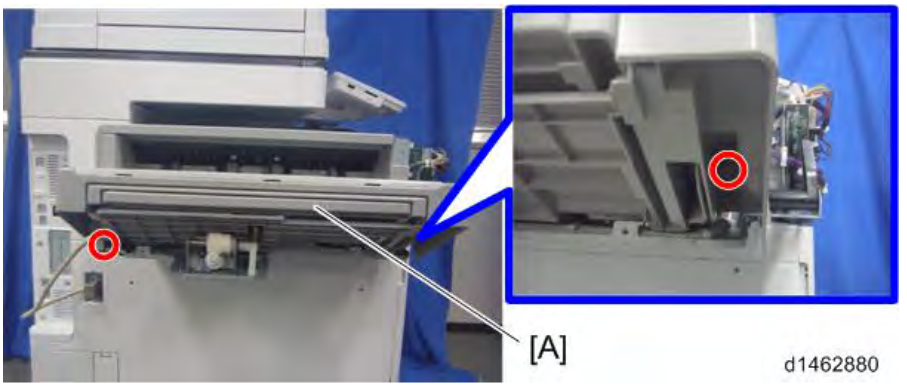
d1462887

Paper Exit Tray

1. Left lower cover [A] (×2)

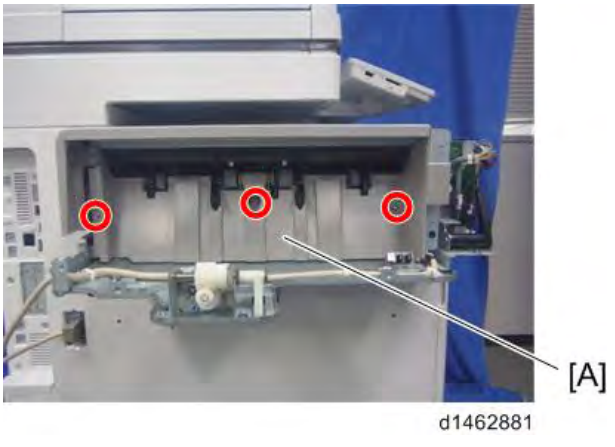
d1462879

2. Paper exit tray [A] (×2).



Paper Exit Cover

1. Paper exit tray (page 11)
2. Paper exit cover [A] (×3, ×3, ×2).



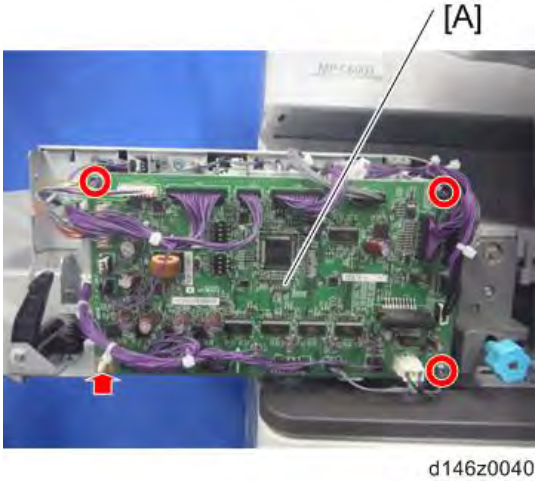
Board

Controller Board

⚠CAUTION

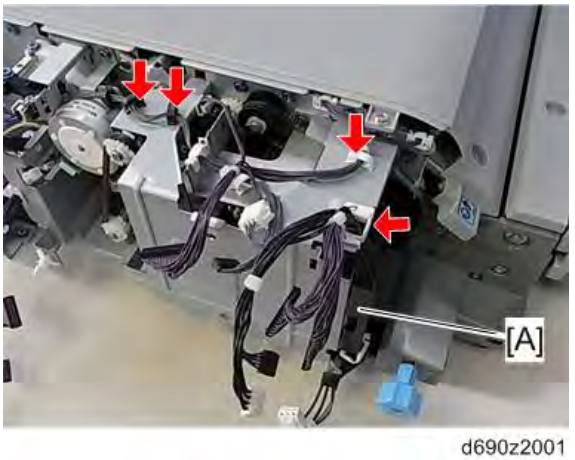
- When a controller board is replaced, use the same DIP switch settings as those of the controller board before replacement.

1. **Finisher front cover (page 9)**
2. **Controller board [A] (×3, ×all, plastic rivet×1)**



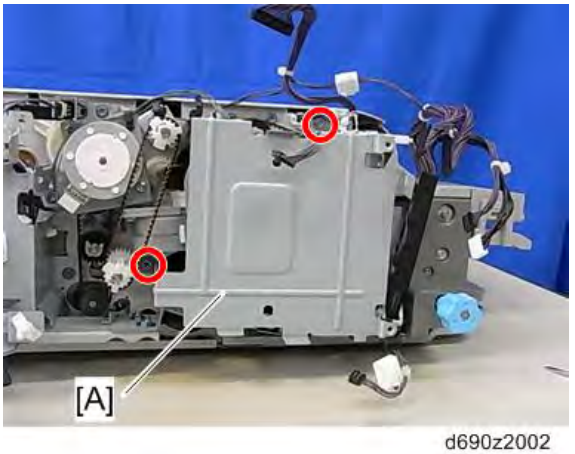
d146z0040

3. **Release four clamps and remove the harness bracket [A] on the controller board bracket. (×4)**



d690z2001

4. **Controller board bracket [A] (x2)**



d690z2002

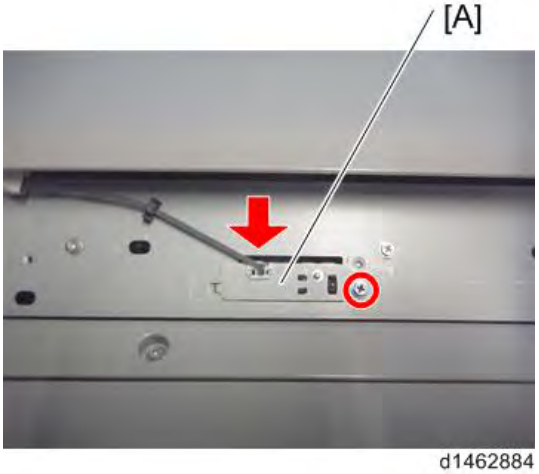
Sensors

Entrance Sensor

1. Internal finisher (page 7)
2. Open/Close upper cover [A] (×2)

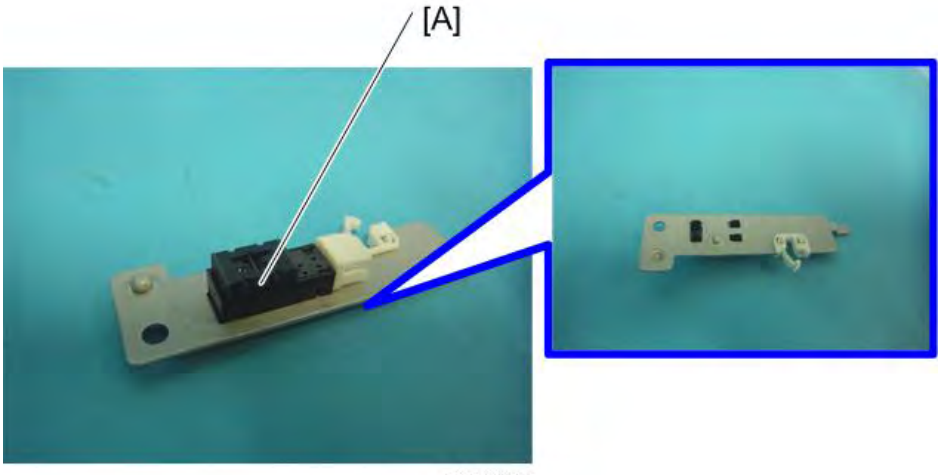
d1462883

3. Entrance sensor unit [A] (×1, ×1, ×1)



d1462884

4. Entrance sensor [A]



d1462885

Paper Exit Full Sensor

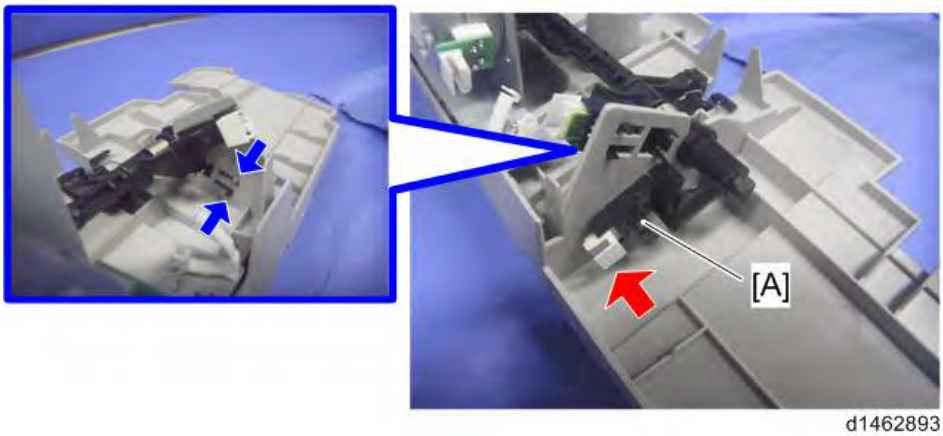
1. Paper exit tray (page 11)
2. Paper exit full sensor [A] (×1, ×1)

d1462892

Stack Height Lever HP Sensor

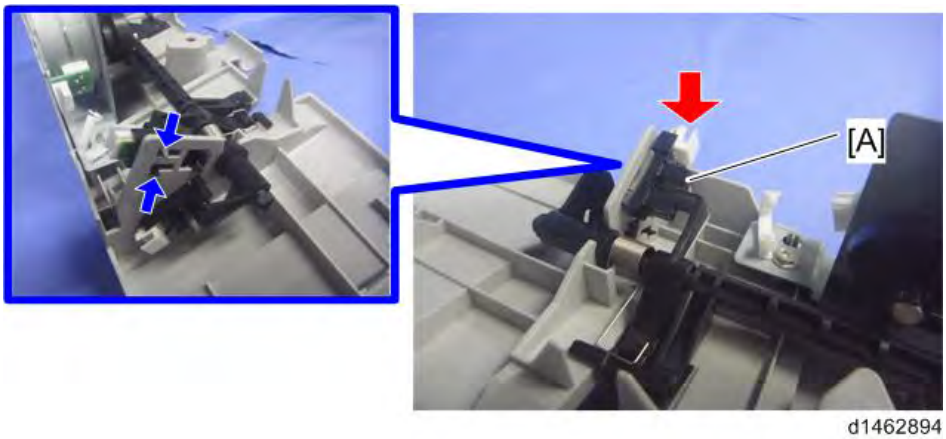
1. Paper exit cover (page 12)

2. Stack Height Lever HP Sensor [A] (×1)



Paper Surface Sensor

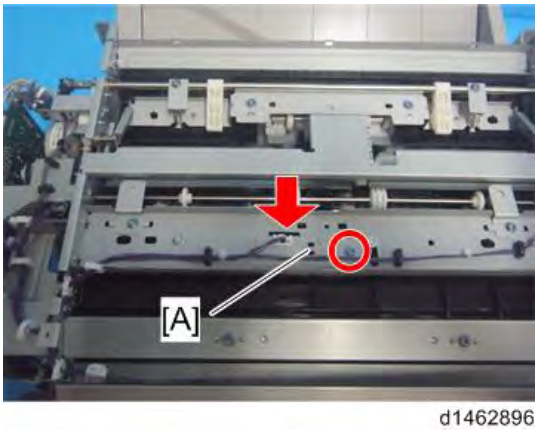
1. Paper exit cover (page 12)
2. Paper surface sensor [A] (×1)



Transport Sensor

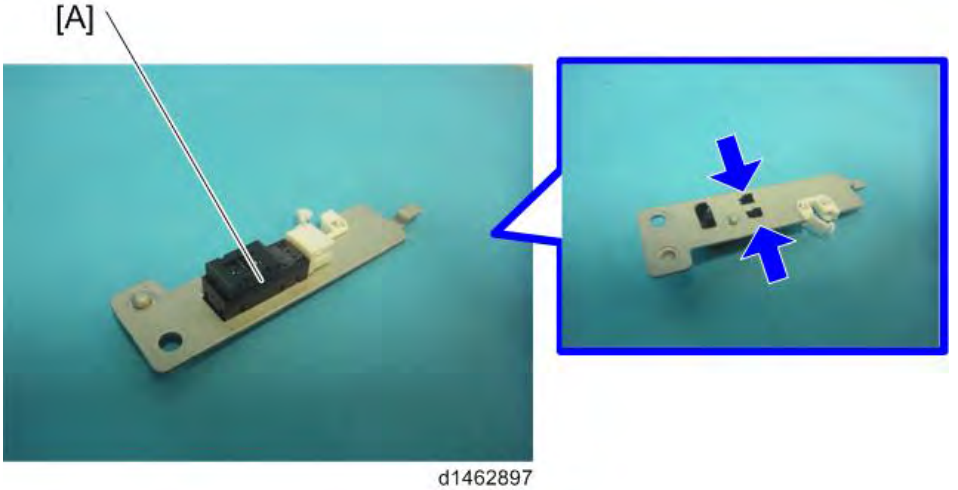
1. Finisher upper cover (page 10)

2. Transport sensor unit [A] (×1, ×1, ×1)



d1462896

3. Transport sensor [A]

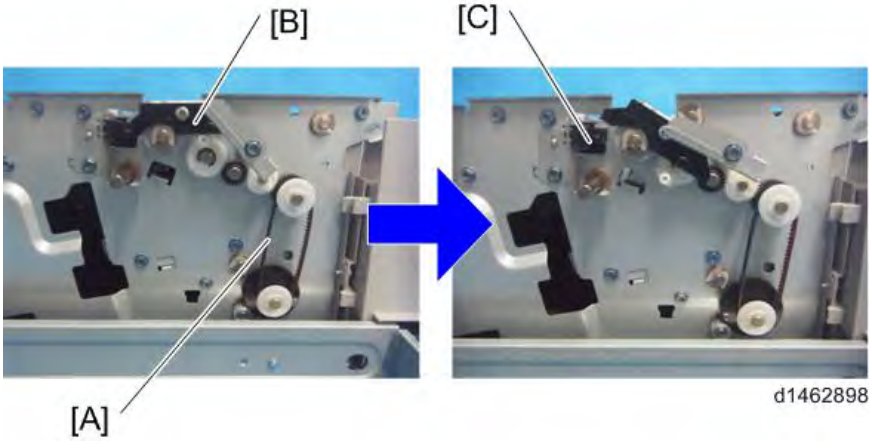


d1462897

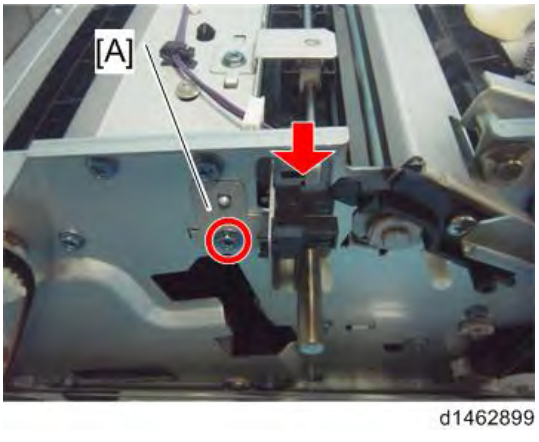
Positioning Roller Home Position Sensor

1. Finisher upper cover (page 10)
2. Finisher rear cover (page 11)

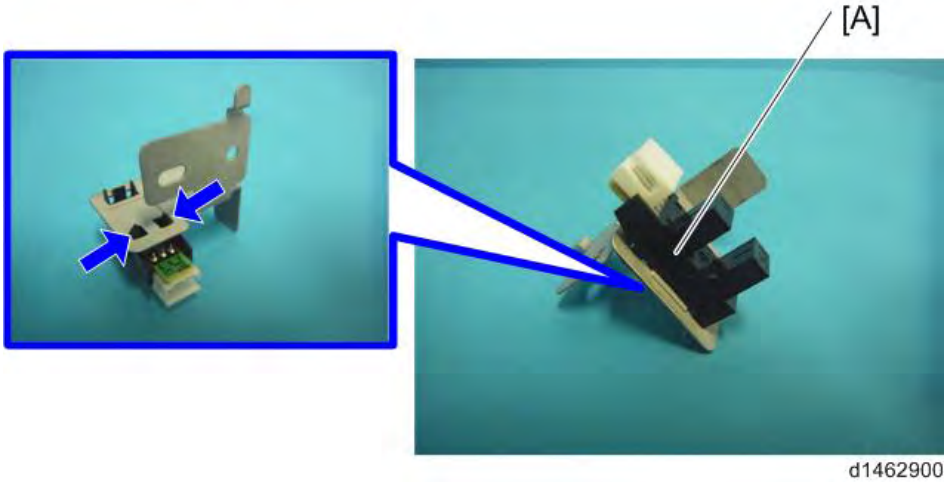
3. Rotate the timing belt [A], and release the positioning roller arm unit [B] from the positioning roller HP sensor [C].



4. Positioning roller home position sensor unit [A] (×1, ×1, ×1)

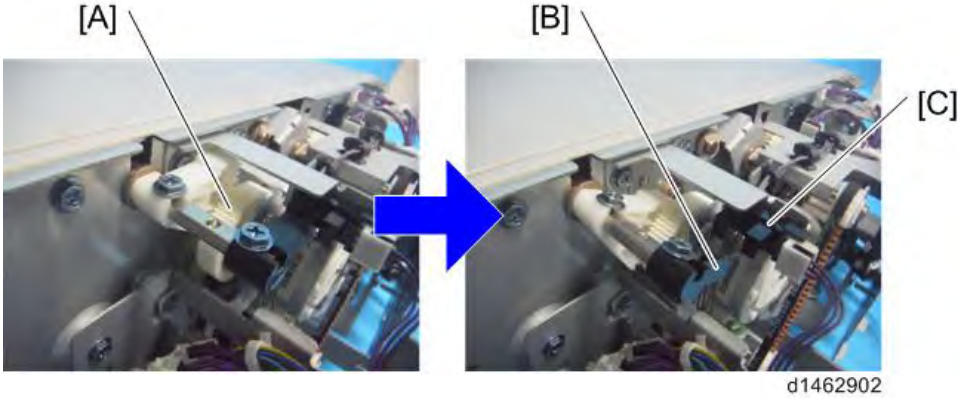


5. Positioning roller home position sensor [A]

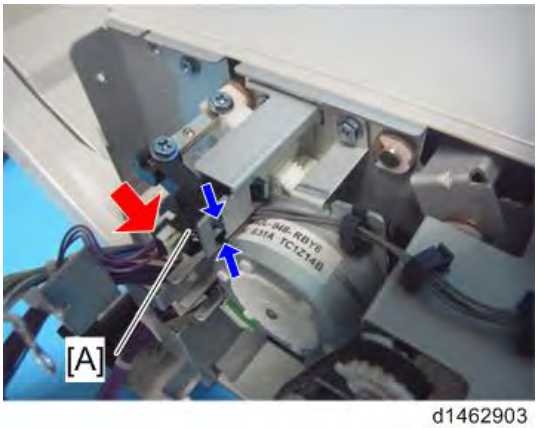


Paper Exit Guide Plate Home Position Sensor

1. Controller board (page 13)
2. Rotate the paper exit guide plate gear [A] counterclockwise, and release the paper exit guide plate [B] from the paper exit guide plate HP sensor [C].



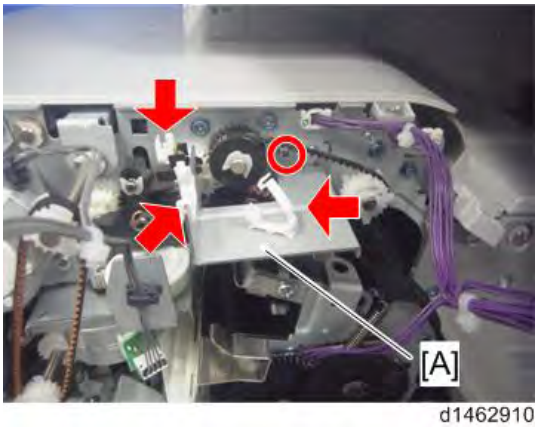
3. Paper Exit Guide Plate Home Position Sensor [A] (×1)



d1462903

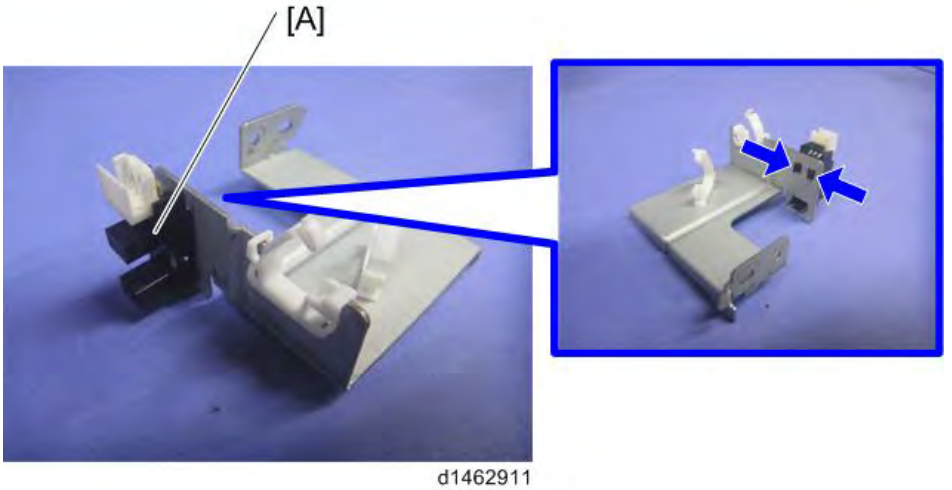
Shift Roller Home Position Sensor

1. Controller board bracket (page 13)
2. Shift roller home position sensor unit [A] (×1, ×1, ×2)



d1462910

3. Shift roller home position sensor [A]



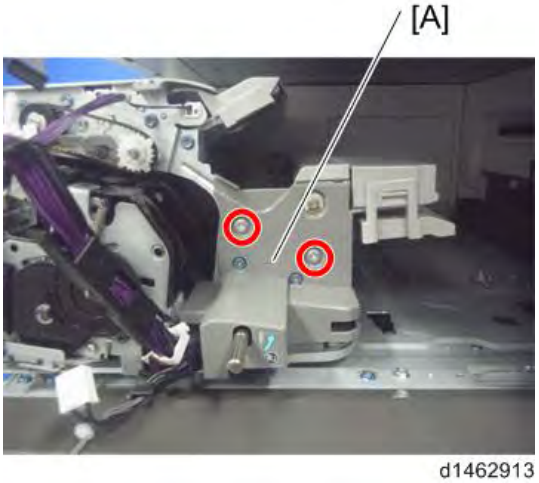
d1462911

Stapler Home Position Sensor

1. Controller board bracket (page 13)
2. Knob [A]

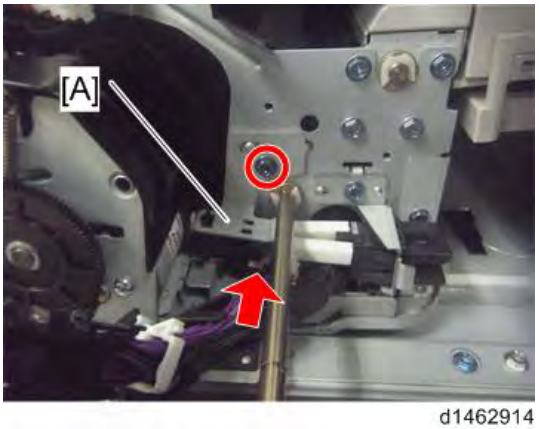
d1462912

3. Entrance cover [A] (×2)



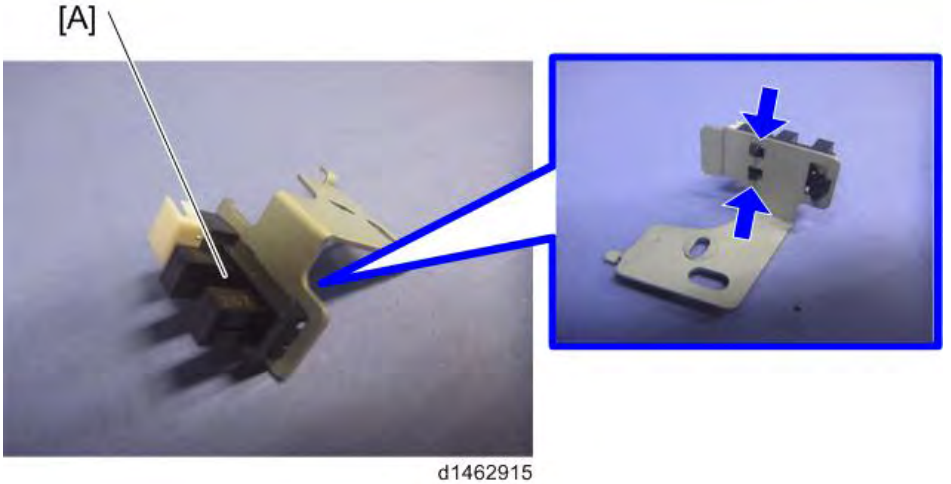
d1462913

4. Stapler home position sensor unit [A] (×1, ×1)



d1462914

5. **Stapler home position sensor [A]**

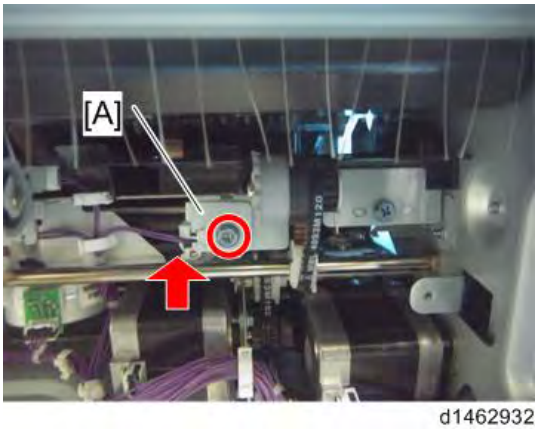


Note

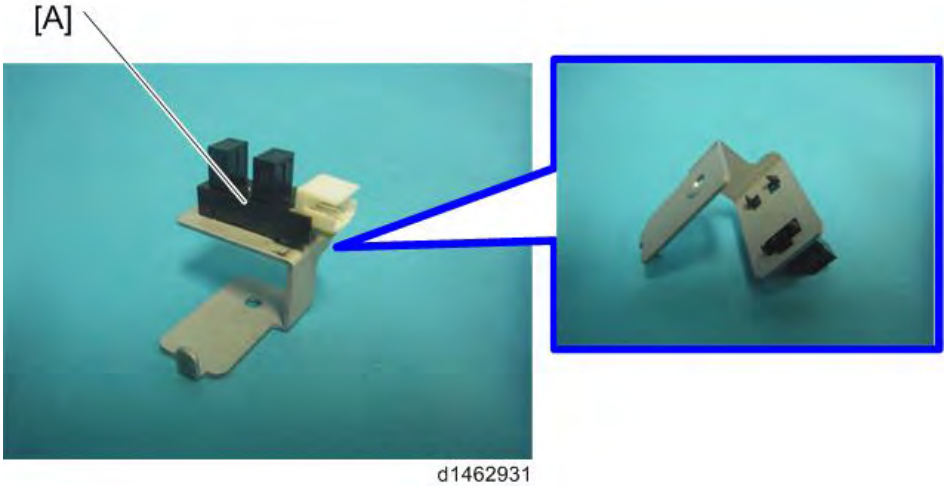
- If it is difficult to remove or attach the sensor, push the stapler unit inside.

Jogger Fence Home Position Sensor (Front)

1. **Paper exit cover (page 12)**
2. **Jogger fence home position sensor (front) unit [A] (×1, ×1, ×1)**



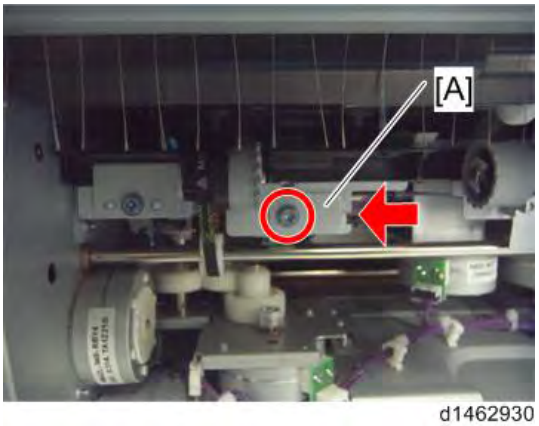
3. Jogger fence home position sensor (front) [A]



d1462931

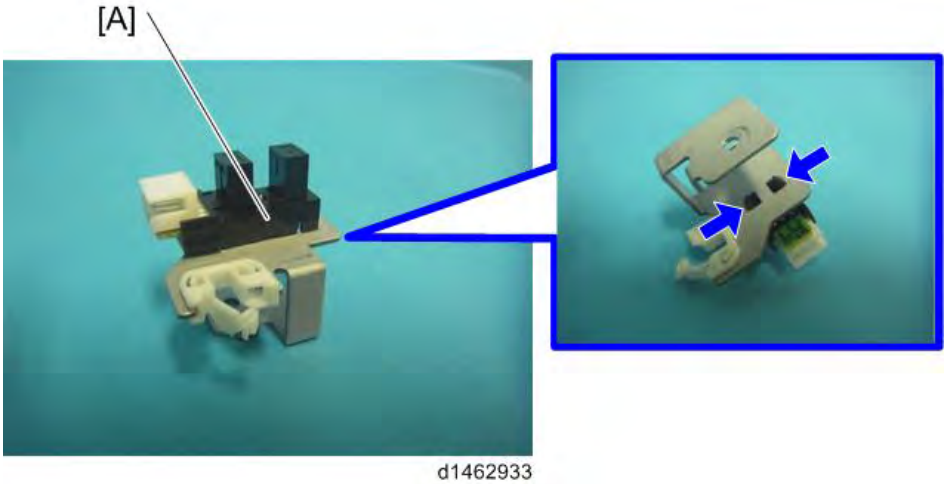
Jogger Fence Home Position Sensor (Rear)

1. Paper exit cover (page 12)
2. Jogger fence home position sensor (rear) unit [A] (×1, ×1)



d1462930

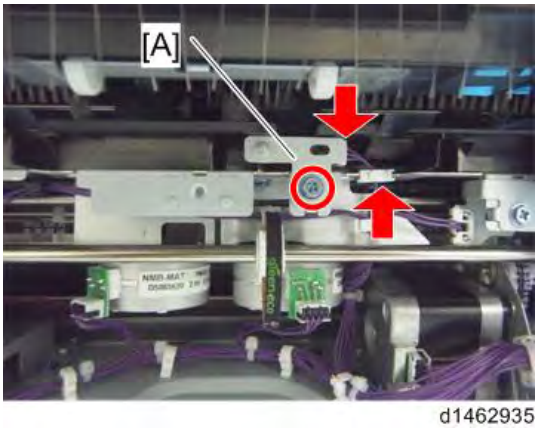
3. Jogger fence home position sensor (rear) [A]



Stapler Tray Jam Sensor

1. Paper exit cover (page 12)
2. Paper exit roller unit [A] (×1)

3. Stapler tray jam sensor unit [A] (×1, ×1, ×1)



d1462935

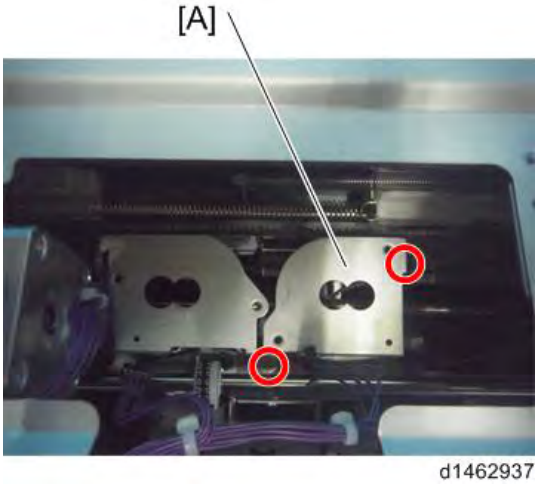
4. Stapler tray jam sensor [A] (×1)

d1462936

Paper Sensor

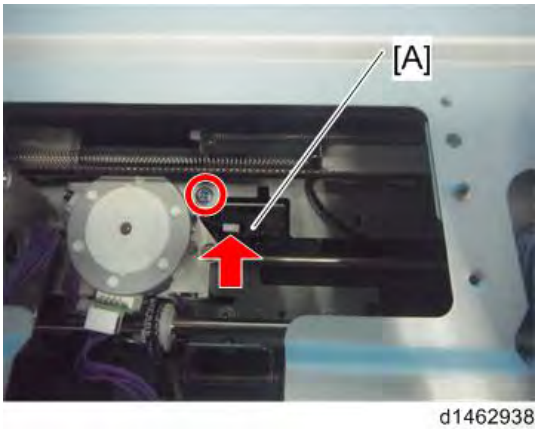
1. Jogger fence motor (rear) (page 37)

2. **Jogger fence motor (rear) bracket [A] (×2, ×3)**



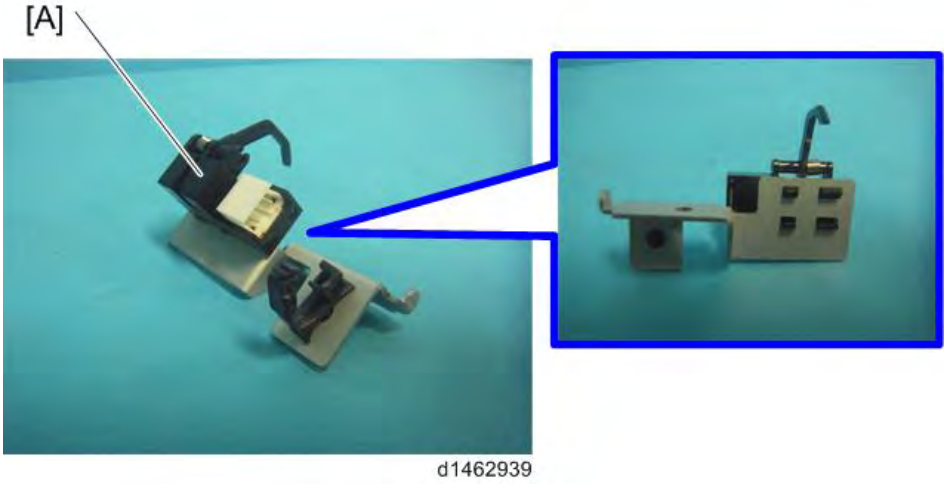
d1462937

3. **Paper sensor unit [A] (×1, ×1, ×1)**



d1462938

4. Paper sensor [A]



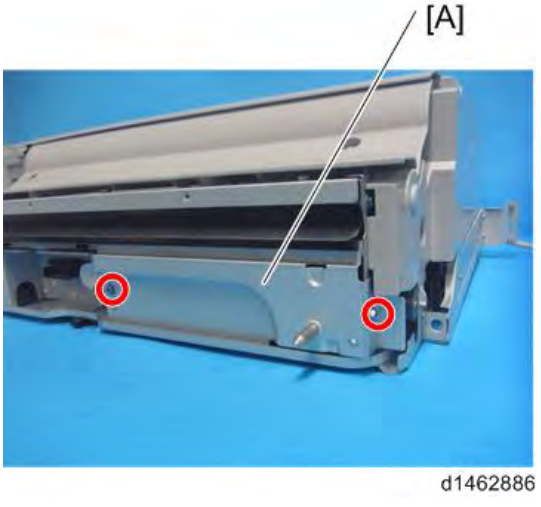
Note

- When installing this sensor, be careful not to damage the sensor actuator.

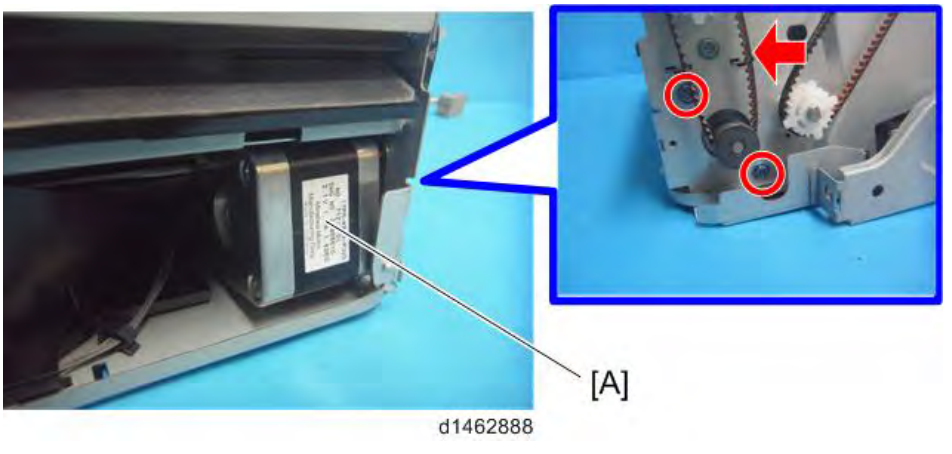
Motors

Entrance Motor

1. Finisher rear cover (page 11)
2. Finisher right rear bracket [A] (×2)



3. Entrance motor [A] (×2, ×1, Timing belt×1)



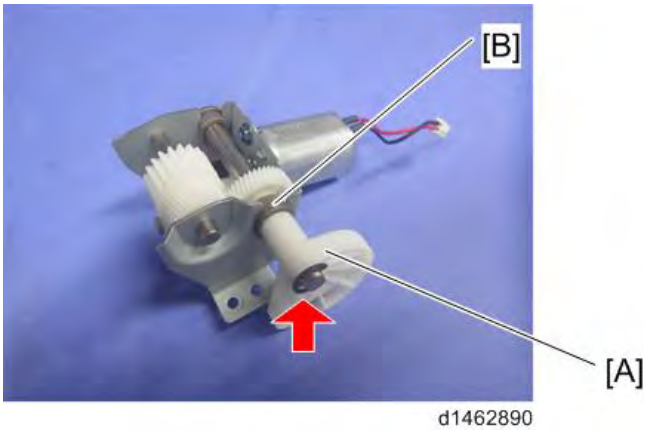
Tray Lift Motor

1. Paper exit tray (page 11)

2. Tray lift motor unit [A] (×2, ×1, ×1)

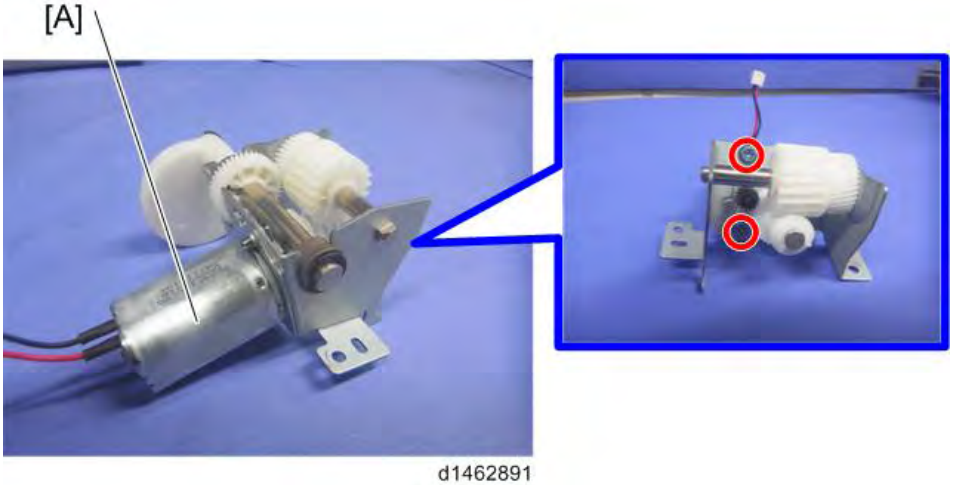
d1462889

3. Cam [A], bearing [B] (×1)



d1462890

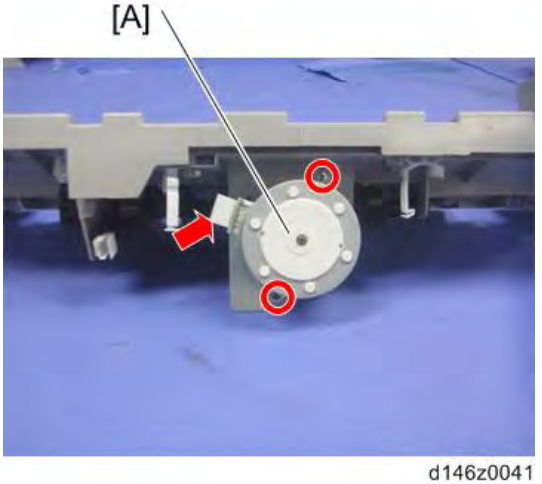
4. Tray lift motor [A] (×2)



d1462891

Stack Height Lever Motor

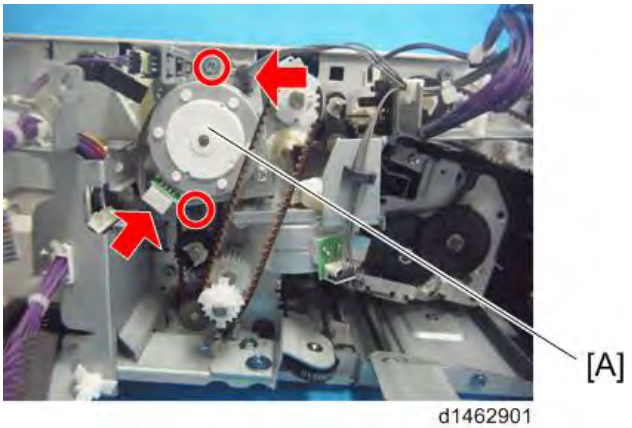
1. Paper exit cover (page 12)
2. Stack height lever motor [A] (×2, ×1)



d146z0041

Paper Exit Guide Plate Motor

1. Controller board (page 13)
2. Paper exit guide plate motor [A] (×2, ×1, ×1)

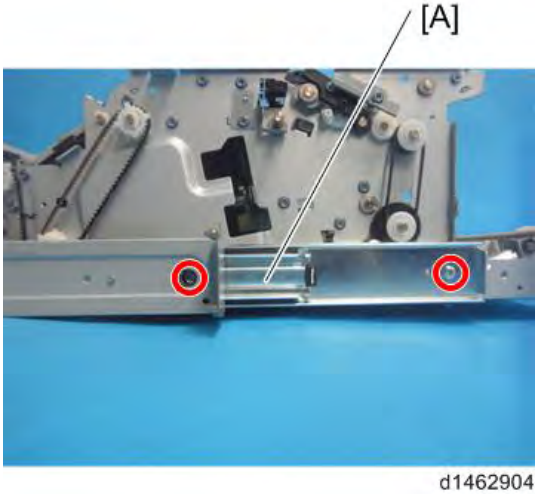


d1462901

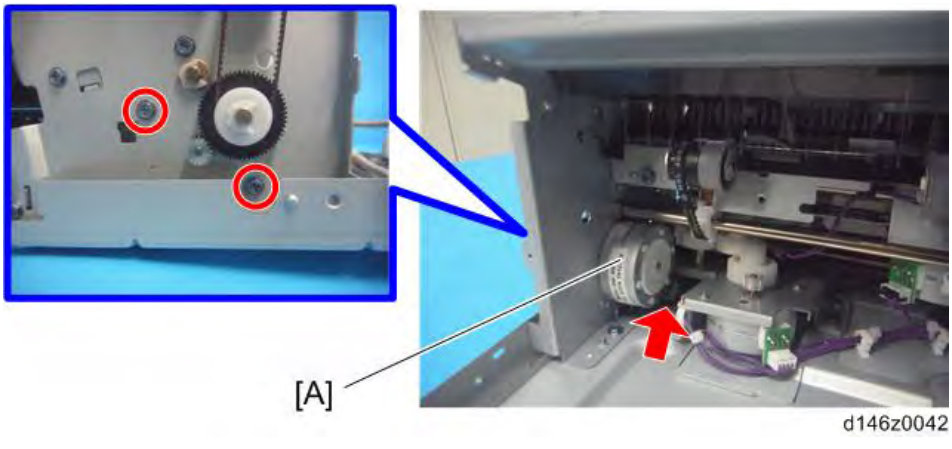
Positioning Roller Motor

1. Paper exit cover (page 12)

2. **Finisher rear cover (page 11)**
3. **Rear rail [A] (×2)**



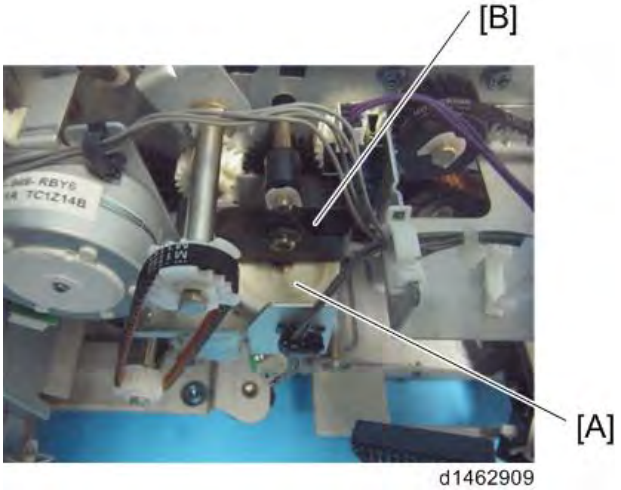
4. **Positioning roller motor [A] (×2, ×1)**



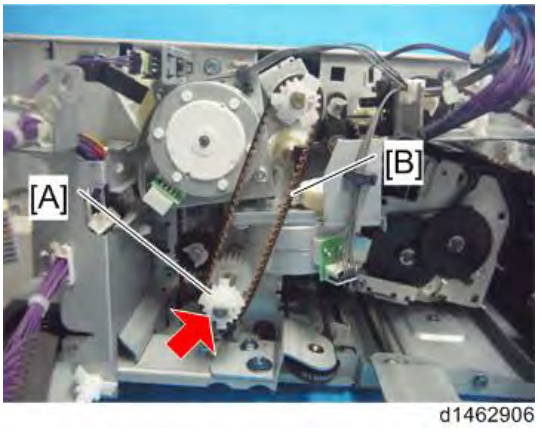
Shift Motor

⚠CAUTION

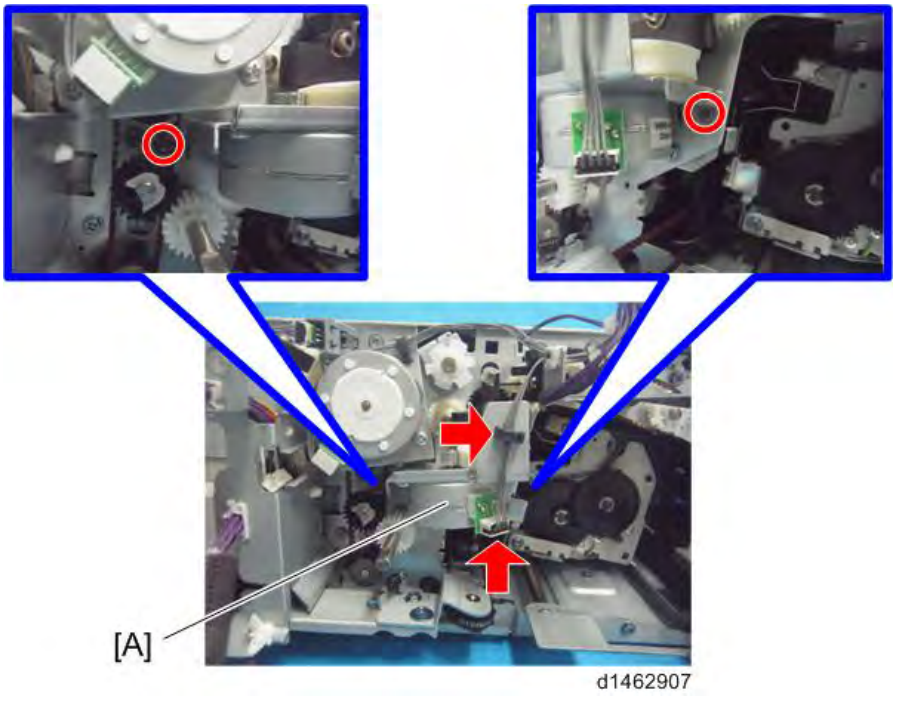
- After attaching, rotate the knob, and check that all gear trains can rotate.
- After attachment, when the cam [A] is rotated, check that the link [B] interlocks.



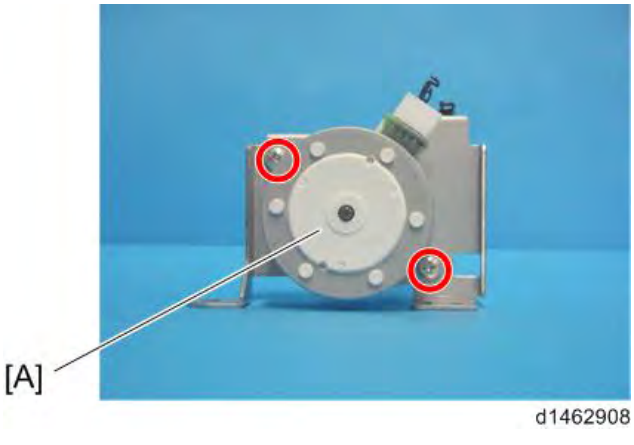
1. **Controller board bracket (page 13)**
2. **Pulley [A], Timing belt [B] (×1)**



3. Shift motor unit [A] (×2, ×1, ×1)



4. Shift motor [A] (×2).



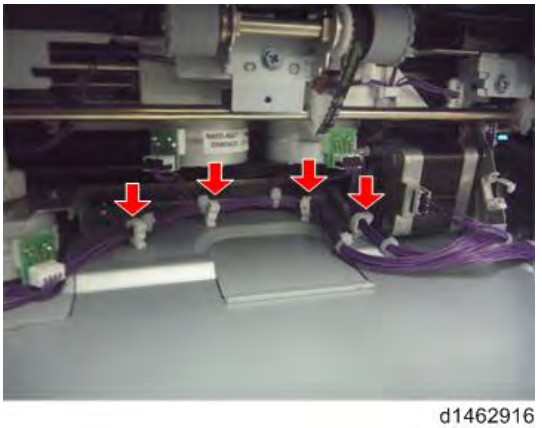
Stapler Retreat Motor

⚠CAUTION

- When placing the finisher upside down, be careful not to deform the frame.

1. Paper exit cover (page 12)

2. **Release the four clamps (×4).**

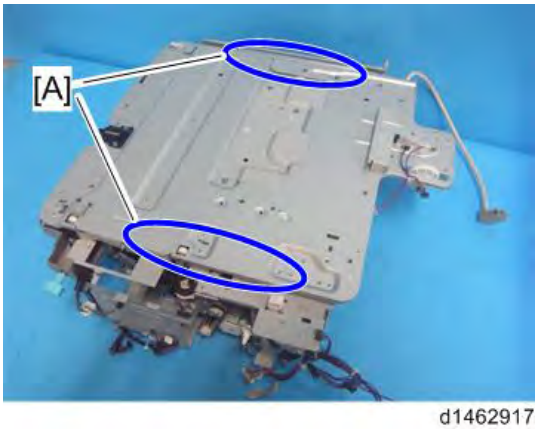


d1462916

3. **Place the internal finisher upside down on the table while holding the parts shown below [A].**

Note

- Hold the parts [A] shown below to lift the internal finisher. Otherwise, other brackets and parts may be deformed.

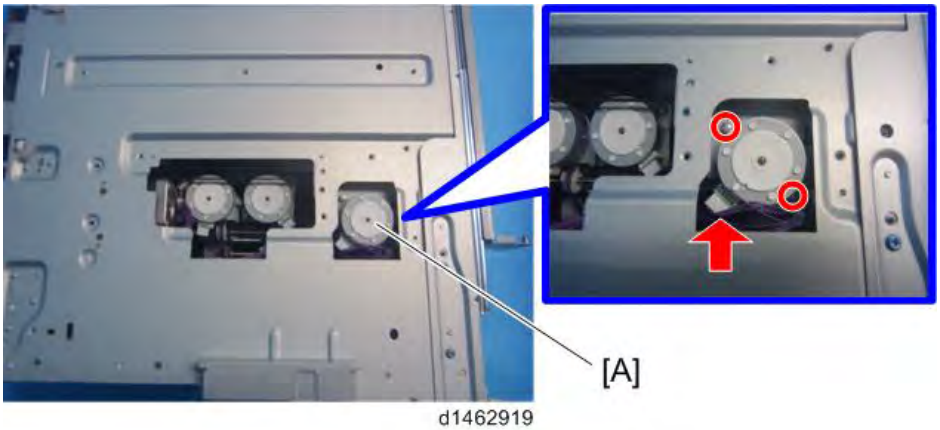


d1462917

4. Base cover [A] (×3)

d1462918

5. Stapler retreat motor [A](×2, ×1)

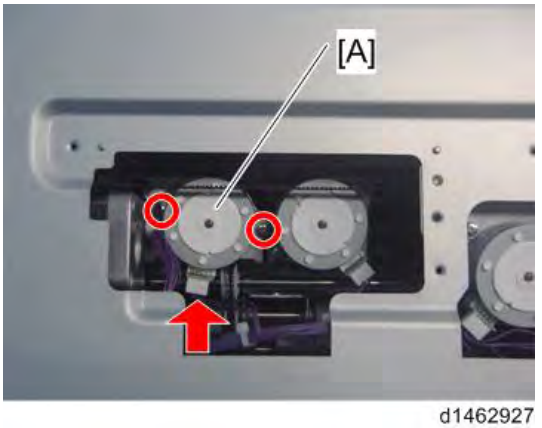


d1462919

Jogger Fence Motor (Front / Rear)

1. Base cover (page 35)

2. Jogger fence motor (front) [A] (×2, ×1, Timing belt×1)



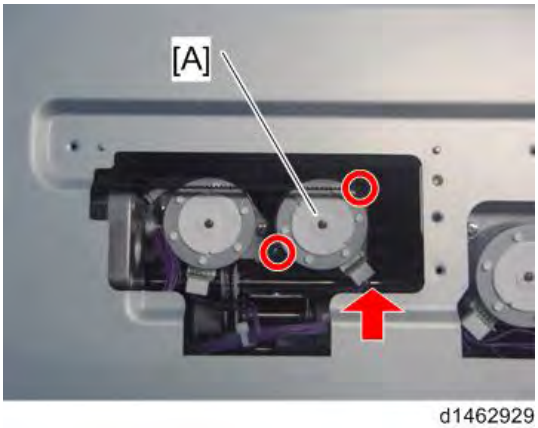
d1462927

Note

- During re-assembly, remove the jogger fence motor (rear) bracket, and check that the motor pulley has not separated from the timing belt.

d1462928

3. **Jogger fence motor (rear) [A] (×2, ×1, Timing belt×1)**



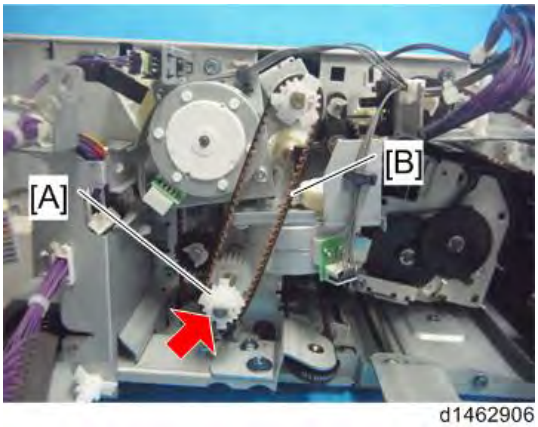
d1462929

Note

- During re-assembly, check that the motor pulley has not separated from the timing belt.

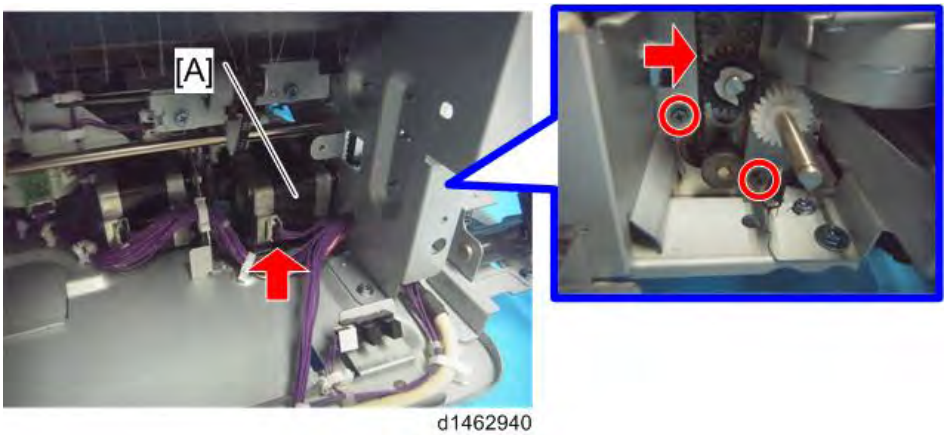
Transport Motor

1. **Paper exit cover (page 12)**
2. **Controller board (page 13)**
3. **Finisher rear cover (page 11)**
4. **Pulley [A], Timing belt [B] (×1).**



d1462906

5. Transport Motor [A] (×2, ×1, Timing belt×1)



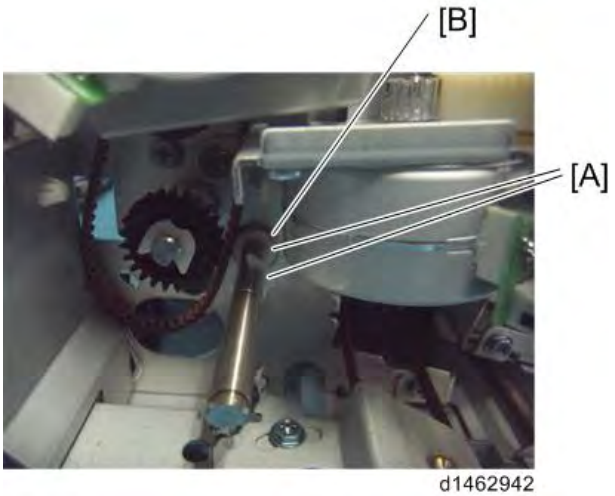
d1462940

Paper Exit Motor

1. Transport motor (page 39)
2. Controller board bracket (page 13)
3. Gear [A] (×1)

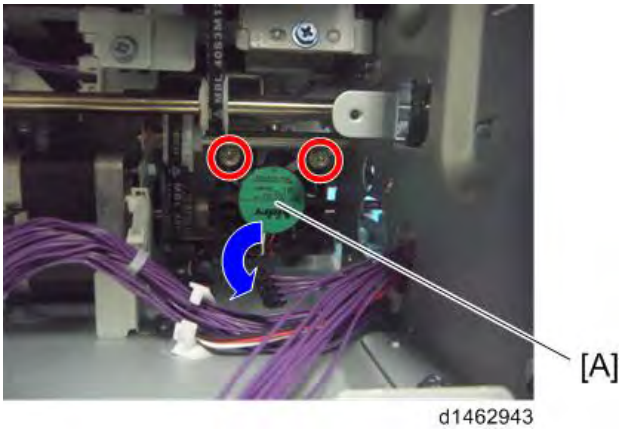
d1462941

4. Two clip rings [A] and Shaft bracket [B] (×2).



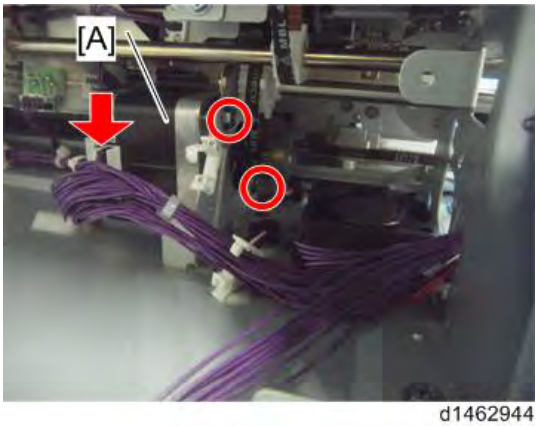
d1462942

5. Remove the screws of the fan [A] and then lay it down (×2).



d1462943

6. Paper Exit Motor [A] (×2, ×1).



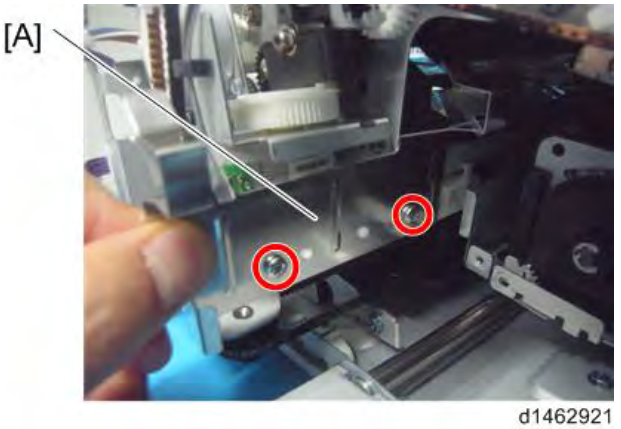
d1462944

Stapler Unit

1. Controller board bracket (page 13)
2. Insert the stapler unit [A] into the rear.

d1462920

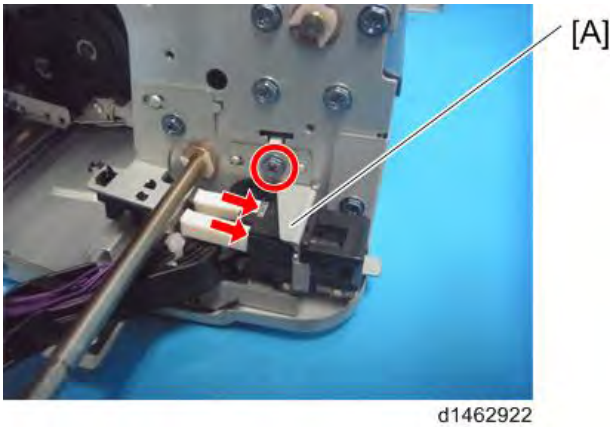
3. Rear trailing edge fence [A] (×2)



d1462921

4. Stapler home position sensor (page 22)

5. Cover open/close switch unit [A] (×1, ×2)



d1462922

6. Harness guide unit [A] (×1)

d1462923

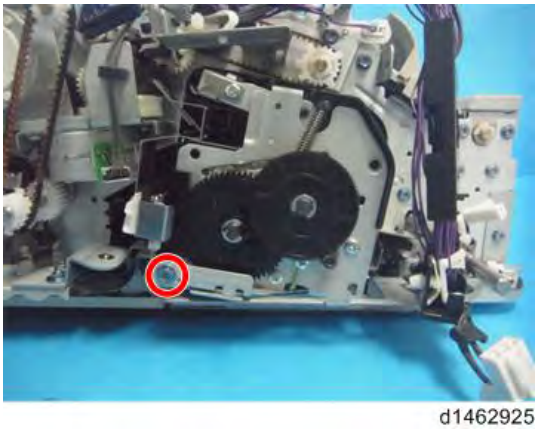
7. Move the stapler unit to the front, and remove the cartridge [A].

d1462924

Note

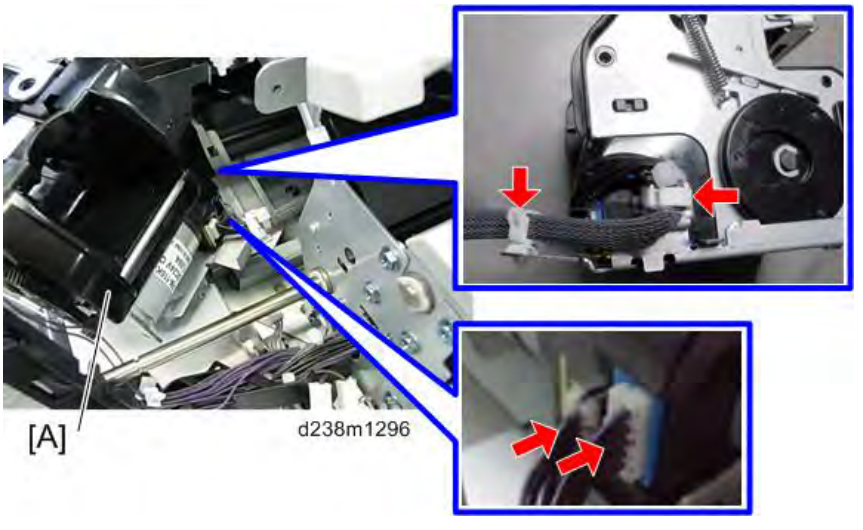
- During re-assembly, install the cartridge last.

8. **Remove the unit fixing screw of the stapler unit. (×1)**



d1462925

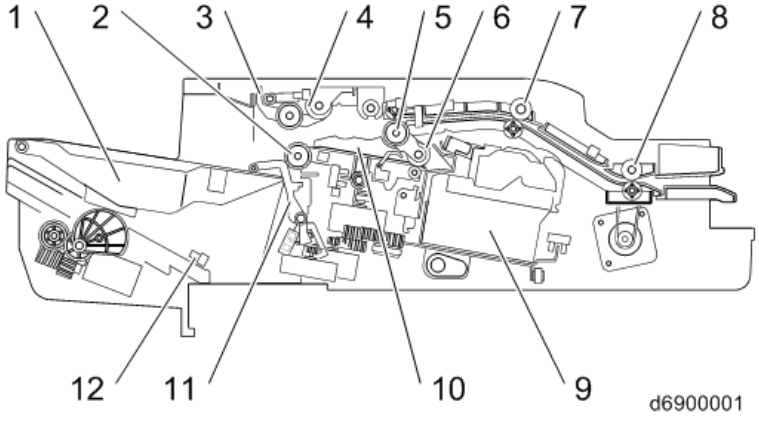
9. **Stapler unit [A] (×2, ×2)**



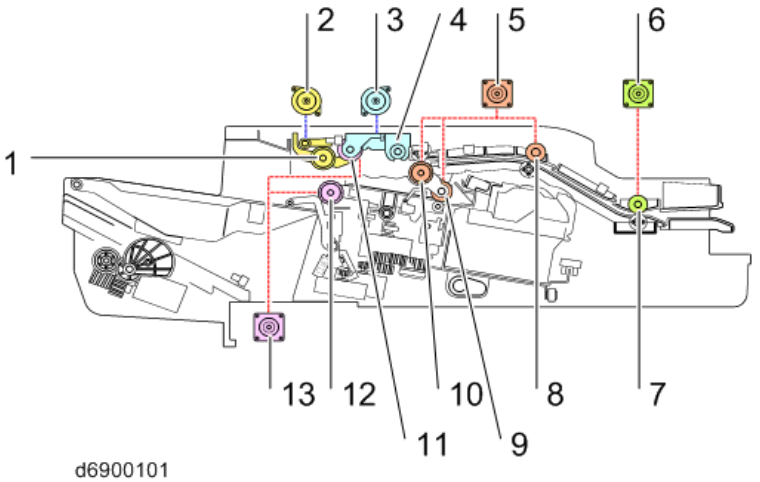
2. Detailed Descriptions

Internal Finisher SR3130 (D690)

Parts Layout

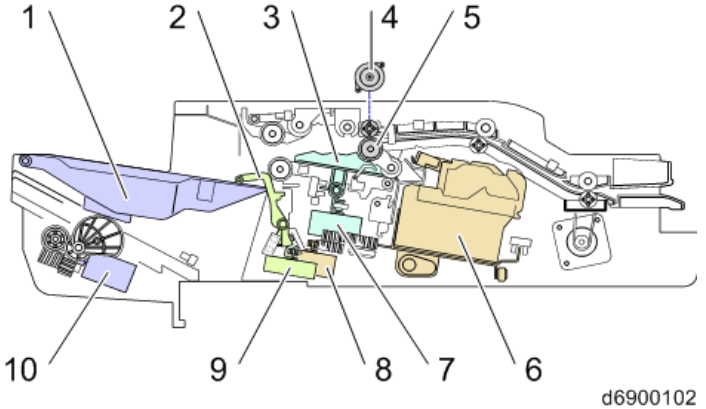


No.	Description	No.	Description
1	Paper exit tray	7	Transport roller
2	Paper ejection roller	8	Entrance roller
3	Paper exit open/close guide plate	9	Stapler
4	Positioning roller	10	Staple tray (jogger)
5	Shift roller	11	Stack height detection lever
6	Reverse roller	12	Full sensor



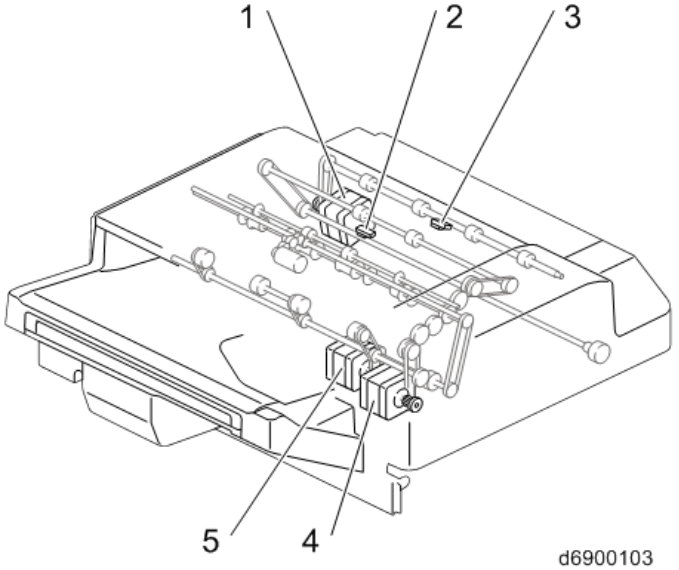
d6900101

No.	Description	No.	Description
1	Paper exit open/close guide plate	8	Transport roller
2	Paper exit open/close guide plate motor	9	Reverse roller
3	Positioning roller motor	10	Shift roller
4	Positioning roller unit	11	Positioning roller
5	Transport motor	12	Paper ejection roller
6	Entrance motor	13	Paper exit motor
7	Entrance roller		

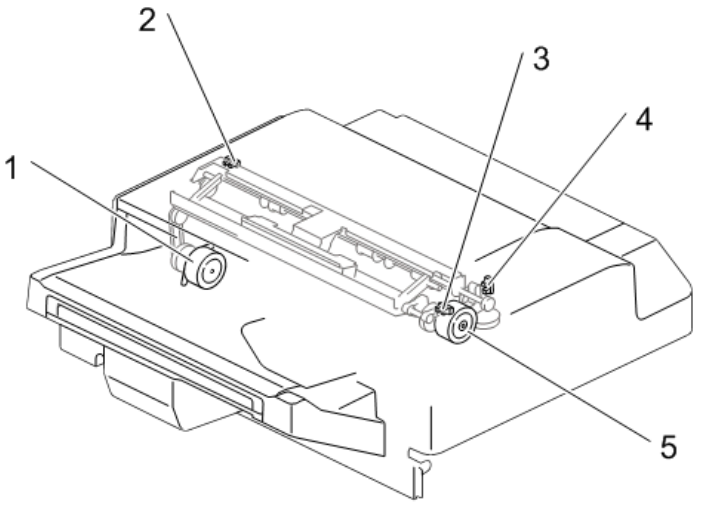


d6900102

No.	Description	No.	Description
1	Paper exit tray	6	Stapler
2	Stack height detection lever	7	Jogger motor
3	Staple tray (jogger)	8	Stapler retreat motor
4	Shift motor	9	Stack height lever motor
5	Shift roller	10	Tray lift motor

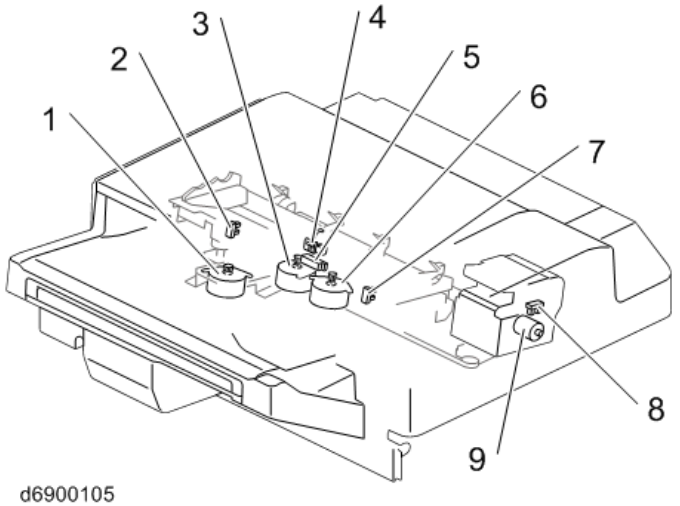


No.	Description	No.	Description
1	Entrance motor	4	Transport motor
2	Transport sensor	5	Paper exit motor
3	Entrance sensor		



d6900104

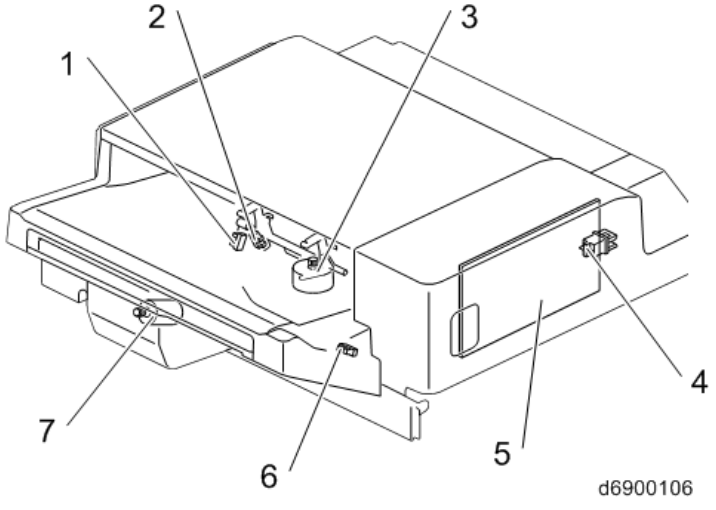
No.	Description	No.	Description
1	Positioning roller motor	4	Shift roller Home Position sensor
2	Positioning roller Home Position sensor	5	Paper exit guide plate motor
3	Paper exit guide plate Home Position sensor		



d6900105

No.	Description	No.	Description
1	Stapler retreat motor	6	Jogger fence motor (front)

No.	Description	No.	Description
2	Jogger fence Home Position sensor (rear)	7	Jogger fence Home Position sensor (front)
3	Jogger fence motor (rear)	8	Stapler Home Position sensor
4	Paper sensor	9	Stapler motor
5	Stapler tray jam sensor		



No.	Description	No.	Description
1	Stack height lever HP sensor	5	Controller board
2	Paper surface sensor	6	Full sensor
3	Stack height lever motor	7	Tray lift motor
4	Cover open/close switch		

Mechanism

Straight paper ejection mechanism

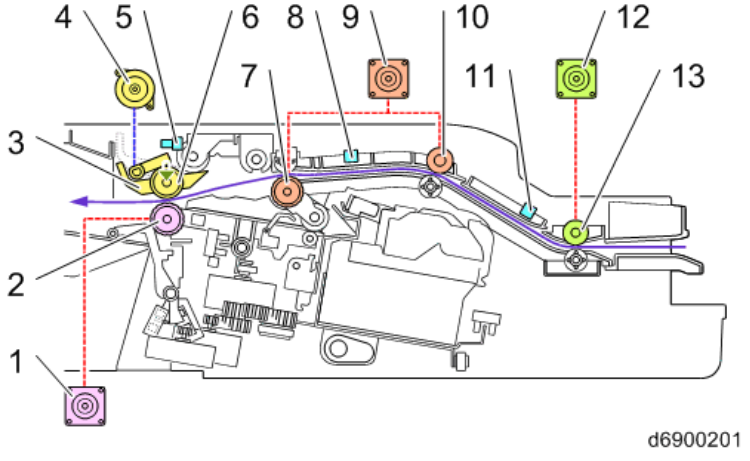
Paper ejected from the printer unit is transported by a transport roller and eject roller via an entrance roller. These are driven by entrance motor, transport motor and eject motor which permit linear speed correspondence. The paper exit driven roller stands by at a certain distance from the paper exit roller,

and its descent/ascent is performed by an eject guide plate movable motor depending on the detection timing of the sensors (motor operates CW/CCW).

The paper eject open/close guide plate descent/ascent timings are as follows:

- Descent: Paper rear edge passes entrance sensor
- Ascent: Paper rear edge passes transport sensor

The eject guide plate is provided with a Home Position sensor which detects the home position during ascent.



No.	Description	No.	Description
1	Paper exit motor	8	Transport sensor
2	Paper exit roller	9	Transport motor
3	Paper exit open/close guide plate	10	Transport roller
4	Paper exit guide plate motor	11	Entrance sensor
5	Paper exit open/close guide plate Home Position sensor	12	Entrance motor
6	Paper exit driven roller	13	Entrance roller
7	Shift roller		

Shift eject mechanism

As with straight eject, shift eject is also done by transporting the paper to a transport roller and an eject roller via an entrance roller.

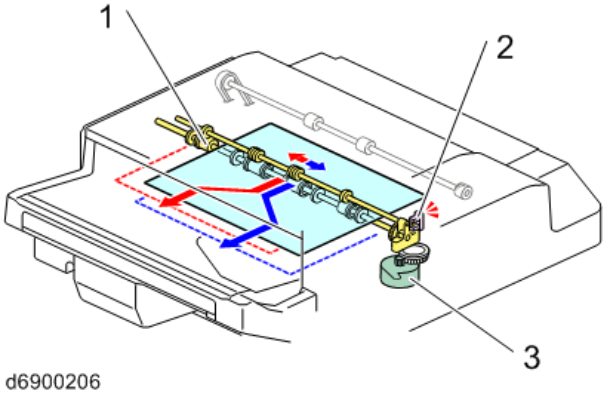
In shift operation, a shift roller is moved from front to back during transport by the driver of a shift motor.

Shift roller operation timings are as follows:

- Shift operation: Paper rear edge passes entrance sensor
- Return to original position: Paper rear edge passes transport sensor

The shift roller detects the home position by a Home Position sensor.

The shift roller motor operates CW/CCW, and shifts the paper from front to back. The home position is located at the back of the displacement range, and is detected by a Home Position sensor.

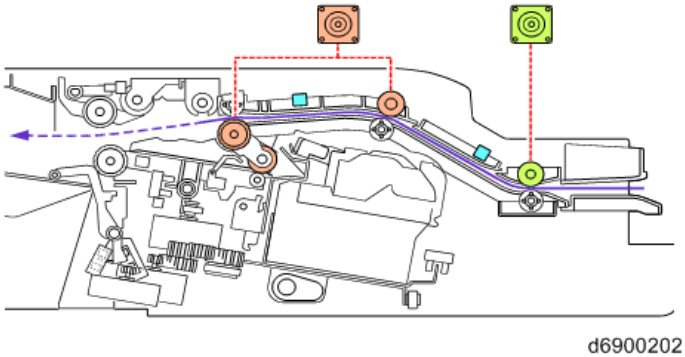


d6900206

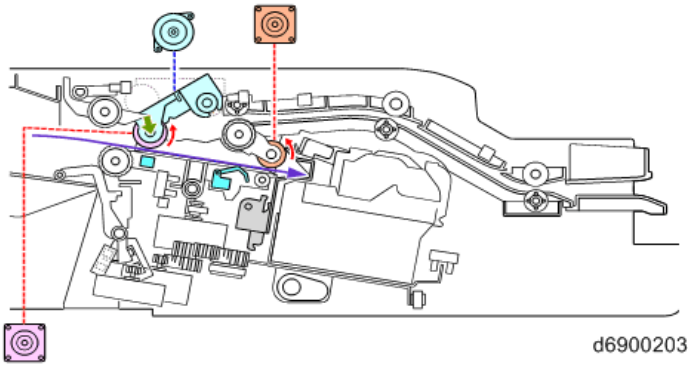
No.	Description	No.	Description
1	Shift roller	3	Shift motor
2	Shift roller Home Position sensor		

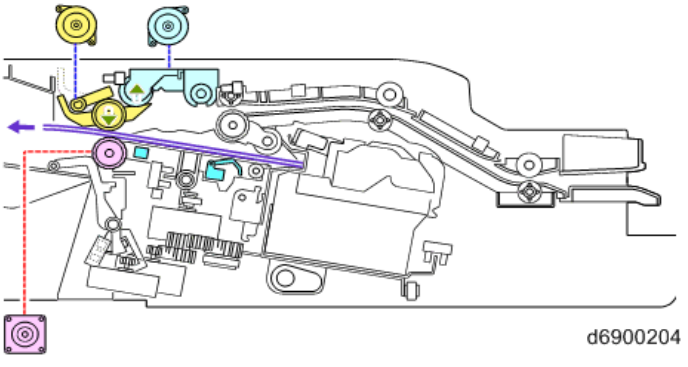
Staple eject mechanism

Staple eject requires that transported paper is temporarily stored in a staple tray. After rear edge detection of the transported paper is performed by a transport sensor, a positioning roller unit descends and transports it to a staple tray.



d6900202





Positioning roller ascent/descent mechanism

The positioning roller unit is made to ascend/descend by a positioning roller up/down drive motor (the motor operates CW/CCW), and its position is detected by a Home Position sensor. The positioning roller rotates in the opposite direction to the transport roller, and has the function of transporting paper to the back of the staple tray.

Paper rear edge alignment mechanism

The rear edge of paper transported by the positioning roller is made to project against a rear trailing edge fence by a reverse roller. It rotates continuously until the bundle of paper is ejected after it is stapled.

The reverse roller is driven from a transport roller via a gear, and is always situated above the stapler tray. A driven roller is installed on the side of the stapler tray which reduces wear of the reverse roller.

Paper detection on stapler tray

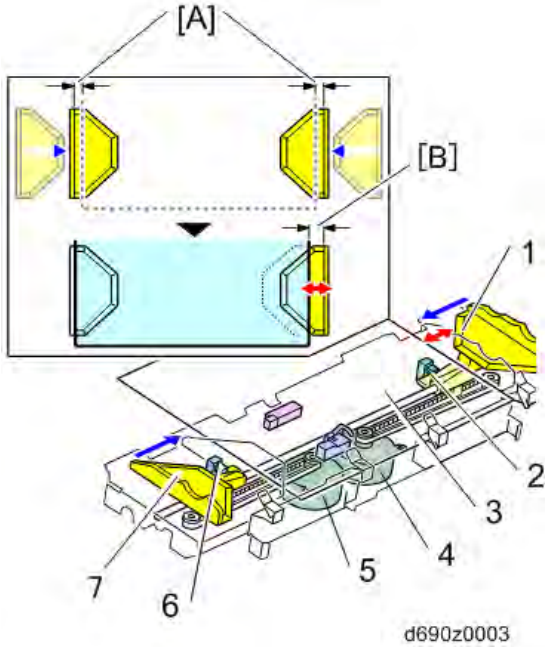
The stapler tray is provided with the following sensors which detect paper status in the tray.

- Paper jam in tray: tray jam sensor
- Paper present/absent in tray: paper sensor

Jogger mechanism (paper alignment)

Paper transported to the stapler tray is aligned one sheet at a time by a jogger fence. The jogger fences are driven forwards and backwards independently, and align the paper with the tray center. Jogger fence drives are installed at the front and back. Home Position sensors are also installed at the front and back.

When the paper alignment is performed, the jogger fences move from the home position, and stand by 7 mm away from the paper to be stapled. When the paper is then transported to the tray, the jogger fence (rear) moves according to the paper size and aligns the paper. The jogger fence (rear) stands by 7 mm away from the paper, and again moves 7 mm towards the paper in order to perform paper alignment, so it moves a total of 14 mm. During the paper alignment, the jogger fence (rear) repeats this movement.



[A]: 7mm

[B]: 14mm

No.	Description	No.	Description
1	Jogger fence (rear)	5	Jogger fence displacement motor (front)
2	Jogger fence Home Position sensor (rear)	6	Jogger fence Home Position sensor (front)
3	Stapler tray	7	Jogger fence (front)
4	Jogger fence displacement motor (rear)		

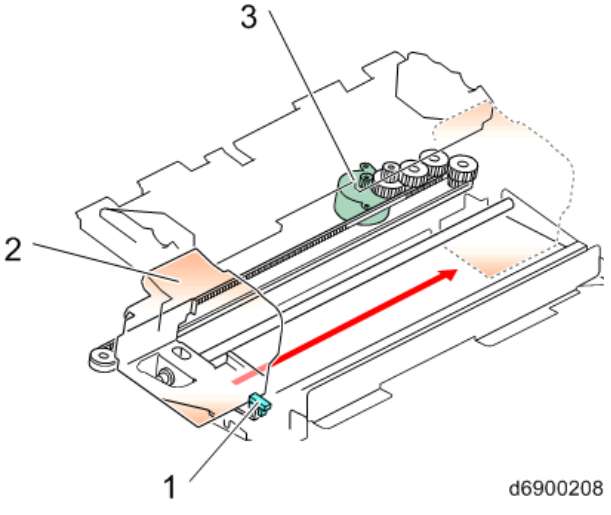
Stapler movement mechanism

Stapler specification is as follows:

- There are three stapling positions, i.e., one front parallel, one back parallel and two parallel.
- 30 large sheets or 50 small sheets can be stapled.

To change the stapling position, a mechanism is provided which moves the stapler.

The stapler is moved by a stapler motor, and the home position is detected by a Home Position sensor.



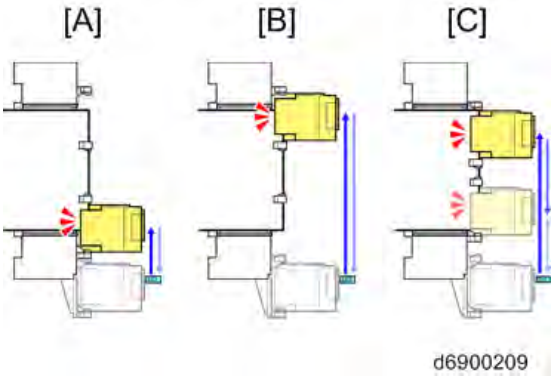
No.	Description	No.	Description
1	Stapler Home Position sensor	3	Stapler retreat motor
2	Stapler		

The stapler moves from the home position to the paper size to be stapled, and temporarily stands by. Next, the paper is transported, and after the jogger operation (paper alignment), stapling is performed.

The following picture shows the stapler standby position according to various stapling positions. From the left, there is front parallel one position, back parallel one position, and parallel two positions.

For parallel two positions, the first staple is inserted from the front, and it then moves to the back to perform stapling.

Stapling is performed back and forth, i.e., the second staple is back > front, the third staple is front > back, etc.



[A]: Front parallel, one position

[B]: Back parallel, one position

[C]: Parallel, two position

Paper eject (bundle eject)

After stapling, the eject paper open/close guide plate descends, and ejects the bundle of paper while gripping it with the eject roller.

Paper press mechanism

For ejected paper, a paper press unit is provided to immobilize the paper above the tray. It is driven by a paper press drive motor (motor operates CW/CCW)

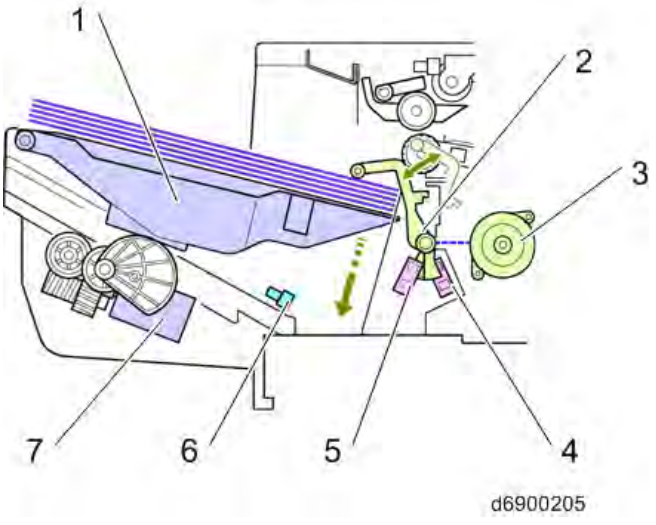
The paper press unit is provided with a paper surface sensor which detects the upper part of the paper, and a Home Position sensor which detects the home position of the paper press unit. The paper surface sensor detects the number of sheets in the tray, and if the number is large, it descends the tray to a suitable position.

Tray drive mechanism

The eject tray has a mechanism which descends the tray to a suitable position. This is driven by a tray drive motor (motor operates CW/CCW). It operates when the paper surface sensor cannot detect paper in the tray, and descends the eject tray until detection is performed.

Tray full detection mechanism

When the eject tray descends to its maximum, a full detect sensor below is covered by the eject tray filler, and it is detected that the top of the tray is full. During full tray detection, paper transport is temporarily stopped. After the paper bundle is released, the tray is raised to a suitable position, and the eject operation is repeated.



No.	Description	No.	Description
1	Paper exit tray	5	Stack height lever HP sensor
2	Stack height detection lever	6	Full sensor
3	Stack height lever motor	7	Tray lift motor
4	Paper surface sensor		

Internal Shift Tray SH3070
Machine Code: D691
Field Service Manual

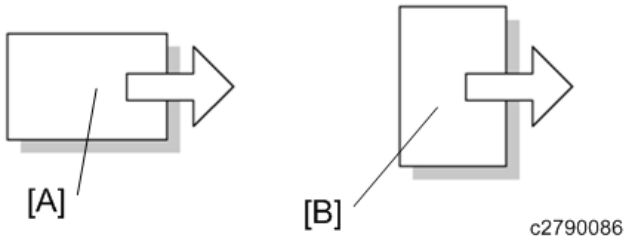
May, 2016

Symbols, Abbreviations and Trademarks

Symbols, Abbreviations

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

Symbol	What it means
	Clip ring
	Screw
	Connector
	Clamp
	E-ring
	Flat Flexible Cable
	Timing Belt
SEF	Short Edge Feed [A]
LEF	Long Edge Feed [B]
K	Black
C	Cyan
M	Magenta
Y	Yellow
B/W, BW	Black and White
FC	Full color



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- Windows® Internet Explorer® 7
- Windows® Internet Explorer® 8

The proper names of the Windows operating systems are as follows:

- The product names of Windows Vista are as follows:

  Microsoft® Windows Vista® Ultimate

  Microsoft® Windows Vista® Business

  Microsoft® Windows Vista® Home Premium

  Microsoft® Windows Vista® Home Basic

  Microsoft® Windows Vista® Enterprise
- The product names of Windows 7 are as follows:

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  Microsoft® Windows® 7 Professional

  Microsoft® Windows® 7 Ultimate

  Microsoft® Windows® 7 Enterprise
- The product names of Windows 8 are as follows:

  Microsoft® Windows® 8

  Microsoft® Windows® 8 Pro

  Microsoft® Windows® 8 Enterprise
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- The product names of Windows Server 2003 R2 are as follows:

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  Microsoft® Windows Server® 2003 R2 Enterprise Edition
- The product names of Windows Server 2008 are as follows:

  Microsoft® Windows Server® 2008 Standard

  Microsoft® Windows Server® 2008 Enterprise
- The product names of Windows Server 2008 R2 are as follows:

  Microsoft® Windows Server® 2008 R2 Standard

  Microsoft® Windows Server® 2008 R2 Enterprise
- The product names of Windows Server 2012 are as follows:

  Microsoft® Windows Server® 2012 Foundation

  Microsoft® Windows Server® 2012 Essentials

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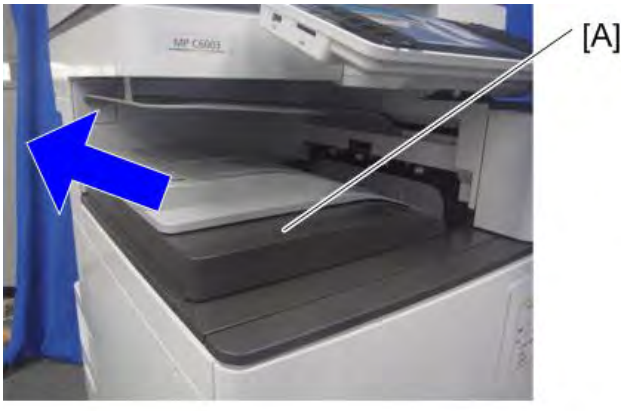
1. Replacement and Adjustment

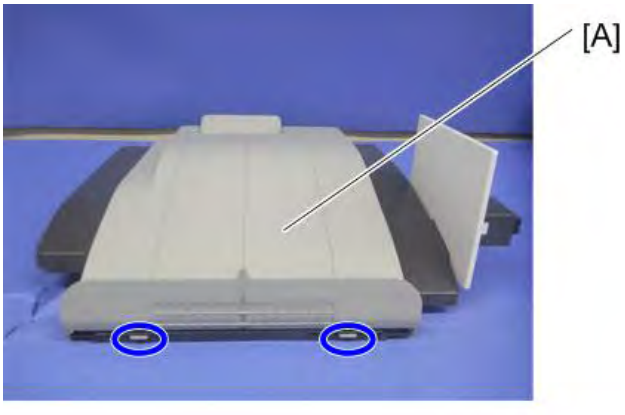
Controller Board

1. Shift tray [A]



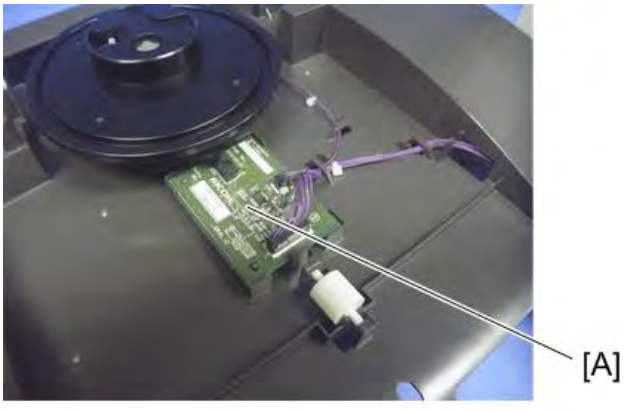
d1462810

2. Upper tray [A]



d1462811

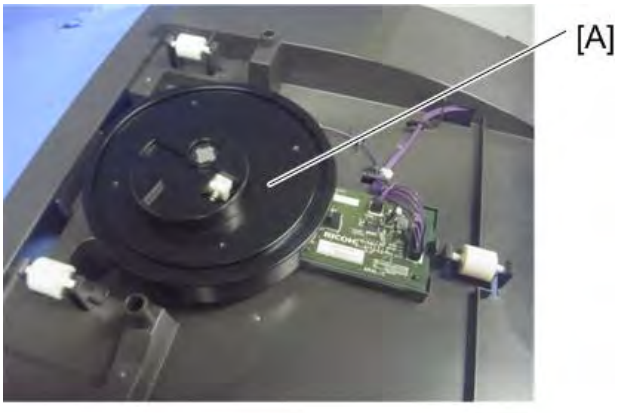
3. Controller board [A]



d1462812

Shift Motor

1. Upper tray (page 7)
2. Interlocking plate [A]

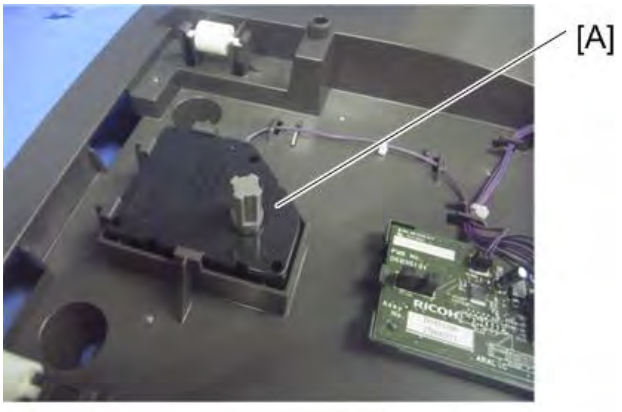


d1462813

3. Rotating plate [A]

d1462814

4. Shift motor [A] (×1)

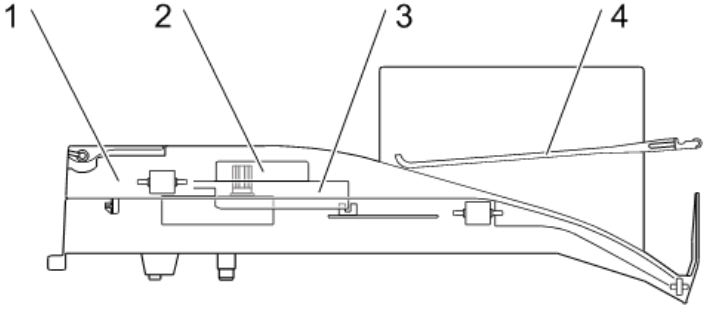


d1462815

2. Detailed Descriptions

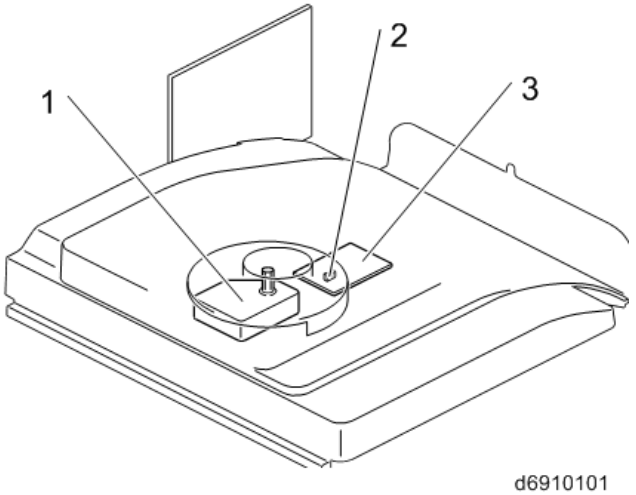
Internal Shift Tray SH3070 (D691)

Parts Layout



d6910001

No.	Description	No.	Description
1	Upper tray	3	Rotating plate
2	Interlocking plate	4	Feeler



d6910101

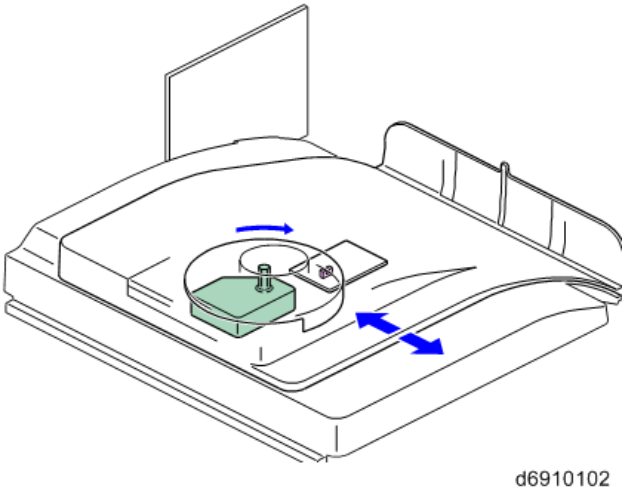
No.	Description	No.	Description
1	Shift motor	3	Controller board

No.	Description	No.	Description
2	Position sensor		

Mechanism

Upper tray drive mechanism

The upper tray is moved by the shift motor through a rotor plate and interlocking plate.



d6910102

Position detection

The position sensor is switched ON (unblocked)/OFF (blocked) by an actuator on the rotating plate.

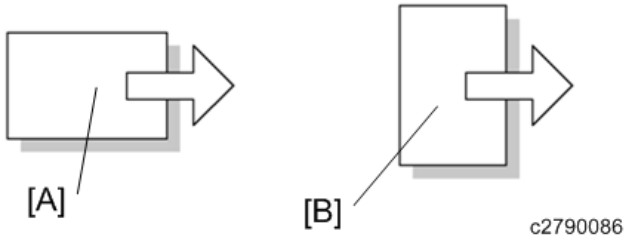
LCIT RT3030
Machine Code: D696
Field Service Manual

May, 2016

Symbols, Abbreviations and Trademarks

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

	Clip ring
	Screw
	Connector
	Clamp
SEF	Short Edge Feed [A]
LEF	Long Edge Feed [B]



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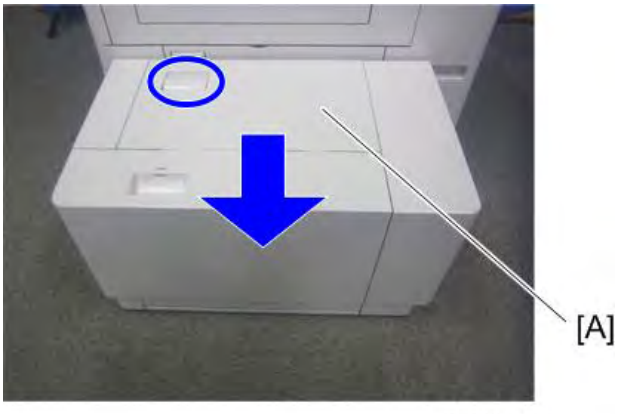
1. Replacement and Adjustment

Rear Cover

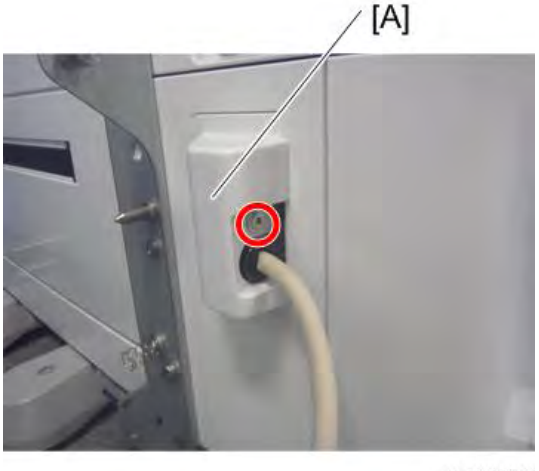
Rear Cover

1. Pull out the LCT [A].



d1462775

2. Cable cover [A] (×1)

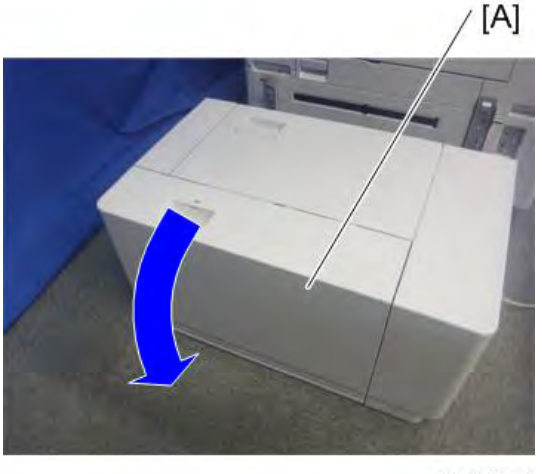


d1462776

3. **Cable bracket [A] (×1, ×1)**

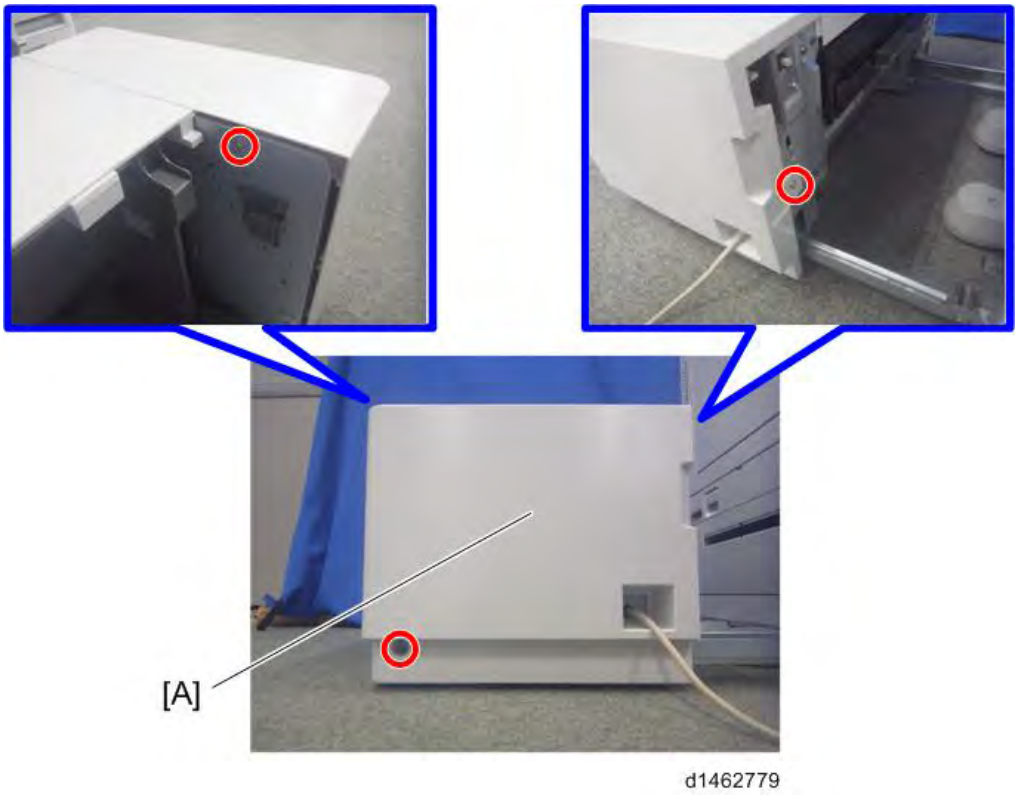
d1462777

4. **Open the right cover [A].**



d1462778

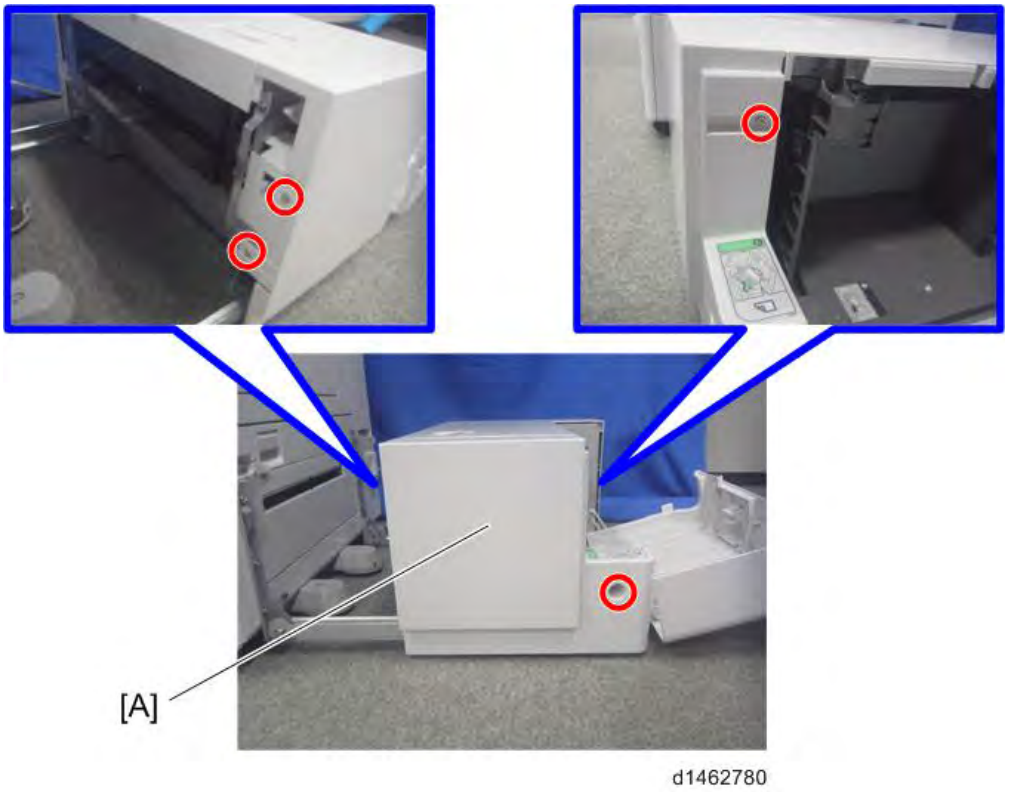
5. **Rear cover [A] (×3)**



Front Cover

Front Cover

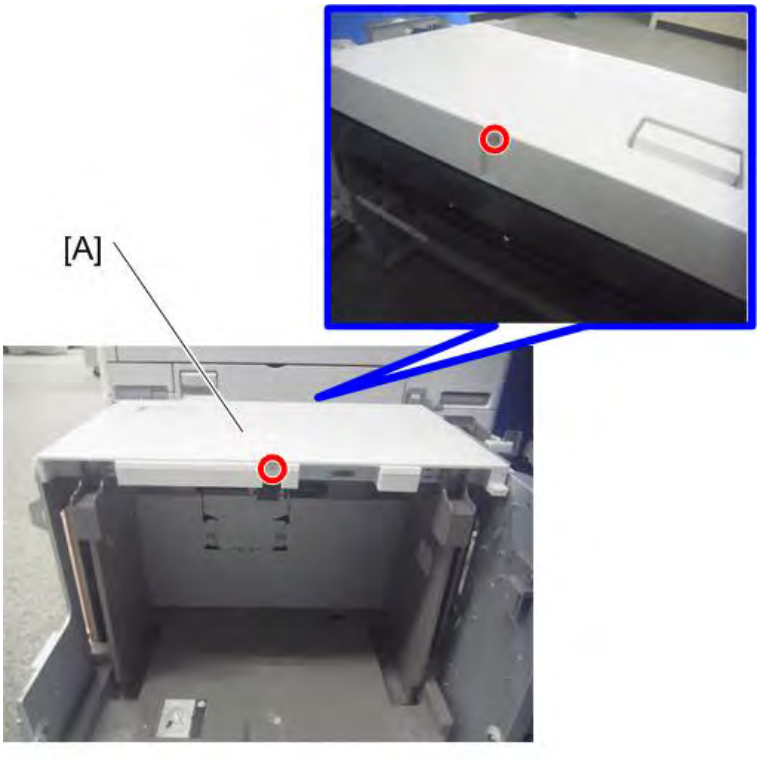
1. Open the right cover (page 10 "Right Cover")
2. Front cover [A] (×4)



Upper Cover

Upper Cover

1. Front cover (page 8 "Front Cover")
2. Rear cover (page 5 "Rear Cover")
3. Upper cover [A] (×2)



d1462781

Right Cover

Right Cover

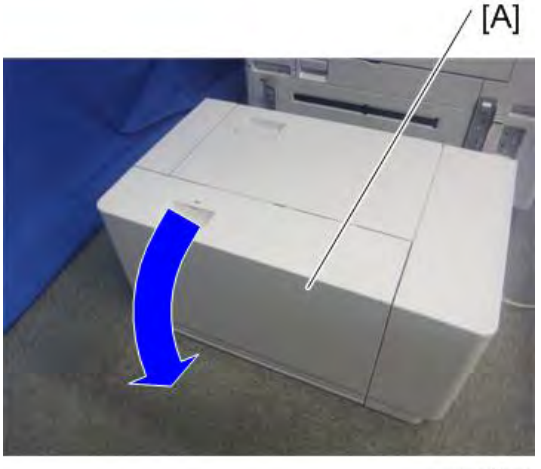
1. Front cover (page 8 "Front Cover")
2. Right cover [A] (×1, ×1)

d1462782

Pick-up Roller, Feed Roller, Friction Roller

Pick-up Roller, Feed Roller, Friction Roller

1. Open the right cover [A].

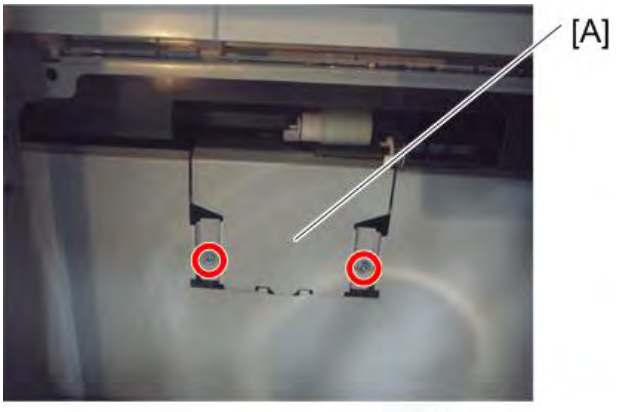


d1462778

2. Pick-up roller [A] (×1)

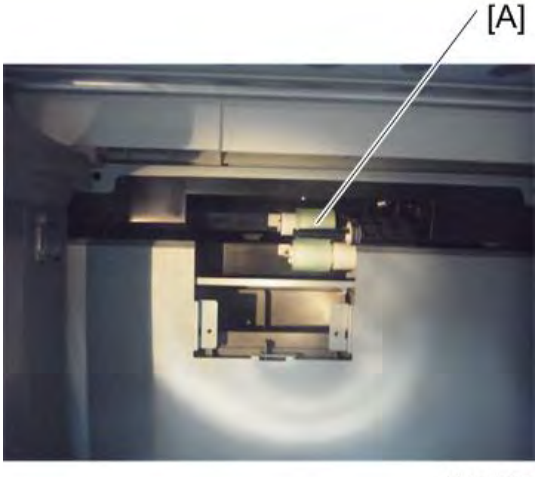
d1462794

3. **Sensor bracket [A] (×2)**



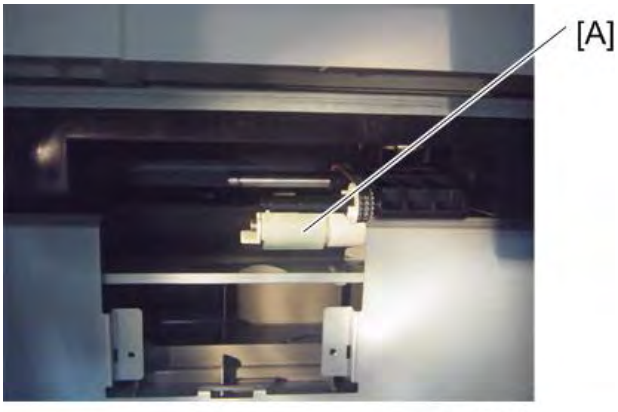
d1462795

4. **Feed roller [A] (×1)**



d1462796

5. Friction roller [A] (×1)

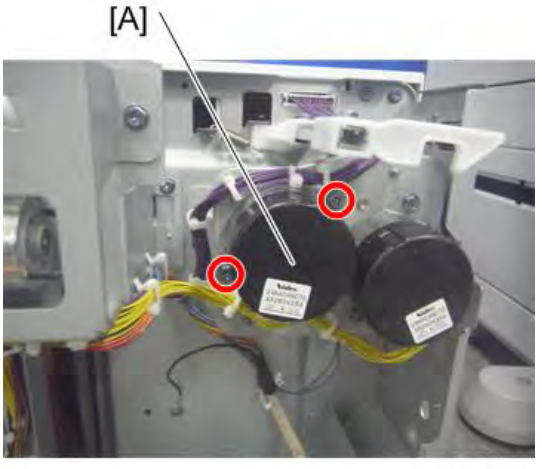


d1462797

Paper Feed Motor

Paper Feed Motor

1. Rear cover (page 5 "Rear Cover")
2. Paper feed motor [A] (×2, ×1)



d1462783

Transport Motor

Transport Motor

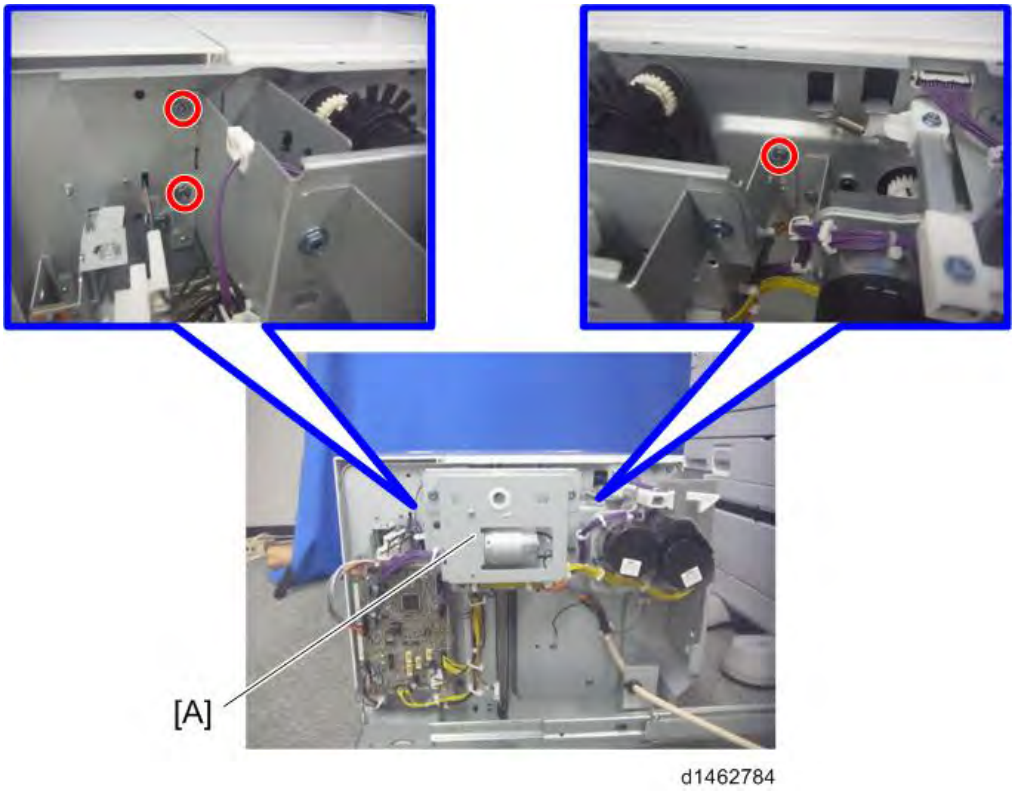
1. Rear cover (page 5 "Rear Cover")
2. Transport motor [A] (×2, ×1)

d1462798

Tray Lift Unit

Tray Lift Unit

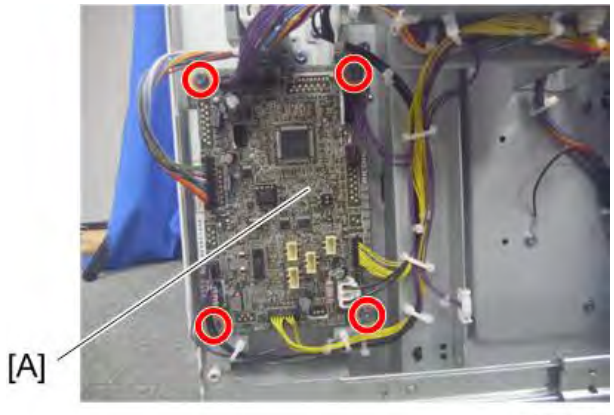
1. Rear cover (page 5 "Rear Cover")
2. Tray lift unit [A] (×3, ×1, ×10)



Controller Board

Controller Board

1. Rear cover (page 5 "Rear Cover")
2. Controller board [A] (×4, ×9, ×2)



d1462785

Tray Set Switch (Front)

Tray Set Switch (Front)

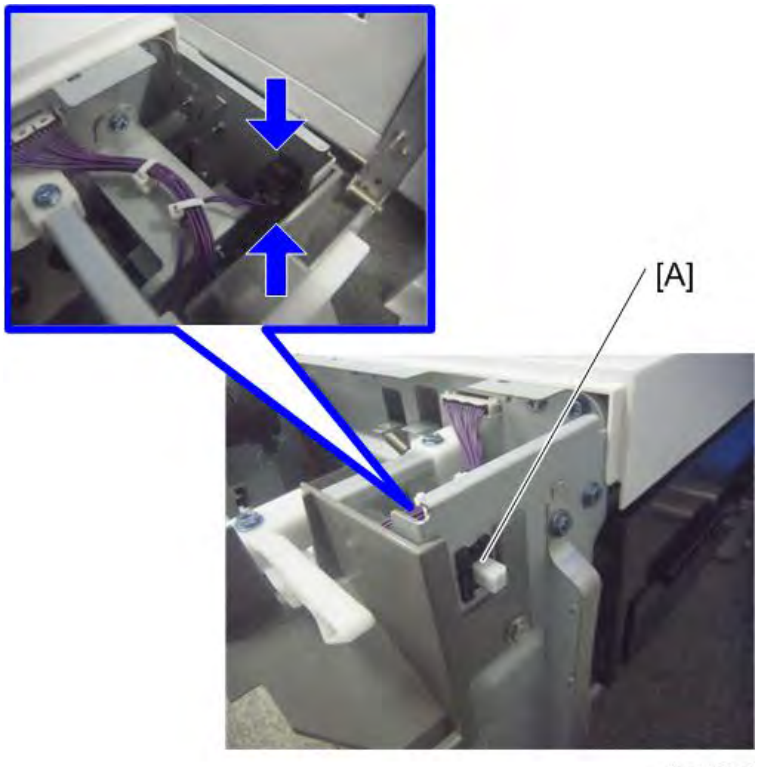
1. Front cover (page 8)
2. Tray set switch (front) [A] (×1)

d1462786

Tray Set Switch (Rear)

Tray Set Switch (Rear)

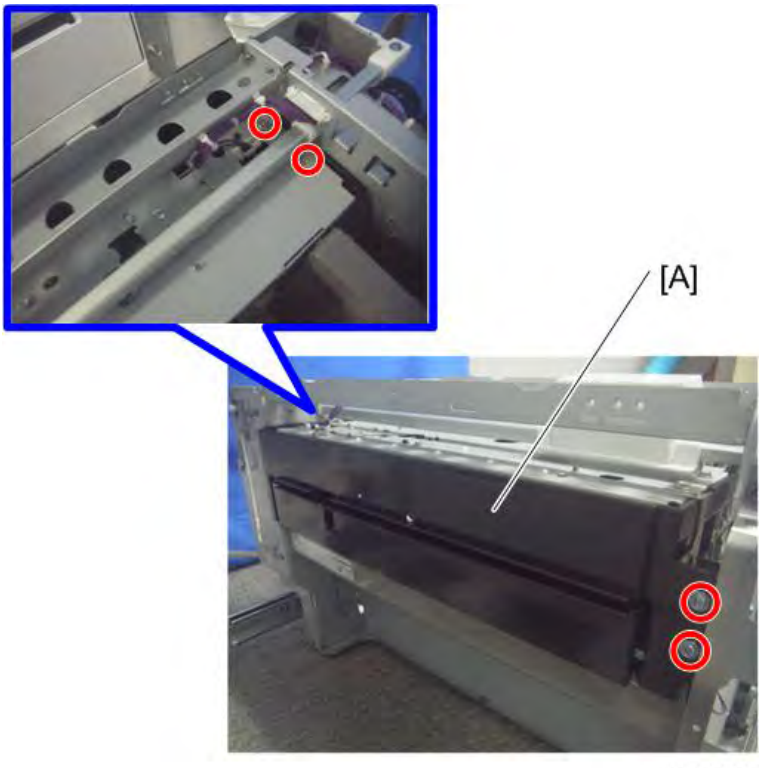
1. Front cover (page 8 "Front Cover")
2. Tray set switch (rear) [A] (×1)



Paper Feed Sensor, Paper End Sensor, Upper Limit Sensor, Transport Sensor

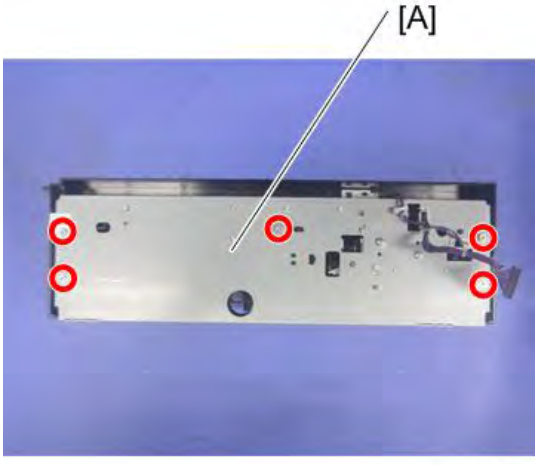
Paper Feed Sensor, Paper End Sensor, Upper Limit Sensor, Transport Sensor

1. Upper cover (page 9 "Upper Cover")
2. Paper feed unit [A] (×4, ×1, ×2)

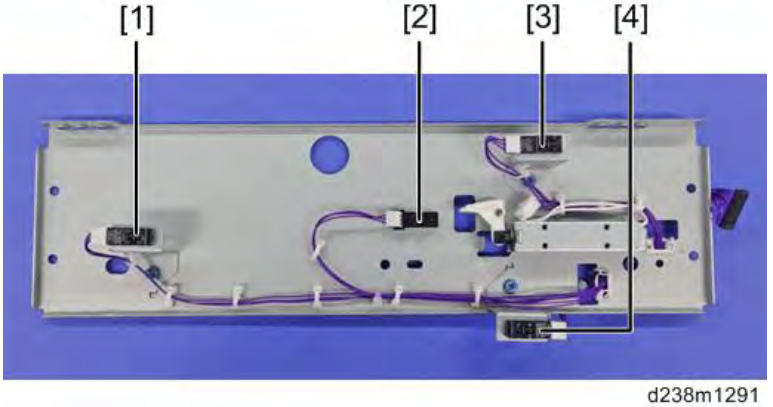


d1462788

3. **Paper feed unit cover [A] (×5)**



d1462789



d238m1291

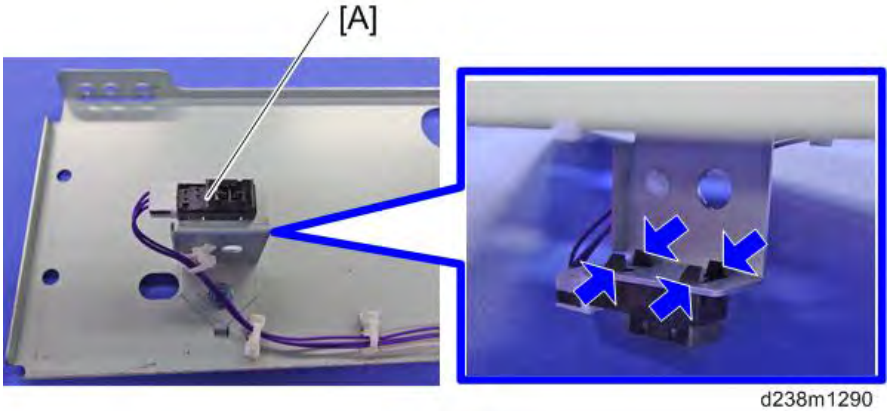
[1]: Paper feed sensor

[2]: Upper limit sensor

[3]: Paper end sensor

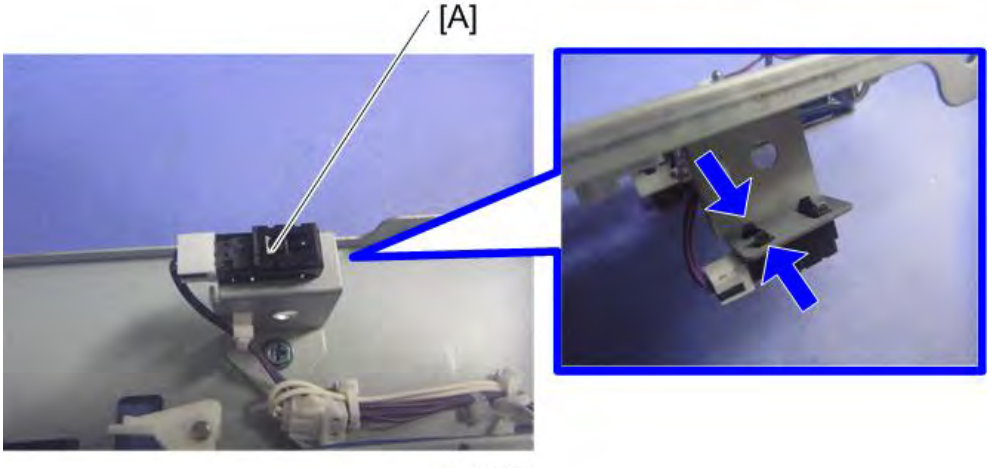
[4]: Transport sensor

4. **Paper feed sensor [A] (×1)**



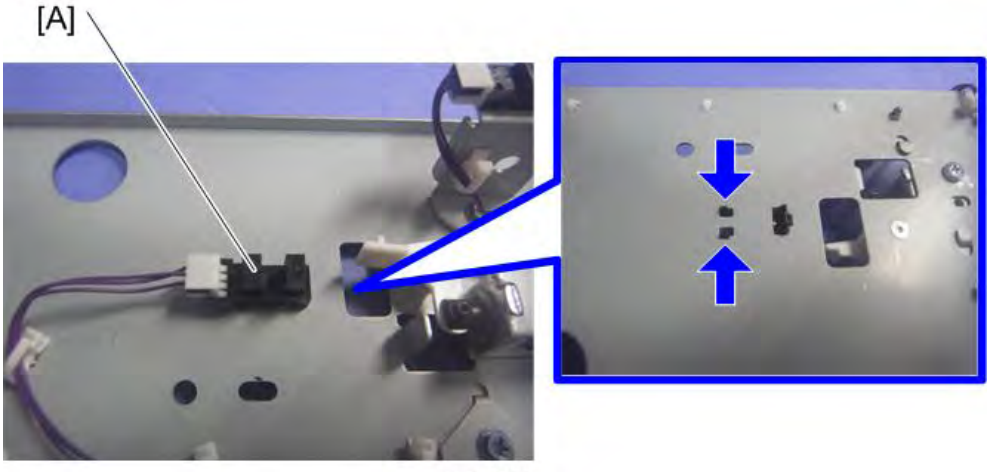
d238m1290

5. **Paper end sensor [A] (×1)**



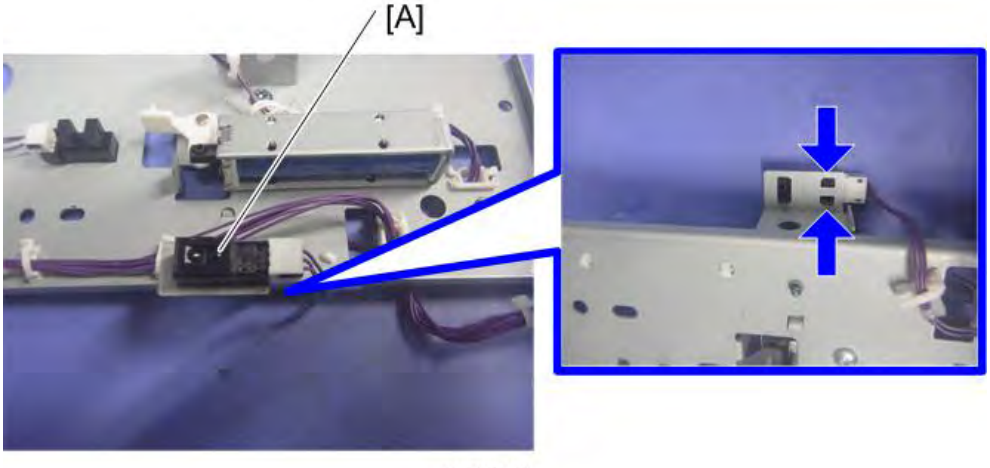
d1462791

6. **Upper limit sensor [A] (×1)**



d1462792

7. **Transport sensor [A] (×1)**



d1462790

2. Detailed Descriptions

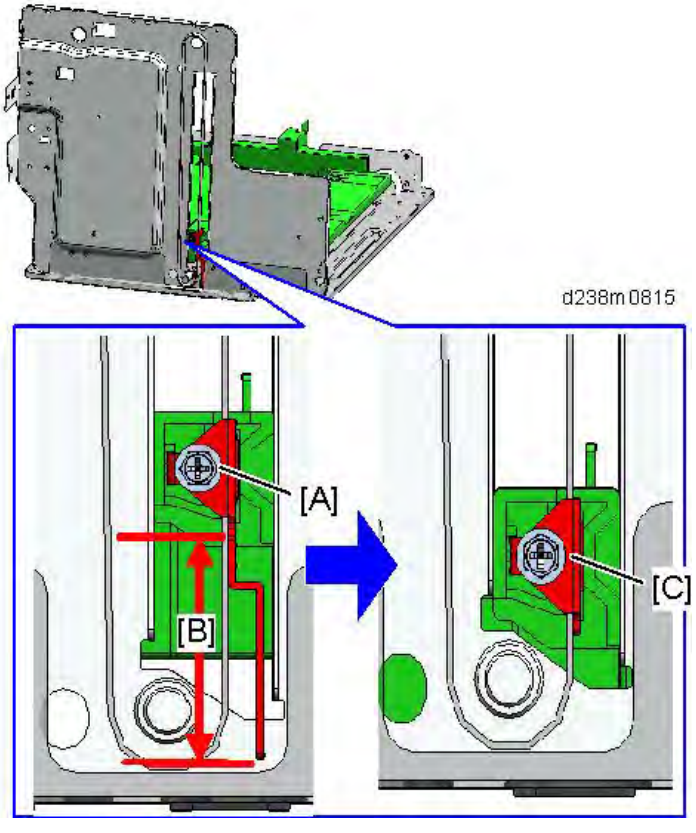
LCIT RT3030 (D696)

Changes from the Previous Machine

The maximum paper quantity is increased.

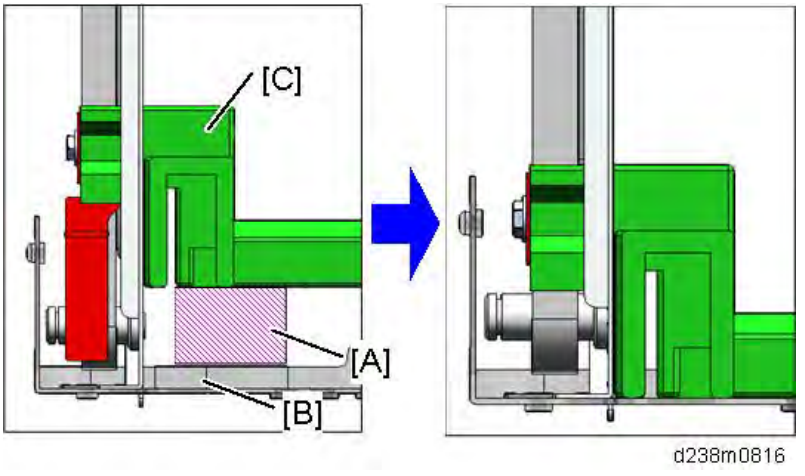
The bottom part [B] of the tray holder [A] which holds the paper tray and the timing belt has been shortened to increase the maximum paper quantity ([C]: The tray holder for increasing the LCIT capacity).

A maximum of 1500 sheets of paper (thickness: 0.11 mm) can now be set, but only after changing some of the parts (a paper tray, a belt pulley, and side fences). For the modification procedure, refer to "Modification for Increasing the LCIT Capacity" in the installation procedure for LCIT RT3030 (D696) in the main service manual.

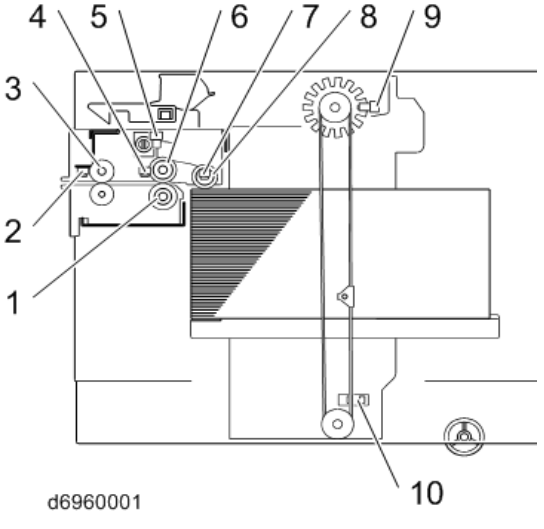


- Tray horizontal adjustment

For the previous machine, the paper tray [C] could not be placed on the bottom plate [B], so a jig [A] was placed in between to make the tray horizontal. For this machine, the paper tray can be placed on the base plate so the jig is removed.

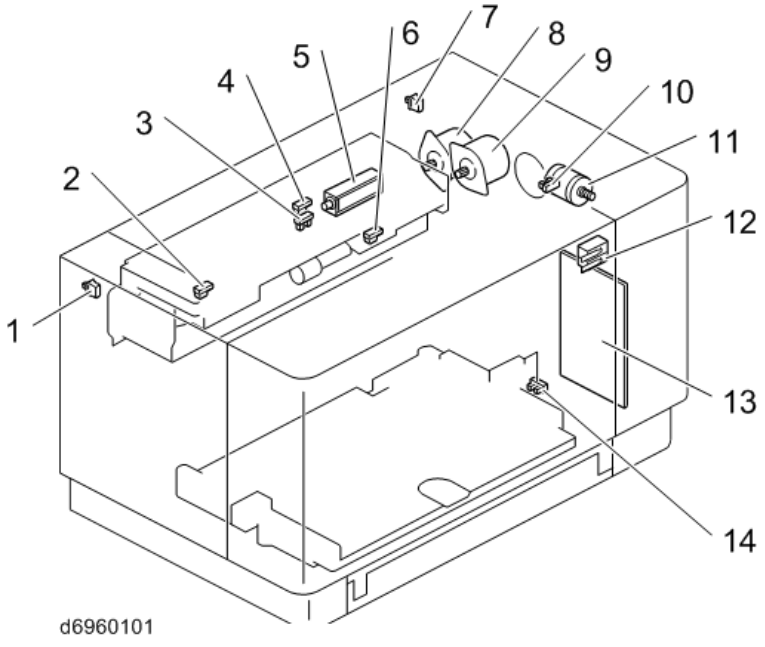


Parts Layout



No.	Description	No.	Description
1	Friction roller	6	Feed roller
2	Transport sensor	7	Paper end sensor
3	Transport roller	8	Pickup roller

No.	Description	No.	Description
4	Paper feed sensor	9	Remaining paper sensor (inside lift unit)
5	Upper limit sensor	10	Lower limit sensor



No.	Description	No.	Description
1	Tray set switch (front)	8	Transport motor
2	Paper feed sensor	9	Paper feed motor
3	Upper limit sensor	10	Remaining paper sensor (inside lift unit)
4	Transport sensor	11	Tray lift motor (inside tray lift unit)
5	Pick-up roller solenoid	12	Interlock switch
6	Paper end sensor	13	Controller board
7	Tray set switch (rear)	14	Lower limit sensor

Mechanism

Paper feed separating mechanism

The tray unit and paper feed transport unit are integrated. The pick-up roller, feed roller and reverse roller are common with the main frame's paper feed unit. Both paper feed and paper separation mechanisms use the same RF paper feed system.

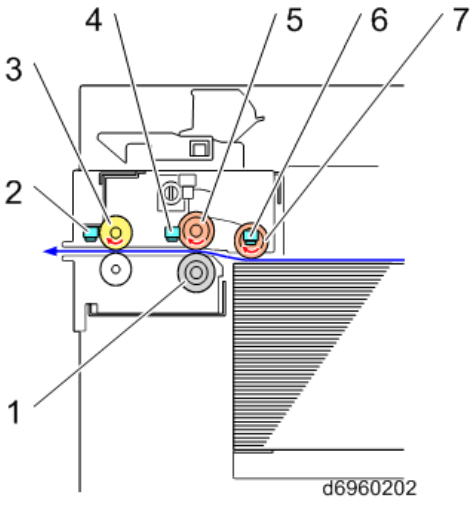
In order to feed the paper at regular intervals, there is a paper feed sensor between the pick-up roller and the feed roller, and this sensor is used to adjust the paper feed timing.

1. **The paper feed motor turns ON, and feeds the first sheet of paper.**
2. **To prevent the next sheet from being transported, the pick-up solenoid turns ON just before the trailing edge of the first sheet passes through the pick-up roller, and the pick-up roller leaves the paper surface.**
3. **Just before the trailing edge of the first sheet leaves the paper feed roller, the paper feed motor turns OFF.**

   However, at this time, if the paper feed sensor does not detect paper (the second sheet is not transported to the paper feed sensor position), the paper feed motor does not turn OFF. Pre-feed is performed as follows:

   1. The pick-up solenoid turns OFF, and the second sheet of paper is transported to the paper feed sensor position.
   2. When the trailing edge of the second sheet passes the feed roller, the paper feed motor is turned OFF. The pick-up solenoid remains OFF.
4. **Just before the trailing edge of the first sheet passes the feed roller, the pick-up solenoid turns OFF. The pick-up roller is brought into contact with the paper surface.**

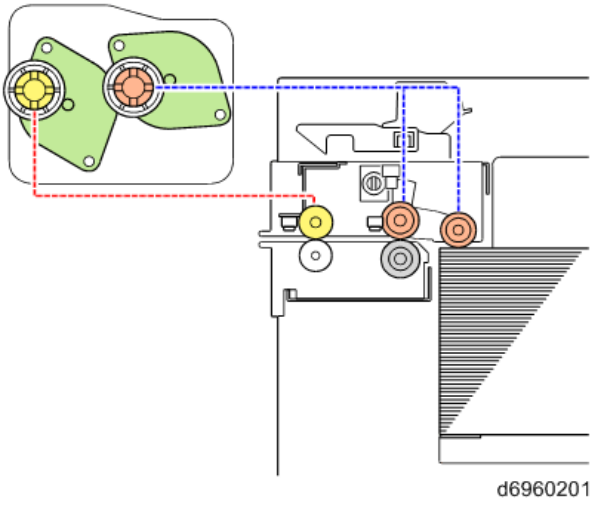
   If paper is pre-fed, the pick-up solenoid will remain OFF, and this operation will not performed.
5. **When the first sheet is transported a specified distance by the downstream transport roller, the paper feed motor turns ON to feed the second sheet.**



No.	Description	No.	Description
1	Friction roller	5	Feed roller
2	Transport sensor	6	Paper end sensor
3	Transport roller	7	Pick-up roller
4	Paper feed sensor		

Drive mechanism

The pick-up roller and feed roller are driven by the paper feed motor. The transport roller is driven by the transport motor. The friction roller is not driven.



Tray lift/descent mechanism

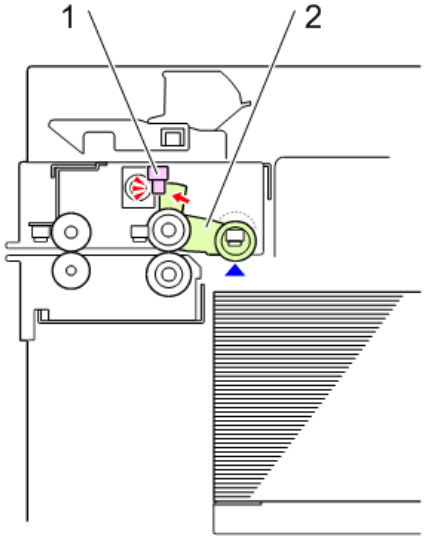
The tray lift motor is coupled with the lift shaft, so that when the shaft rotates, the tray bottom plate rises.

Conditions for tray lift

- The main power is turned ON.
- During copying, the tray upper limit sensor is ON (the sensor is not blocked)
- The top cover is closed and the tray upper limit sensor is ON.
- The main machine recovers from low power mode.

Note

- The tray lifts until the upper limit sensor turns OFF (the sensor is blocked).



d6960203

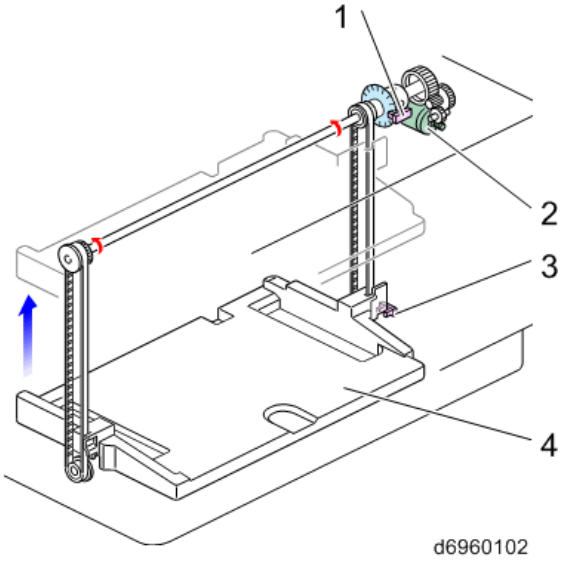
No.	Description
1	Upper limit sensor
2	Actuator

Conditions for tray descent

- The right cover is opened.
- Paper end is detected.

Note

- The tray descends until the lower limit sensor turns OFF (the sensor is blocked).



No.	Description
1	Remaining paper sensor (inside lift unit)
2	Tray lift motor
3	Lower limit sensor
4	Tray

Remaining paper/paper end detection

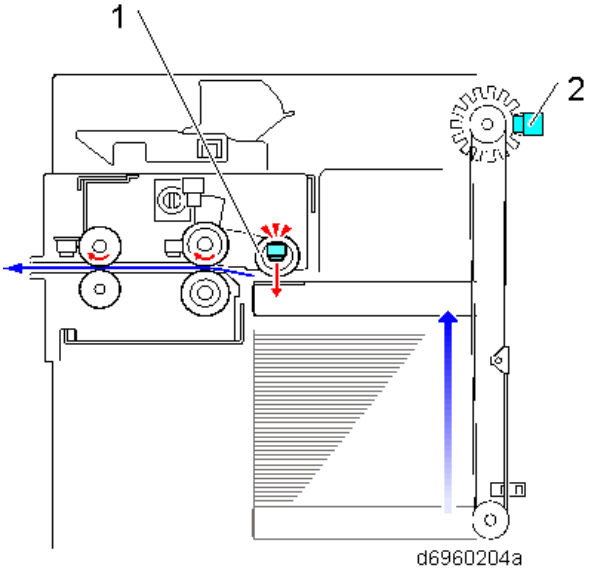
Remaining paper detection

Remaining paper in the paper feed tray is detected using a pulse count by the remaining paper sensor. The paper remaining is displayed on the control panel.

Remaining paper	Paper end sensor	Control panel display
100%	OFF	4 bars
70%	OFF	3 bars
30%	OFF	2 bars
10%	OFF	1 bar
Paper end	ON	None

Paper end detection

There is a reflector-type sensor in the upper stay that detects the upper surface of the paper in the tray.



No.	Description	No.	Description
1	Paper end sensor	2	Remaining paper sensor

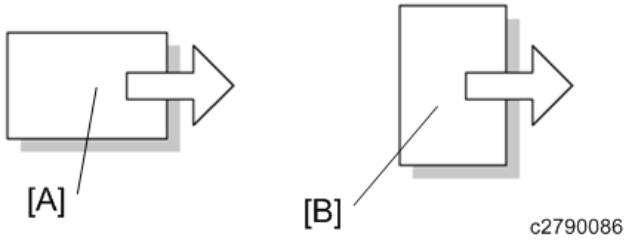
Punch Unit PU3040
Machine Code: D716
Field Service Manual

May, 2016

Symbols, Abbreviations and Trademarks

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

	Clip ring
	Screw
	Connector
	Clamp
SEF	Short Edge Feed
LEF	Long Edge Feed



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

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1. Replacement and Adjustment

Punch Unit

Punch Unit

1. Open the front cover [A].

d1462960

2. Left upper cover [A] (×1)

d197f0109

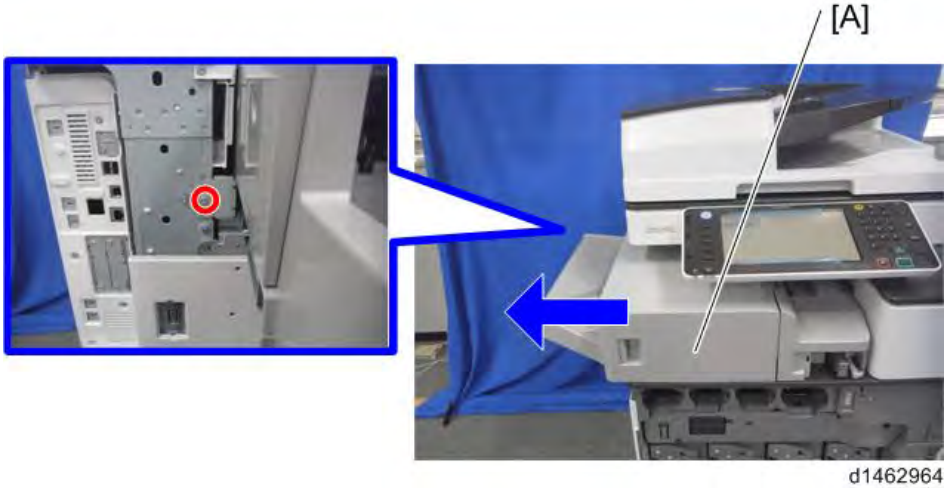
3. **Left rear cover [A] (×2)**

d1462962

4. **Interface cable [A]**

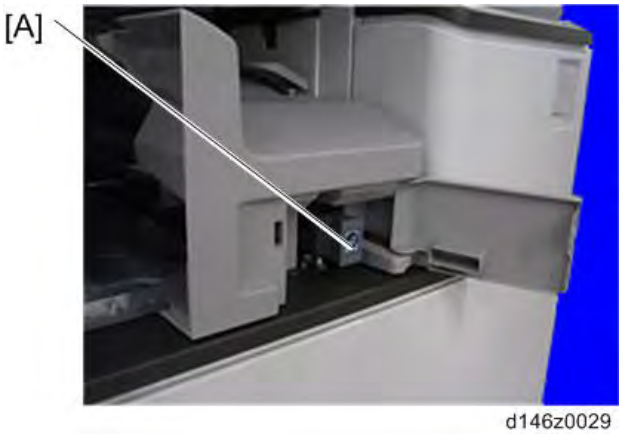
d1462963

5. **Internal finisher [A] (×1)**



d1462964

6. **Punch hopper [A]**



d146z0029

7. **Punch unit front cover [A] (×1)**

d1462966

8. **Punch unit [A] (×1)**

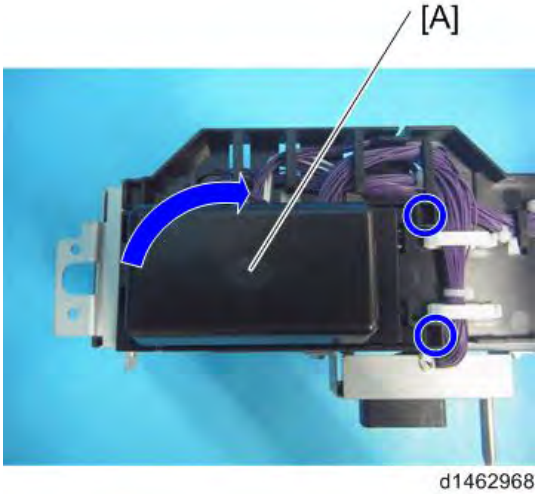
d1462967

Controller Board

Controller Board

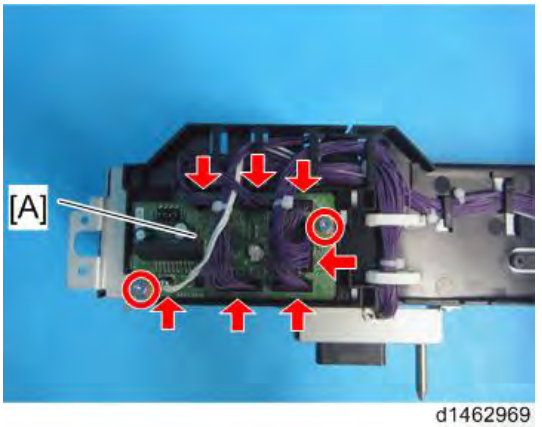
1. **Punch unit (page 5).**
2. **Turn over the punch unit.**
3. **Control plate cover [A]**

   Release the claws (blue circles). Lift the plate cover in the direction of the blue arrow.



d1462968

4. **Controller board [A] (×2, ×7)**



d1462969

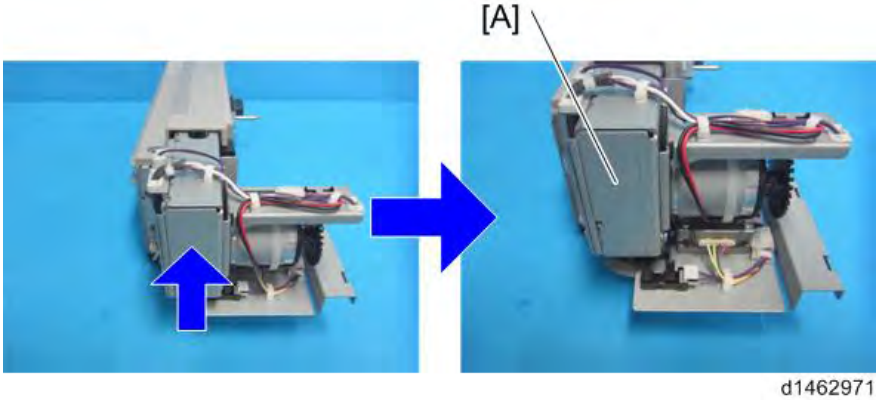
Punch Unit Home Position Sensor

Punch Unit Home Position Sensor

1. Punch unit (page 5)
2. Upper rear cover [A] (×1)

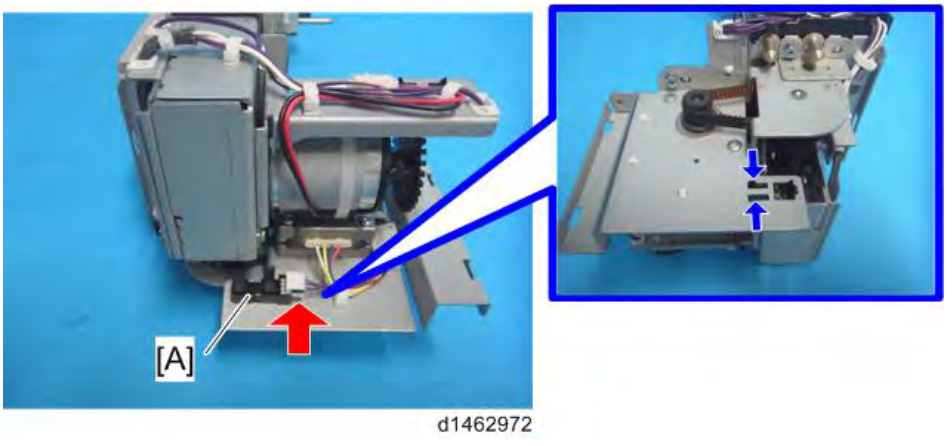
d1462970

3. Push out the punch unit [A].



d1462971

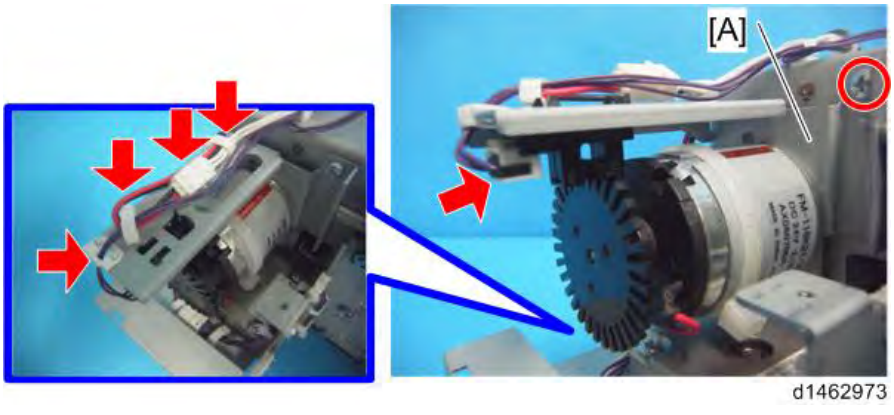
4. Punch unit home position sensor [A] (×1)



Punch Motor

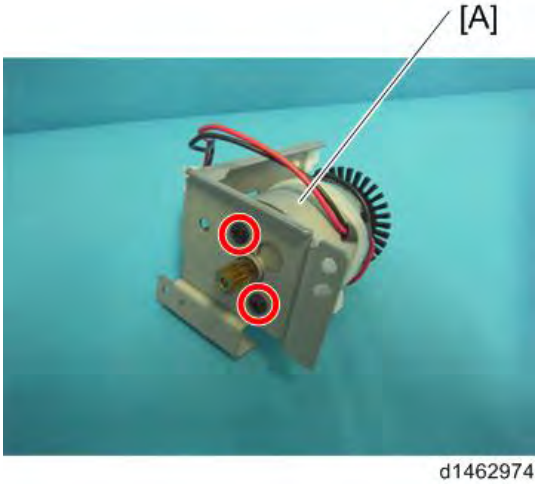
Punch Motor

1. Upper rear cover (page 9)
2. Punch motor unit [A] (×2, ×2, ×3)



d1462973

3. Punch motor [A] (×2)

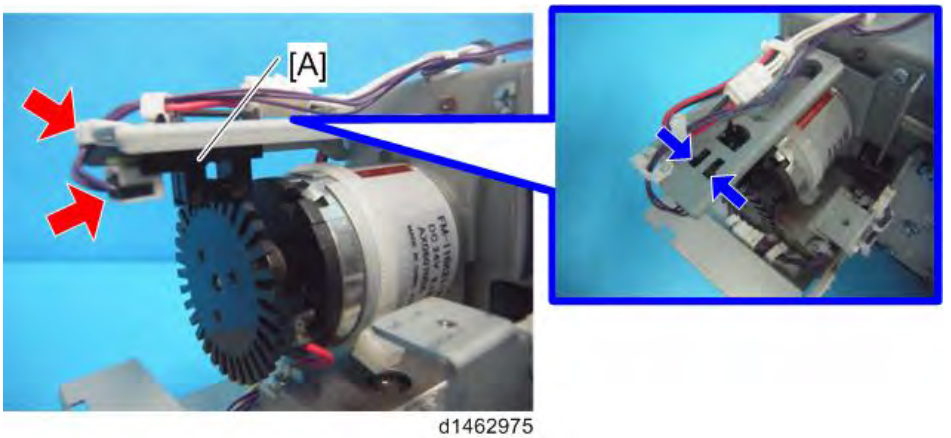


d1462974

Punch Unit Motor Pulse Sensor

Punch Unit Motor Pulse Sensor

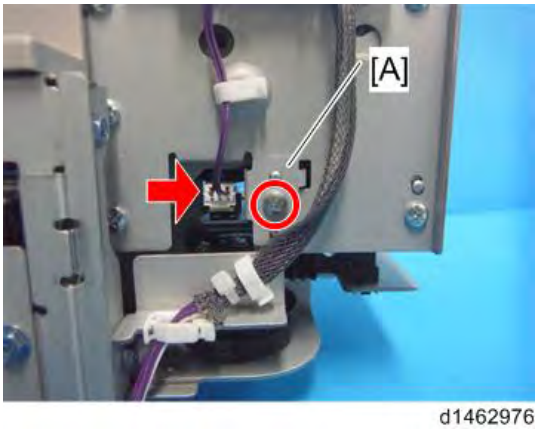
1. Upper rear cover (**page 9**)
2. Punch unit motor pulse sensor [A] (×1, ×1)



Horizontal Registration Transport Unit Home Position Sensor

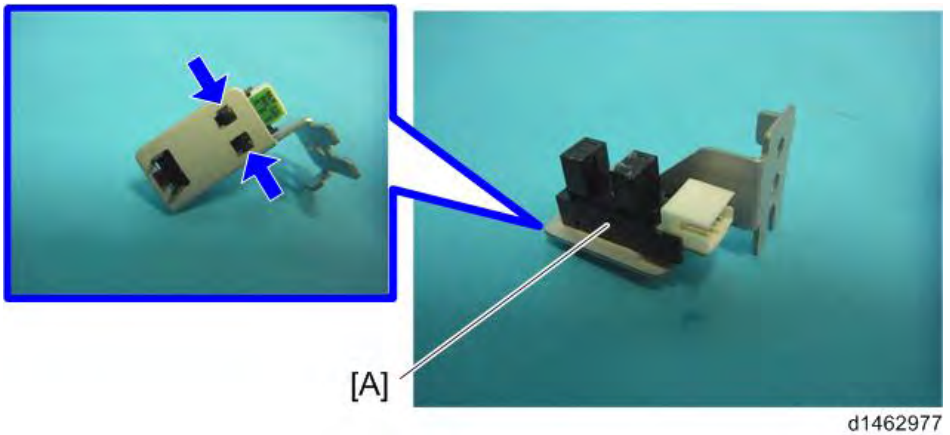
Horizontal Registration Transport Unit Home Position Sensor

1. Punch Unit (page 5)
2. Horizontal registration transport unit home position sensor unit [A] (×1, ×1)



d1462976

3. Horizontal registration transport unit home position sensor [A]



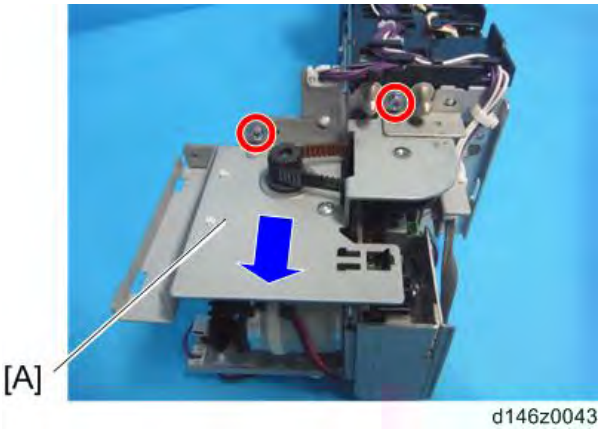
d1462977

Horizontal Registration Transport Unit Motor

1

Horizontal Registration Transport Unit Motor

1. Upper rear cover (page 9)
2. Pull the bracket forward [A] (x2).

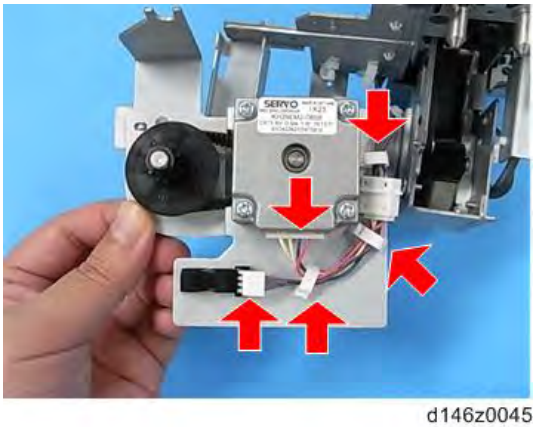


d146z0043

3. Release the two clamps (x2)

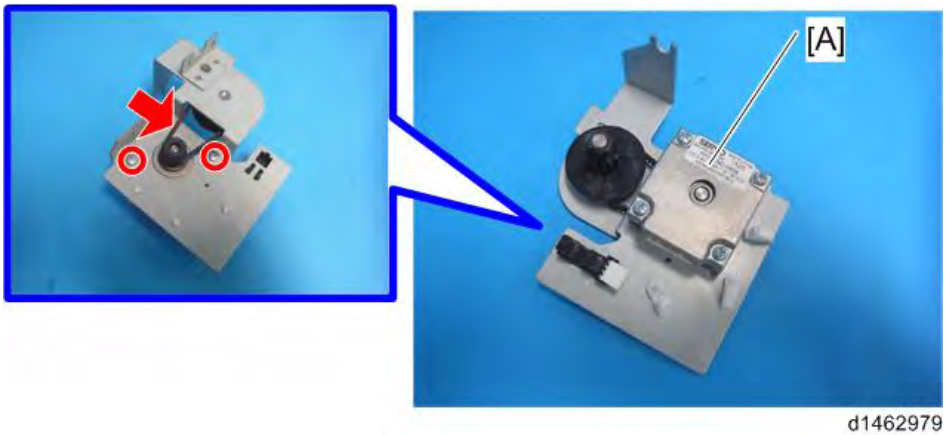
d146z0044

4. **Bracket with the horizontal registration transport unit motor (x3, x2)**



d146z0045

5. **Horizontal registration transport unit motor [A] (x2, timing belt x1)**

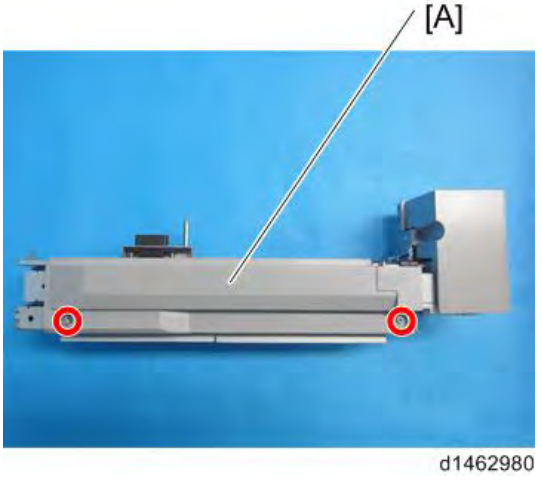


d1462979

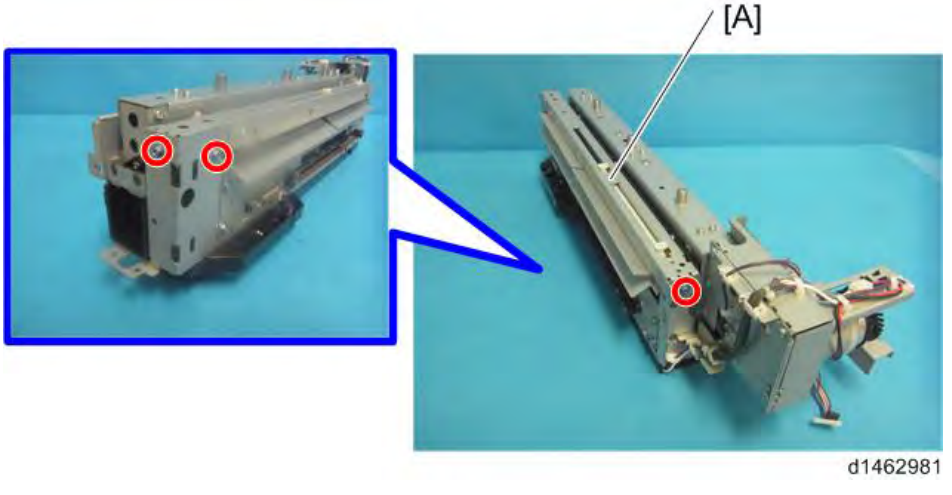
Punching Unit

Punching Unit

1. Punch Unit (page 5).
2. Upper cover [A] (×2).

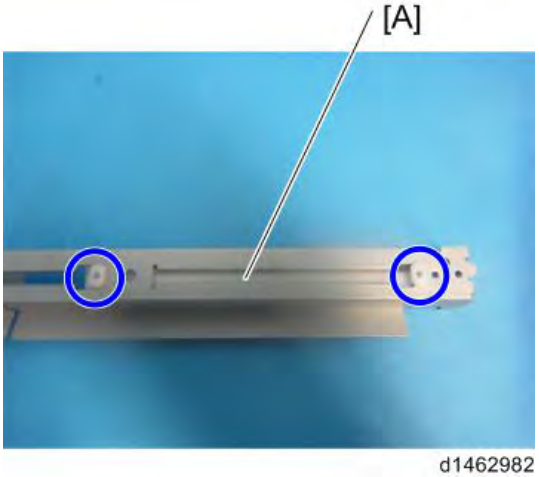


3. Horizontal registration transport unit motor unit (page 14)
4. Upper entrance guide plate [A] (×3)



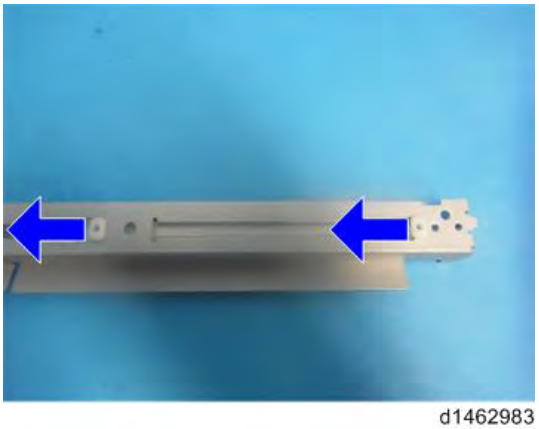
Note

- To prevent the guide plate from dropping, set the movable parts [A] into the groove as shown by the blue circles.



d1462982

- When attaching the guide plate, shift the movable parts toward the left.



d1462983

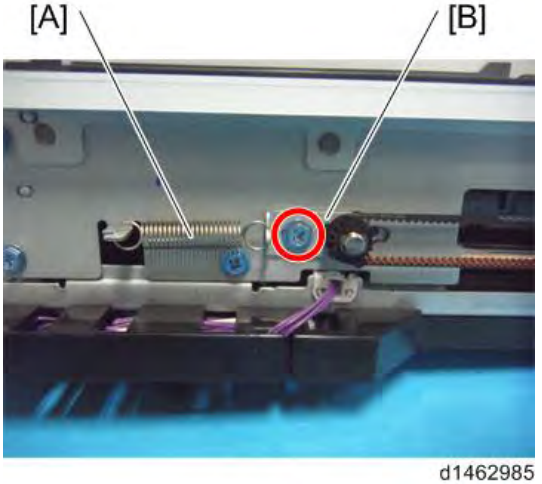
5. **Punching unit [A] (×1, ×3, ×7)**

d1462984

Horizontal Registration Sensor Unit Home Position Sensor

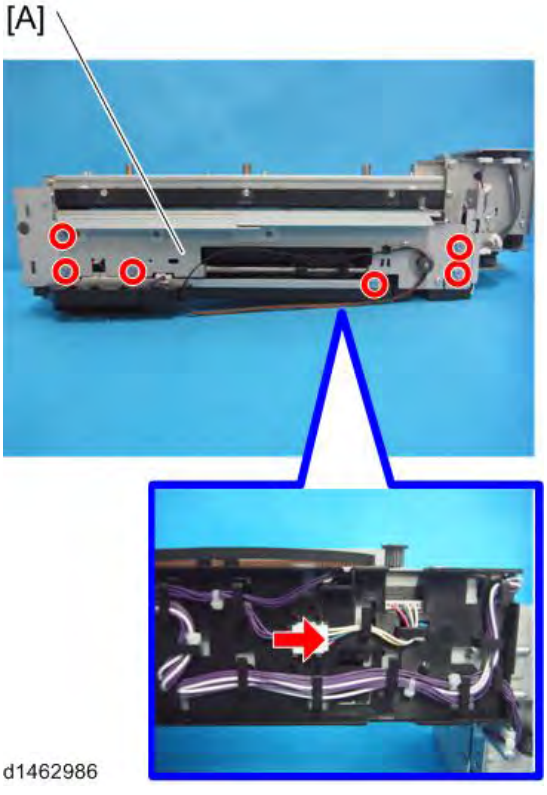
Horizontal Registration Sensor Unit Home Position Sensor

1. Upper cover (page 16)
2. Upper entrance guide plate (page 16)
3. Spring [A], bracket [B] (×1)



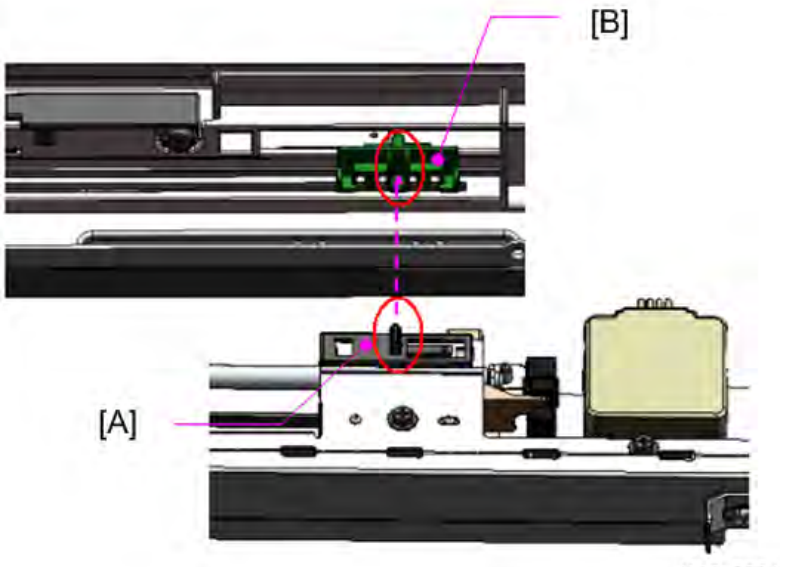
d1462985

4. **Horizontal registration sensor unit [A] (×6, ×1)**

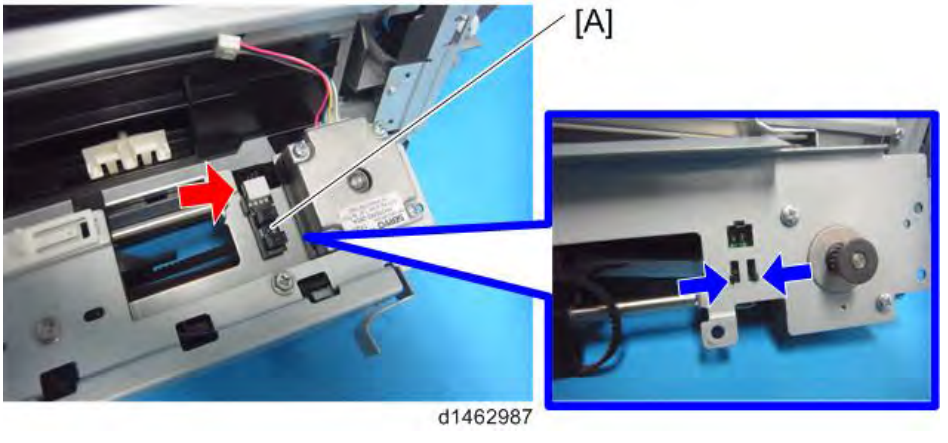


Note

- When reinstalling the horizontal registration sensor unit, make sure that the protruded part of the joint [A] fits into the groove on the cam [B].



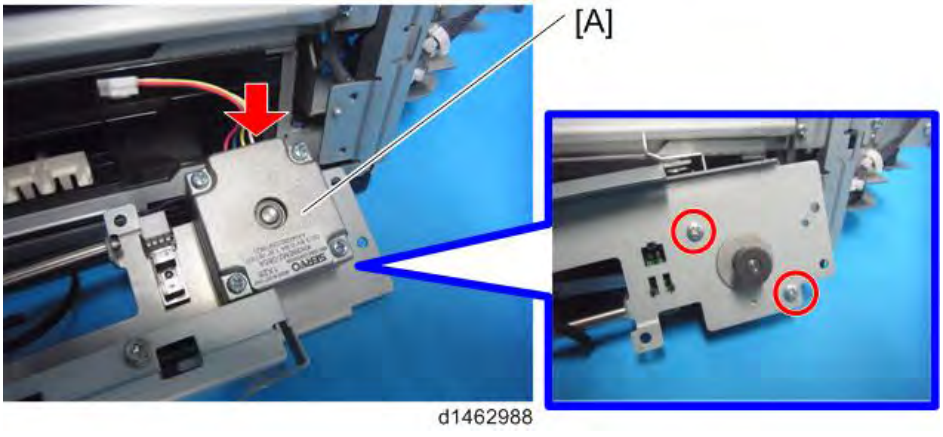
5. **Horizontal registration sensor unit home position sensor [A] (×1)**



Horizontal Registration Sensor Unit Motor

Horizontal Registration Sensor Unit Motor

1. Horizontal registration sensor unit (page 18).
2. Horizontal registration sensor unit motor [A] (×2, ×1)

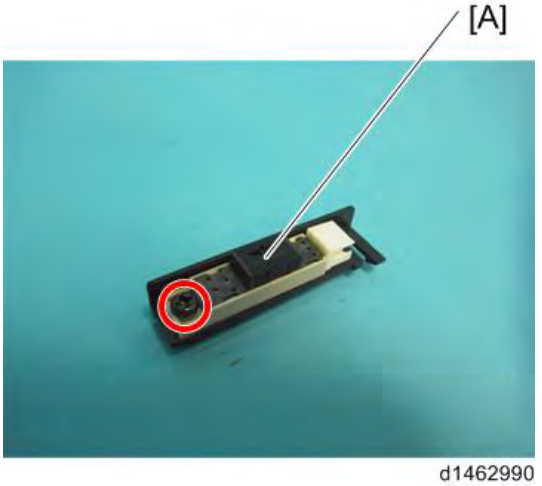


Punch Hopper Full Sensor

1. **Horizontal registration sensor unit (page 18).**
2. **Punch hopper full sensor unit [A] (×1)**

d1462989

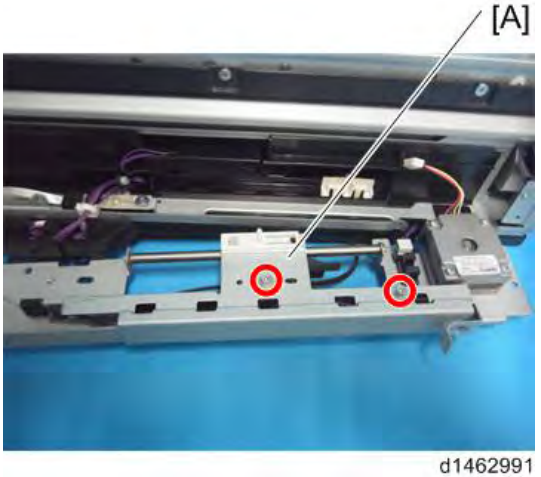
3. **Punch hopper full sensor [A] (×1)**



d1462990

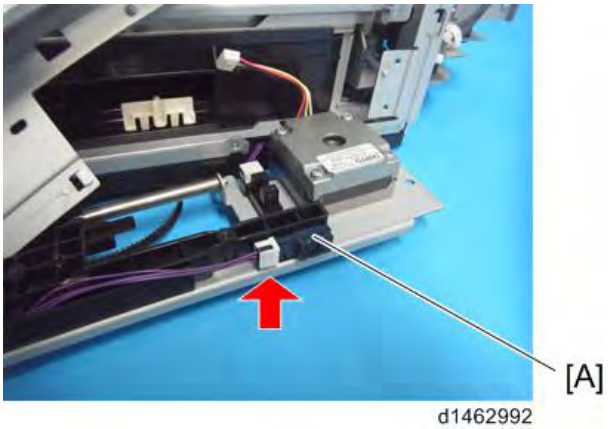
Horizontal Registration Sensor

1. Horizontal registration sensor unit (page 18).
2. Horizontal registration unit bracket [A] (×2)



d1462991

3. Horizontal registration sensor [A] (×1)

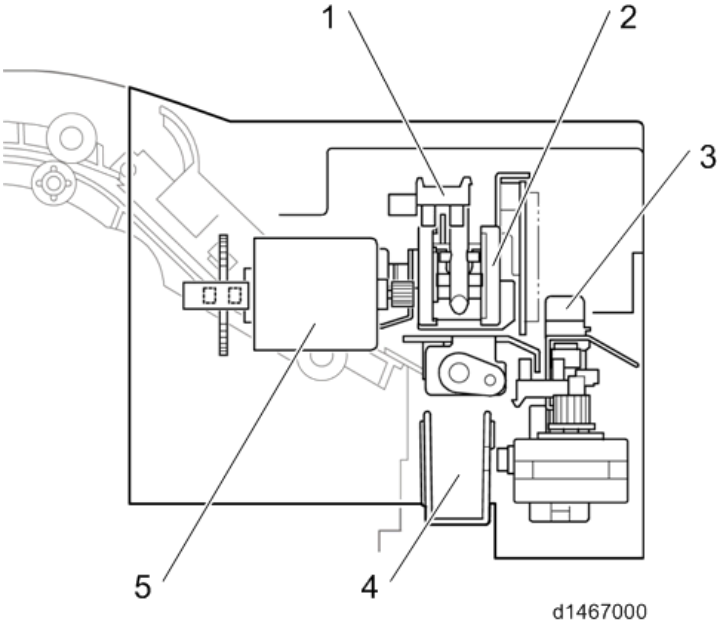


d1462992

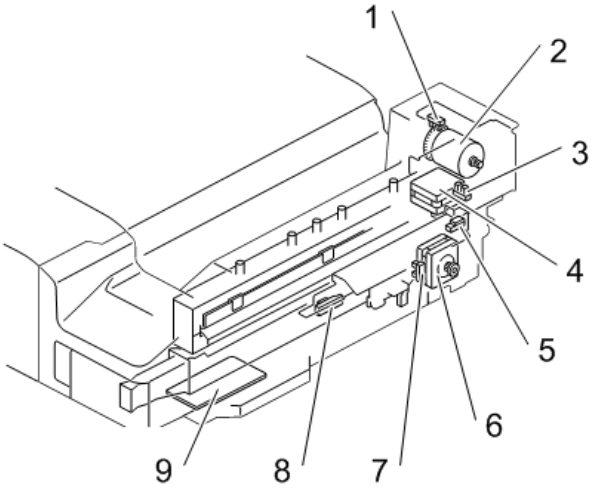
2. Detailed Descriptions

Punch Unit PU3040 (D716)

Parts Layout



No.	Description	No.	Description
1	Punch unit home position sensor	4	Punch hopper
2	Punch unit	5	Punch unit motor
3	Horizontal registration sensor unit		



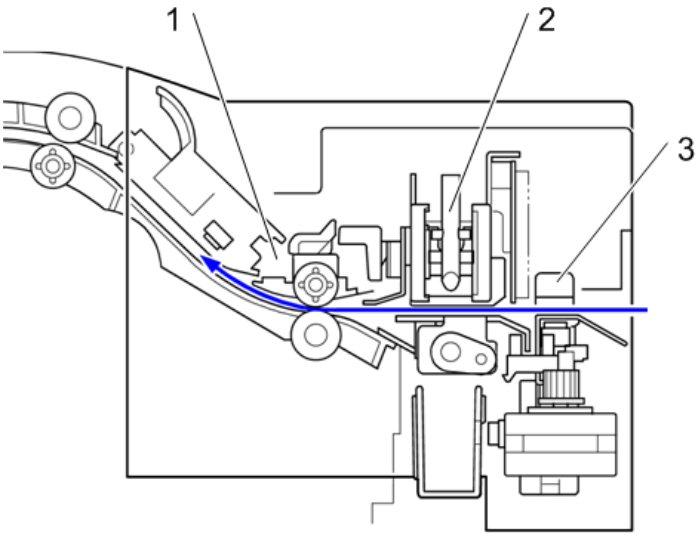
d7160201

No.	Description	No.	Description
1	Punch unit pulse sensor	6	Horizontal registration sensor unit motor
2	Punch unit motor	7	Horizontal registration sensor unit home position sensor
3	Horizontal registration sensor	8	Punch hopper full sensor
4	Horizontal registration transport unit motor	9	Punch unit controller board
5	Horizontal registration transport unit home position sensor		

Mechanism

Transport mechanism

Paper from the main machine passes through the horizontal registration sensor unit, and is transported to the punch unit and the entrance of the finisher.



d1467001

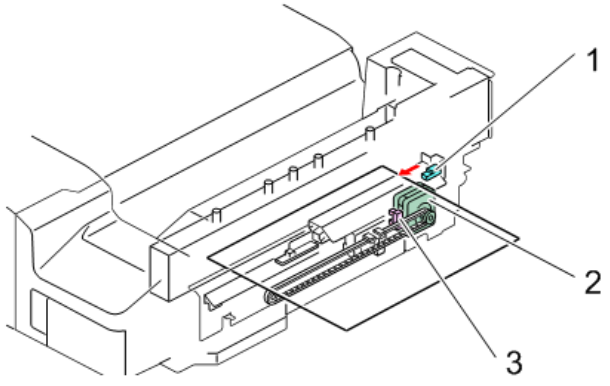
No.	Description	No.	Description
1	Finisher paper entrance	3	Horizontal registration sensor unit
2	Punch unit		

Horizontal registration transport unit mechanism

When the entrance sensor of the finisher detects the leading edge of the paper, the horizontal registration transport unit motor rotates to measure the horizontal registration of the paper. The horizontal registration sensor unit home position sensor detects the home position.

Horizontal registration sensor unit mechanism

The horizontal registration sensor unit has a horizontal registration sensor, which detects the horizontal registration (offset) of the paper relative to the punch unit position.

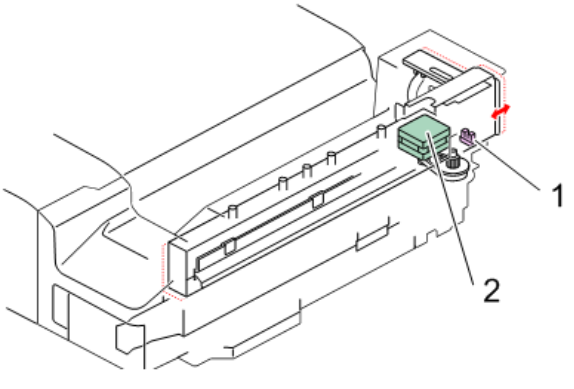


d7160202

No.	Description	No.	Description
1	Horizontal registration sensor	3	Horizontal registration sensor unit home position sensor
2	Horizontal registration sensor unit motor		

Punch unit mechanism

The punch unit moves according to information from the horizontal registration sensor, so that punch holes can be made in the correct positions. The punch unit is moved by the horizontal registration transport unit motor. The horizontal registration transport unit home position sensor detects the home position.

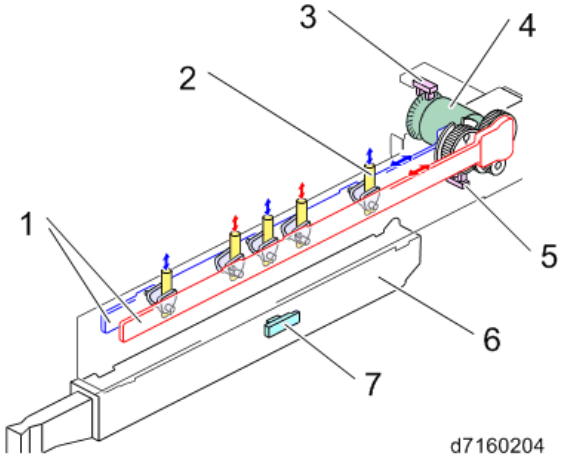


d7160203

No.	Description	No.	Description
1	Horizontal registration transport unit home position sensor	2	Horizontal registration transport unit motor

Punch mechanism

The punch unit motor rotates to move the links via gears. This moves the punch pin up and down. After punching, punch waste is collected in the punch hopper under the unit. The hopper has a punch hopper full sensor so that punch waste does not overflow. Because the punch motor is a DC motor, the motor shaft has an encoder, and there is a punch unit motor pulse sensor. The punch unit also has a mechanism for changing the punch positions according to the country/region of installation.



No.	Description	No.	Description
1	Links	5	Punching position sensor
2	Punch pin	6	Punch hopper
3	Punch motor unit pulse sensor	7	Punch hopper full sensor
4	Punch motor		

Punching position changing mechanism

The punch unit also has a mechanism for changing the punch positions according to the country/region of installation.

- Japan: 2 holes
- North America: 2/3 holes
- Europe: 2/4 holes
- Northern Europe: 4 holes

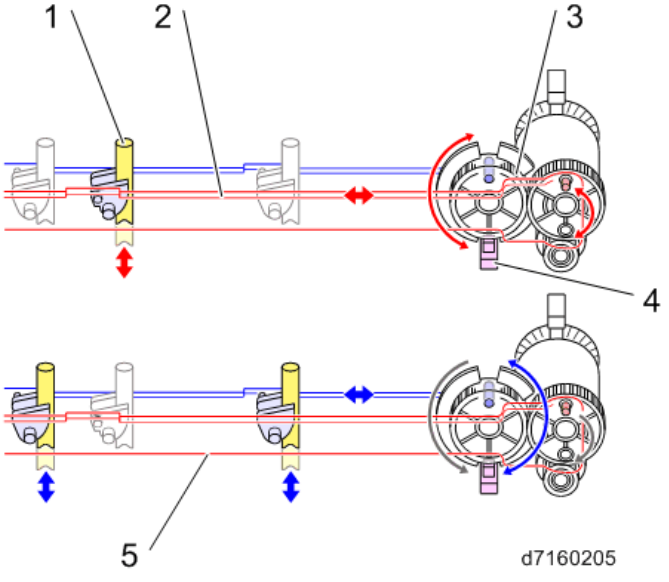
The punching position sensor detects a change in the punching position.

2 holes

The position where the 1st drive gear has not moved is the 2-hole home position. The 1st drive gear rotates clockwise/anti-clockwise, and only one link is moved, and this moves the necessary punch pins.

3 or 4 holes

The position where the 1st drive gear has rotated forward by 180° is the 3 or 4-hole home position. The 1st drive gear rotates clockwise/anti-clockwise, and the two links are moved, and these move the necessary punch pins.



No.	Description	No.	Description
1	Punch pin	4	Punching position sensor
2	2-hole link	5	3/4-hole link
3	1st drive gear		

MEMO

MEMO

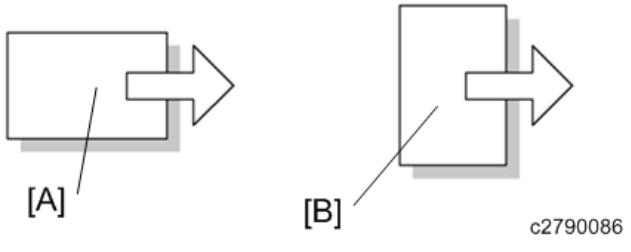
Side Tray Type M3
Machine Code: D725
Field Service Manual

May, 2016

Symbols, Abbreviations and Trademarks

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

	Clip ring
	Screw
	Connector
	Clamp
SEF	Short Edge Feed
LEF	Long Edge Feed



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

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1. Replacement and Adjustment

Side Tray Motor Unit

1. Upper extension tray [A], Left extension tray [B].

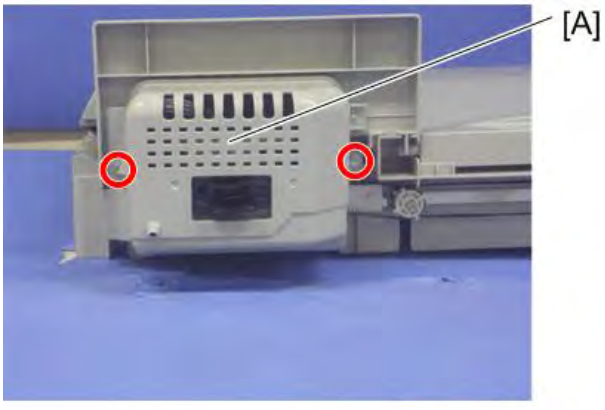
d1462840

2. Fixing plate [A] (×1).

d1462493

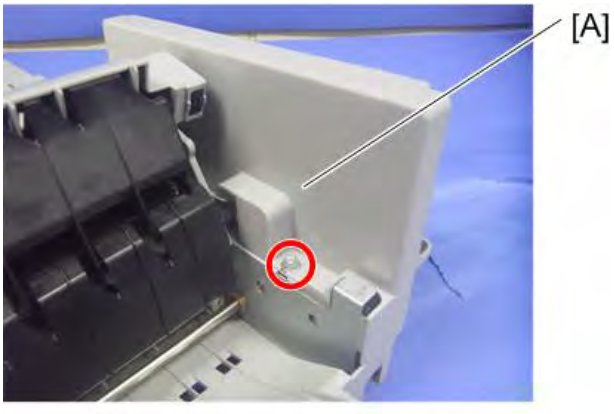
3. **Side tray [A] (×1).**

4. **Side tray motor unit cover [A] (×2).**



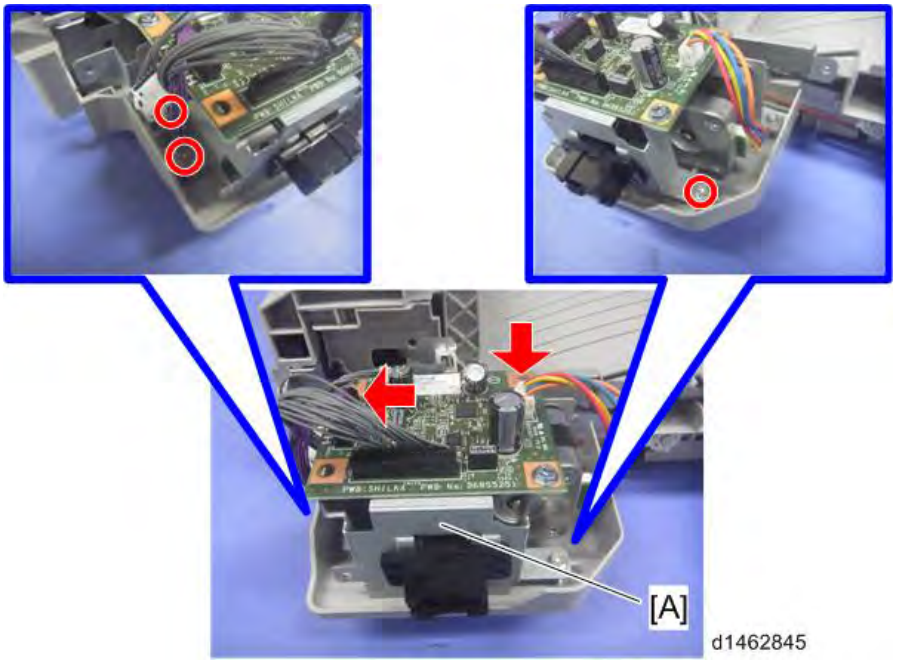
d1462843

5. **Side tray rear cover [A] (×1).**



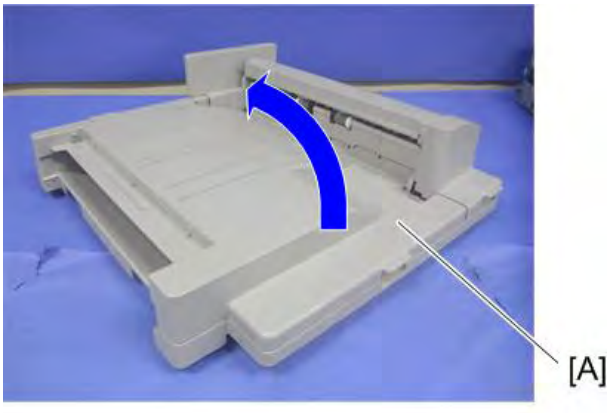
d1462844

6. **Side tray motor unit [A] (×3, ×2).**



Paper Exit Sensor

1. Side tray (page 3).
2. Paper exit tray [A].

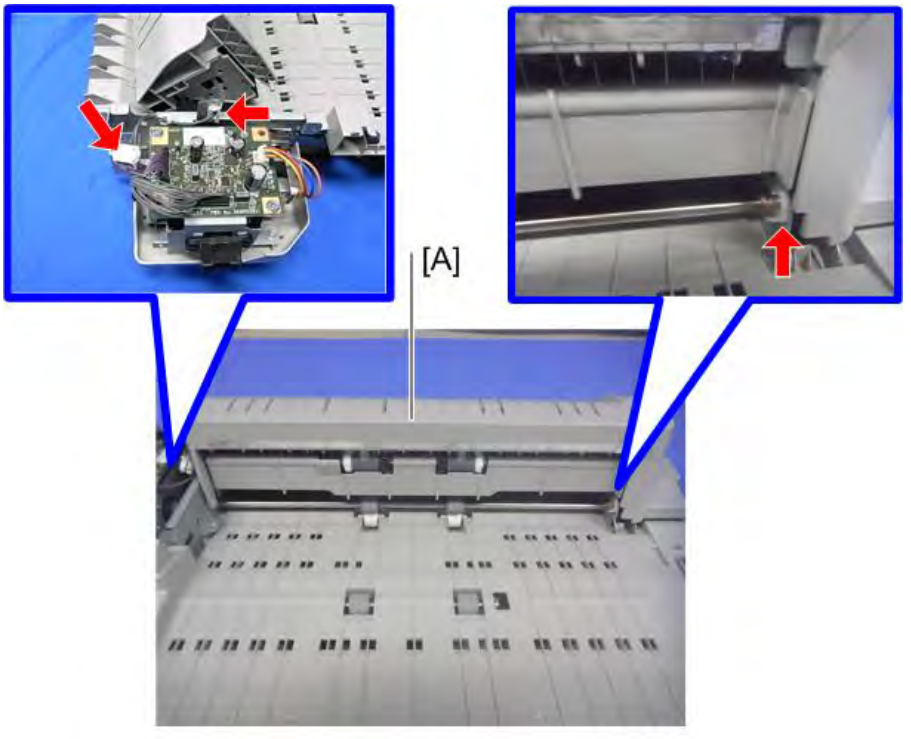


d1462846

3. Side tray motor unit cover (page 3).
4. Side tray rear cover (page 3).
5. Side tray paper exit cover [A] (×1).

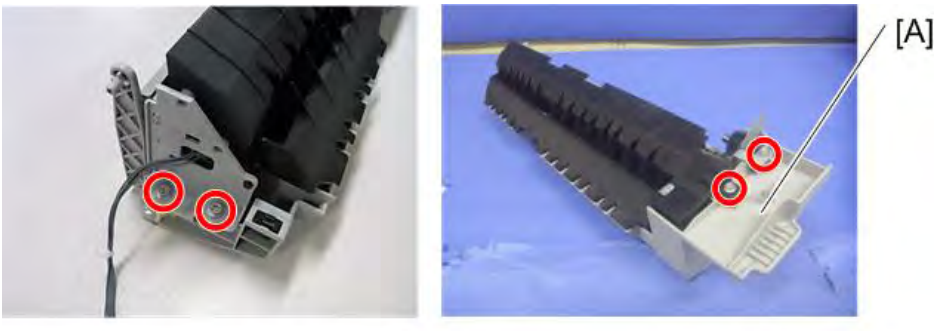
d1462847

6. **Paper exit switching unit [A] (×1, ×1, ×1).**



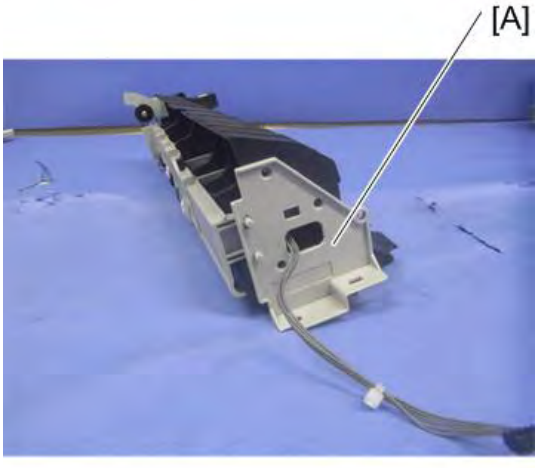
d146z0051

7. **Paper exit switching unit cover [A] (×4).**



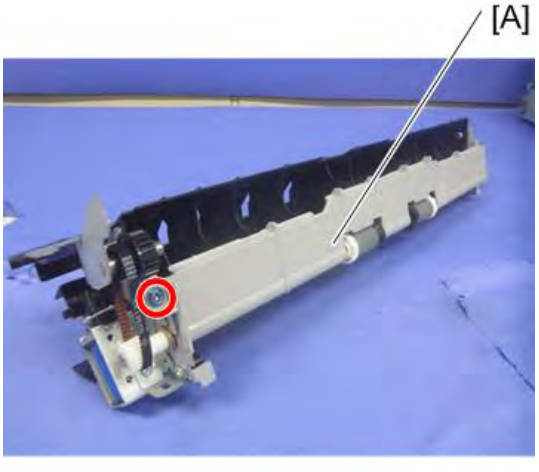
d146z0049

8. Guide plate [A].



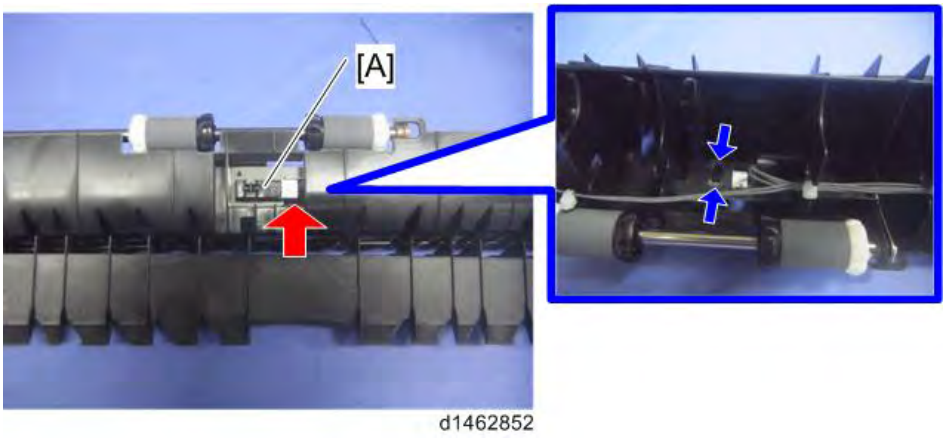
d1462850

9. Guide plate [A] (×1).



d1462851

10. Paper exit sensor [A] (×1).

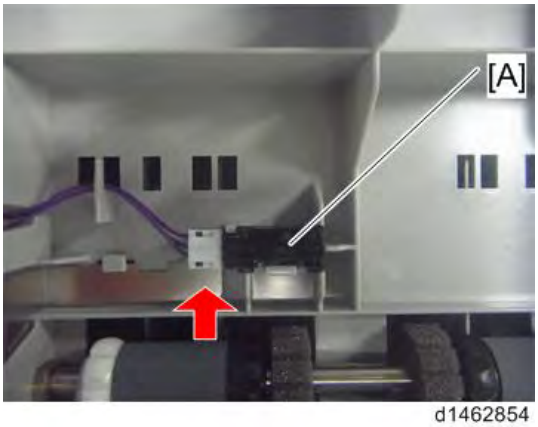


Side Tray Paper Exit Sensor

1. Paper exit tray (page 7).
2. Place the unit upside down.

d1462853

3. Side tray paper exit sensor [A] (×1).



d1462854

Paper Exit Tray Set Switch

1. **Paper exit tray (page 7)**
2. **Paper exit set switch cover [A]**

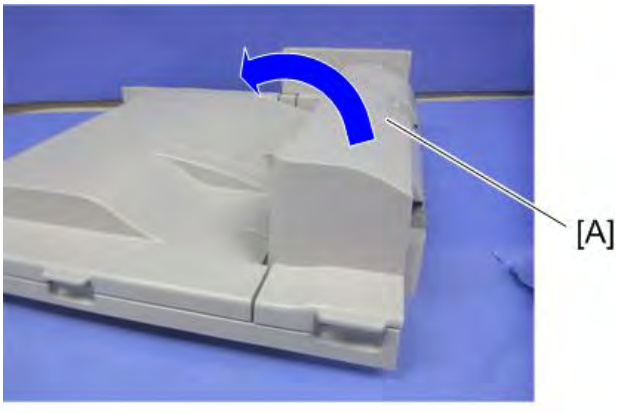
d1462855

3. **Paper exit tray set switch [A] (×1)**

d1462856

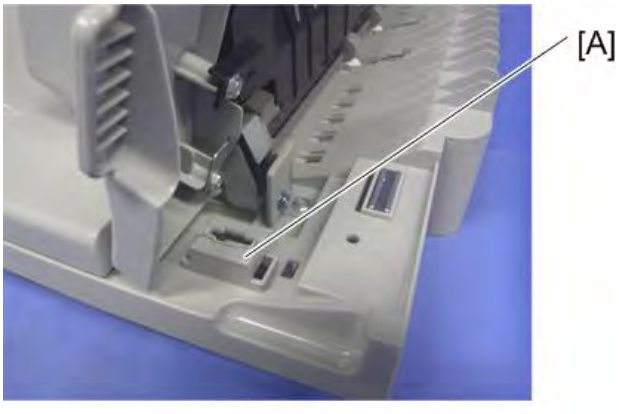
Paper Exit Switching Unit Set Switch

1. **Open the paper exit switching unit [A].**



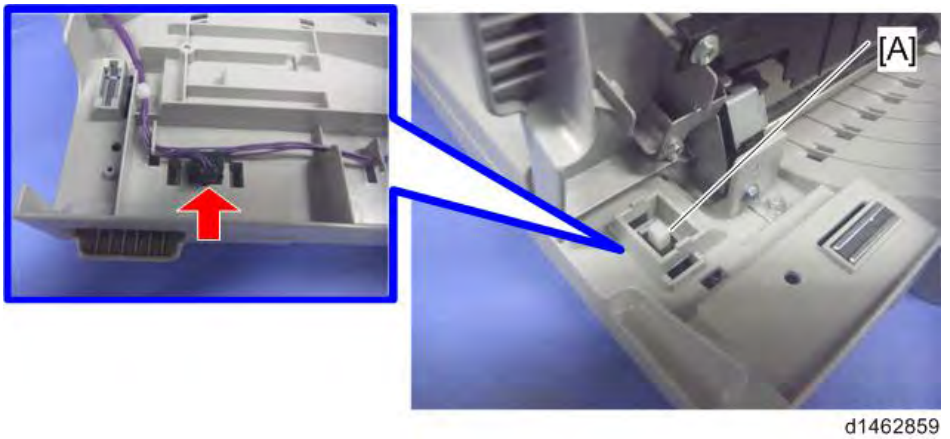
d1462857

2. **Paper exit switching unit switch cover [A]**



d1462858

3. Paper exit switching unit set switch [A] (×1)

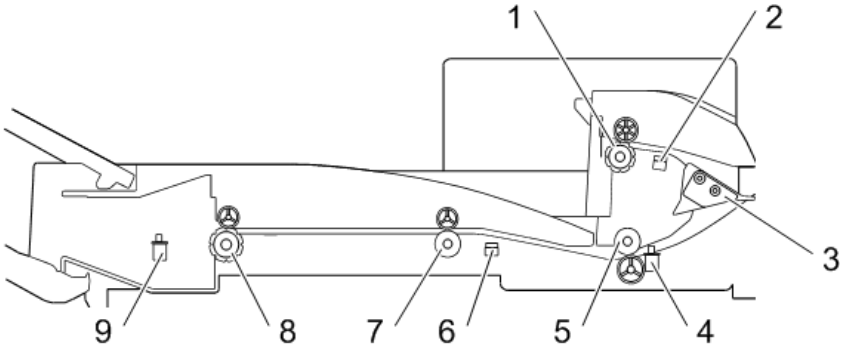


d1462859

2. Detailed Descriptions

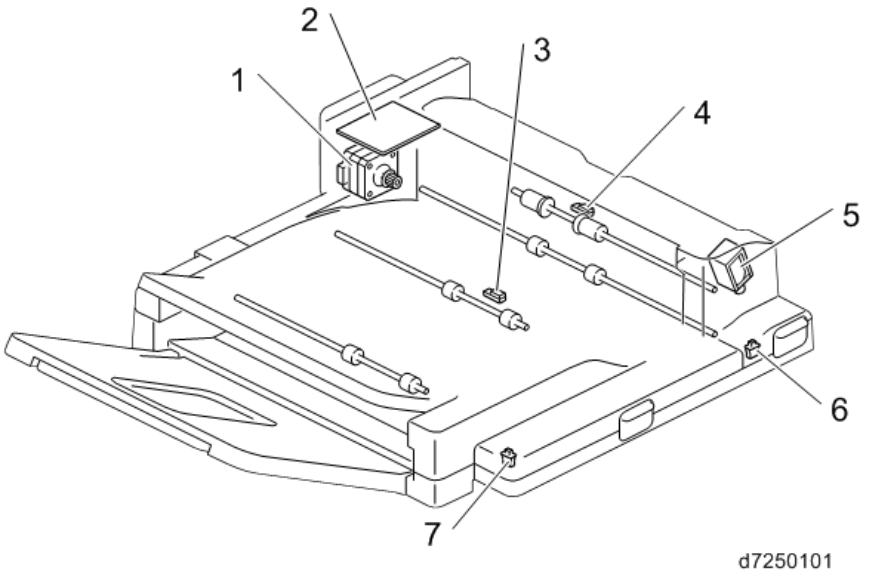
Side Tray Type M3 (D725)

Parts Layout



d7250001

No.	Description	No.	Description
1	Paper exit roller	6	Side tray paper exit sensor
2	Paper exit sensor	7	Transport roller 2
3	Paper junction gate	8	Transport roller 3
4	Paper exit switching unit set switch	9	Paper exit tray set switch
5	Transport roller 1		



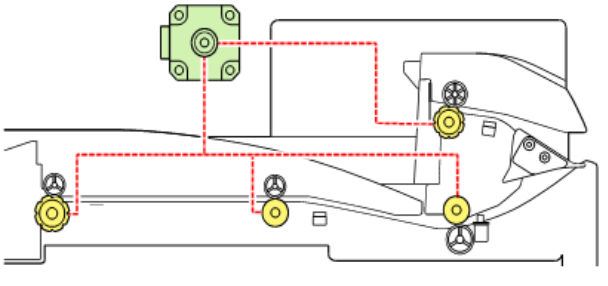
d7250101

No.	Description	No.	Description
1	Side tray motor	5	Paper junction gate solenoid
2	Controller board	6	Paper exit switching unit set switch
3	Side tray paper exit sensor	7	Paper exit tray set switch
4	Paper exit sensor		

Mechanism

Drive Mechanism

The paper exit roller and transport rollers 1-3 are driven by the side tray motor through gears and a timing belt.

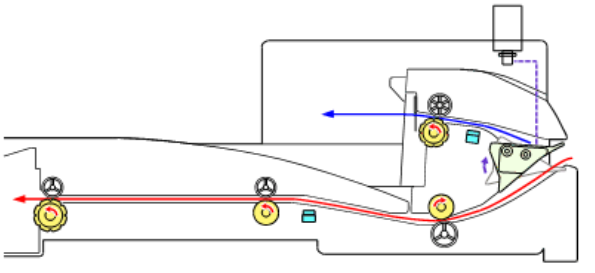


d7250201

Paper Transport Mechanism

The paper junction gate solenoid drives the paper junction gate. The paper junction gate changes the path of the paper transported from the main machine's paper exit section to the upper or side paper exit tray.

Paper delivered to the upper paper exit tray is ejected by the paper exit roller, which is provided in the paper exit transport path. On the other hand, paper delivered to the side paper exit tray is transported by the transport roller, which is provided in the transport path. Two sensors detect paper jams.



d7250202

MEMO

MEMO

MEMO

Internal Finisher SR3180
Machine Code: D766
Field Service Manual

May, 2016

Symbols, Abbreviations and Trademarks

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

	Clip ring
	Screw
	Connector
	Clamp
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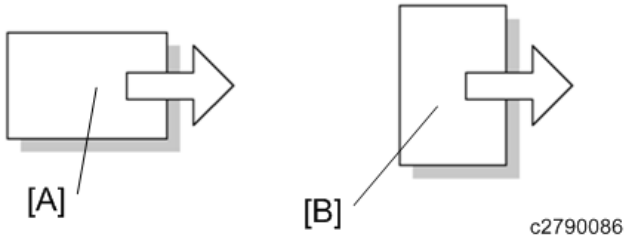
LEF	Long Edge Feed



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

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2. Detailed Descriptions

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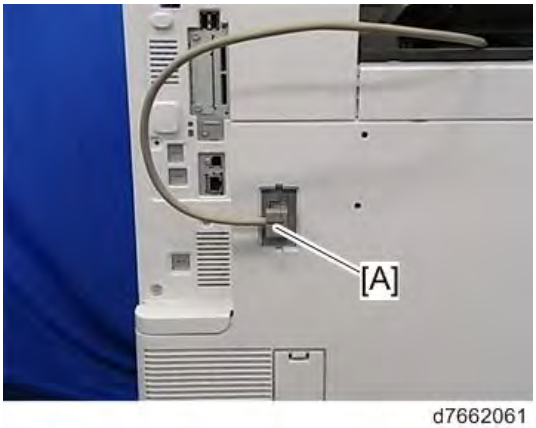
1. Replacement and Adjustment

Main Unit

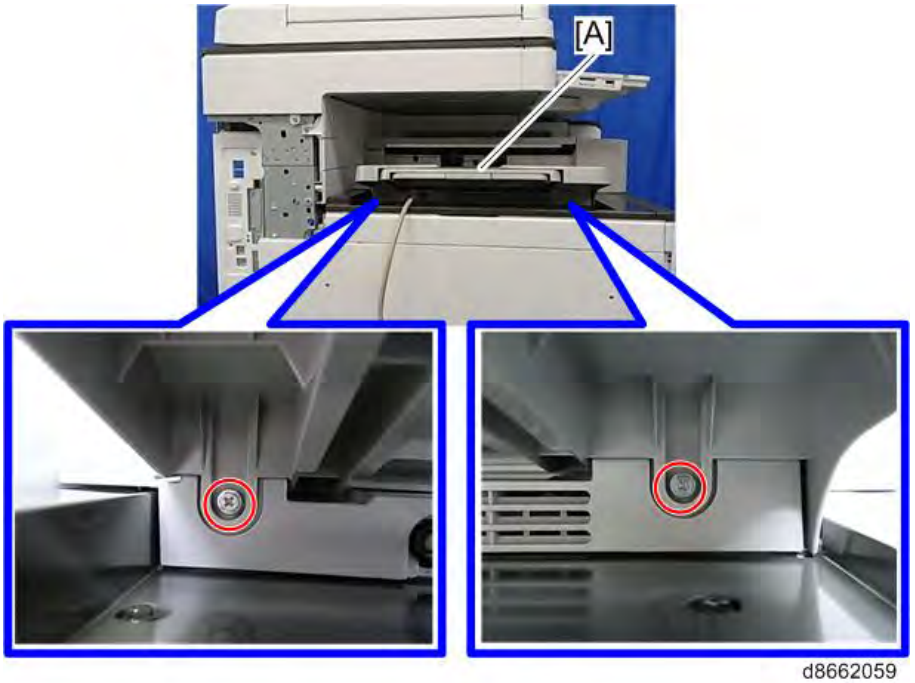
Internal Finisher SR3180

1. Interface cable [A]



d7662061

2. Paper exit tray [A] (×2)

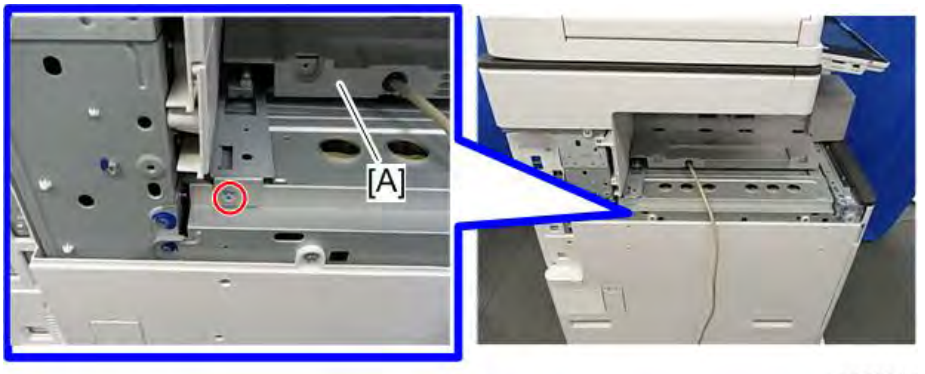


d8662059

3. Cover [A] (×2)

d7662057

4. Screw on the finisher [A] (×1)



d7662036

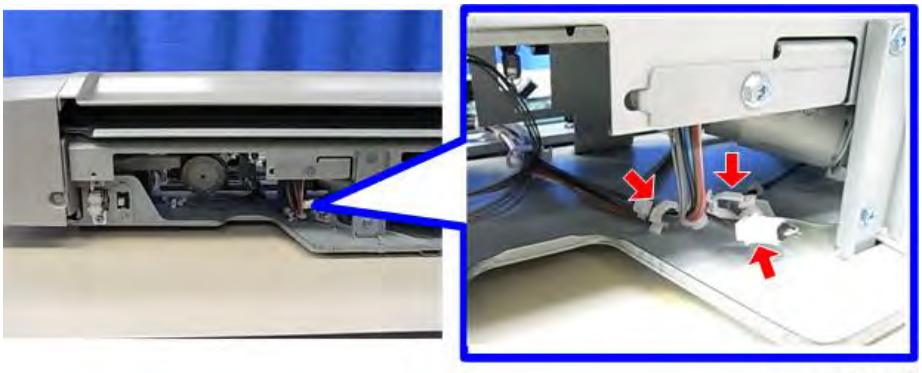
5. Finisher [A]

d7662064

Stapler Unit

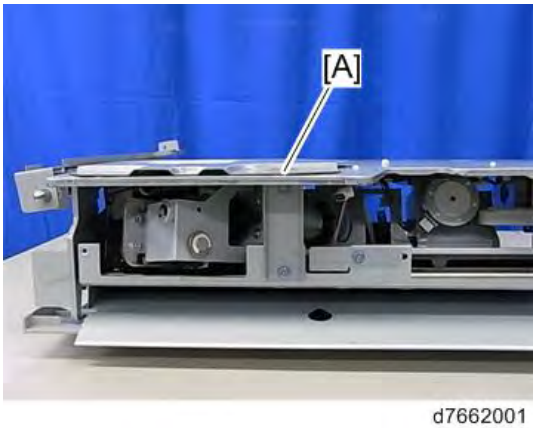
Stapler Unit

1. Rear cover (page 11)
2. Disconnect the connector and release the clamps (×1, ×2).



d7662000

3. Turn the finisher [A] over.

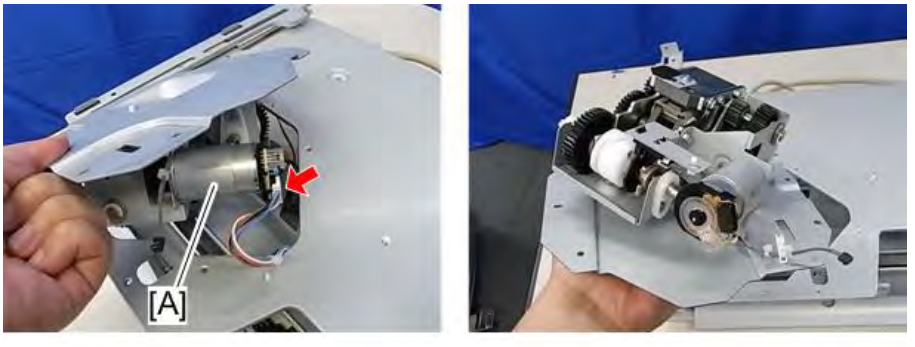


d7662001

4. **Remove the screws securing the stapler unit [A] (×5).**

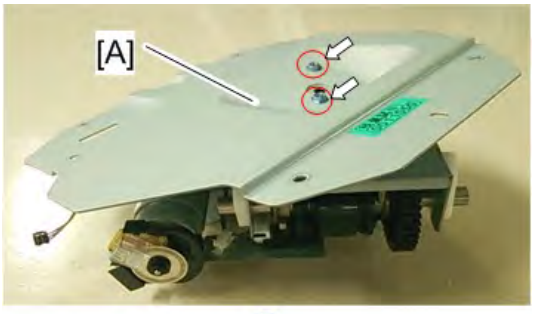
d7662002

5. **Stapler unit [A] (×1)**



d7662003

6. **Bracket [A] from the stapler unit (×2)**

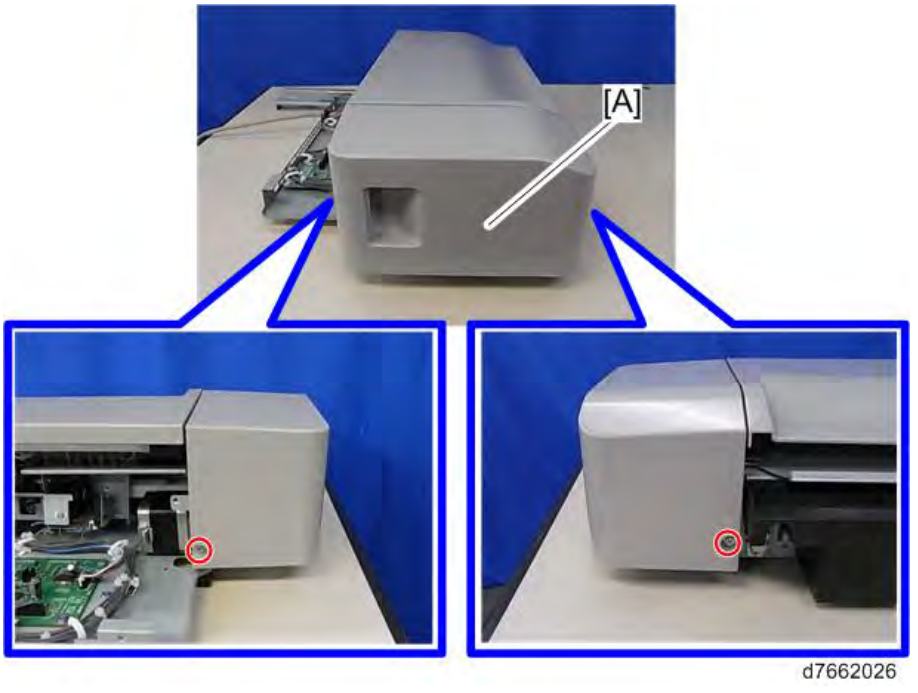


d766e0001

Exterior Covers and Tray

Finisher Front Cover

1. Paper exit cover (page 12)
2. Finisher front cover [A] (×2)



Finisher Upper Cover

1. Finisher front cover (page 10)

2. Finisher upper cover [A] (×1)

d7662027

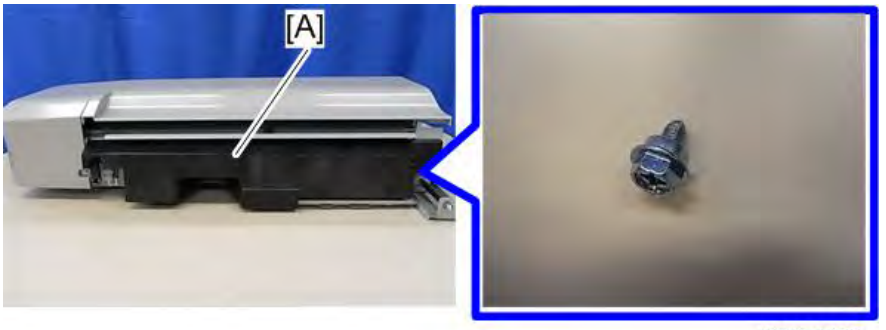
Rear Cover

1. Finisher (page 5)
2. Rear cover (×2)

d7662028

Note

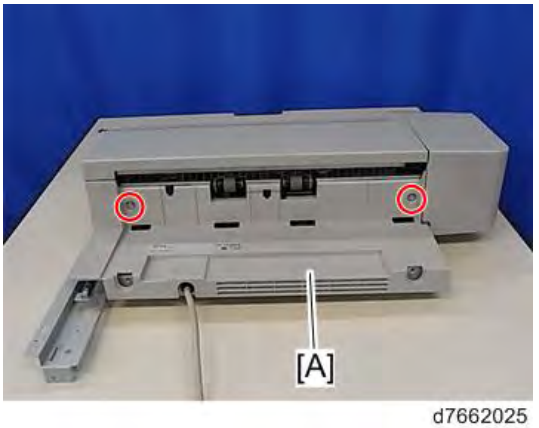
- The screw on the right (when you are facing the rear cover [A]) is a step screw



d766z4500

Paper Exit Cover

1. Internal Finisher (page 5)
2. Paper exit cover [A] (×2)



d7662025

Paper Exit Tray

1. Paper exit tray [A] (×2)

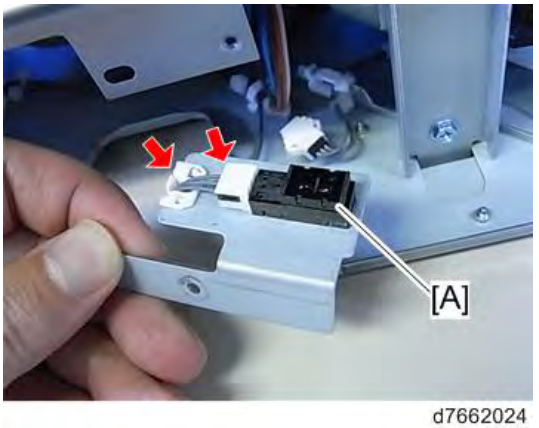
Sensors and Switch

Entrance Sensor

1. Rear cover (page 11)
2. Remove the entrance sensor [A] together with the bracket (×1, ×1).

d7662023

3. Entrance sensor [A] (×1, ×1)

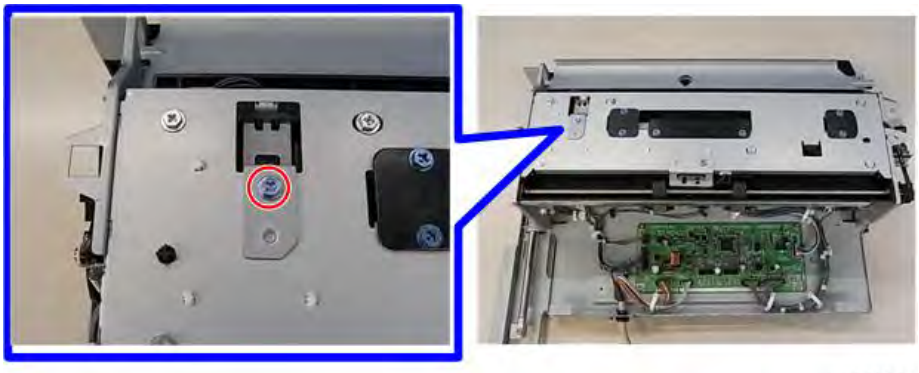


d7662024

Side-to-Side Registration Sensor

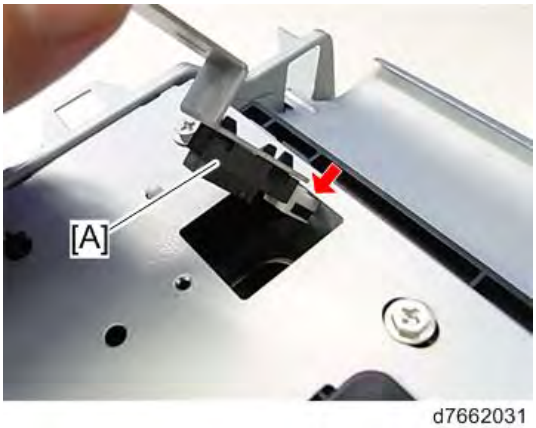
1. Finisher upper cover (page 10)

2. Remove the screw (×1).



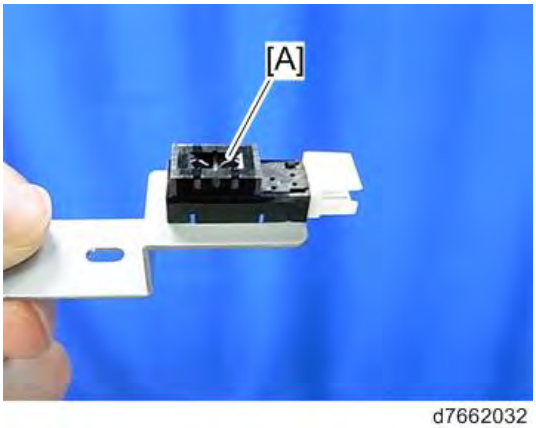
d7662030

3. Remove the side-to-side registration sensor [A] together with the bracket (×1).



d7662031

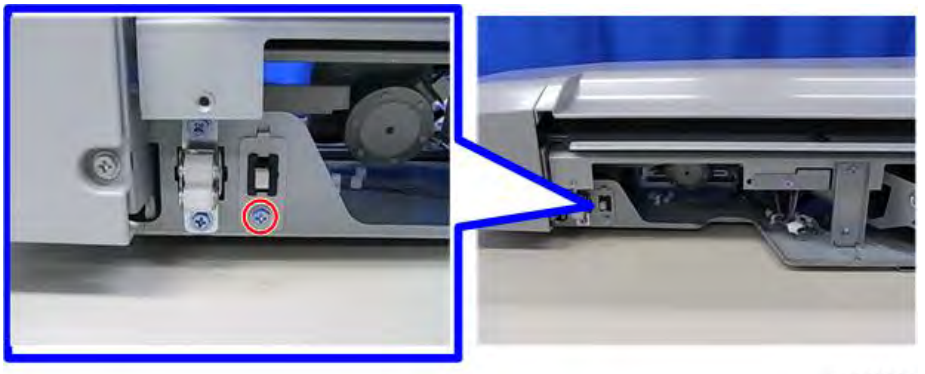
4. Side-to-side registration sensor [A]



d7662032

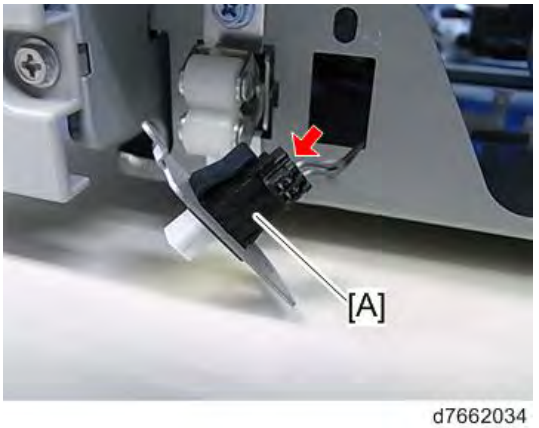
Open/Close Door Switch

1. Rear cover (page 11)
2. Remove the screw (×1).



d7662033

3. Open/close door switch [A] (×1).



d7662034

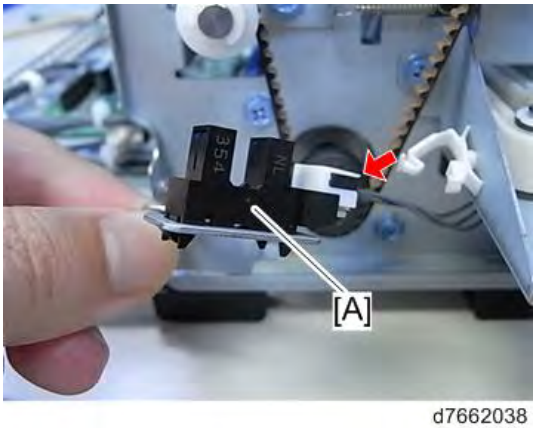
Shift HP Sensor

1. Finisher front cover (page 10)

2. Remove the shift HP sensor [A] together with the bracket (×1, ×1).

d7662037

3. Shift HP sensor [A] (×1)

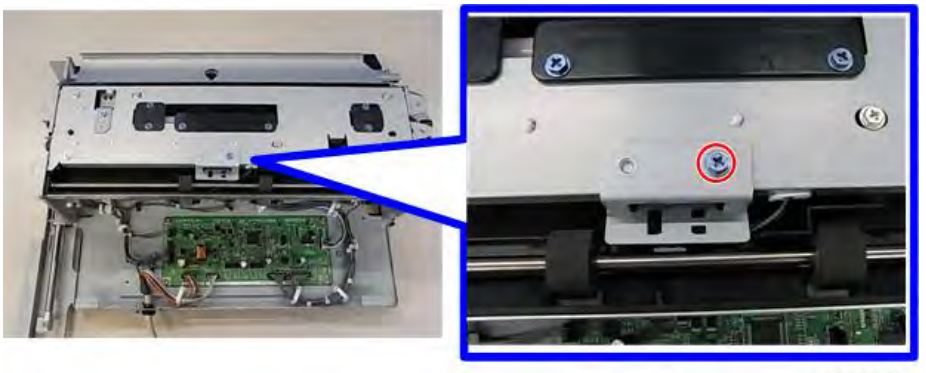


d7662038

Paper Exit Sensor

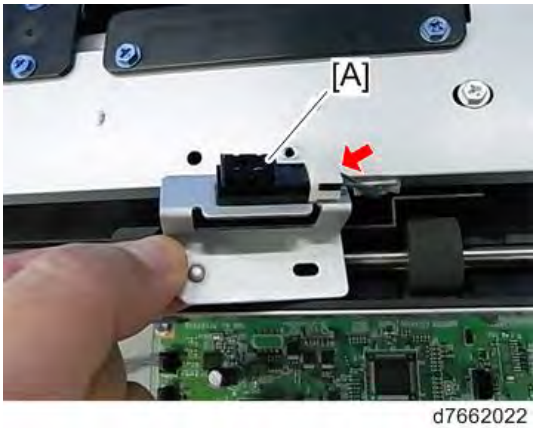
1. Finisher upper cover (page 10)

2. Remove the screw (×1).



d7662021

3. Paper exit sensor [A] (×1)

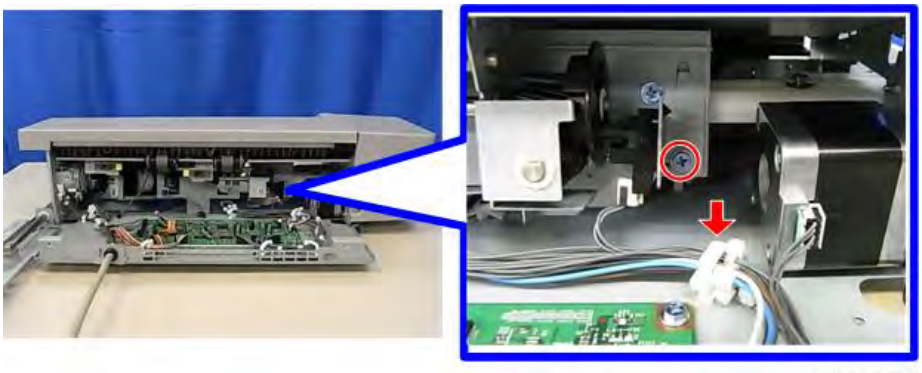


d7662022

Paper Exit Pressure HP Sensor

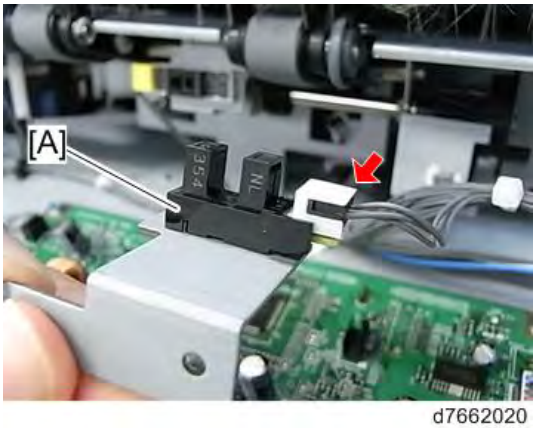
1. Paper exit cover (page 12)

2. **Remove the screw and release the clamp (×1, ×1).**



d7662019

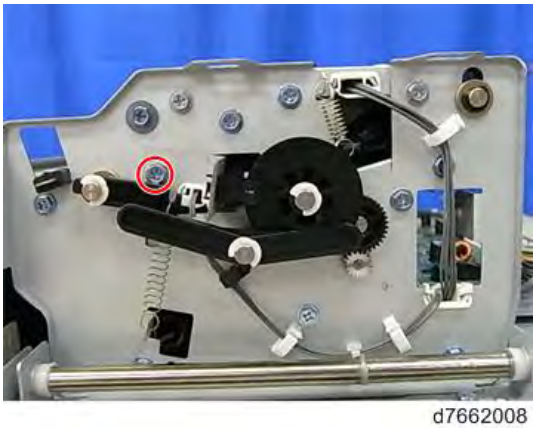
3. **Paper exit pressure HP sensor [A] (×1)**



d7662020

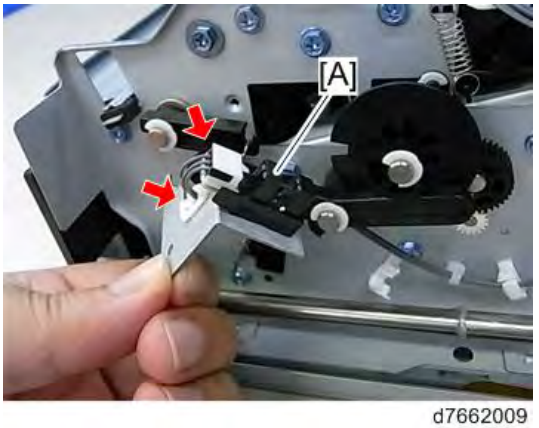
Junction Gate Motor HP Sensor

1. Remove the screw (×1).



d7662008

2. Junction gate motor HP sensor [A] (×1, ×1)

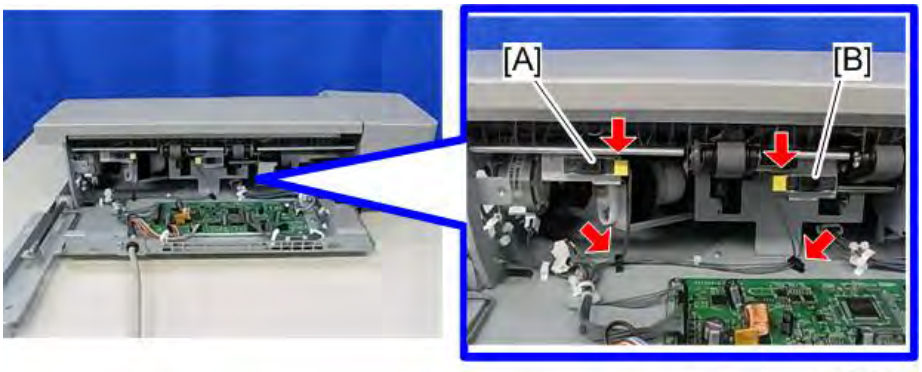


d7662009

Paper Exit Full Sensor 1/Paper Exit Full Sensor 2 (Staple)

1. Paper exit cover (page 12)

2. Paper exit full sensor 1 [A], paper exit full sensor 2 [B] (×1, and ×1, for each sensor)



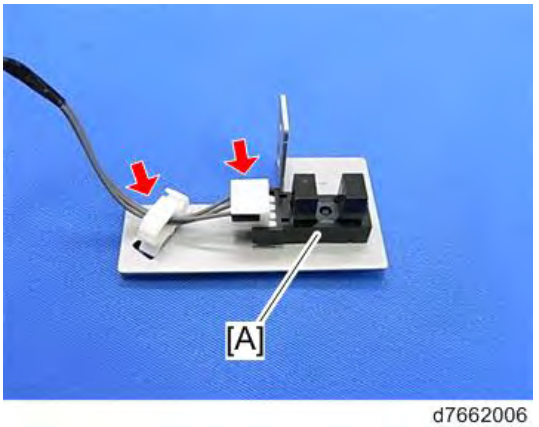
d7662007

Stapler Drive HP Sensor

1. Stapler unit (page 7)
2. Loosen the screw and release the clamp (×1, ×1).

d7662005

3. **Remove the stapler drive HP sensor [A] from the bracket (×1, ×1).**

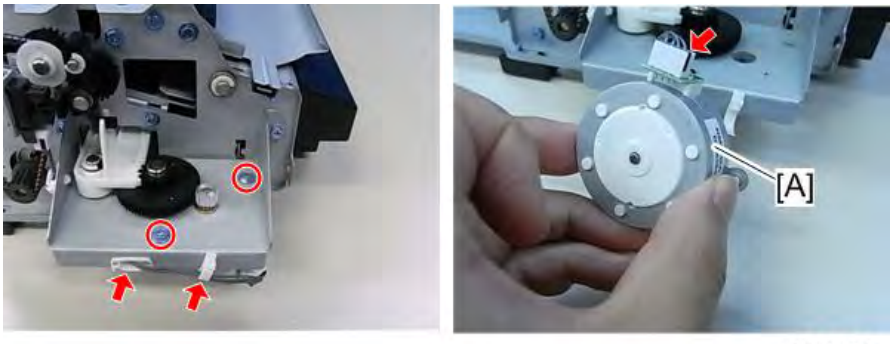


d7662006

Motors

Shift Motor

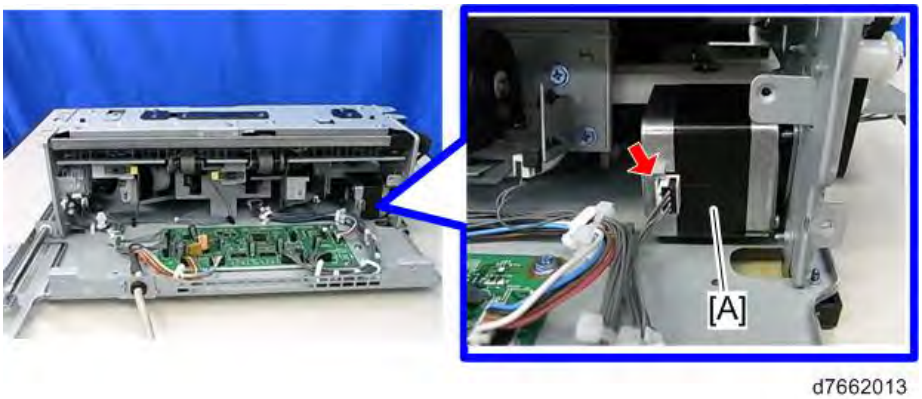
1. Finisher front cover (page 10)
2. Shift motor [A] (×2, ×1, ×2)



d7662035

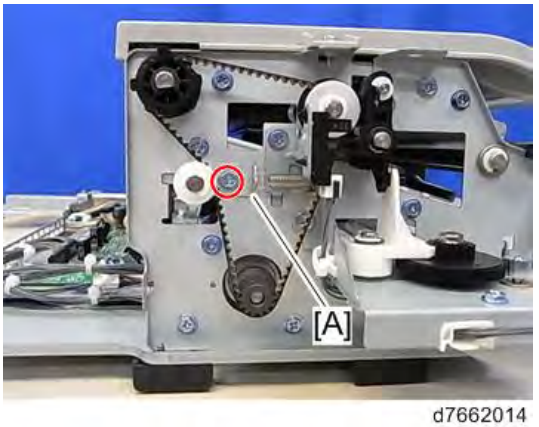
Transport Motor

1. Finisher front cover (page 10)
2. Disconnect the connector attached to the transport motor [A] (×1).



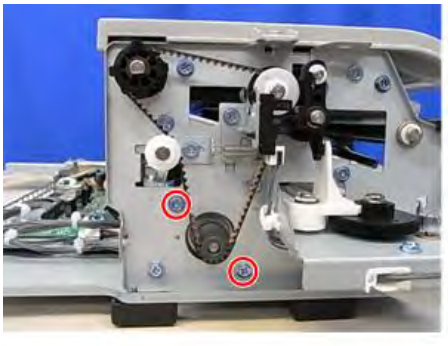
d7662013

3. Loosen the screw securing the spring bracket [A], and then release the tension on the belt (×1).



d7662014

4. Transport motor [A] (×2)



d7662015

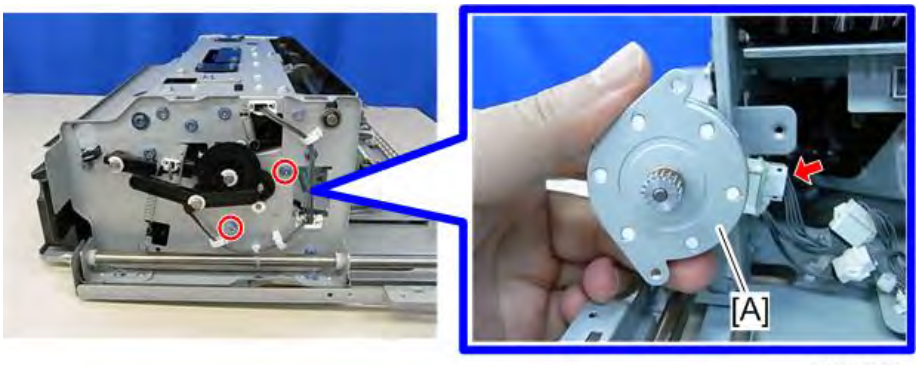
Junction Gate Motor

1. Paper output cover (page 12)

2. Release the clamp (×1).

d7662011

3. Junction gate motor [A] (×2, ×1)

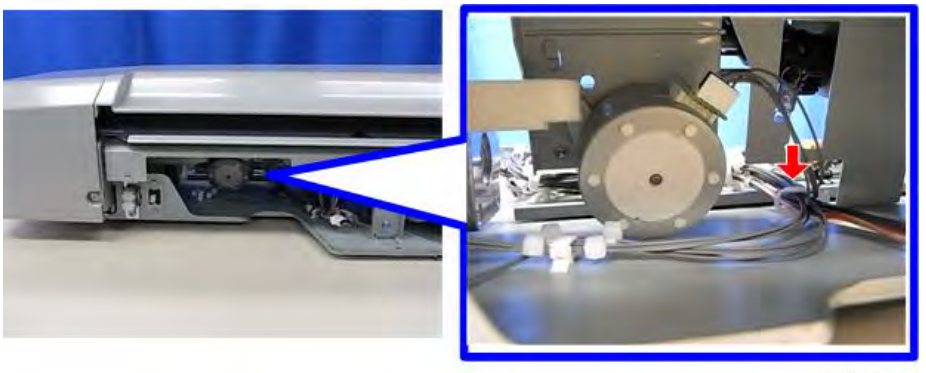


d7662010

Paper Exit Pressure Motor

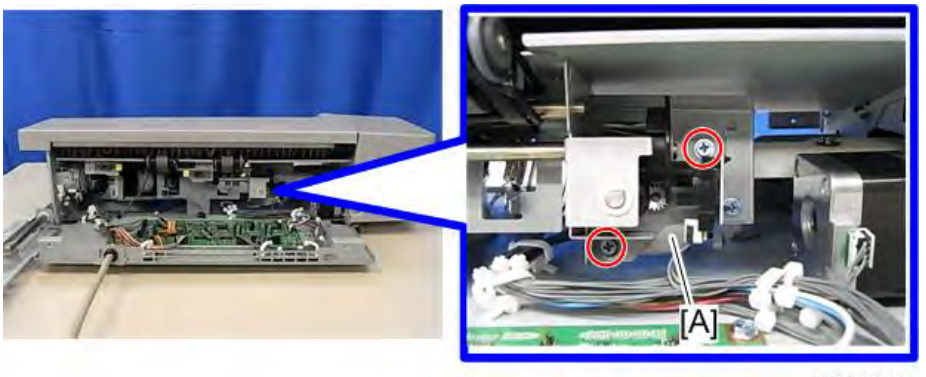
1. Paper exit cover (page 12)
2. Rear cover (page 11)

3. **Release the clamp (×1).**



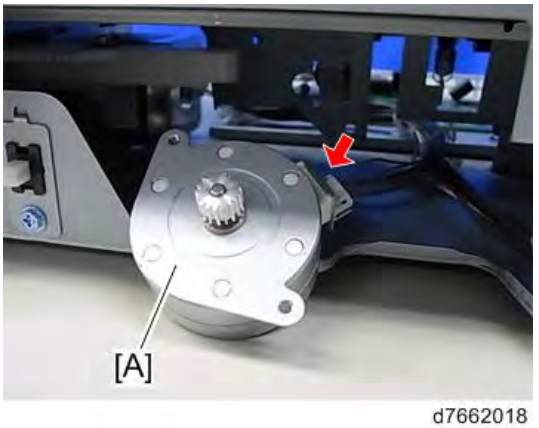
d7662017

4. **Remove the screws on the bracket [A] (×2).**



d7662016

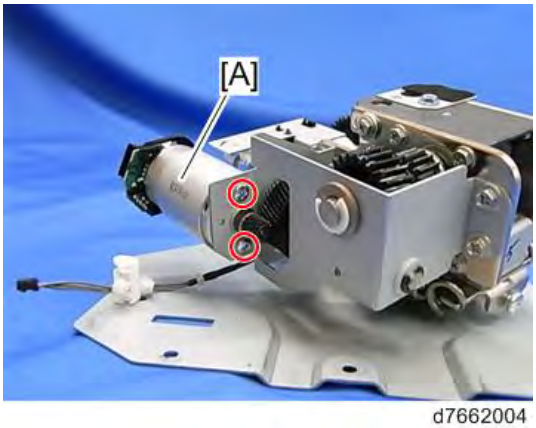
5. **Paper exit pressure motor [A] (×1)**



d7662018

Stapler Drive Motor

1. Stapler unit (page 7)
2. Stapler drive HP sensor (page 21)
3. Stapler drive motor [A] (×2)

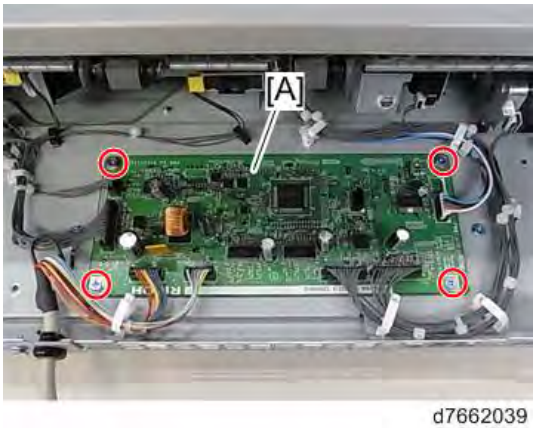


d7662004

Board

Controller Board

1. **Paper exit cover (page 12)**
2. **Controller board [A] (×4, ×all)**

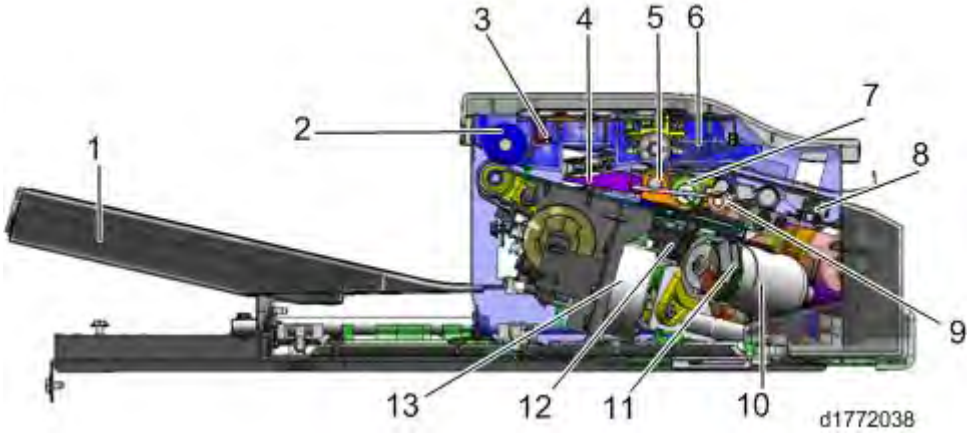


d7662039

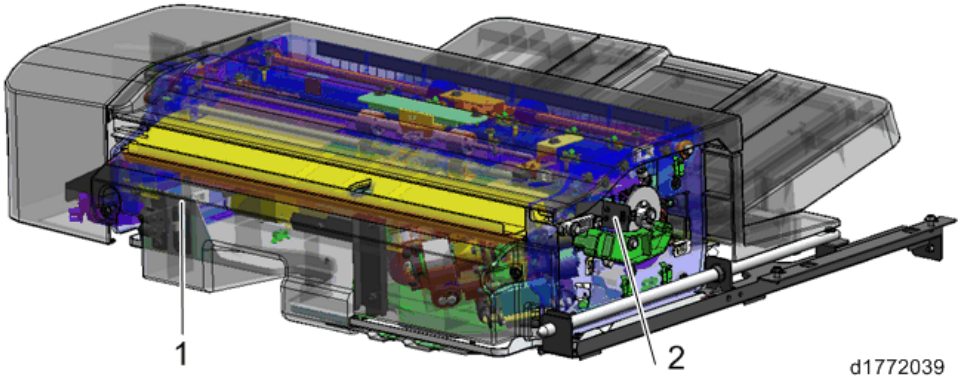
2. Detailed Descriptions

Internal Finisher SR3180 (D766)

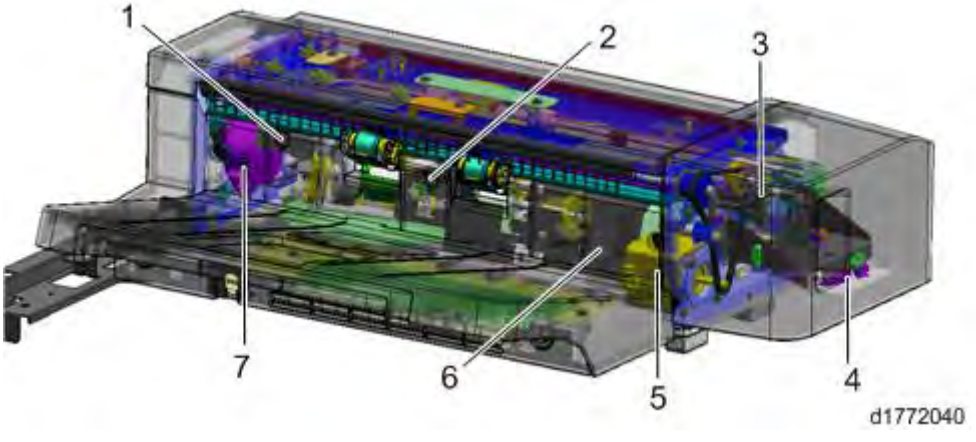
Parts Layout



No.	Description	No.	Description
1	Paper exit tray	8	Entrance sensor
2	Paper exit roller/paper exit belt	9	Trailing edge presser
3	Paper exit sensor	10	Stapler drive motor
4	Junction gate	11	Stapler
5	Shift roller	12	Stapler home position sensor
6	Side-to-side registration sensor	13	Paper exit pressure motor
7	Reverse roller		



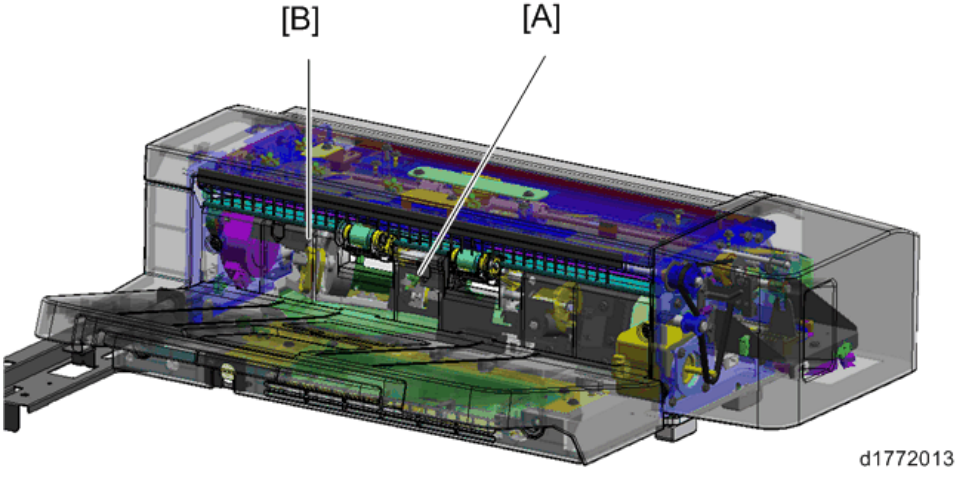
No.	Description	No.	Description
1	Open/close door switch	2	HP sensor



No.	Description	No.	Description
1	Paper exit full sensor 2 (staple)	5	Transport motor
2	Paper exit full sensor 1	6	Paper exit pressure HP sensor
3	Shift HP sensor	7	Junction gate motor
4	Shift motor		

Mechanism

Tray full detection mechanism

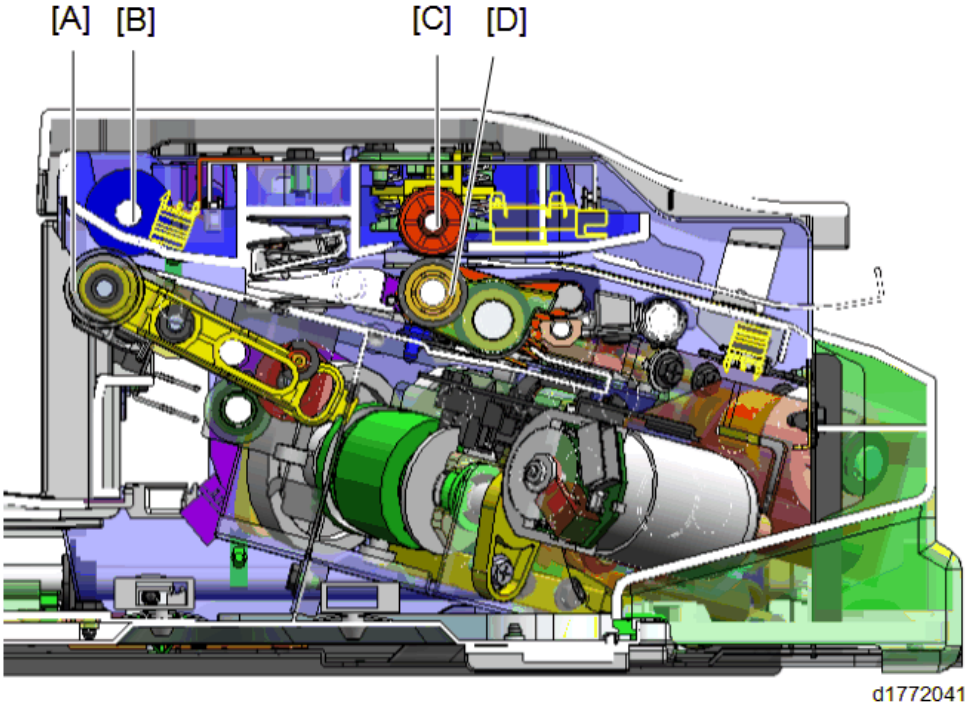


When the paper exit full sensor 1 [A] or the paper exit full sensor 2 (staple) [B] detects paper, the paper exit tray is full. Paper feed is stopped temporarily while the tray is full, and is restarted after the paper is removed.

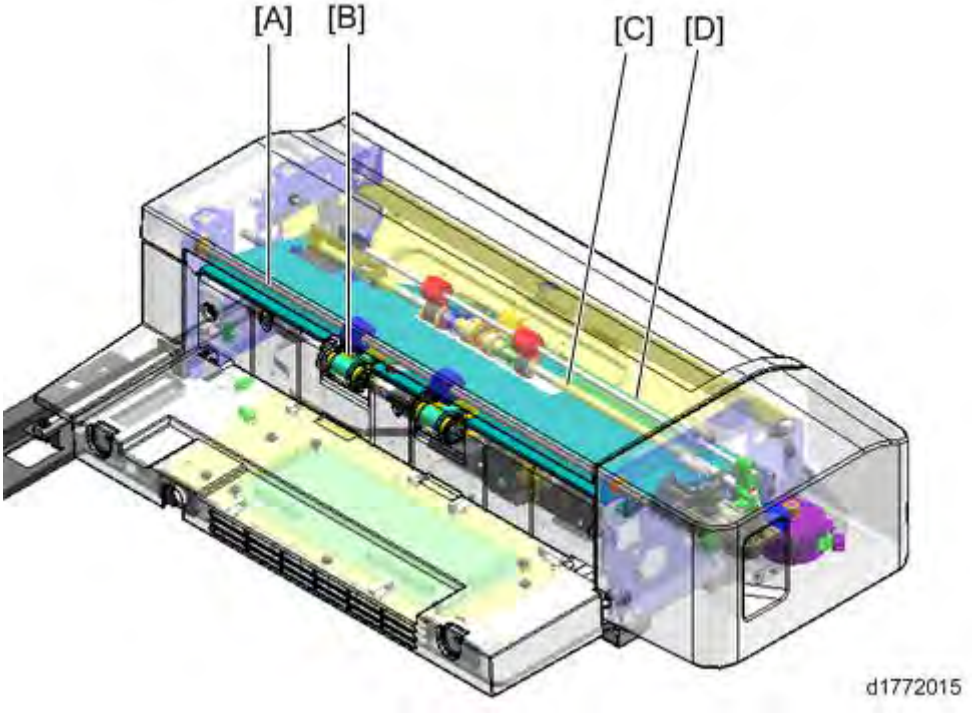
The paper exit full sensor 1 is at the center of the main scan (side-to-side), and detects the total quantity of paper in the paper exit tray.

If the paper is stapled, the height of the paper around the stapled area is higher than that of the other areas. The paper exit full sensor 2 (staple) is located at the stapling area, and detects the quantity of stapled paper.

Straight paper exit/shift paper exit mechanism



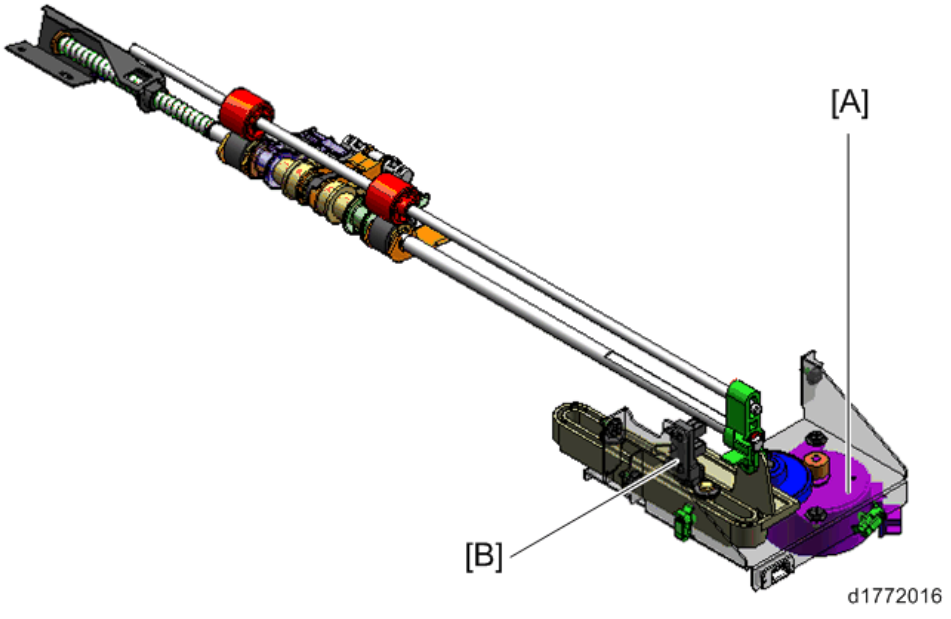
Paper from the main machine is transported to the paper exit roller [B] and paper exit belt [A] via the shift rollers ([C] and [D]). The transport motor drives the shift rollers, reverse rollers and paper exit rollers.



After passing through the paper exit roller of the main machine, to shift the paper from side to side, the shift rollers ([C] and [D]) nip the sheets and the shift motor moves the paper towards the front or rear of the machine.

If the paper is still held by the paper exit rollers, this will stop the paper from shifting, so the paper exit rollers ([A] and [B]) are moved from their home (strong pressure) positions to their pressure release positions.

Shift mechanism



Shift roller operation timing

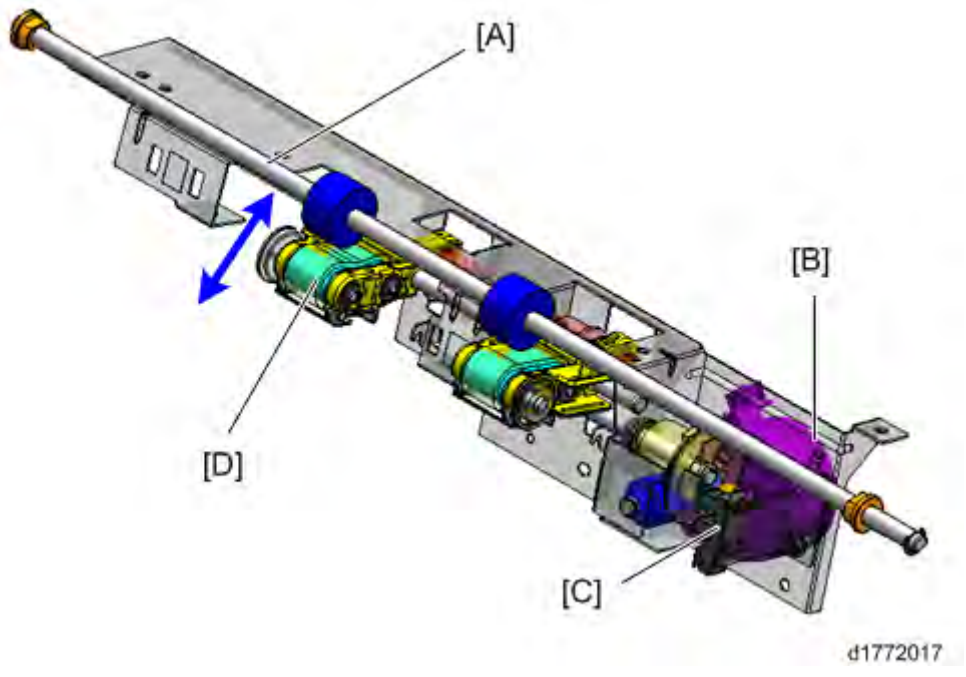
Paper is shifted when the distance between the trailing edge and the paper exit roller on the main machine is 10mm (the entrance sensor detects the leading edge of the paper).

The shift motor [A] rotates clockwise/anti-clockwise to shift the paper towards the front/rear of the machine.

The shift amount is 20mm when shifting towards the front, and 10mm when shifting towards the back.

The home position is located at the back end of the shift area, and is detected by the shift roller HP sensor [B].

Paper exit roller/paper exit belt release mechanism



Pressure release timing of the paper exit rollers

- Waiting (before paper is received): Strong pressure
- When paper is transported: Pressure released
- When paper shift is completed (shift motor stops): Strong pressure

When paper is transported, the paper exit rollers/paper exit belt ([A] and [D]) are at the pressure release position so that they do not interfere with paper shifting.

When paper shift is completed, the rollers are moved to the strong pressure position for paper transportation and paper exit.

Positions of the paper exit roller/paper exit belt

- HP (strong pressure)
- Pressure release position
- Weak pressure position

The paper exit pressure motor [B] rotates clockwise/anti-clockwise to drive the paper exit drive belt [D] to the strong pressure or weak pressure positions.

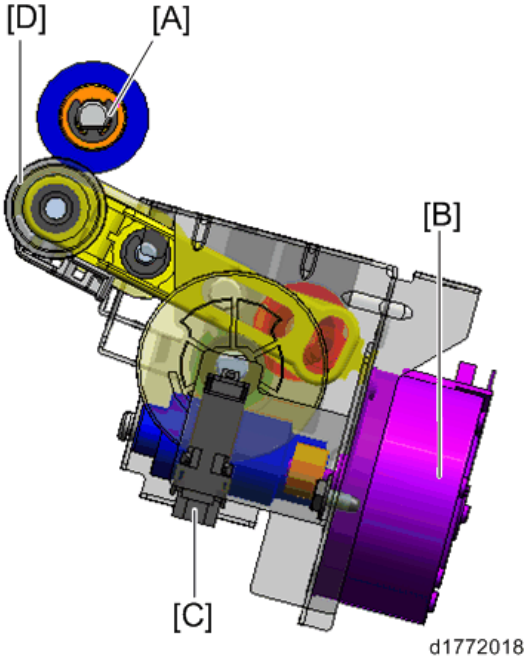
The paper exit pressure HP sensor [C] detects the home position.

Details of each position

- Home position (strong pressure position)

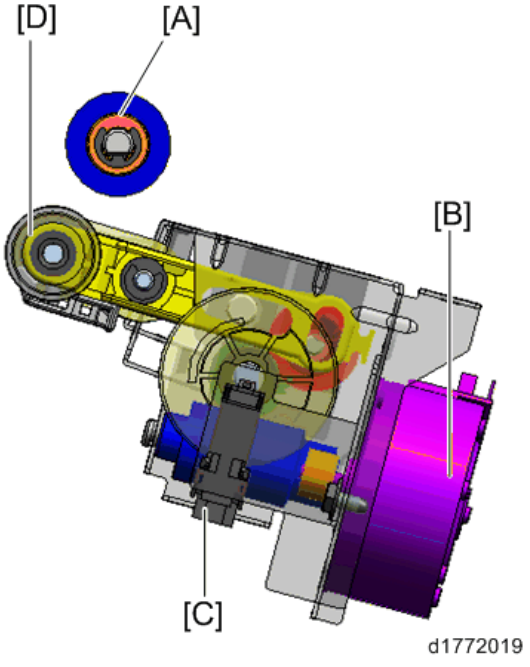
This is used for paper transportation and paper exit. The pressure increased using the motor [B], and the paper exit roller (drive) [A] and the paper exit belt (driven) [D] come into contact in order to nip the paper firmly.

[C] is the paper exit pressure HP sensor.



- Pressure release position

  The nip of the paper exit roller/paper exit belt is released so that they do not interfere with paper shift.

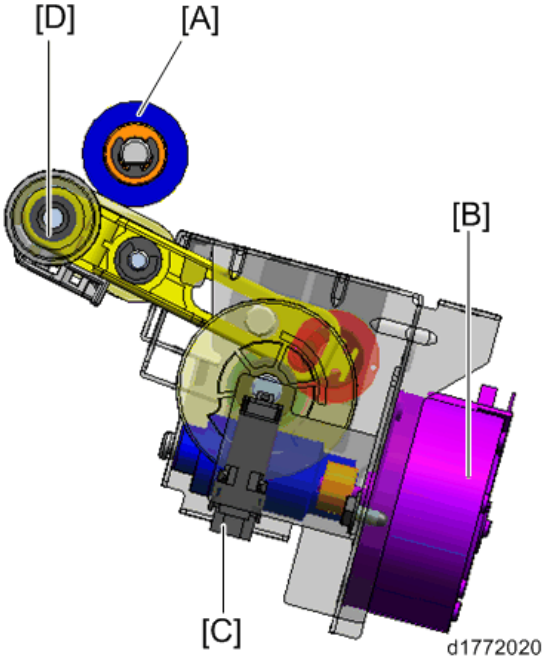


- Weak pressure position

  This is used during stapling, when there is already paper stacked in the paper exit tray, and more paper is being transported.

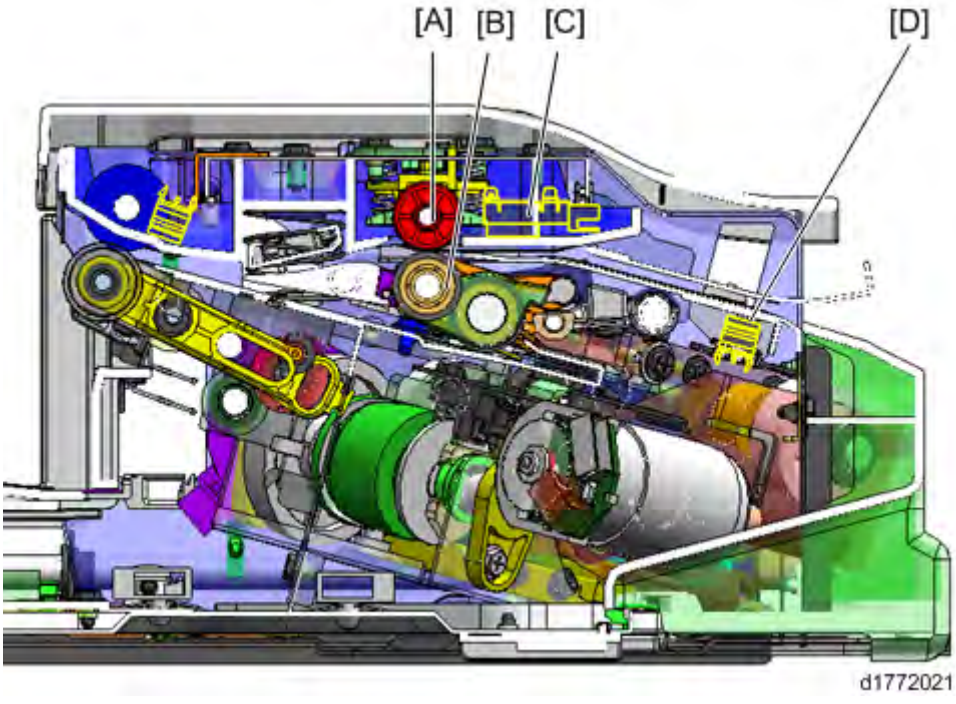
  The motor [A] lowers the pressure, and the position of the paper exit belt (driven) is moved so that the middle part of the belt comes in contact with the paper exit roller (drive).

  The weak pressure position is for preventing smudges or stains caused by paper rubbing against the paper that is already stacked.



Staple eject mechanism

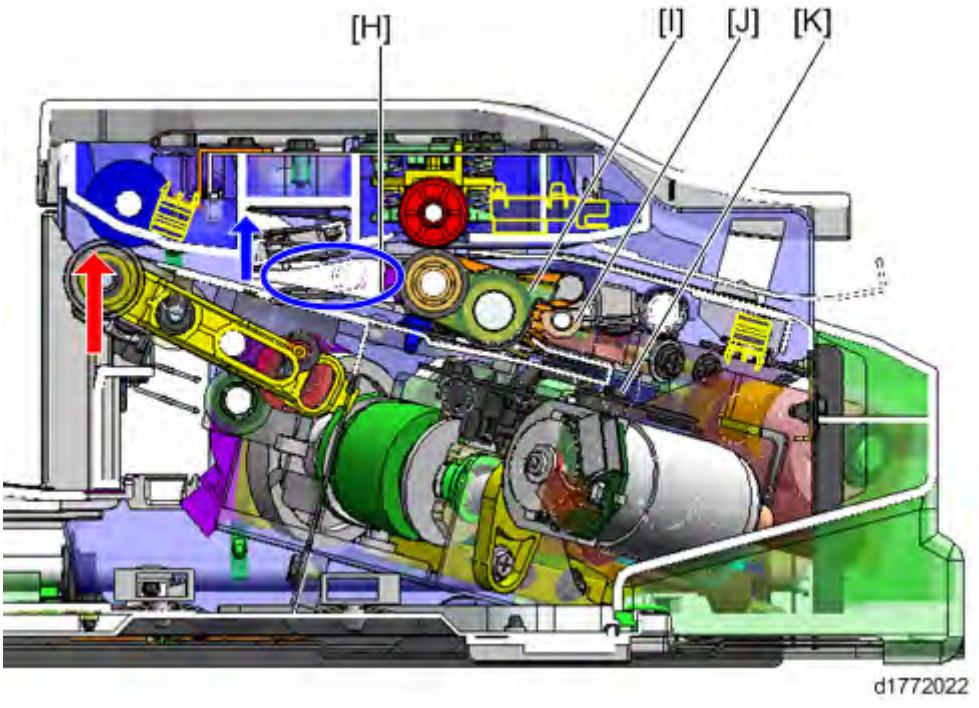
- Transport/adjustment of paper position (home position)



This finisher does not have a jogger. Paper position (side-to-side) is aligned using sensors, by registration adjustment during paper transportation.

The leading edge of the paper transported from the main machine is detected by the entrance sensor [D]. After the trailing edge has passed through the paper exit rollers of the main machine, the paper is transported by the shift rollers ([A] and [B]) for shifting. The paper is shifted to the position where the side-to-side registration sensor [C] detects the rear edge of the paper (as viewed from the front of the machine). During paper shifting, the paper exit roller and paper exit belt move to the pressure release position.

- Stacking (Position B)

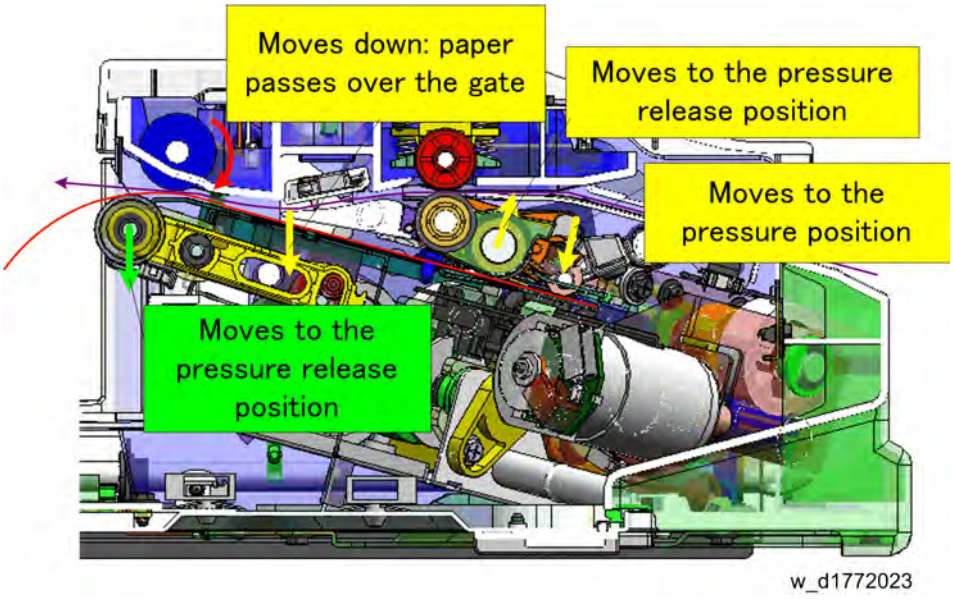


After shifting is completed, the paper exit rollers move to the strong pressure position and received the paper from the shift rollers. After the trailing edge of the paper has passed the junction gate, the paper exit roller rotates in the opposite direction. Paper is transported to the stacking area, and then passed through the reverse rollers [H].

At this time, the junction gate [J] moves to the lower position (the gate's edge is raised, as shown by the blue arrow and circle) to bring paper to the stacking area.

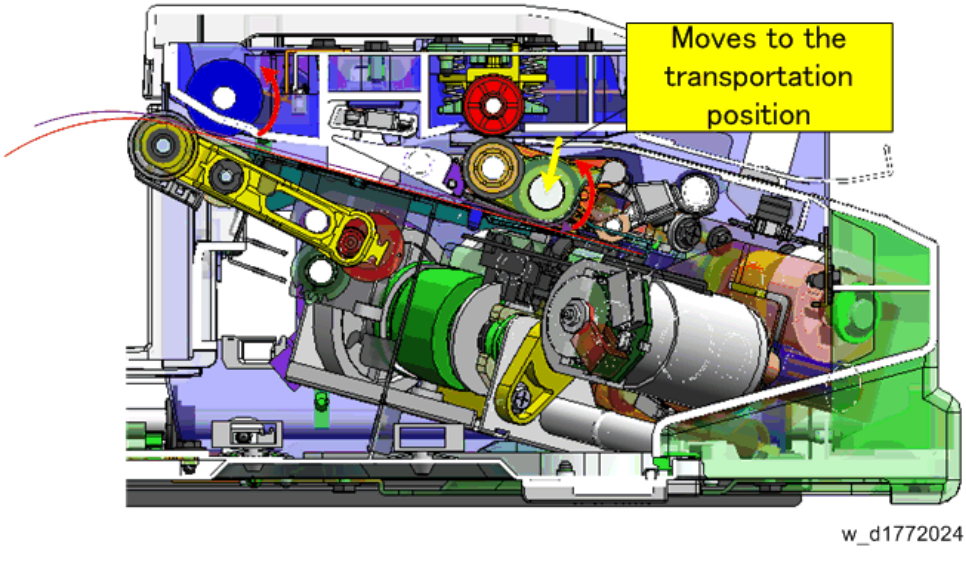
After paper is transported to the reverse rollers, the paper exit rollers move to the pressure release position to allow shifting of the next sheets (as shown by the red arrow). When the transported sheet of paper touches the stack guide [K], the paper is aligned (main-scan direction). After the paper is stacked, the trailing edge presser [I] moves to the press position (the reverse rollers move to the pressure release position) and holds back the stacked paper.

- Second sheet transport/adjustment (Position A)



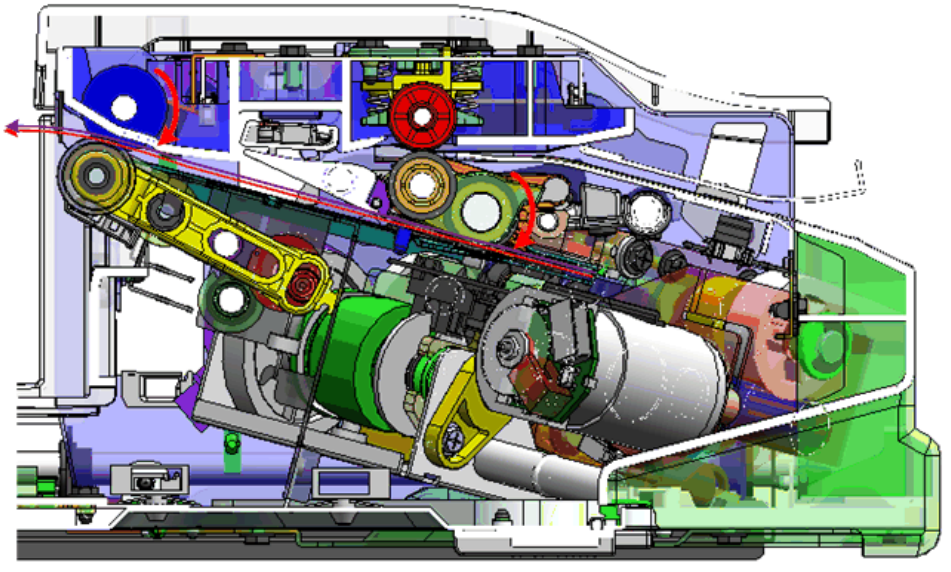
After the first sheet is stacked, the second sheet is shifted in the same way as the first sheet. During this time, the stacked paper is held back by the trailing edge presser.

- Second sheet stacking



After the first sheet is shifted, the paper exit rollers and paper exit belt move to the weak pressure position, and transport the paper to the stacking area. The reverse rollers then receive the paper. The same is done to the third and subsequent sheets. The trailing edge presser holds back the stacked paper, and transports the second and subsequent sheets by sliding them onto the stacked paper.

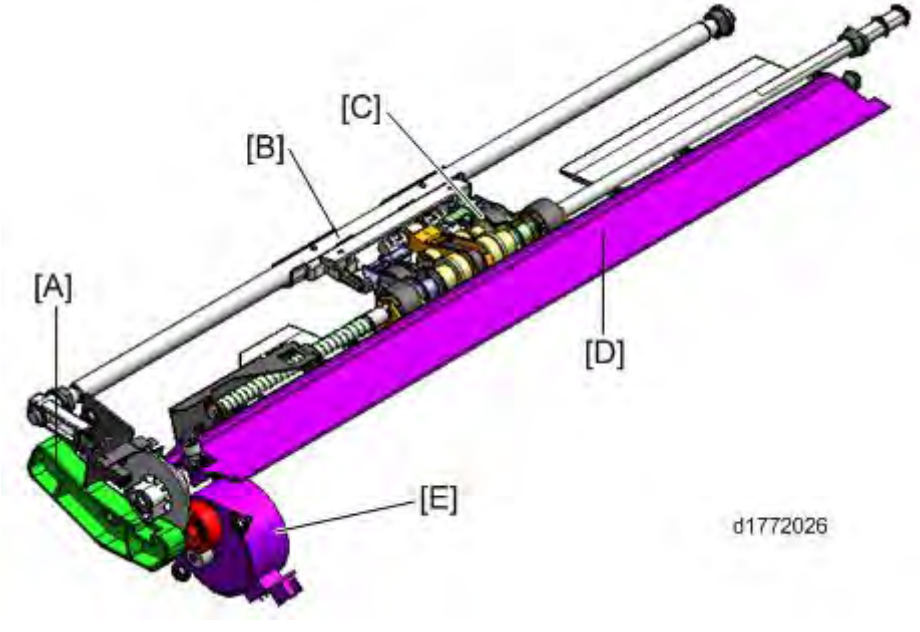
- Paper batch (Position C)



d1772025

After the specified number of sheets are stacked, the batch of paper is stapled and transported through the paper exit rollers and paper exit belt. If the stapling method is set to “Double” using the user settings, the batch of paper is moved slightly and stapling is repeated.

Junction gate/trailing edge presser mechanism



d1772026

The junction gate motor [E] drives the junction gate [D], trailing edge presser [B], and the reverse rollers [C]. The junction gate motor HP sensor [A] detects the home position.

Timing of operation

- Junction gate
  - Upper-transportation position → Lower-transportation position

    The junction gate moves to the lower transportation position when the trailing edge of the paper reaches the point 10mm after the junction gate. (Paper position is based on the entrance sensor, and is controlled by motor pulses.)
  - Lower-transportation position → Upper-transportation position>

    The junction gate moves to the upper transportation position when the trailing edge of the paper reaches the guide fence, and the trailing edge presser moves to the press position.
- Trailing edge presser (Reverse roller)
  - Press position → Pressure release position>

    The trailing edge presser moves to the pressure release position when the trailing edge of the paper reaches the reverse roller.
  - Pressure release position → Press position>

    The trailing edge presser moves to the press position when the trailing edge of the paper reaches the guide fence.

The junction gate motor rotates clockwise, and switches the junction gate and the trailing edge presser (reverse roller). The positions of the junction gate, trailing edge presser and reverse roller vary as follows.

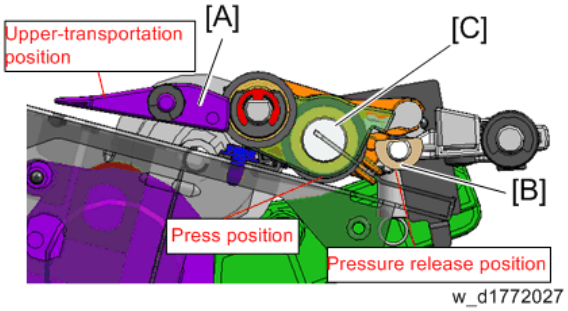
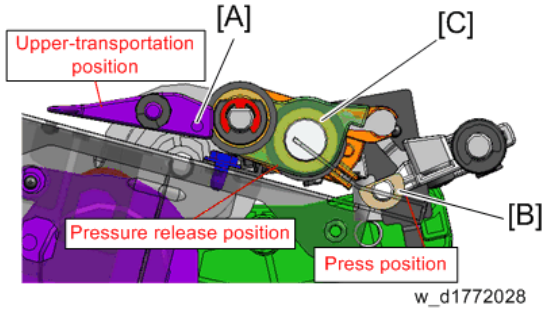
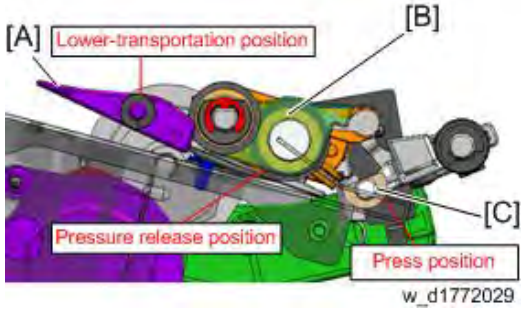
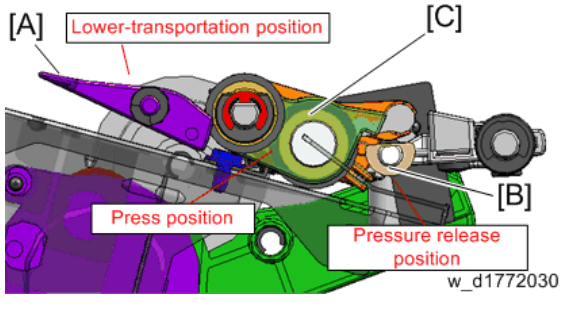
	Figure	[A] Junction gate	[B] Trailing edge presser	[C] Reverse roller
Home Position *		Upper transportation position	Pressure release position	Press position

	Figure	[A] Junction gate	[B] Trailing edge presser	[C] Reverse roller
Position A		Upper transportation position	Press position	Pressure release position
Position B		Lower transportation position	Press position	Pressure release position
Position C		Lower transportation position	Pressure release position	Press position

* The home position is at “Junction gate: Upper-transportation position” and “Trailing edge presser: Pressure release position”, and is detected by the junction gate motor HP sensor.

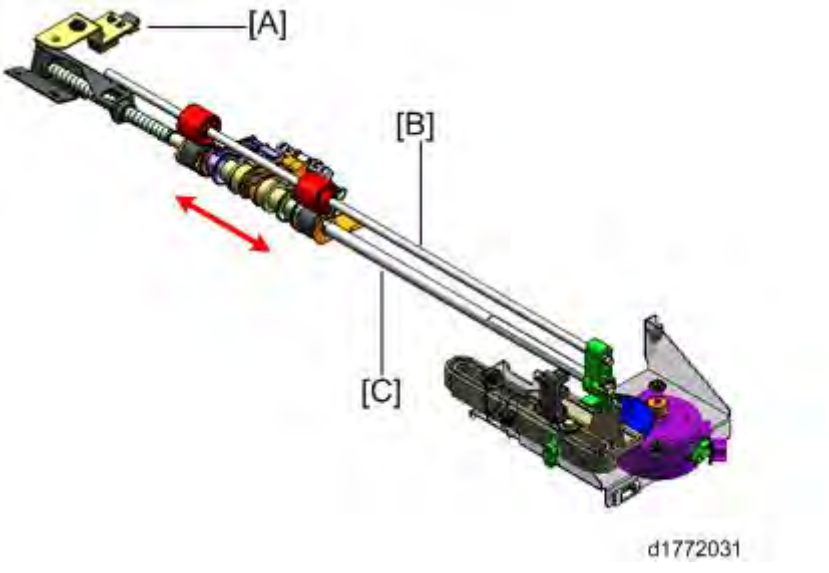
Sub-scan direction (transport direction) jogger mechanism

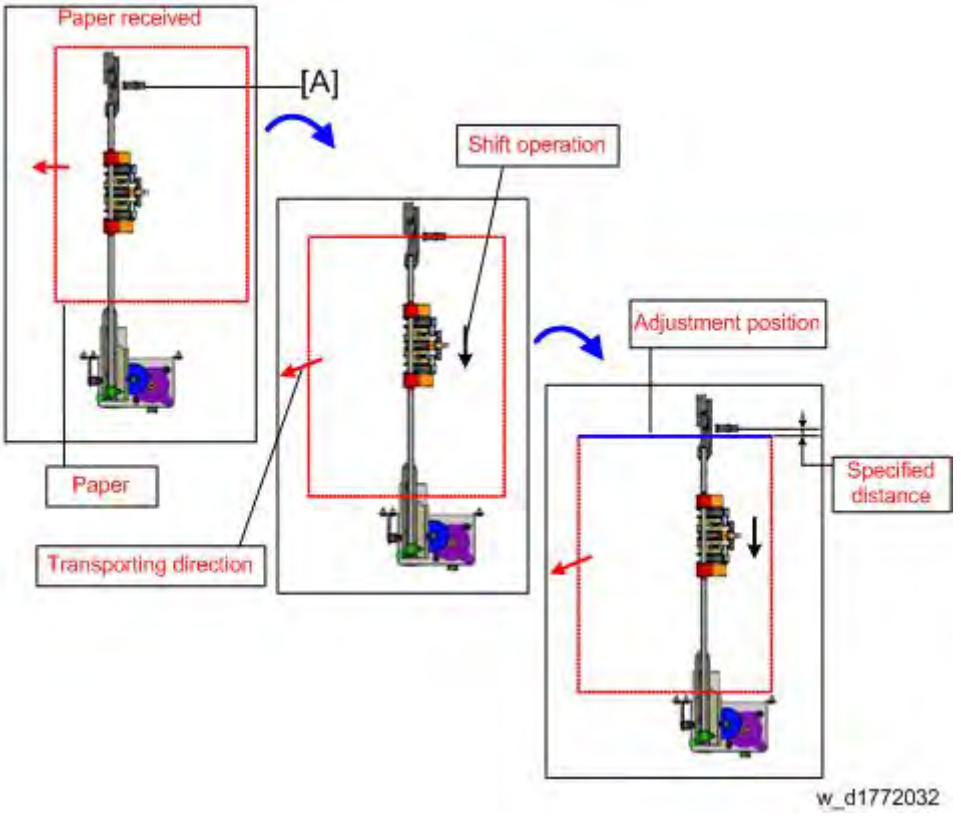
Paper transported to the stacking area by the paper exit rollers is delivered to the reverse rollers. Paper alignment for the sub-scan direction is performed by using the reverse rollers to press the trailing edge of the paper against the guide fence.

Paper detection on the stack guide plate

The paper exit sensor detects paper when there is paper on the stack guide plate.

Sheet edge face alignment mechanism (main-scan direction)





This option does not have a jogger. Paper position adjustment for stapling (main-scan direction) is performed by paper shift and alignment of the paper edges using the registration sensor.

Paper transported to the shift rollers ([B] and [C]) is shifted when the trailing edge is 10mm from the paper exit roller. (Paper position is based on the entrance sensor, and is controlled by motor pulses.)

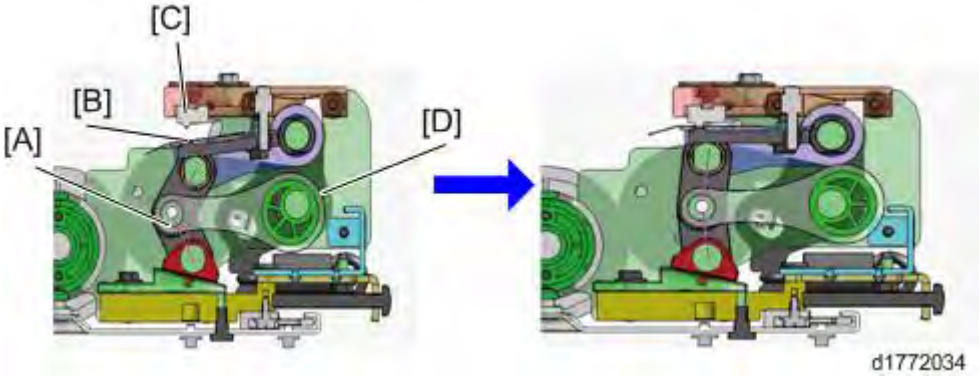
The paper shifts to a position where it can be detected by the sub-scan (leading edge) registration sensor [A]. The paper is then shifted for a specified distance. These operations are applied to each sheet, so that the edge of each sheet is aligned as shown by the blue line above.

Stapler mechanism

This option uses the crimping method. V-shaped teeth align the paper and press a tooth-mark onto the paper. This tooth-mark holds the paper together. The pressure applied is 220 kg.

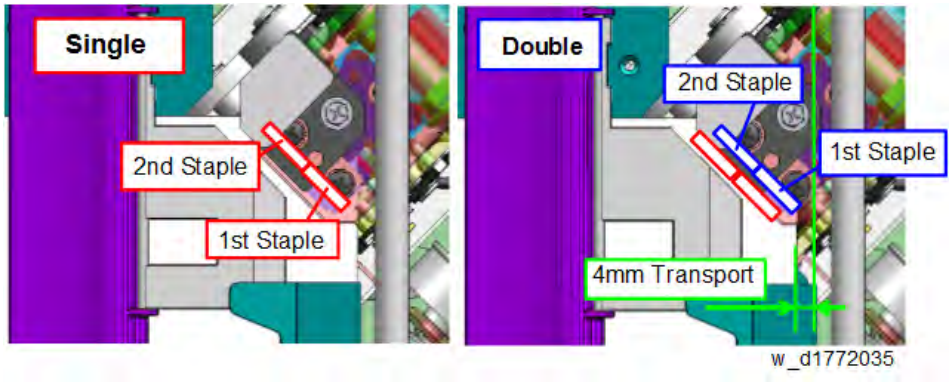
This option performs two stapling movements for every stapling operation.

Moving to the first staple position → Stapling → Moving to the second staple position → Stapling → Moving back to the home position



The pressure cam [D] stretches the pressure link [A], and the upper tooth [C] and the lower tooth [B] fit into each other. Stapler movements and stapling operations are driven by the stapler drive motor. The stapler drive HP sensor detects the home position.

- Double/Single Staple



It is difficult to adjust the bonding strength because it depends on how well the paper fibers twine. Setting to Single or Double allows you to adjust the bond strength.

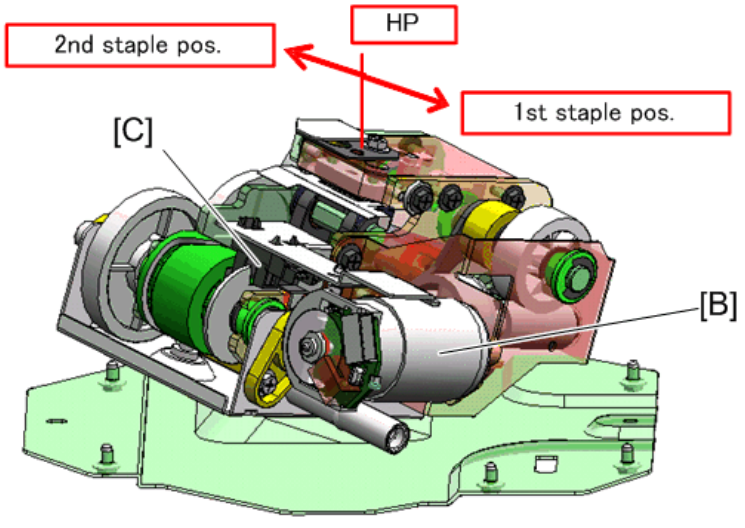
For Single, stapling is applied twice.

For Double, after stapling is applied twice, the paper exit roller shifts the paper 4mm, and a stapling operation is applied again.

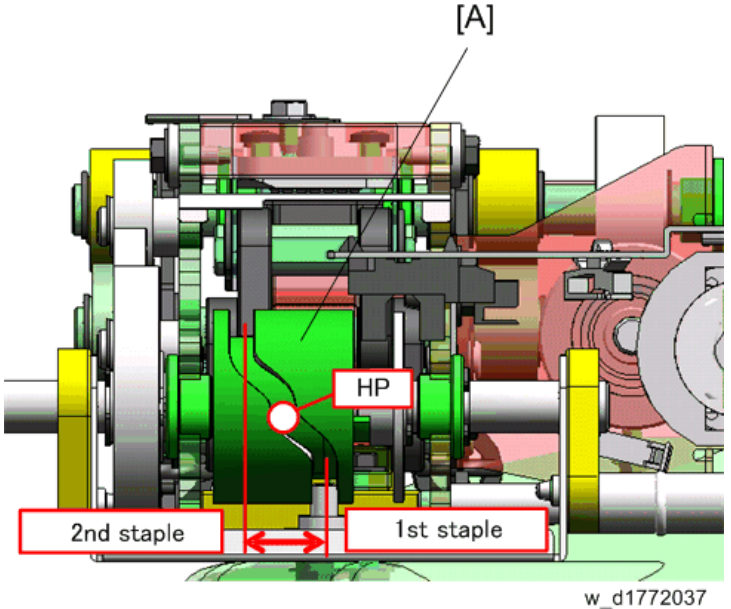
- Paper exit

After stapling, the trailing edge presser is released. The paper exit rollers ejects the paper.

Stapler movement mechanism



w_d1772036



w_d1772037

Because this stapler needs to staple twice for a single staple position, there is a mechanism to move the stapler.

The grooved cam [A] inside the stapler unit rotates, and the securing pin passes over the grooves to guide the cam.

Stapler movements and stapling operations are driven by the stapler drive motor [B]. The stapler home position sensor [C] detects the home position.

ARDF DF3090
Machine Code: D779
Field Service Manual
Ver 1.0

Initial Release: Nov, 2016

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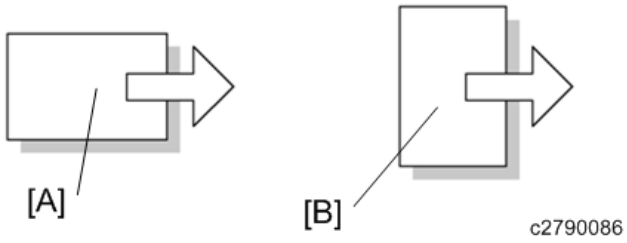
Symbols, Abbreviations

Symbols, Abbreviations

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

Symbol	What it means
	Clip ring
	Screw
	Connector
	Clamp
	E-ring
	Flat Flexible Cable
	Timing Belt
SEF	Short Edge Feed
LEF	Long Edge Feed
K	Black
C	Cyan
M	Magenta
Y	Yellow
B/W, BW	Black and White
FC	Full color



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

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1. Replacement and Adjustment

Document Feeder

Original Feed Unit

1. Open the left cover.
2. Original feed unit [A]

d578r502

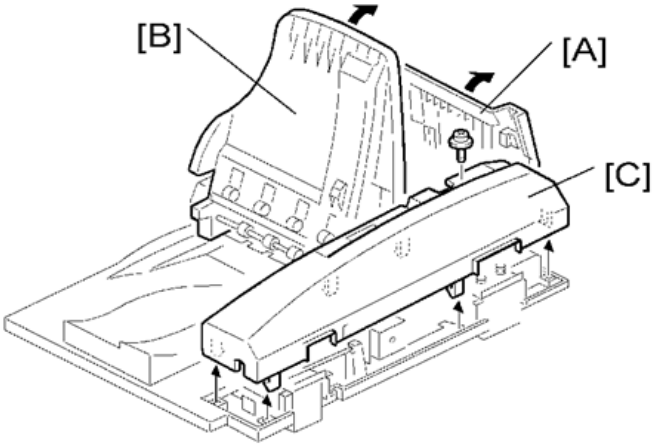
Note

- Pull the original feed unit forward to release the back side of the shaft.

Exterior Covers and Original Tray

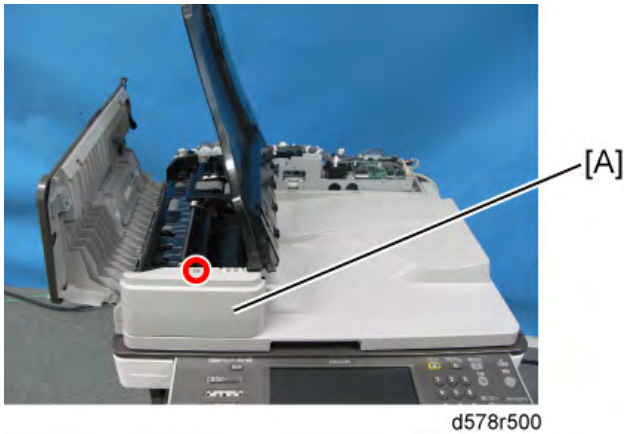
Rear Cover

1. Open the left cover [A].
2. Open the original tray [B].
3. Rear cover [C] (×1, hook ×5)



Front Cover and Original Tray

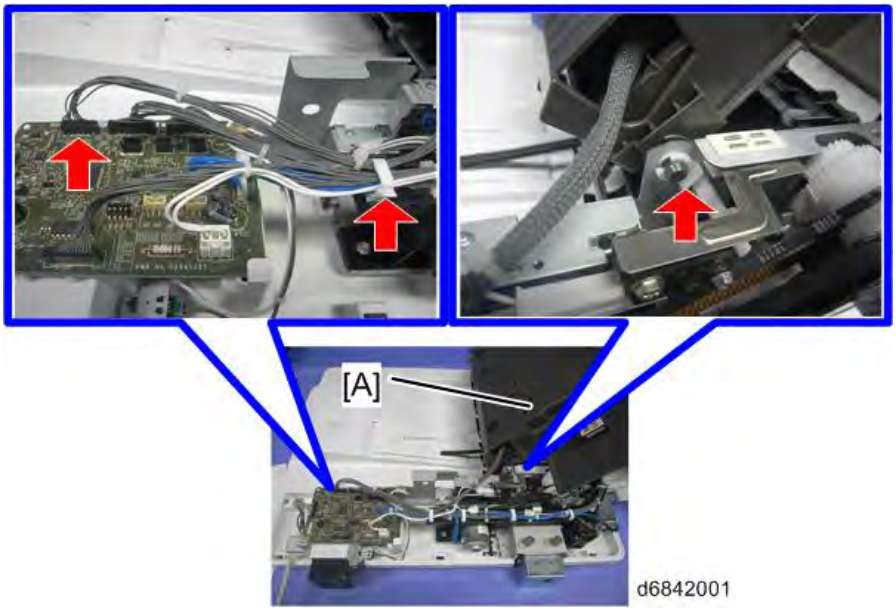
1. Open the left cover.
2. Rear cover (Rear Cover)
3. Front cover [A] (×1)



Note

- Keep the original tray open when removing the front cover.

4. Original tray [A] (×1, ×1, ×1)



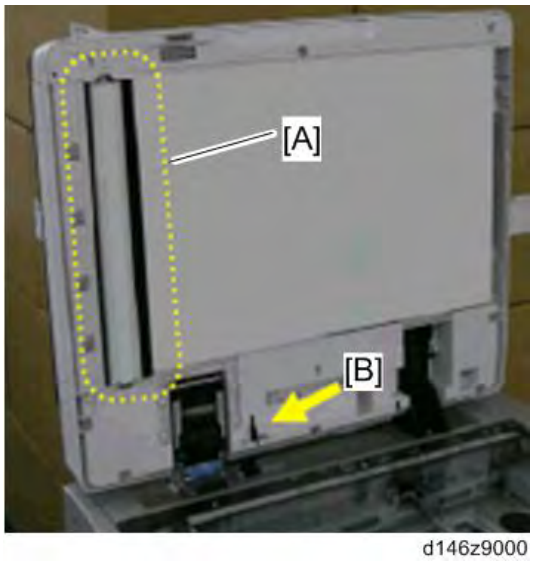
Hinge

1. Remove the ARDF from the main machine.

2. Place the ARDF on a flat surface, and place it so that the hinge does not hit against that surface.

Note

- Be careful not to scratch the scanning area [A] (guide plate and mylar).
- Be careful not to hook the actuator [B]. (It is a movable actuator; it is stored in the ARDF when you push it and it comes back because of a spring.)

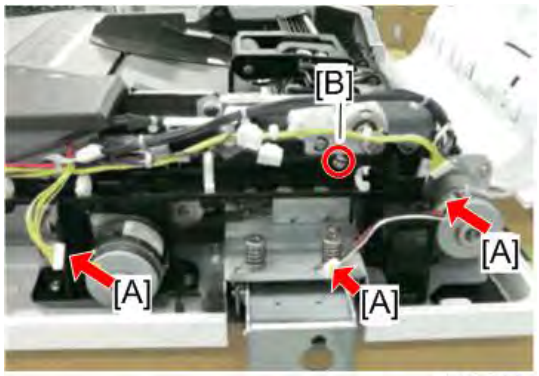


3. Remove the rear cover of the ARDF.

d146z9001

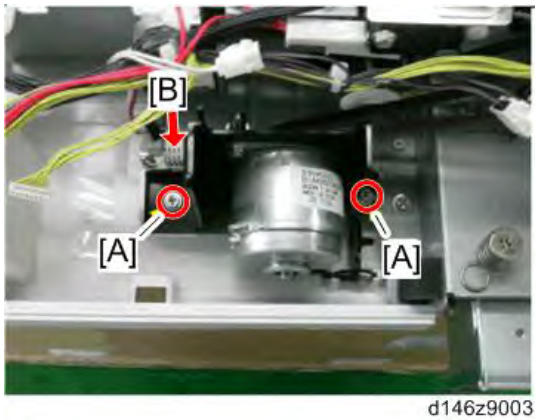
4. Remove the following parts.

- Clamp
- Harness
- Connectors [A] (×3)
- Screw [B] (×1)



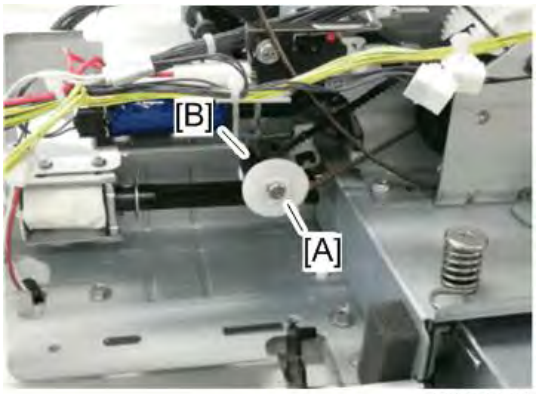
d146z9002

5. Remove the screws [A] and spring [B] of the feed motor bracket, and remove the feed motor unit. (×2, spring ×1)



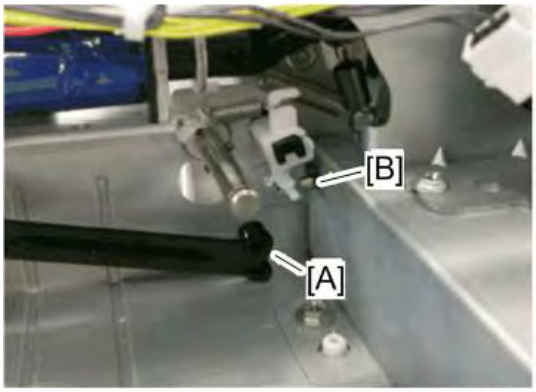
d146z9003

6. Remove the resin ring [A] and flanges, and remove the timing belt. Then, remove the reverse torque limiter [B] from the shaft.



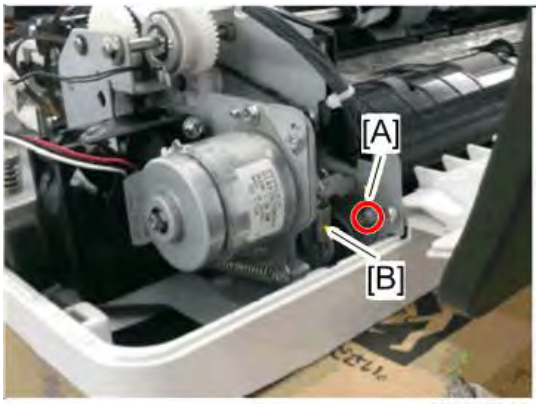
d146z9004

7. Disconnect the link [A] of the junction gate, and remove the E-ring [B] of the fixing shaft. (×1)



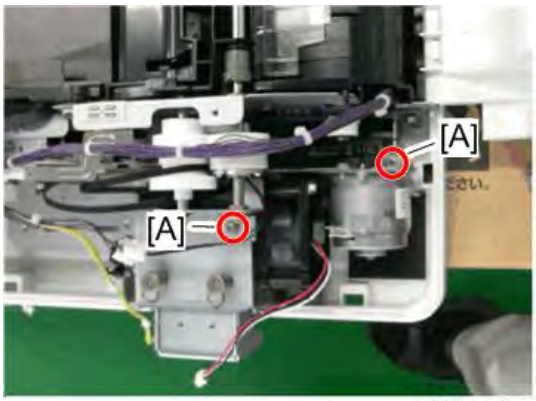
d146z9005

8. Loosen the screw [A] of the belt tension unit and remove the spring [B]. (×1, spring ×1)



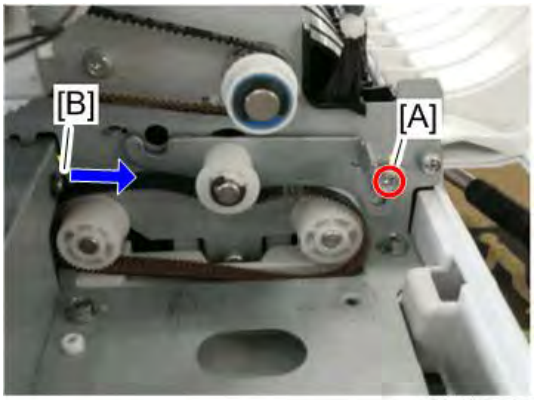
d146z9006

9. Remove the screws [A] of the motor bracket, and remove the transport motor unit. (×2)



d146z9007

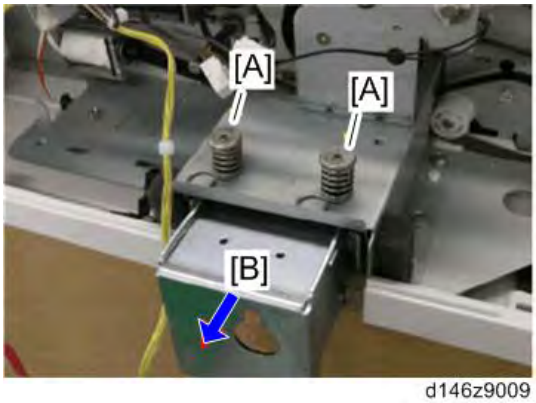
10. Remove the belt tension unit and screw [A], and pull out the hinge fixing shaft [B] (do not remove the E-ring on the fixing shaft side).



d146z9008

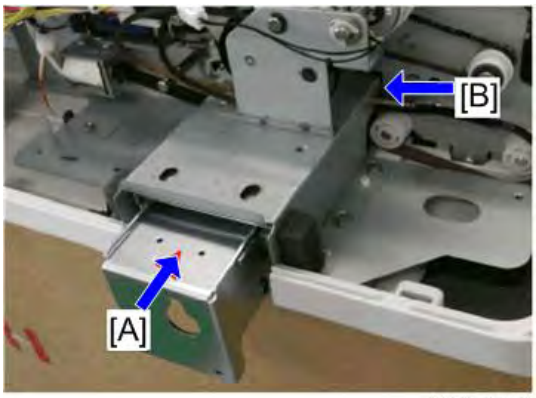
11. Remove the step screws and springs [A] of the hinge, and remove the hinge [B]. (×2, spring ×2)

Note: Grease is applied to the step screws.



d146z9009

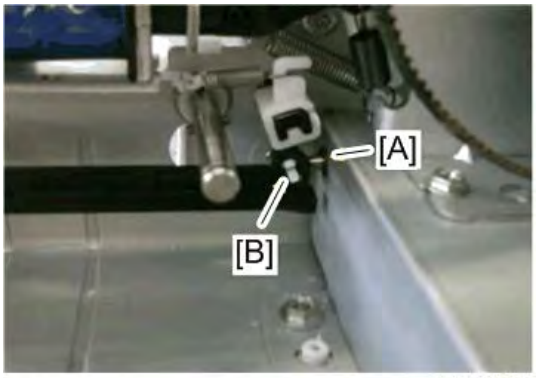
12. Insert the left hinge with a damper [A] and insert the hinge fixing shaft [B].



d146z9010

13. Fix the hinge fixing shaft with an E-ring, and insert the link [B] of the junction gate. (ℂ×1)

After inserting the link, pull it slightly to check that it does not fall out.



d146z9011

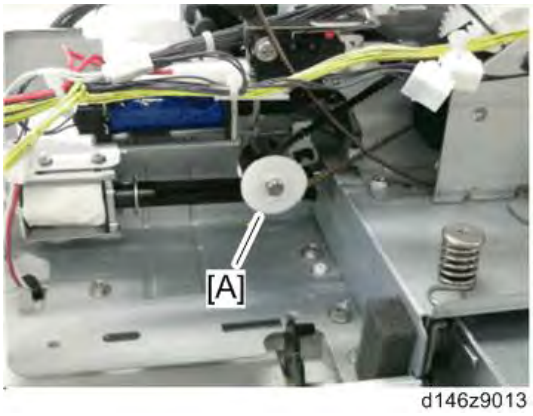
14. Attach the step screws and springs of the hinge. After attaching them, push the screw top to check that the screws are pushed down.

When the screws do not move, the step screws may be fixed with the plate stay. Loosen and fix the screws again.

d146z9012

15. Attach the reverse torque limiter [A].

Put the torque limiter on the shaft, hook the timing belt, attach the flange, and fix it with the resin ring.

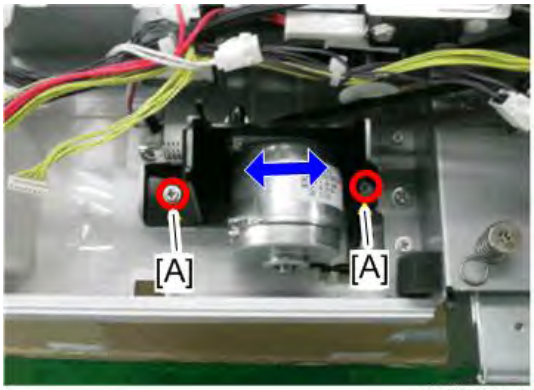


d146z9013

16. Attach the transport motor unit. (×2)

Attach the bracket to the plate, hook the timing belt onto the motor pulley, and hook the spring.

Do not fix the screws [A] completely, so that the motor unit can move left and right.

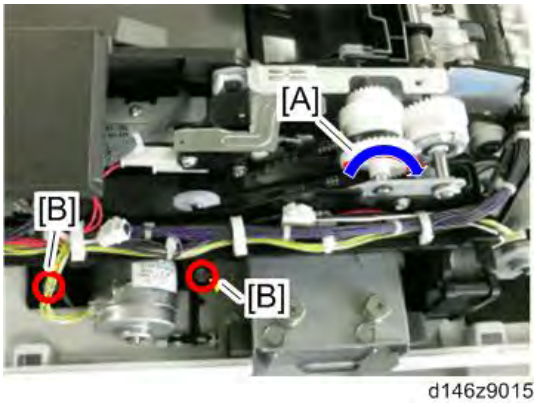


d146z9014

17. Rotate the white gear [A] by hand to warm up the timing belt. (×2)

Fix the screws [B] of the feed motor bracket completely, which were attached in step 16.

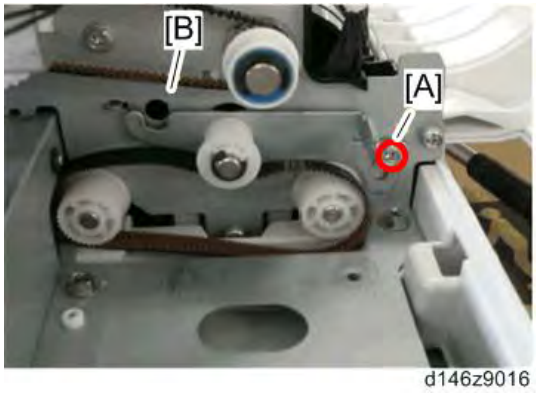
(The picture has been taken after attaching the harness guide.)



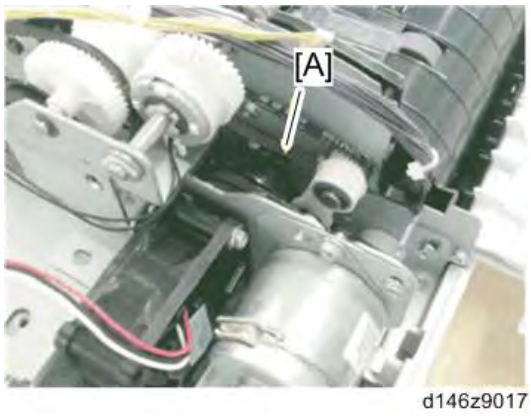
d146z9015

18. Attach the belt tension unit. Do not fix the screw [A] completely. Move the cutout of the belt tension unit to

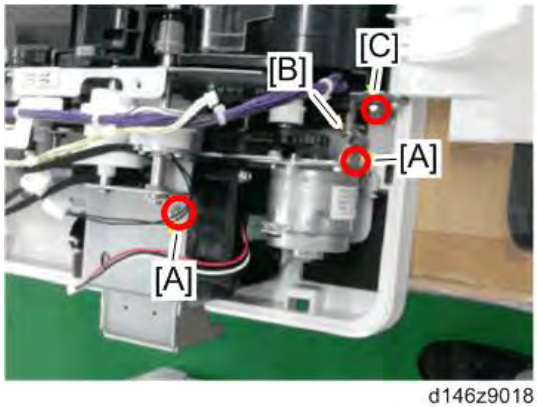
fit the hole [B] in the rear plate. (×1)



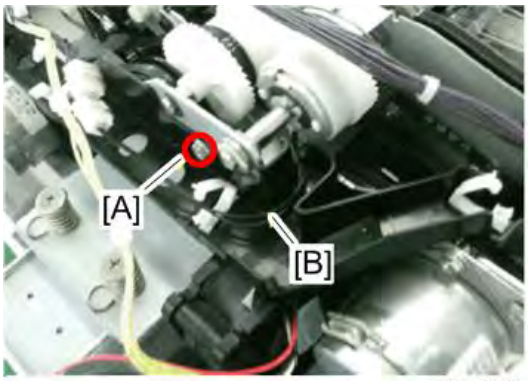
19. Hook the belt [A] onto the pulley of the transport motor unit, and insert the shaft into the hole in the rear plate, shown in step 18.



20. Fix the two screws [A] of the transport motor unit, and hook the spring [B] of the belt tension unit. Do not fix the screw [C] of the belt tension completely. (×3, spring×1)

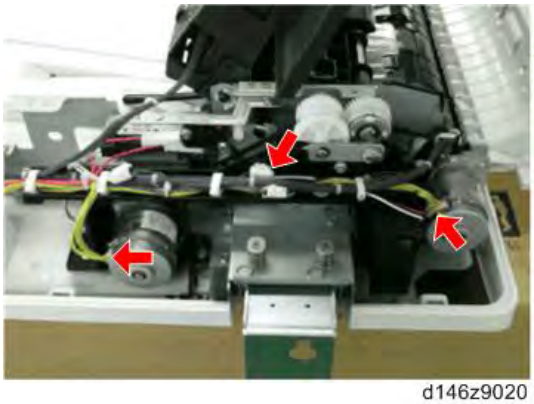


21. Attach the harness guide and fix it with the screw [A]. (×1)
The harness [B] of the clutch should be passed as shown below.



d146z9019

22. Insert the connector of the motor and the connector of the cooling fan, and fix the harness with the clamp. (×2, ×1)

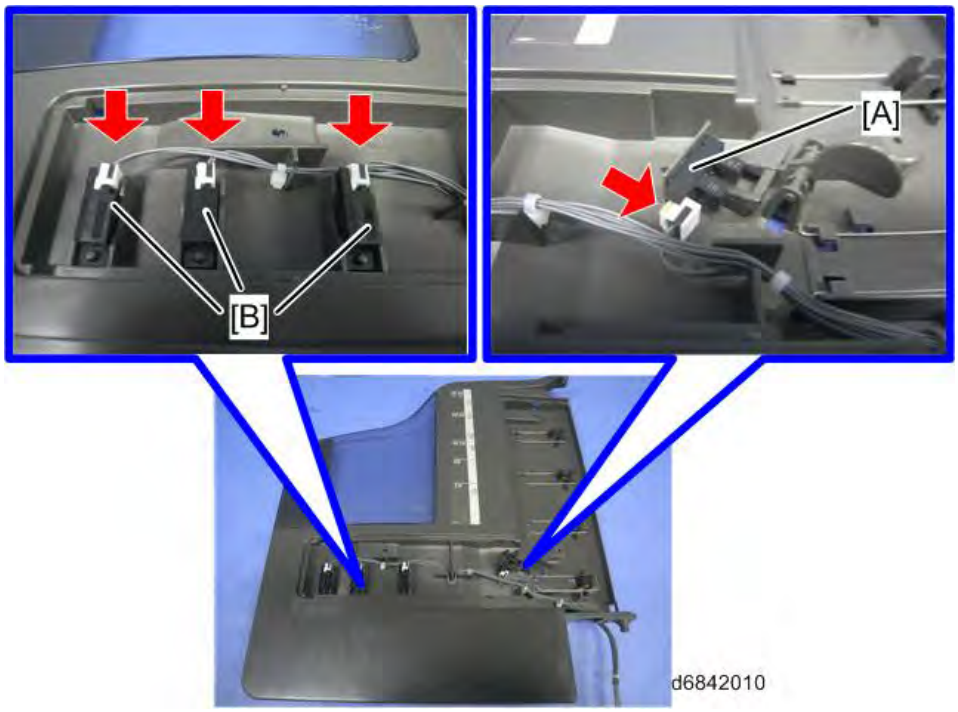

d146z9020

Sensors and Switch

Original Length Sensors and Original Sensor

1. Original Tray (Front Cover and Original Tray)
2. Tray cover [A] (×3)

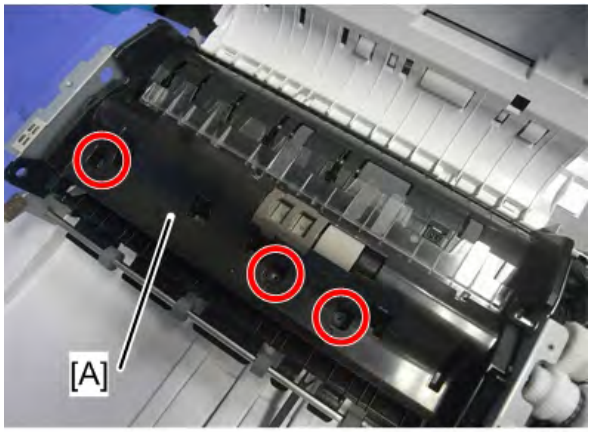
3. Remove the following items:
   - Original sensor [A] (×1)
   - Original length sensors [B] (×1 each)



Original Set Sensor

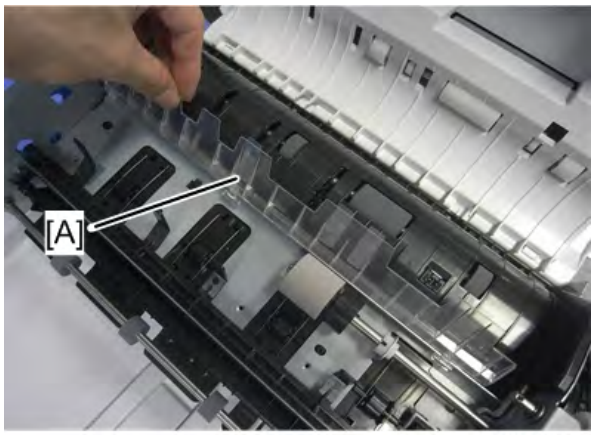
1. Original feed unit (Original Feed Unit)
2. Original tray (Front Cover and Original Tray)

3. Original feed-in guide plate [A] (×3)



d6842012

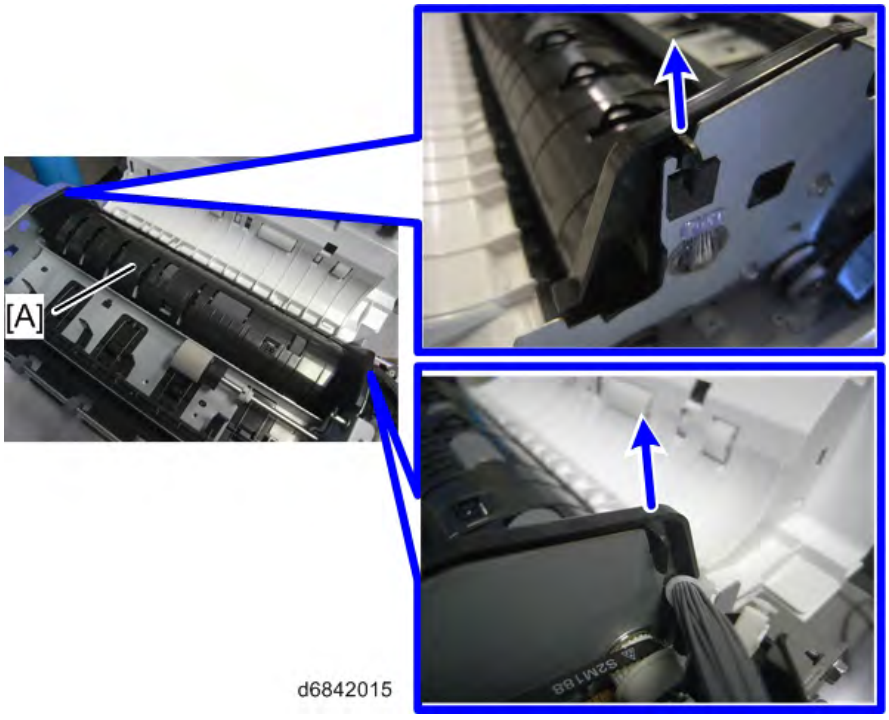
4. Feed guide [A]



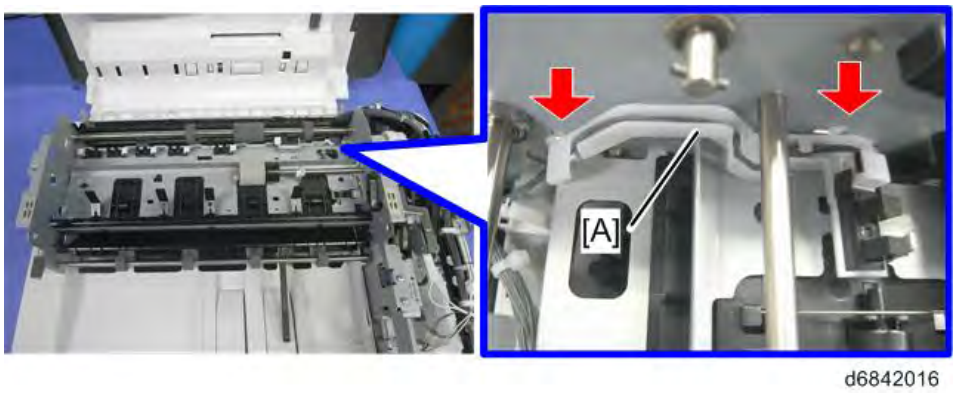
d6842013

5. Original turn guide plate [A] (hook ×2)

d6842014



6. Original set sensor bracket [A] (hook ×2)

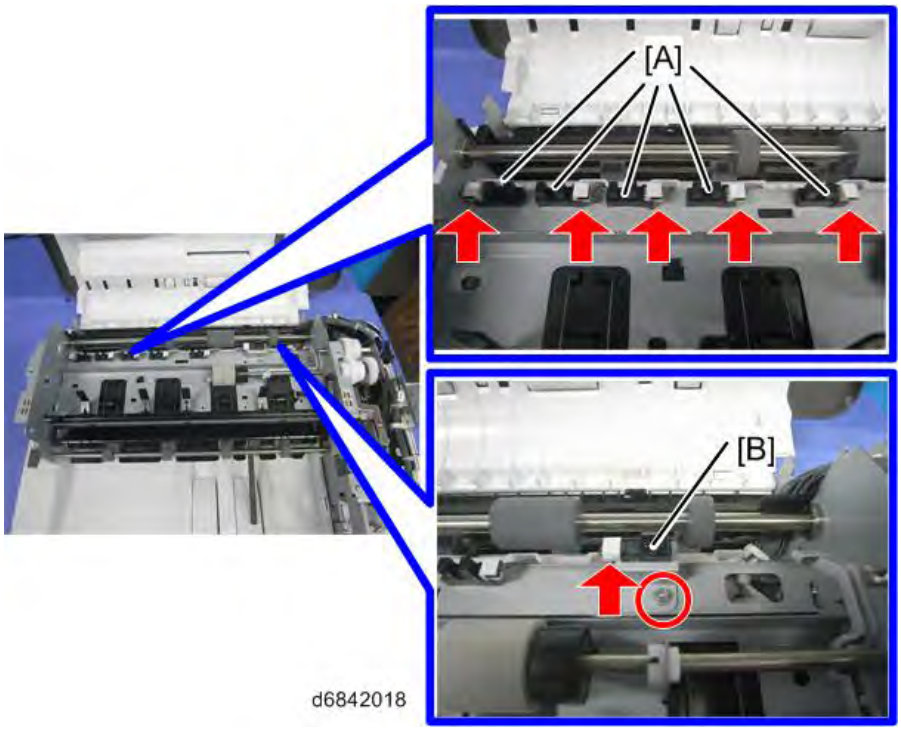


7. Original set sensor [A] (×1)

Original Width Sensors and Skew Correction Sensor

1. Original turn guide plate (Original Set Sensor)

2. Original width sensors [A] (×1 each) and skew correction sensor [B] with bracket (×1, ×1)

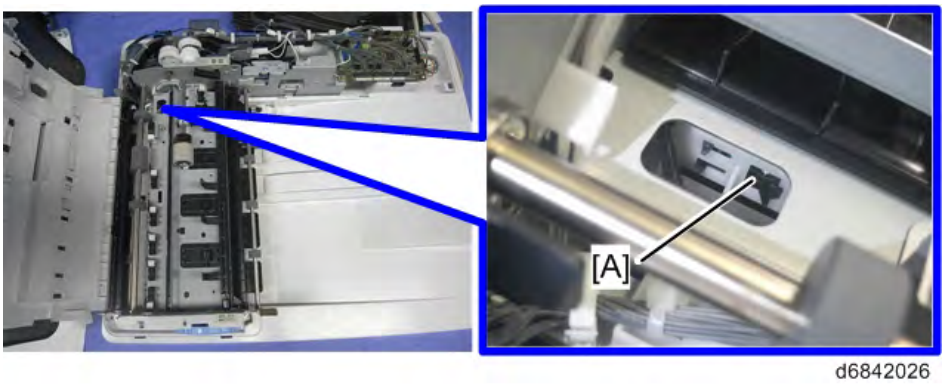


Original Exit Sensor

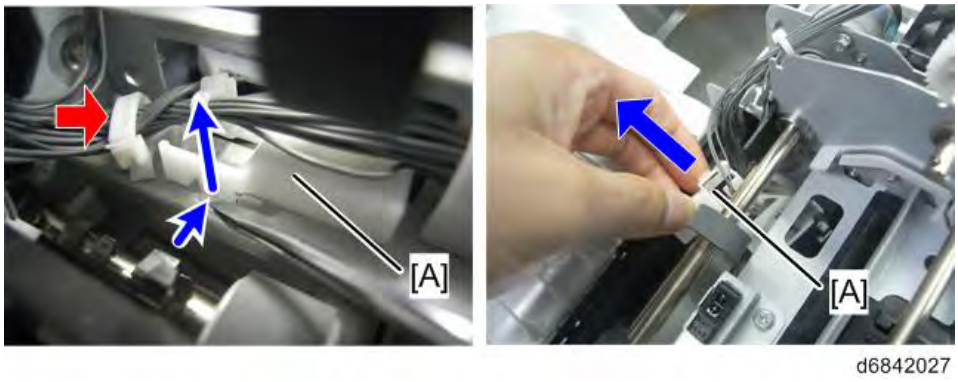
1. Original feed-in guide plate (Original Set Sensor)

Note

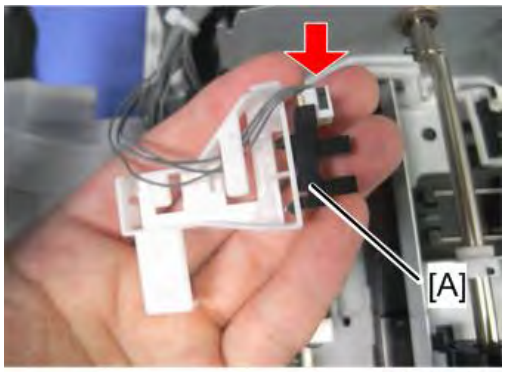
- The original exit sensor [A] is located in the ARDF mainframe.



2. Original exit sensor bracket [A] (×1)



3. Original exit sensor [A] (×1)



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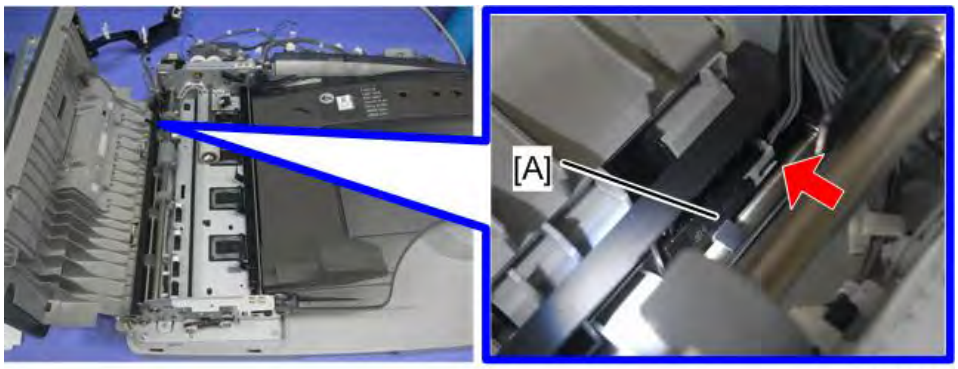
Registration Sensor

1. Original feed-in guide plate (Original Set Sensor)

2. Registration sensor [A] (×1)

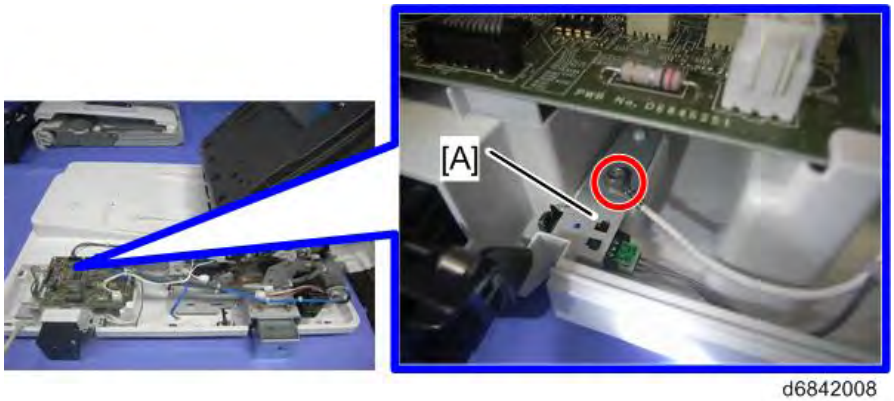


d7242002

DF Position Sensor

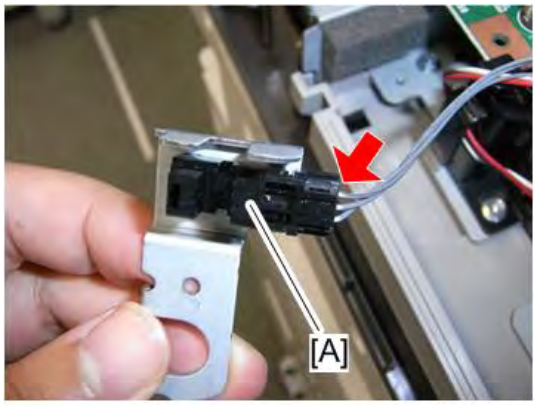
1. ARDF Drive Board (ARDF Drive Board)

2. DF position sensor with bracket [A] (×1)



d6842008

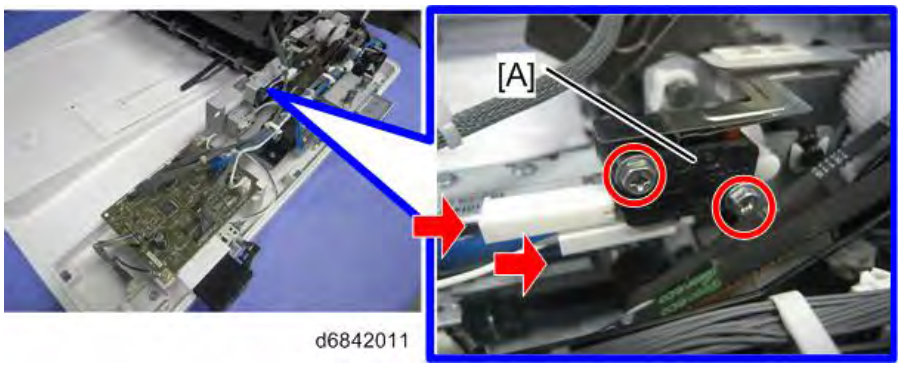
3. DF position sensor [A] (×1)



Left Cover Switch

1. Rear cover (Rear Cover)

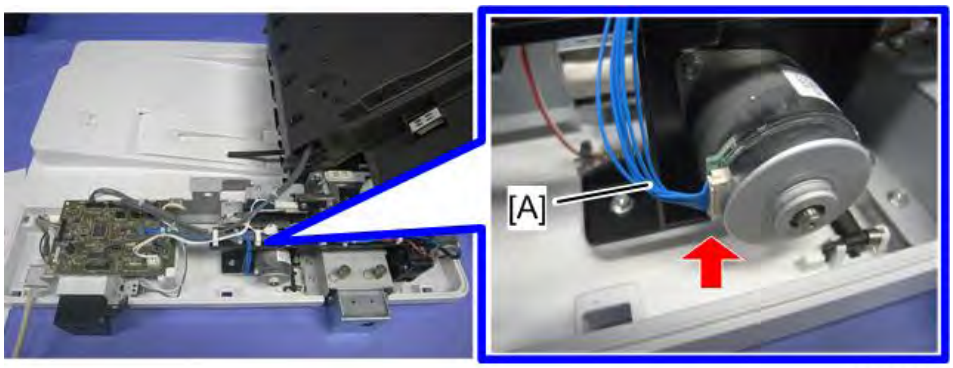
2. Left cover switch [A] (×2, ×2)



Motors, Solenoids, and Clutches

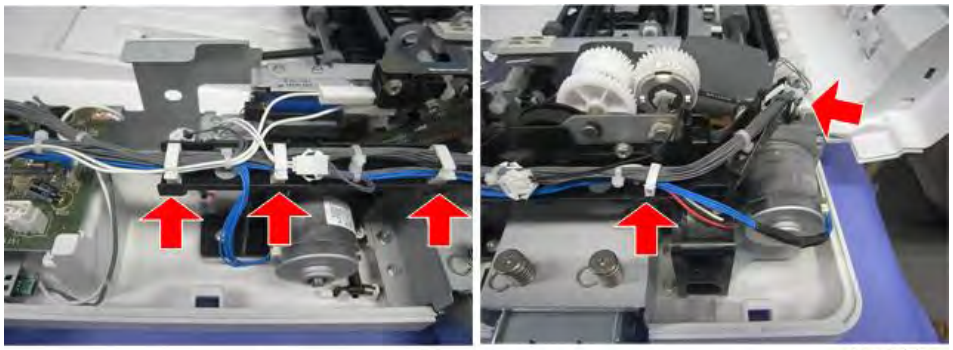
Feed Motor

1. Rear cover (Rear Cover)
2. Feed motor harness [A] (×1)

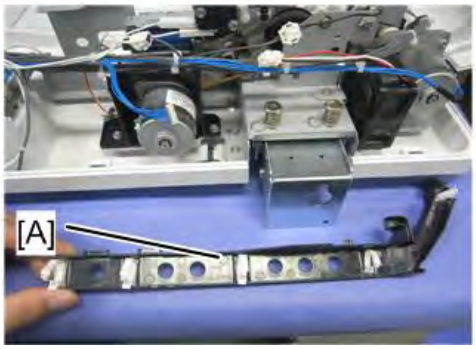


d6842003

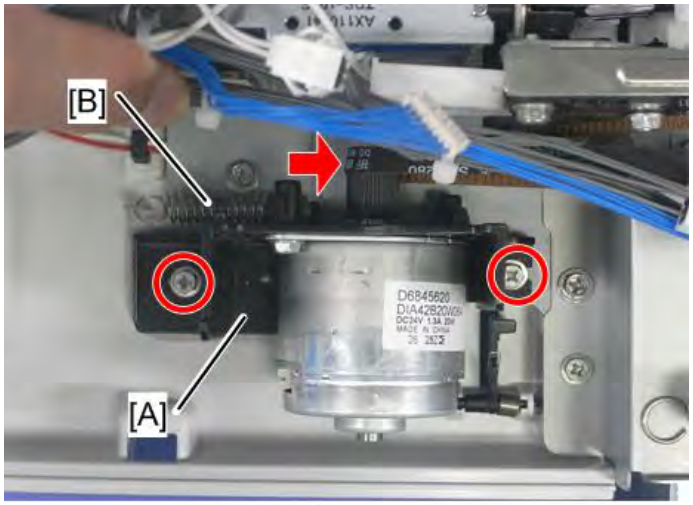
3. Harness guide [A] (×5)



d6842002

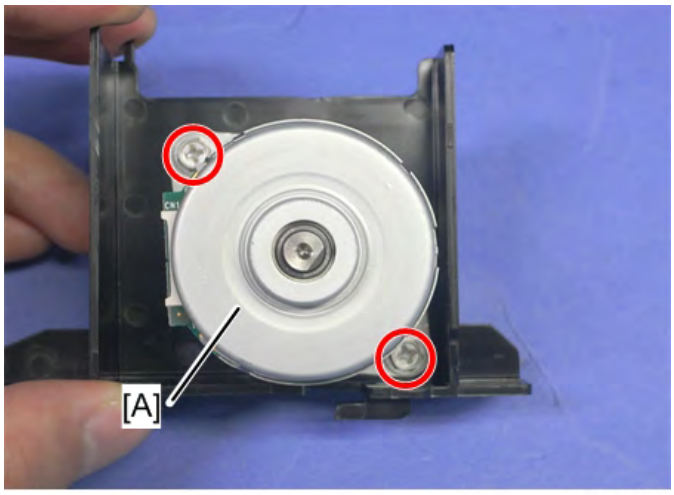


4. Feed motor with bracket [A] (×2, spring [B]×1, ×1)



d6842004

5. Feed motor [A] (×2)



d6842005

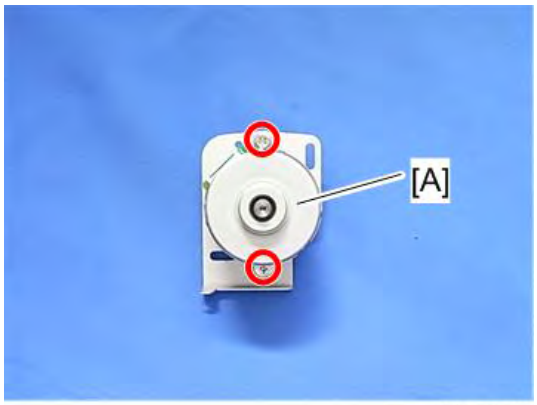
Transport Motor

1. Rear cover (Rear Cover)

2. Transport motor bracket [A] (spring ×1, ×2, ×1)

d146z0031

3. Transport motor [A] (×2)

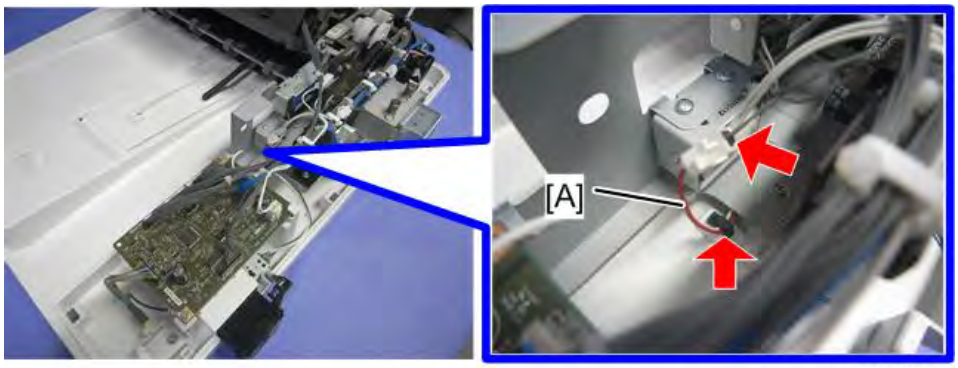


d146z0032

Stamp Solenoid

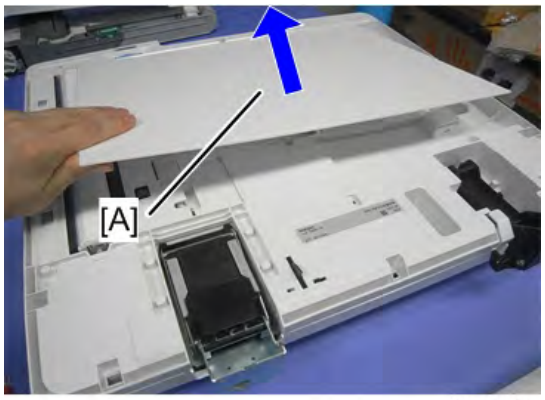
1. Rear cover (Rear Cover)

2. Stamp solenoid harness [A] (×1, ×1)



d6842023

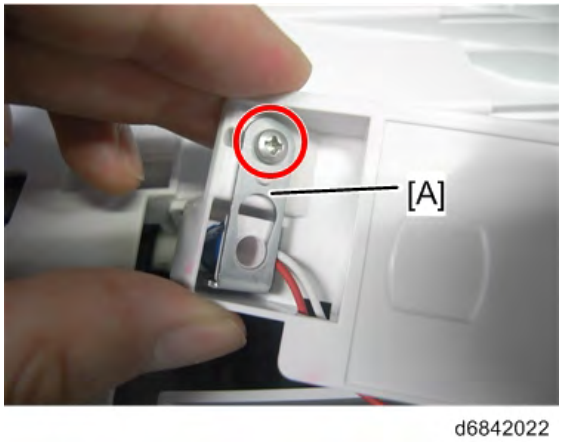
3. Open the DF and remove the platen sheet [A].



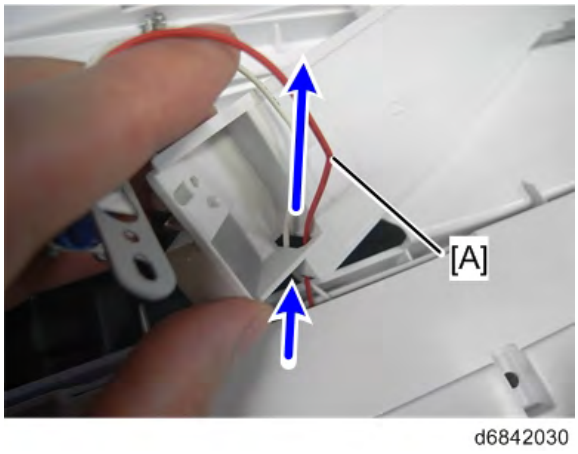
d6842020

4. Stamp solenoid cover [A] (×1)

5. Stamp solenoid [A] (×1)



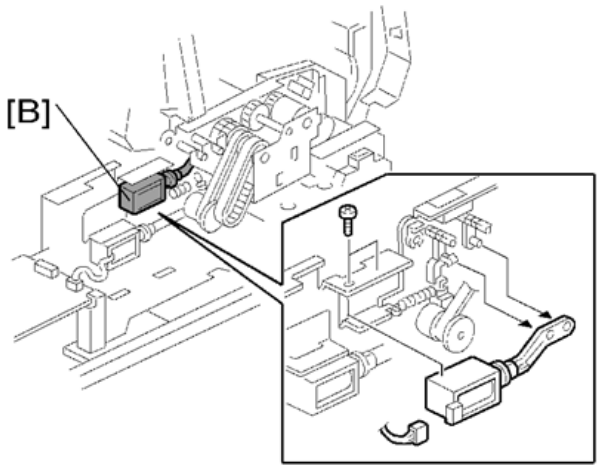
6. Pull out the harness [A].



Pick-up Solenoid

1. Rear cover (Rear Cover)
2. Harness guide (Feed Motor)

3. Pick-up solenoid [B] (×2, ×1)

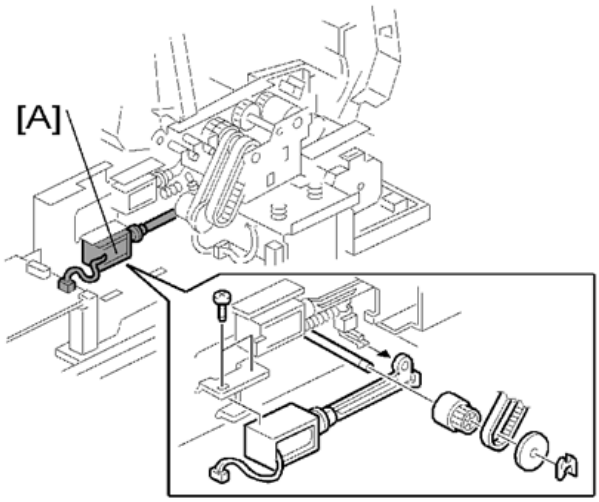


Inverter Solenoid

1. Rear cover (Rear Cover)

2. Harness guide (Feed Motor)

3. Inverter solenoid [A] (×2, ×1, ×1, gear ×1, gear cover ×1, ×1)

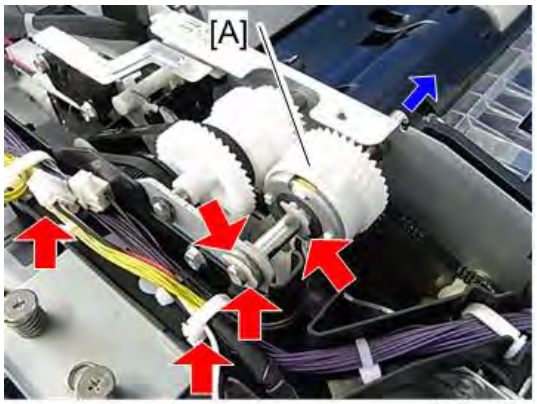


Feed Clutch

1. Rear cover (Rear Cover)

2. Original feed unit (Original Feed Unit)

3. Feed clutch [A] (×2, bushing ×1, shaft ×1, ×1, ×1)

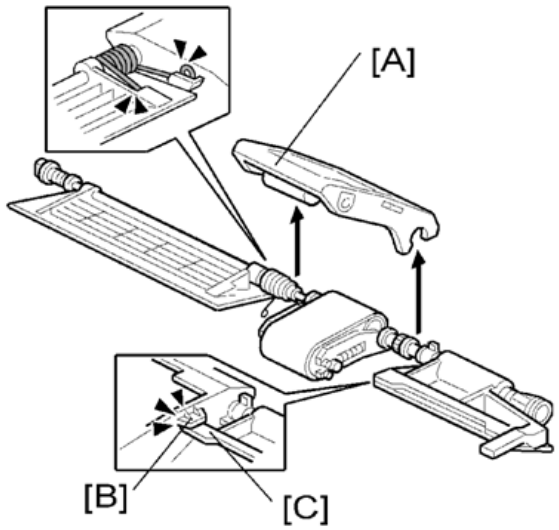


d146z0030

Belt and Rollers

Feed Belt

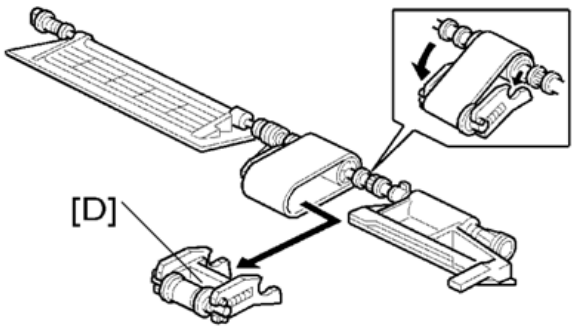
1. Original feed unit (Original Feed Unit)
2. Feed belt cover [A] (spring×1)



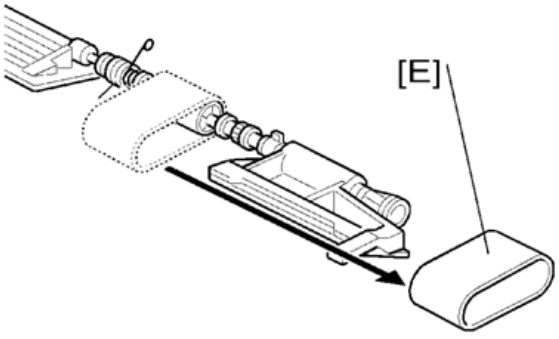
Note

- When reattaching the feed belt cover, make sure that the projection [B] of the feed belt cover is on the guide plate rear [C].

3. Belt tension unit [D]

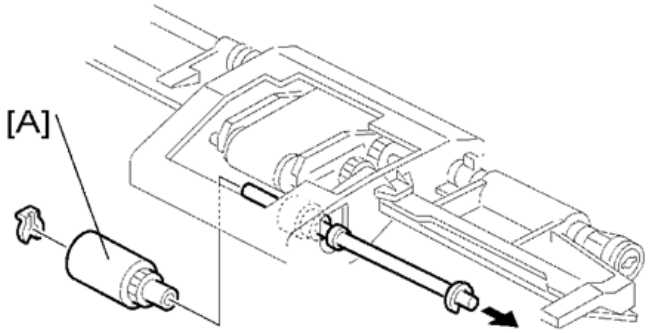


4. Feed belt [E]



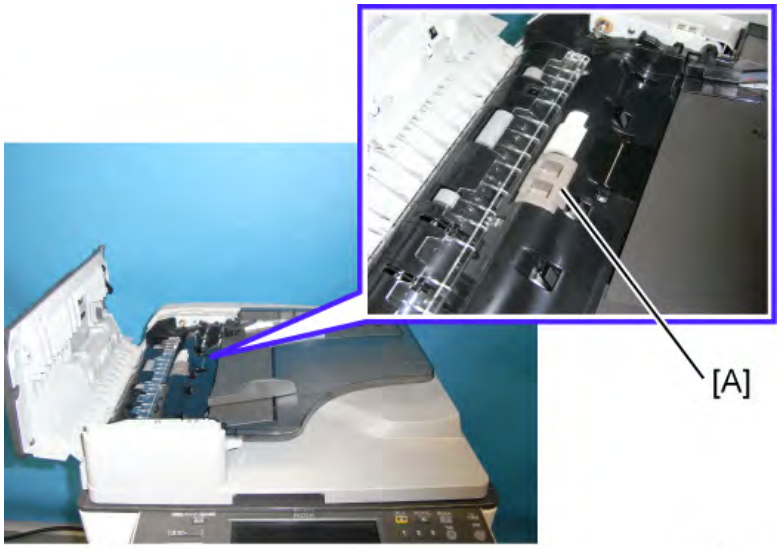
Pick-Up Roller

1. Original feed unit (Original Feed Unit)
2. Pick-up roller [A] (×1)



Separation Roller

1. Original Feed Unit (Original Feed Unit)
2. Separation roller cover [A]



d578r503

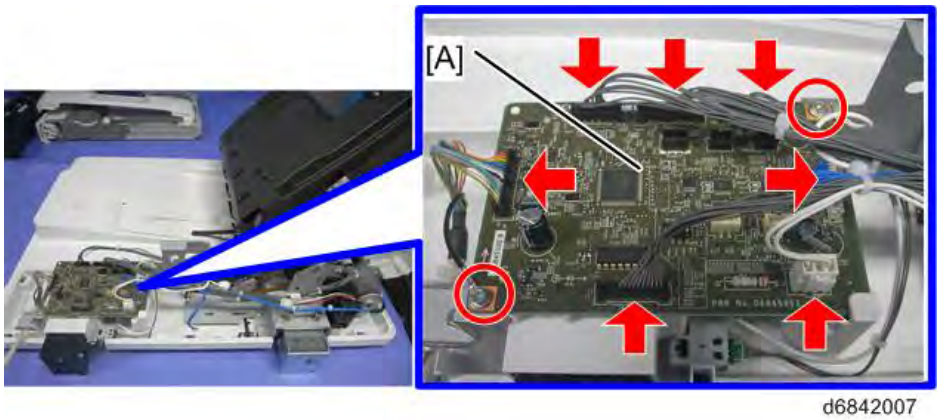
3. Separation roller [A] (×1)

d578r504

Board

ARDF Drive Board

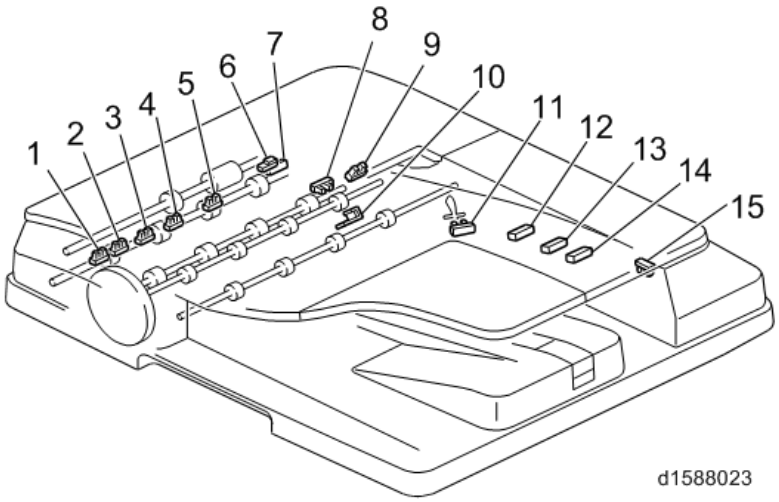
1. Rear cover (Rear Cover)
2. ARDF drive board [A] (×2, ×7)

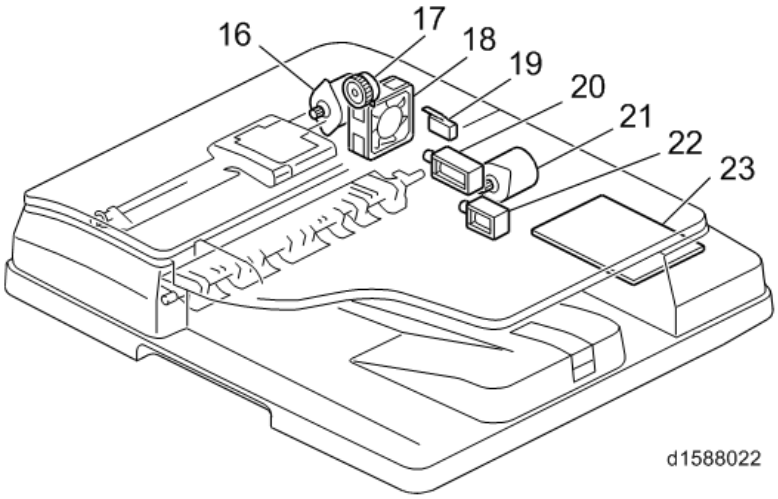


2. Detailed Descriptions

ARDF DF3090 (D779)

Parts Layout





No.	Description	No.	Description
1	Original Width Sensor 5 (LL)	13	Original Length Sensor (M)
2	Original Width Sensor 4 (L)	14	Original Length Sensor (L)
3	Original Width Sensor 3 (M)	15	DF Position Sensor
4	Original Width Sensor 2 (S)	16	Transport Motor
5	Original Width Sensor 1 (SS)	17	Feed Clutch
6	Skew Correction Sensor	18	Cooling Fan Motor
7	Registration Sensor	19	Cover Switch
8	Original Exit Sensor	20	Pick-up Solenoid

No.	Description	No.	Description
9	Original Set Sensor	21	Feed Motor
10	Stamp Solenoid	22	Inverter Solenoid
11	Original Sensor	23	ARDF Drive Board
12	Original Length Sensor (S)	-	-

Mechanism

Original Detection

When an original is placed on the original tray correctly, the edge of the original pushes up the feeler of the original sensor.

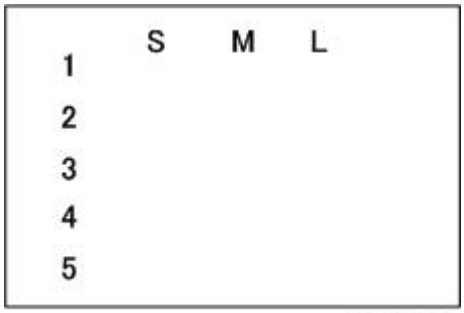
Original Size Detection / Original Set Detection Mechanism

Five original width sensors detect the width of the original just when the leading edge of the original passes the interval sensor. Three original length sensors on the original table detect the length. These two pieces of size information summarize the original size.

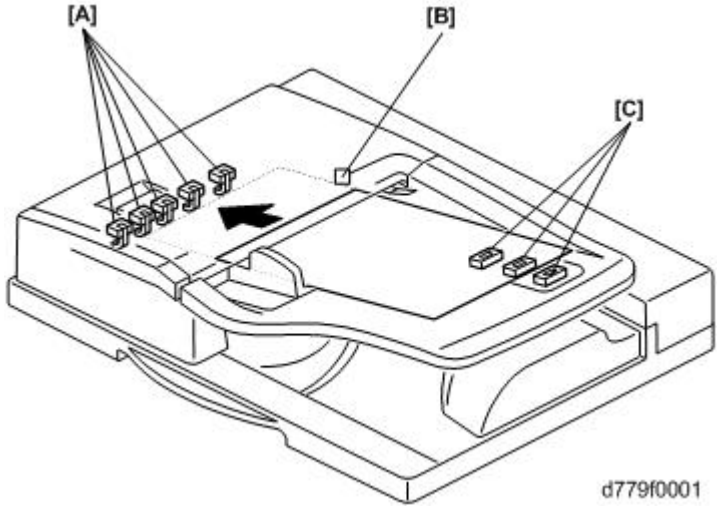
Size (Width x Length: mm)		Width Detection					Length Detection		
		1	2	3	4	5	S	M	L
1	A3 SEF (297 x 420)	On	On	On	On	On	On	On	On
2	B4 SEF (257 x 364)	On	On	On	-	-	On	On	On
3	A4 SEF (210 x 297)	On	On	-	-	-	On	On	-
4	A4 LEF (297 x 210)	On	On	On	On	On	-	-	-
5	B5 SEF (182 x 257)	On	-	-	-	-	On		-
6	B5 LEF (257 x 182)	On	On	On	-	-			-
7	A5 SEF (148 x 210)	On	-	-	-	-			-
8	A5 LEF (210 x 148)	On	On	-	-	-			-
9	B6 SEF (128 x 182)	-	-	-	-	-			-
10	B6 LEF (182 x 128)	On	-	-	-	-	-	-	-
11	11" x 17" SEF (DLT)	On	On	On	On	-	On	On	On*
12	11" x 15" SEF	On	On	On	On	-	On	On	On*
13	8 1/2" x 11" SEF (LT)	On	On	-	-	-	On	-	-
14	11" x 8 1/2" LEF (LT)	On	On	On	On	-	-	-	-

* The machine cannot tell the difference between certain original sizes, such as DLT (11 x 17”) and 11 x 15”. The machine assumes such originals are 11 x 17”. To change this, use SP mode.

Sensor Position



d779f0002



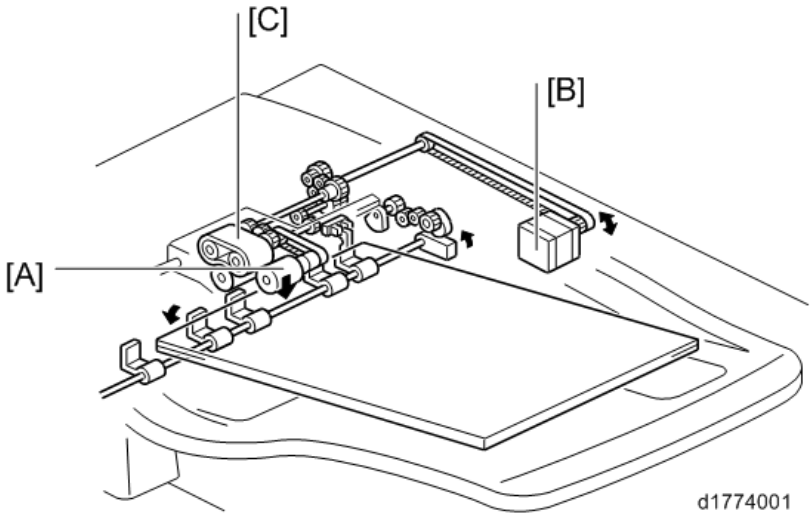
d779f0001

	Description
A	Original Width Sensors
B	Original Set Sensor
C	Original Length Sensors

Paper Feed / Separation Mechanism

The separation mechanism uses the RF method.

When the originals are placed and [Start] is pressed, the paper feed solenoid is turned ON and the pickup roller [A] goes down to the original. At this time, the paper feed motor [B] switches on and the pickup roller and paper feed motor [B] start rotating. Then a sheet of paper is fed.



	Description
A	Pickup Roller
B	Paper Feed Motor
C	Paper Feed Belt

Skew Correction Mechanism, Registration Mechanism

- Skew Correction

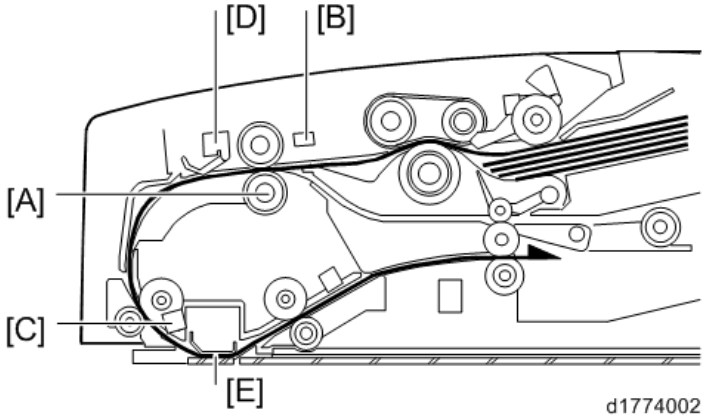
  This machine adjusts paper skew by hitting the originals against the pullout roller [A].

  The skew correction sensor [B] detects the leading edge of the original after it passes through the separation area.

  After hitting the originals against the pullout roller and making a buckle in the original, the transport motor turns ON. This mechanism prevents skewed feeding of the originals.

- Registration Mechanism

  The registration sensor [C] detects the leading edge of the originals. The machine uses the data for registration during copying.

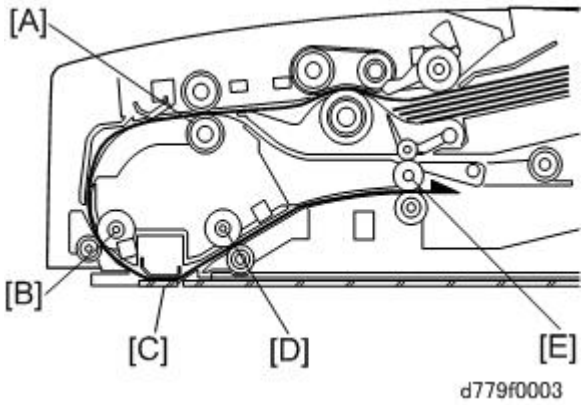


A	Pullout Roller
B	Skew Correction Sensor
C	Registration Sensor

D	Original Width Sensor
E	Sheet-through Exposure Glass

- Transport Mechanism (Simplex)

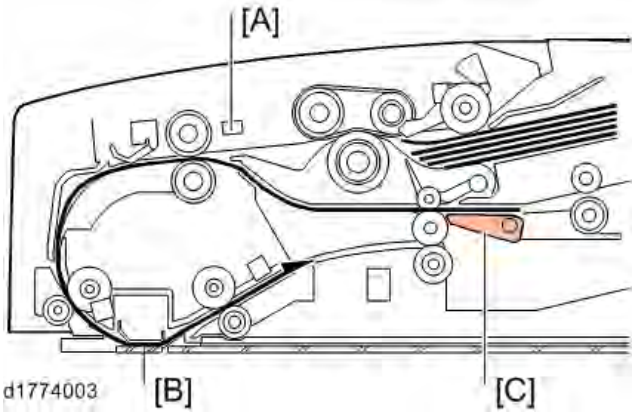
  Originals are transported by the pullout roller [A] and the entrance transport roller [B] to the sheet-through exposure glass [C], which scans the image. After this process, the originals are transported to paper exit section by the exit transport roller [D] and the exit driven roller [E].



	Description
A	Pullout Roller
B	Entrance Transport Roller
C	Sheet-through Exposure Glass
D	Exit Transport Roller
E	Exit Driven roller

- Transport Mechanism (Duplex)

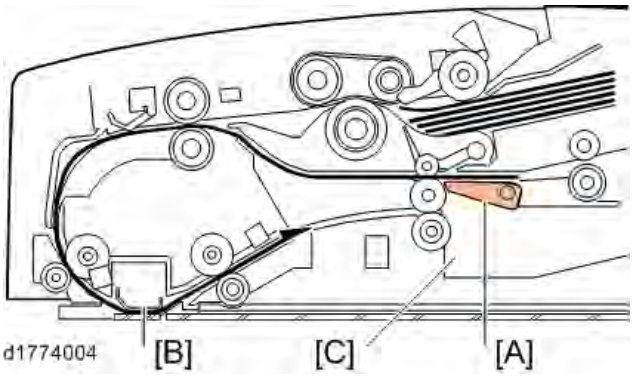
  When originals are detected by the skew correction sensor [A], the transport motor switches OFF and the original stops for a while. After skew correction, the originals are re-transported to the sheet-through exposure glass [B], which scans the first side (front). Then the inverter solenoid switches ON and the junction gate [C] opens. By that process, the originals are transported to the reverse roller. At this time, the transport motor stops and the inverter solenoid switches off.

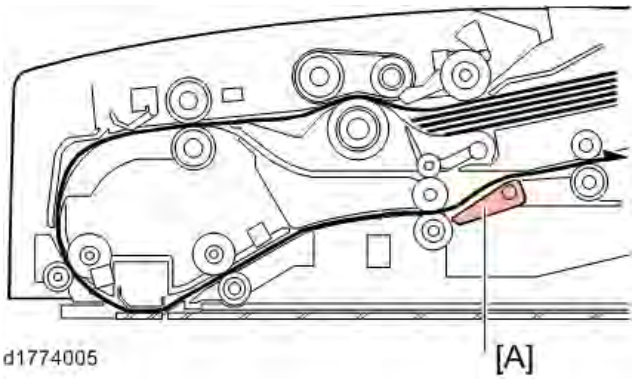


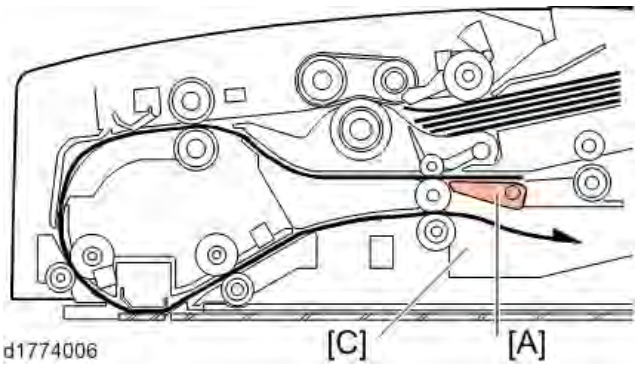
	Description
A	Skew Correction Sensor

	Description
B	Sheet-through Exposure Glass
C	Junction Gate

The originals, which reached the reverse roller, are re-fed over the upper surface of the junction gate [A]. When the originals reach the sheet-through exposure glass [B], the second side (back) is scanned. To make the order of the sheets on the exit tray correct, the two sides (front/back) of the original need to be inverted. Therefore, the inverter solenoid switches ON and the originals are transported to the reverse roller again. After the inversion, the originals exit onto the exit tray [C].







SP6-901-002 (Setting to give priority to stackability)

To improve the alignment of the delivered originals, select to give priority to stackability in the following SP. This will reduce the originals' delivery speed and improve their stackability.

- **SP6-901-002** (Setting to give priority to stackability): for DF3090
  0: Higher throughput (default)
  1: Higher stackability

Paper Feed Unit PB3220/PB3210
Machine Code: D787

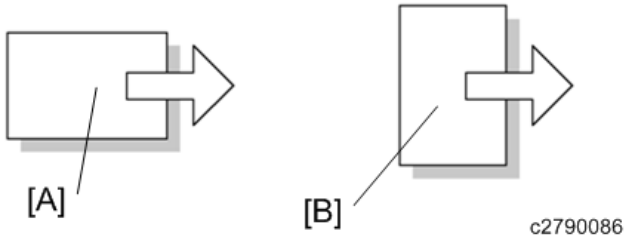
Field Service Manual

July, 2016

Symbols, Abbreviations and Trademarks

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

	Clip ring
	Screw
	Connector
	Clamp
SEF	Short Edge Feed [A]
LEF	Long Edge Feed [B]



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1st Paper Feed Unit 21

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1. Replacement and Adjustment

Rear Cover

Precautions Concerning Stabilizers

The stabilizers are necessary for meeting the requirements of IEC60950-1, the international standard for safety.

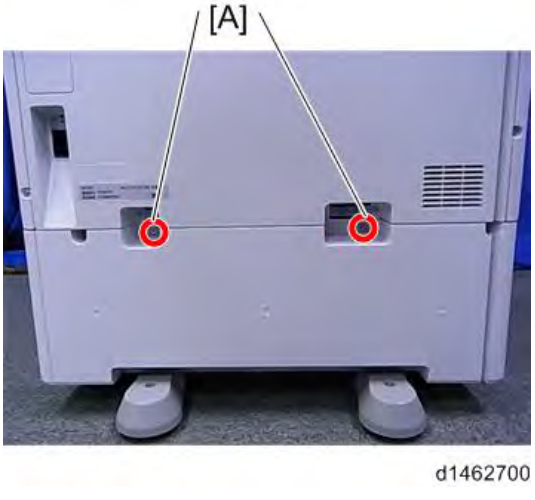
The aim of these components is to prevent the products, which are heavy, from toppling as a result of people running into or leaning on the products, which can lead to serious accidents such as persons becoming trapped under the product. (U.S.: UL60950-1, Europe: EN60950-1)

Therefore, removal of such components must always be with the consent of the customer.

Do not remove them at your own judgment.

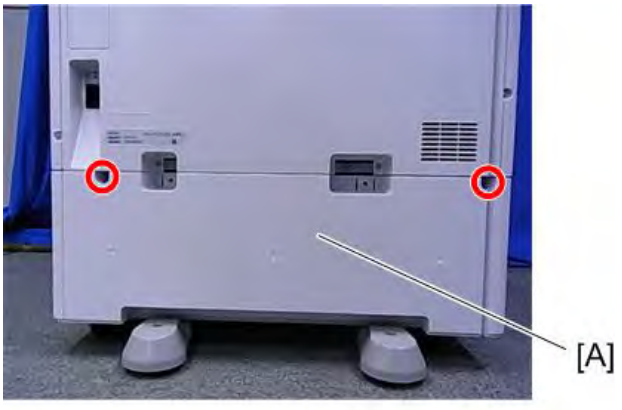
Rear Cover

1. **Securing brackets [A] (×2)**



d1462700

2. Rear cover [A] (×2)

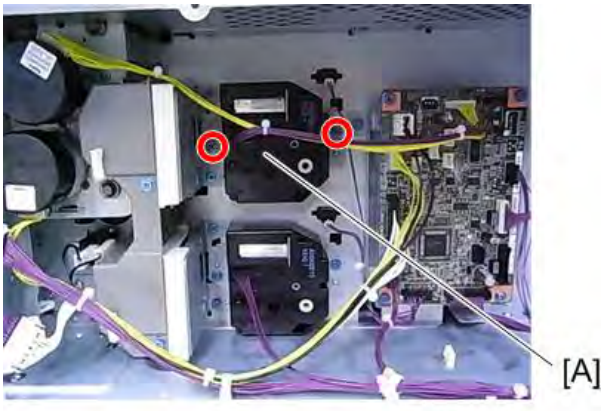


d1462701

Tray Lift Motor (Upper)

Tray Lift Motor (Upper)

1. Rear cover (page 5)
2. Tray lift motor (upper) [A] (×2, ×1)



Tray Lift Motor (Lower)

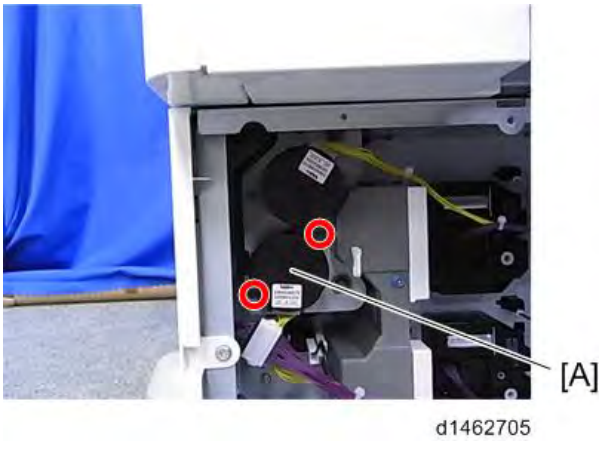
Tray Lift Motor (Lower)

1. Rear cover (page 5)
2. Tray lift motor (lower) [A] (×2, ×1)

Transport Motor

Transport Motor

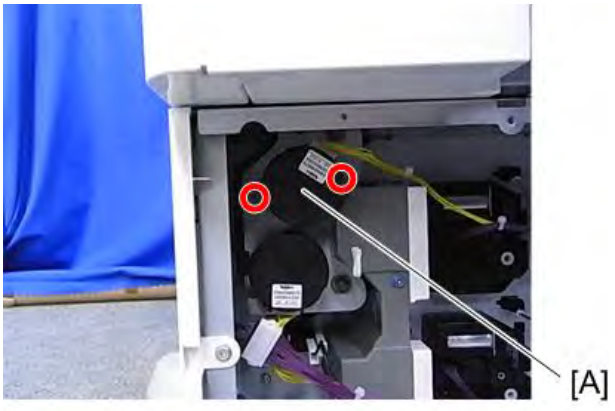
1. Rear cover (page 5)
2. Transport motor [A] (×2, ×1)



Paper Feed Motor

Paper Feed Motor

1. Rear cover (page 5)
2. Paper feed motor [A] (×2, ×1)

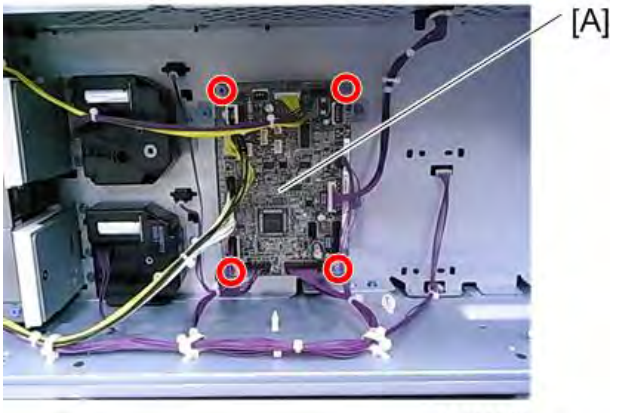


d1462704

Controller Board

Controller Board

1. Rear cover (page 5)
2. Controller board [A] (×4, ×10)

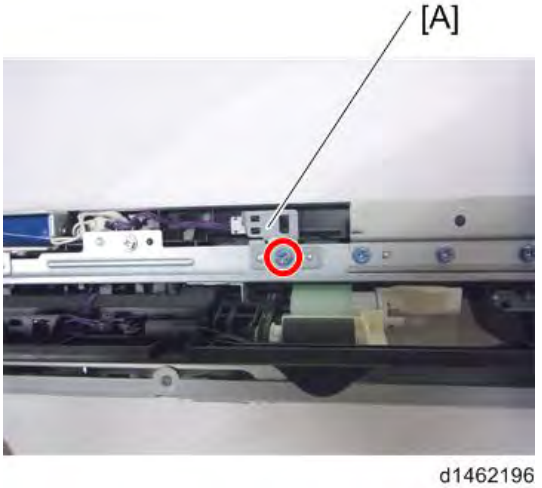


d1462706

Transport Sensor, Upper Limit Sensor, Paper End Sensor

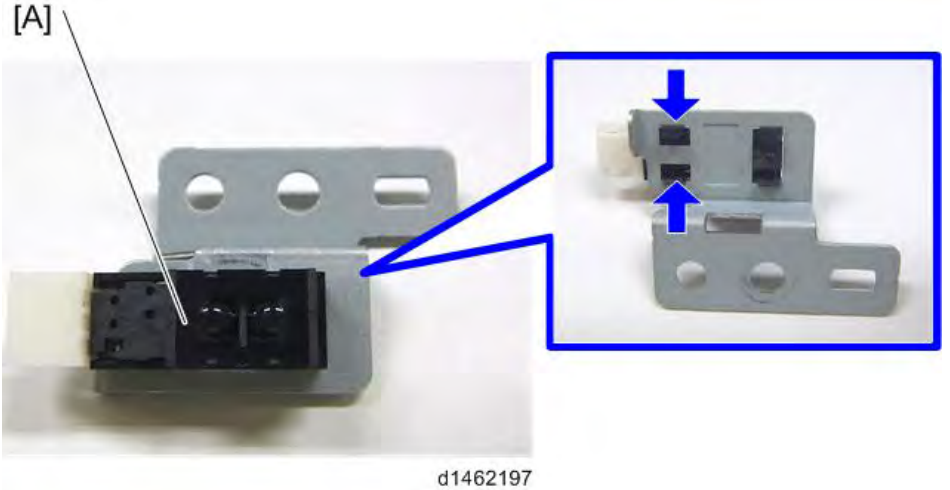
Transport Sensor

1. 2nd paper feed unit (page 15), 1st paper feed unit (page 21)
2. Transport sensor bracket [A] (×1)



d1462196

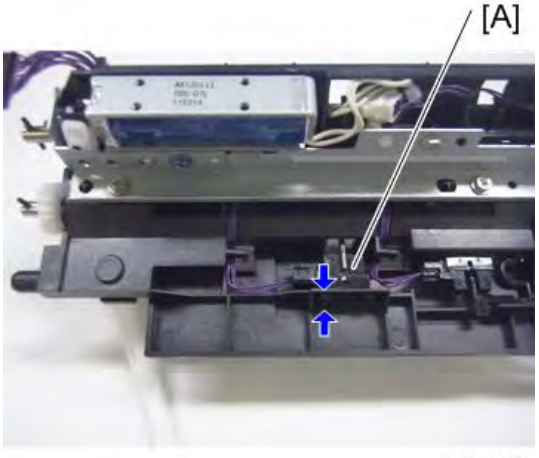
3. Transport sensor [A] (×1)



d1462197

Upper Limit Sensor

1. 2nd paper feed unit (page 15), 1st paper feed unit (page 21)
2. Upper limit sensor [A] (×1)

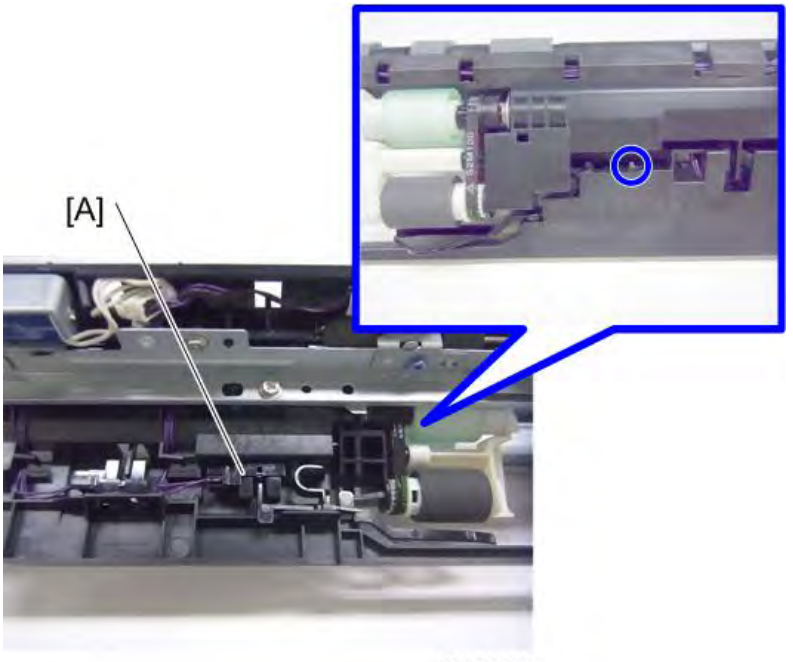


d1462198

Paper End Sensor

1. 2nd paper feed unit (page 15), 1st paper feed unit (page 21)

2. Paper end sensor [A] (×1)



d1462200

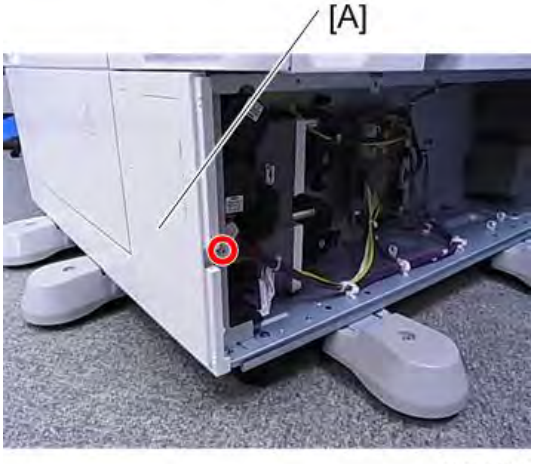
2nd Paper Feed Unit

2nd Paper Feed Unit

1. Pull out the paper trays.
2. Rear cover (page 5)
3. Right front cover [A] (×1)

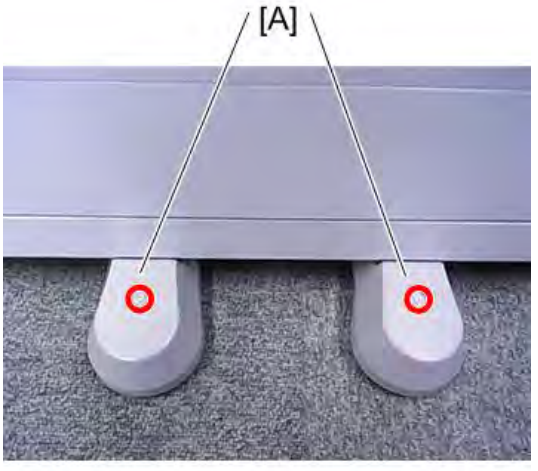
d1462707

4. Right rear cover [A] (×1)



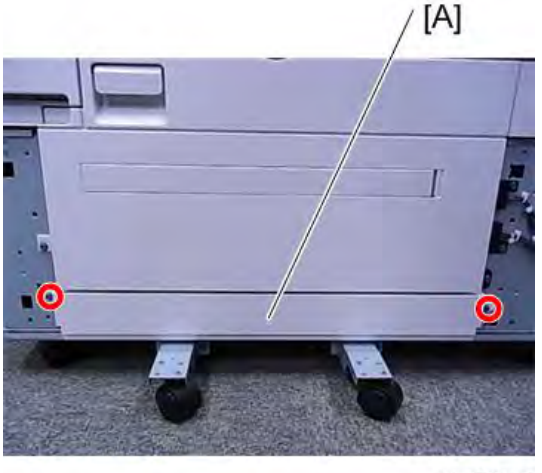
d1462708

5. **Stabilizer covers [A] (×2)**



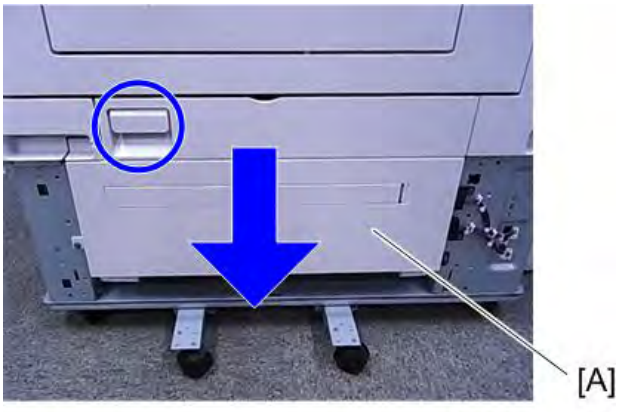
d1462709

6. **Right lower cover [A] (×2)**



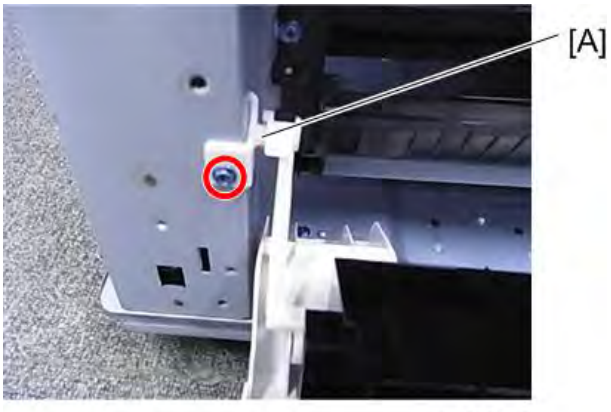
d1462710

7. **Open the transport cover [A].**



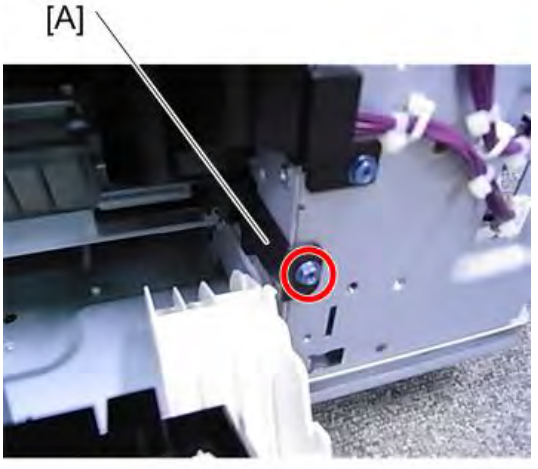
d1462711

8. **Stopper [A] (×1)**



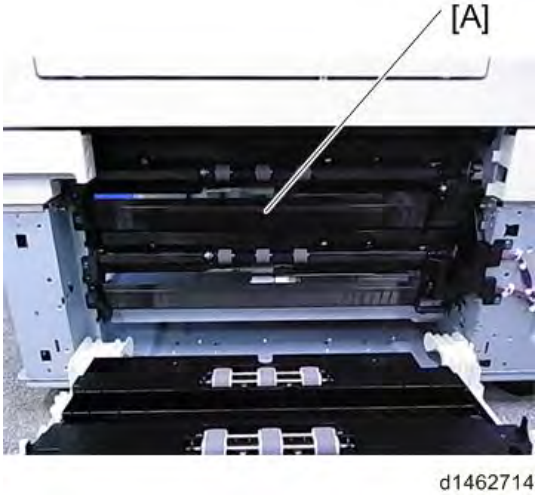
d1462712

9. **Interlock switch cover [A] (×1)**



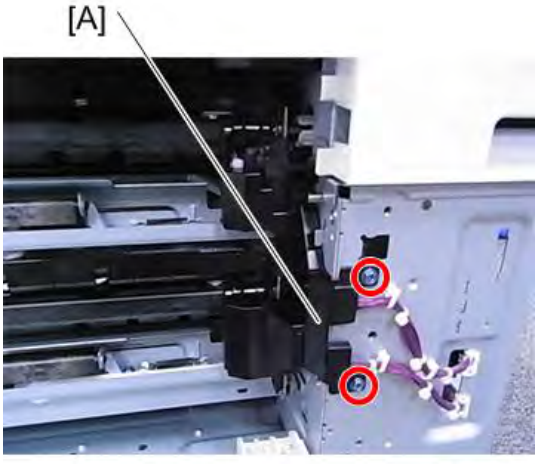
d1462713

10. **Paper feed guide plate [A]**



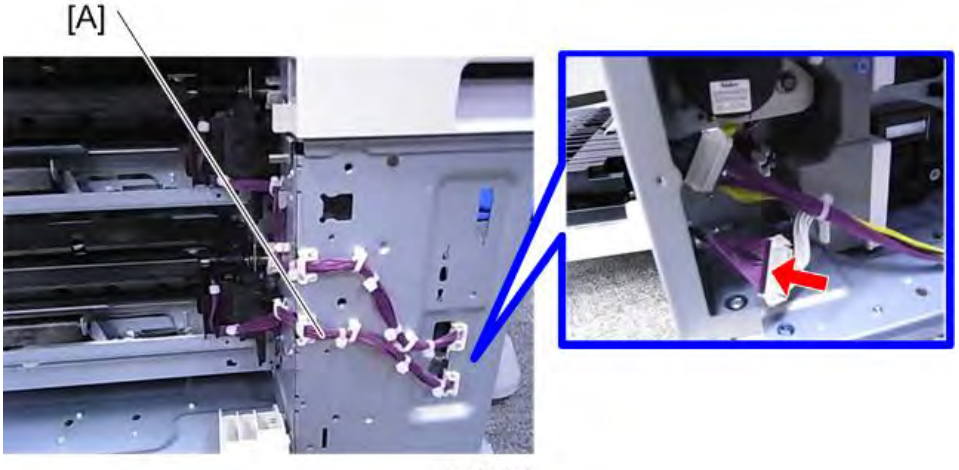
d1462714

11. Harness cover [A] (×2)



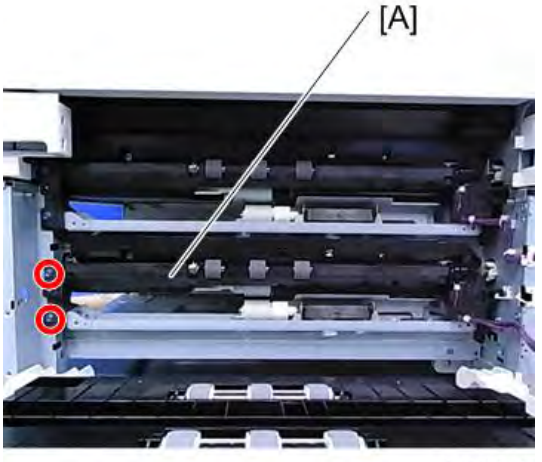
d1462715

12. Harness [A] (×1, ×4)



d1462716

13. 2nd Paper feed unit [A] (×2)

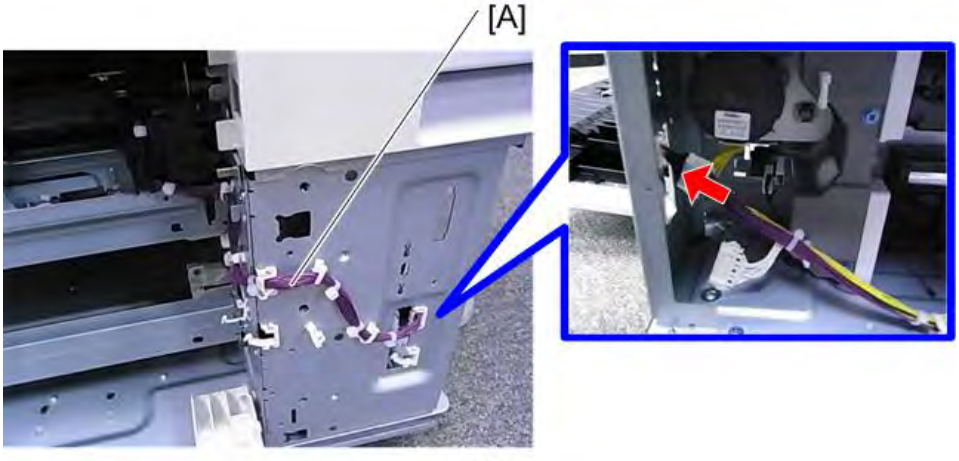


d1462717

1st Paper Feed Unit

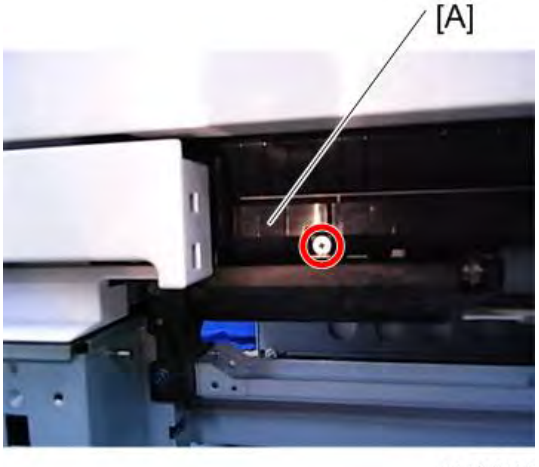
1st Paper Feed Unit

1. 2nd Paper feed unit (page 15)
2. Harness [A] (×1, ×6)



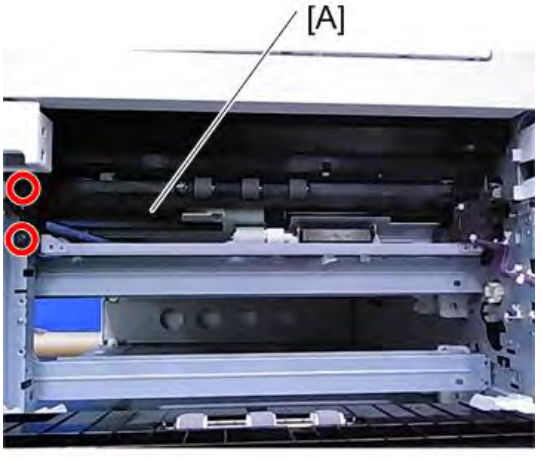
d1462718

3. Guide plate [A](×1)



d1462719

4. 1st Paper feed unit [A] (×2)

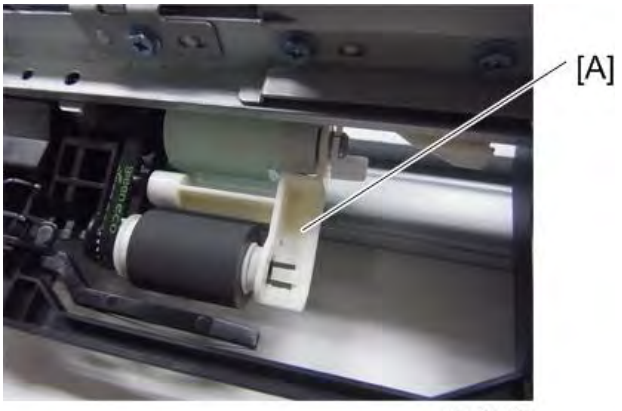


d1462720

Pick-up Roller, Feed Roller, Friction Roller

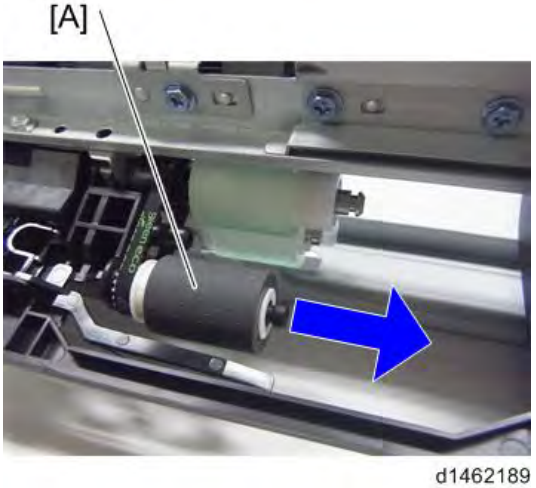
Pick-up Roller, Feed Roller, Friction Roller

1. 2nd paper feed unit (**page 15**), 1st paper feed unit (**page 21**)
2. Holder [A] (×1)



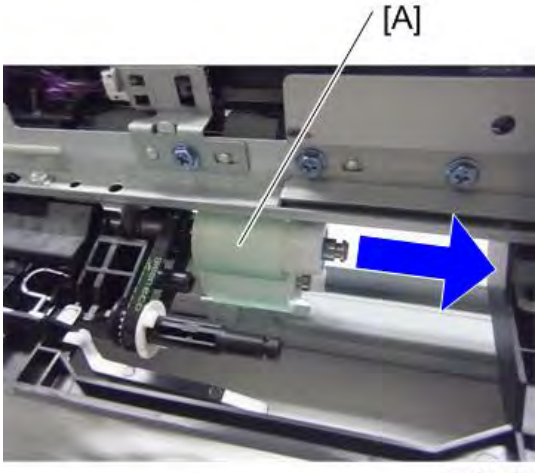
d1462188

3. Pick-up roller [A]



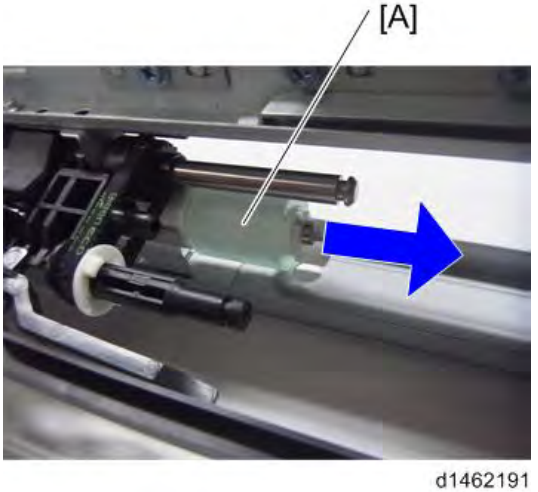
d1462189

4. **Feed roller [A]**



d1462190

5. **Friction roller [A]** (×1)

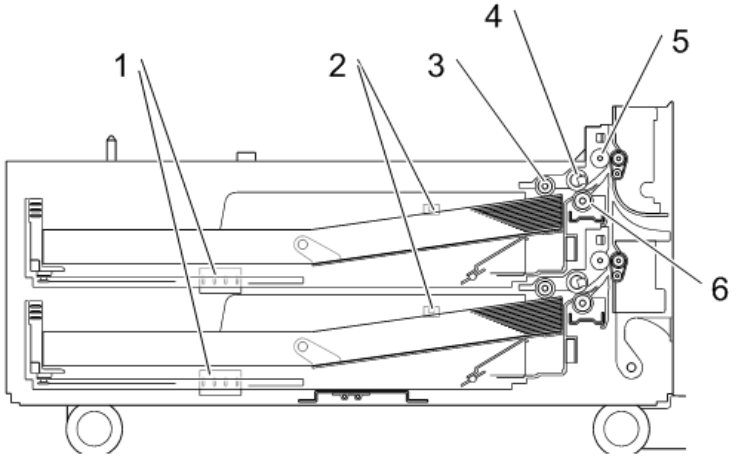


d1462191

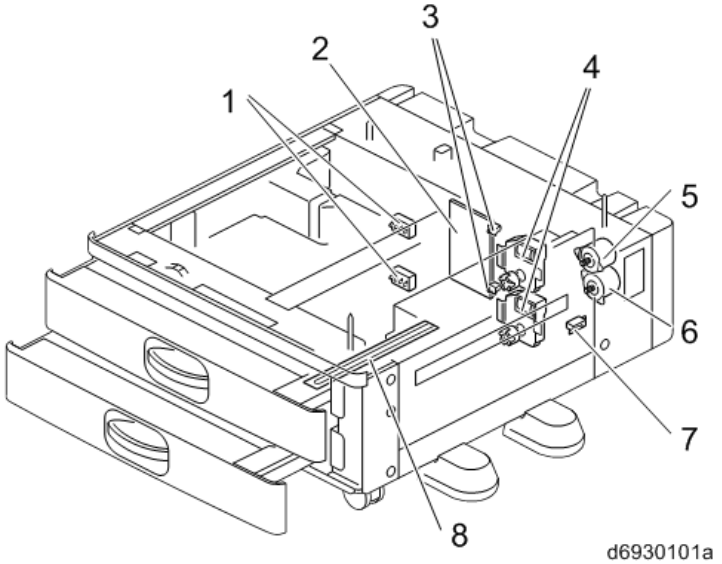
2. Detailed Descriptions

Paper Feed Unit PB3220 (D787-17)/PB3210 (D787-18, -22)

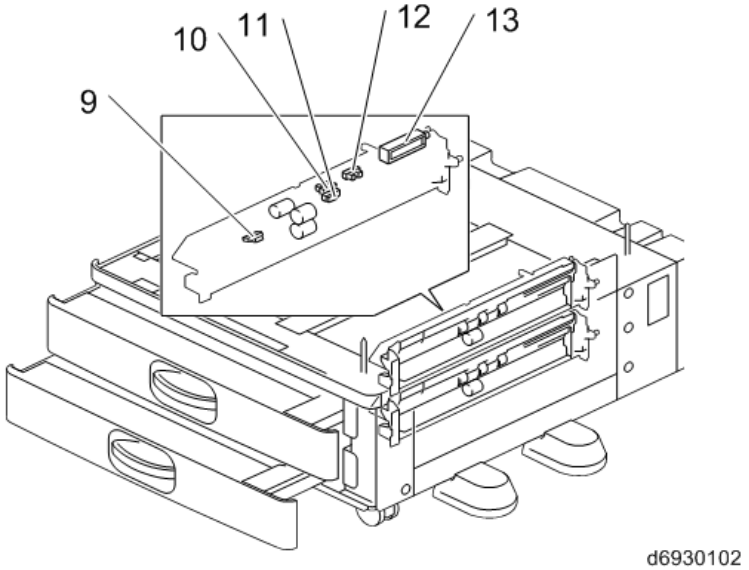
Parts Layout



No.	Description
1	Paper size switch
2	Tray set switch
3	Pick-up roller
4	Feed roller
5	Transport roller
6	Friction roller



d6930101a



d6930102

No.	Description	No.	Description
1	Paper size switch	8	Anti-condensation heater
2	Controller board	9	Paper feed sensor
3	Tray set switch	10	Paper end sensor
4	Tray lift motor	11	Transport sensor
5	Paper feed motor	12	Upper limit sensor

No.	Description	No.	Description
6	Transport motor	13	Pick-up solenoid
7	Transport cover open/close switch		

Mechanism

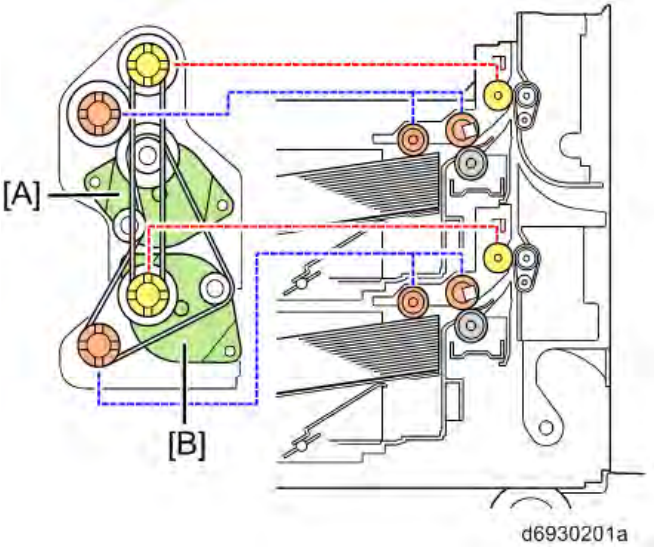
Paper Feed Separation Mechanism

Paper feed is an RF paper feed system. The paper feed unit comprises a pick-up roller, feed roller and friction roller. These rollers are high durability.

In the RF system, paper separation is assisted by the resistance of a separation roller with a torque limiter (reverse drive is not performed).

Drive Mechanism

The pick-up roller and feed roller are driven by the paper feed motor [A]. The transport roller is driven by the transport motor [B]. The friction roller is not driven.



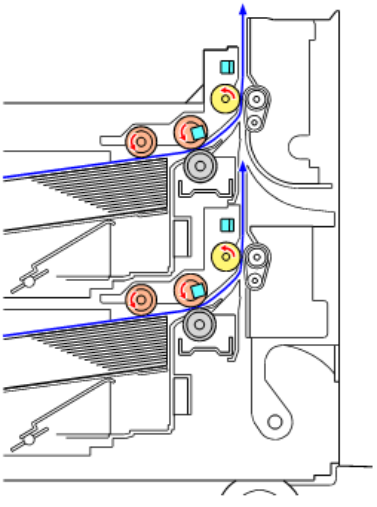
Friction Roller/Pick-up Roller Release Mechanism

When the paper feed tray is set, the friction roller comes in contact with the feed roller, and the pick-up roller contacts the uppermost sheet of paper.

However, when the paper feed tray is pulled out, to prevent paper from dropping out, the contact between the feed roller and friction roller, and between pick-up roller and paper is released.

Paper Feed Transport Mechanism

In this MFP, to maintain a fixed clearance between sheets, a paper feed sensor is provided near the pickup roller, which adjusts the paper feed timing.



d6930202

1. **The paper feed motor turns ON, and supplies the first sheet.**
2. **To prevent the next sheet from being fed, the pick-up solenoid switches ON just before the trailing edge of the first sheet leaves the pickup roller, and the pickup roller separates from the paper surface.**
3. **Slightly before the trailing edge of the first sheet leaves the paper feed roller, the paper feed motor switches OFF.**

   However, at this time, when the paper feed sensor detects no sheet (when the second sheet is not fed to the paper feed sensor position), pre-feed is performed without switching the paper feed motor OFF.

   Pre-feed is as follows.

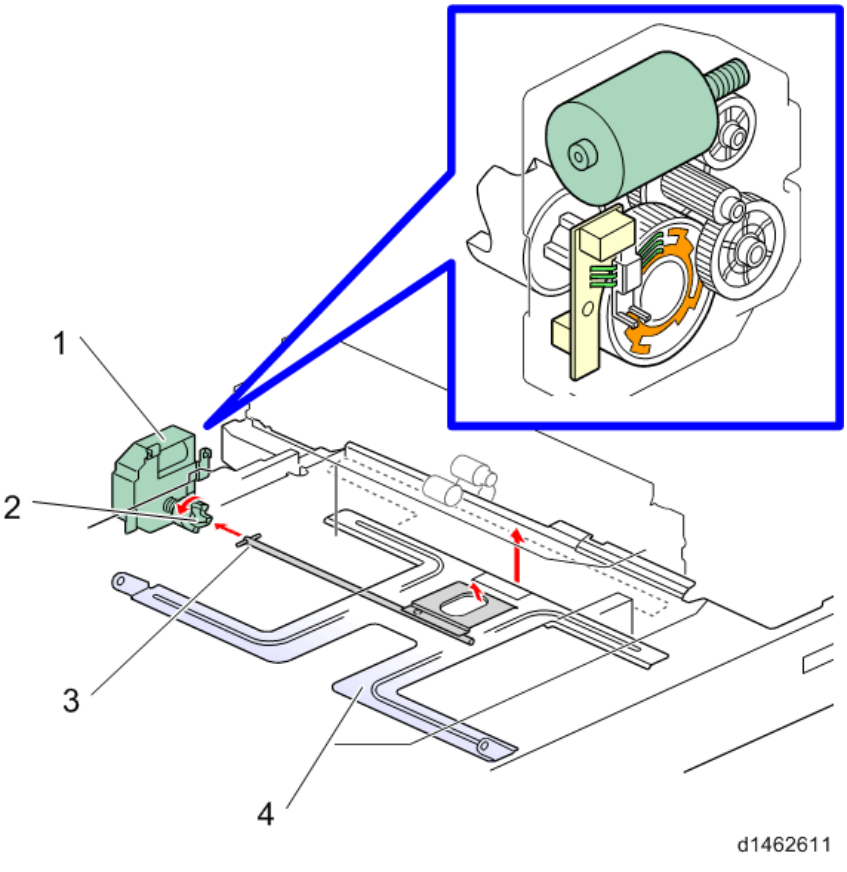
   1. The pickup solenoid switches OFF, and the second sheet of paper is fed to the paper feed sensor position.
   2. When the trailing edge of the second sheet passes the feed roller, the paper feed motor is switched OFF. The pickup solenoid remains OFF.
4. **Just when the trailing edge of the first sheet passes the paper feed roller, the pickup solenoid is switched OFF, and the pickup roller is brought in contact with the paper surface.**

5. **When the first sheet is fed a predetermined distance by the downstream transport roller, the paper feed motor is switched ON to supply the second sheet.**

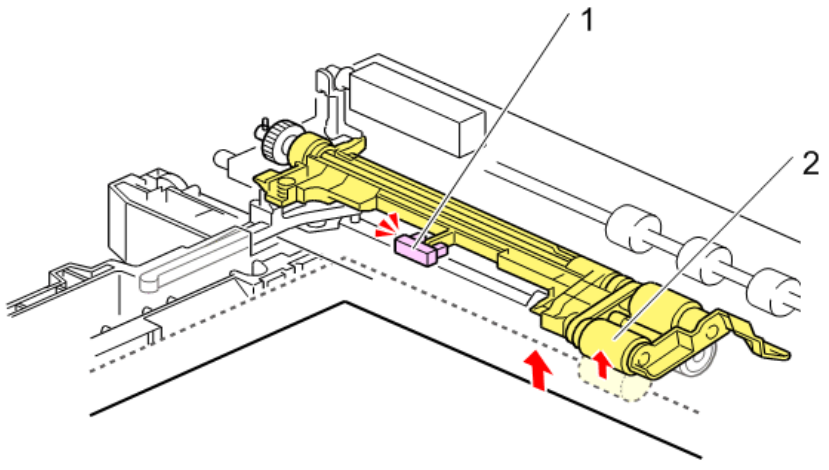
Tray Base Plate Lift

When the paper feed tray is set in the main unit, the set switch switches ON, and it is detected that the tray is set. At this time, the coupling of the lift motor engages with the shaft at the rear of the tray, the motor rotates, and the tray base plate is lifted up. The paper surface pushes up the Pickup roller, the tray base plate is lifted until the upper limit sensor switches OFF (blocked), and the machine enters the standby mode.

When the paper feed tray is removed, the coupling is disengaged, and the base plate descends. At this time, the lift motor rotates until the coupling returns to the home position.



No.	Description	No.	Description
1	Lift motor	3	Tray rear side shaft
2	Coupling	4	Tray base plate

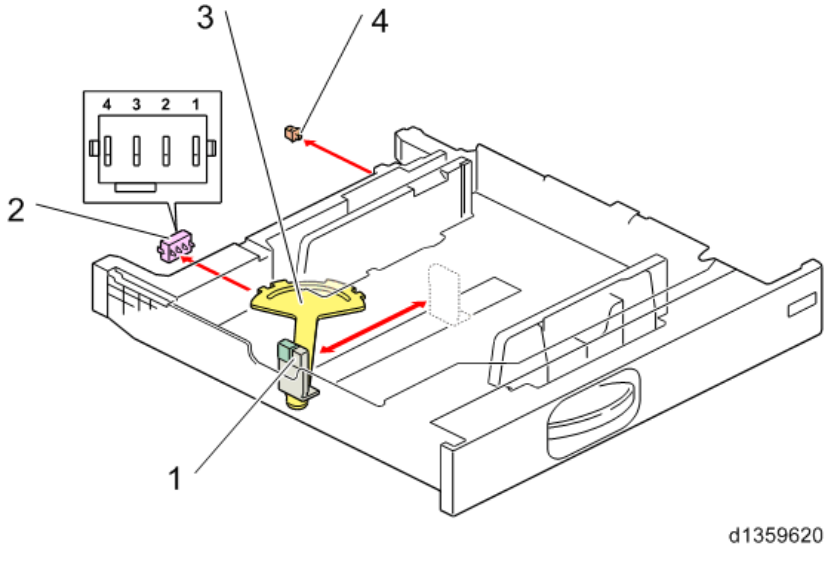


No.	Description	No.	Description
1	Upper limit sensor	2	Pick-up roller

Paper size detection

The end fence interlocks mechanically with the size detection actuator, and when the end fence is moved, the size detection actuator also moves.

When the paper feed tray is set, 4 size detection switches switch ON/OFF depending on the position of the size detection actuator. Paper size is detected by the detected combination of these switches.



No.	Description	No.	Description
1	End fence	3	Size detection actuator
2	Paper size switch	4	Tray set switch

Paper size switch operation

Paper size	Paper size switch			
	SW4	SW3	SW2	SW1
SRA3 (12″×18″)	1	0	1	0
A3 (DLT)	0	1	0	0
B4 (LG)	0	0	1	1
	0	1	1	1
A4_SEF	1	1	1	0
LT_SEF	1	1	0	0
B5_SEF	1	0	0	0
A4_LEF (LT_LEF)	0	0	0	1
B5_LEF (Exe_LEF)	0	0	1	0
A5_LEF	0	1	0	1

Remaining paper detection/paper end detection

Remaining paper detection

Detection of paper remaining in the paper feed tray is performed by a combination of ON/OFF (contact/non-contact) of contact-type remaining detection plates (printed circuits) CN-3, CN-5.

When the amount of remaining paper decreases, and the tray lift motor rotates, the remaining paper sensors CN-3 and CN-5 in the motor are turned ON/OFF.

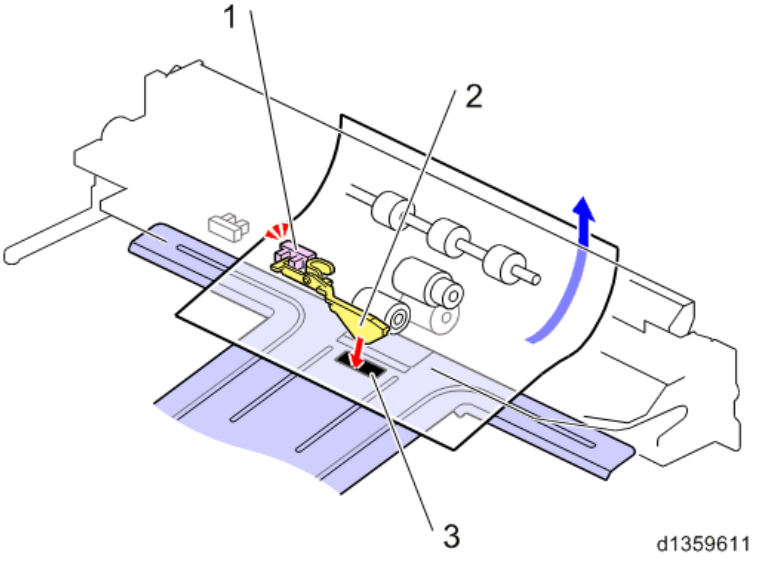
The following 4 levels of remaining paper can be detected:

Amount remaining	100%	70%	30%	10%
CN-3	OFF	ON	ON	OFF
CN-5	OFF	OFF	ON	ON

Amount remaining	100%	70%	30%	10%
Control panel remaining paper display	4 bars	3 bars	2 bars	1 bar

Paper end detection

When the paper feed tray is empty, the paper end sensor switches ON (unblocked) due to the end feeler.



No.	Description	No.	Description
1	Paper end sensor	3	Slot in the tray base plate
2	End feeler		

Internal Multi-fold Unit FD3000
Machine Code: M482
Field Service Manual
Ver 1.0

Latest Release: Sep, 2016
Initial Release: Sep, 2016
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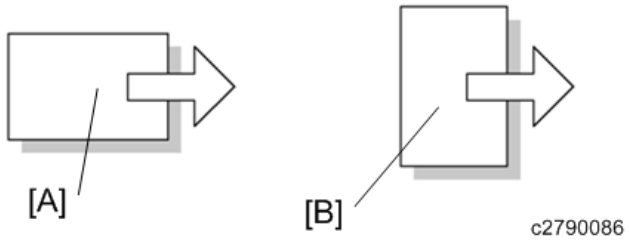
Symbols, Abbreviations and Trademarks

Symbols, Abbreviations

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

Symbol	What it means
	Clip ring
	Screw
	Connector
	Clamp
	E-ring
	Flat Flexible Cable
	Timing Belt
SEF	Short Edge Feed
LEF	Long Edge Feed
K	Black
C	Cyan
M	Magenta
Y	Yellow
B/W, BW	Black and White
FC	Full color



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

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- Microsoft® Internet Explorer® 6
- Windows® Internet Explorer® 7
- Windows® Internet Explorer® 8

The proper names of the Windows operating systems are as follows:

- The product names of Windows Vista are as follows:

Microsoft® Windows Vista® Ultimate

Microsoft® Windows Vista® Business

Microsoft® Windows Vista® Home Premium

Microsoft® Windows Vista® Home Basic

Microsoft® Windows Vista® Enterprise

- The product names of Windows 7 are as follows:

Microsoft® Windows® 7 Home Premium

Microsoft® Windows® 7 Professional

Microsoft® Windows® 7 Ultimate

Microsoft® Windows® 7 Enterprise

- The product names of Windows 8 are as follows:

Microsoft® Windows® 8

Microsoft® Windows® 8 Pro

Microsoft® Windows® 8 Enterprise

- The product names of Windows 8.1 are as follows:

Microsoft® Windows® 8.1

Microsoft® Windows® 8.1 Pro

Microsoft® Windows® 8.1 Enterprise

- The product names of Windows 10 are as follows:

Microsoft® Windows® 10 Home Premium

Microsoft® Windows® 10 Pro

Microsoft® Windows® 10 Enterprise

Microsoft® Windows® 10 Education

- The product names of Windows Server 2003 are as follows:

Microsoft® Windows Server® 2003 Standard Edition

Microsoft® Windows Server® 2003 Enterprise Edition

- The product names of Windows Server 2003 R2 are as follows:

Microsoft® Windows Server® 2003 R2 Standard Edition

Microsoft® Windows Server® 2003 R2 Enterprise Edition

- The product names of Windows Server 2008 are as follows:

Microsoft® Windows Server® 2008 Standard

Microsoft® Windows Server® 2008 Enterprise

- The product names of Windows Server 2008 R2 are as follows:

Microsoft® Windows Server® 2008 R2 Standard

Microsoft® Windows Server® 2008 R2 Enterprise

- The product names of Windows Server 2012 are as follows:

Microsoft® Windows Server® 2012 Foundation

Microsoft® Windows Server® 2012 Essentials

Microsoft® Windows Server® 2012 Standard

- The product names of Windows Server 2012 R2 are as follows:

Microsoft® Windows Server® 2012 R2 Foundation

Microsoft® Windows Server® 2012 R2 Essentials

Microsoft® Windows Server® 2012 R2 Standard

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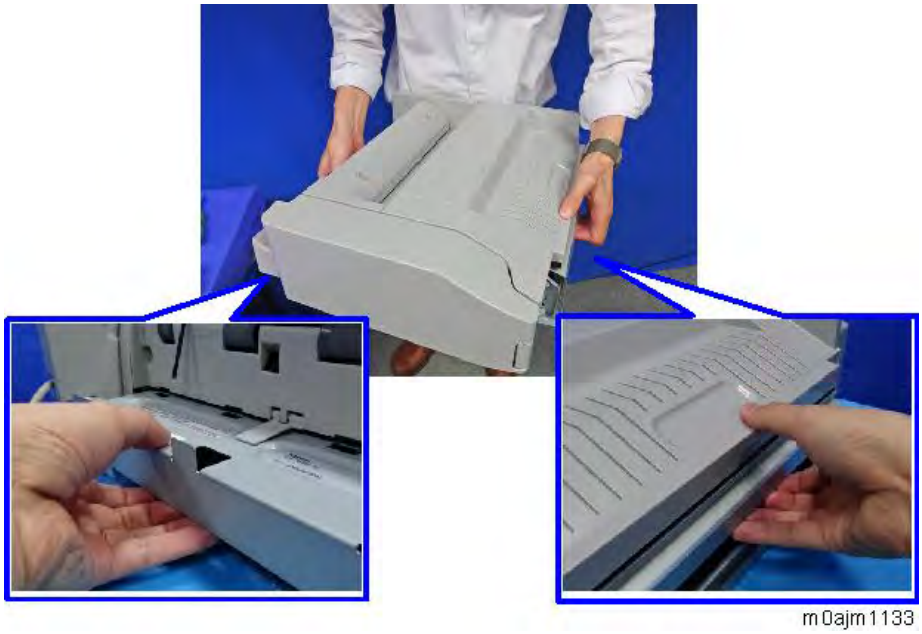
1. Replacement and Adjustment

How to Hold the Internal Multi-folding Unit

⚠CAUTION

When lifting the internal multi-folding unit, be sure to hold the side frames, as shown in the image below. Holding the exterior or other parts might damage or deform the unit.

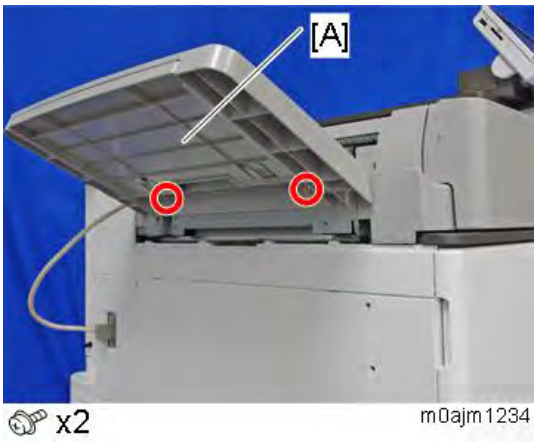


Removing the Internal Multi-fold Unit

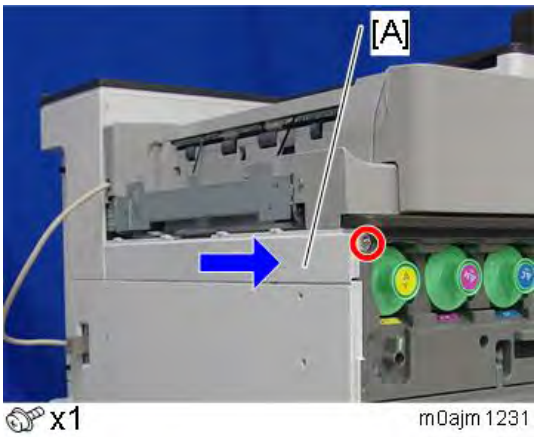
1. When a finisher is connected, first remove the finisher and then proceed to step 3.

2. When no finisher is connected, perform the following steps.

1. Remove the paper exit tray [A].



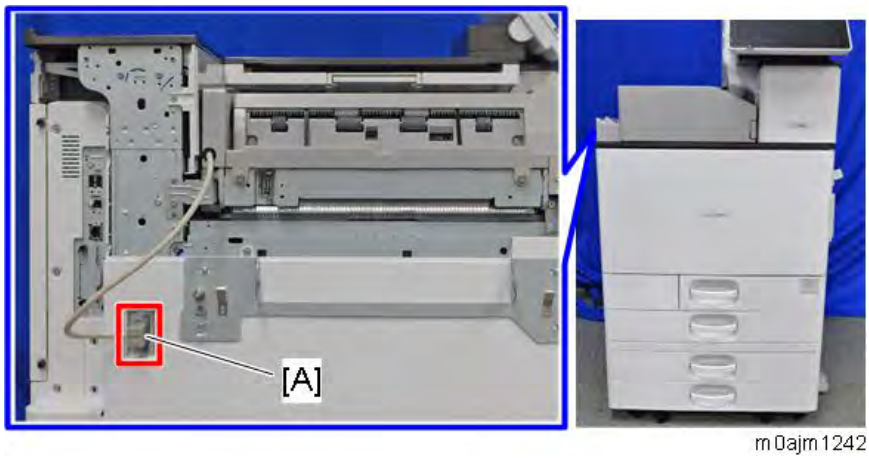
2. Open the front cover, and then remove the left upper cover [A].
   Slide the cover in the direction of the blue arrow.



3. Remove the left rear cover [A].

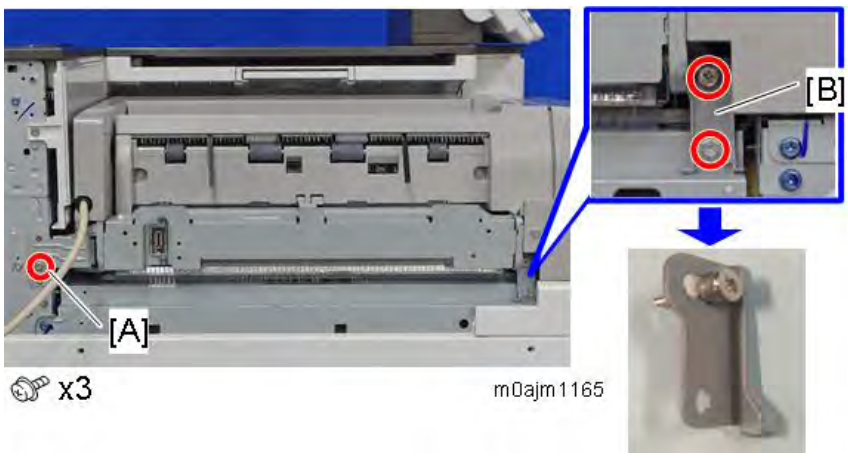
4. Open the door [A] and remove the coin screw [B].

5. Disconnect the connector [A].



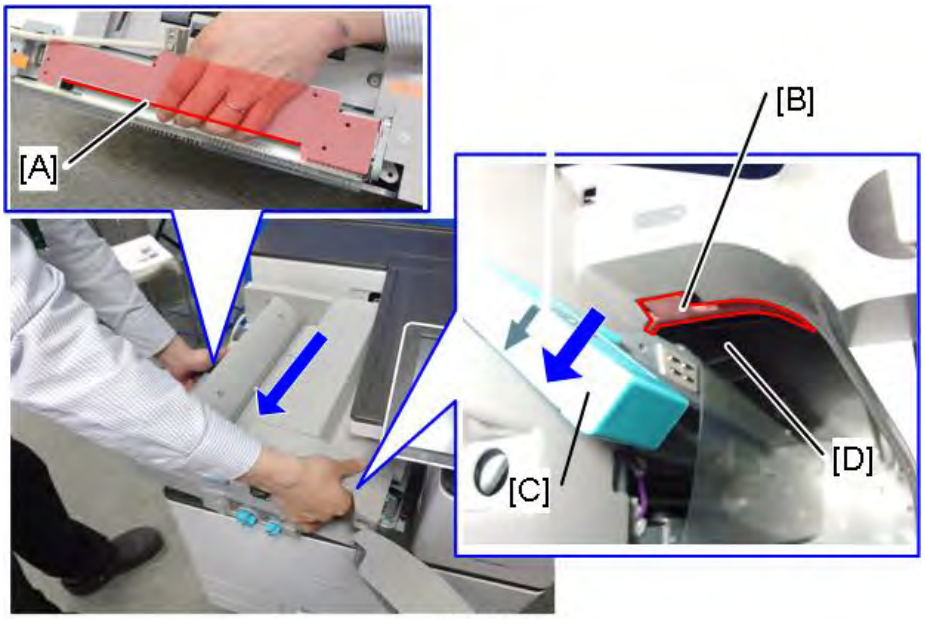
6. Remove the fixing screw [A] and bracket [B].

When removing the bracket [B], remove the top screw first, and then the bottom one.



7. Open the front cover of the internal multi-fold unit, and then, holding the exit tray frame [A] and the top part of the opening [B], lift the internal multi-fold unit and remove it.

- Lower the lever [C] to keep the paper guide plate open during operation, because the plate might be deformed if a strong force is applied while the guide plate is closed.
- Hold the metal frame part [B], not the exterior cover, to avoid damaging the cover.
- Be careful not to touch the mylar sheet [D] located behind.



m0ajm0088b

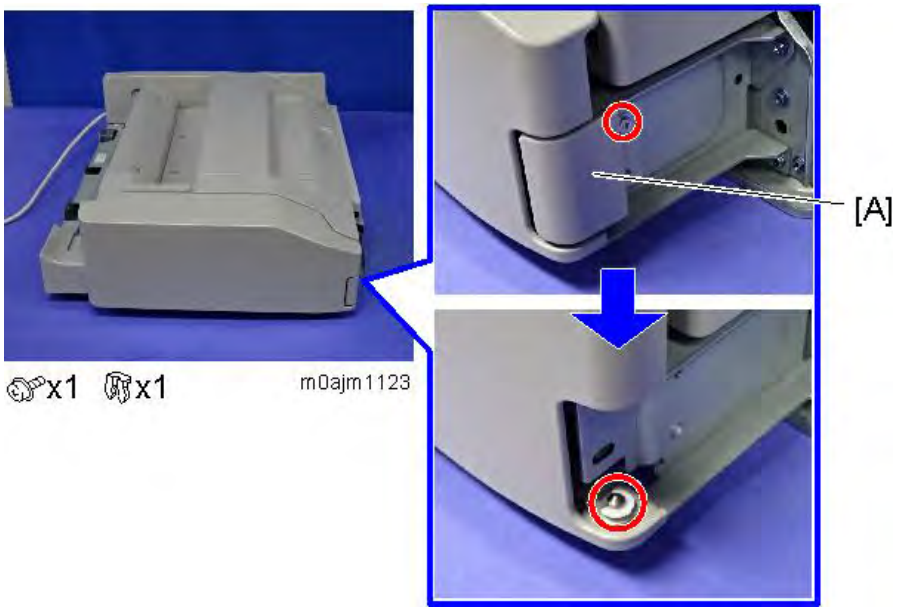
Exterior Covers

Rear Cover

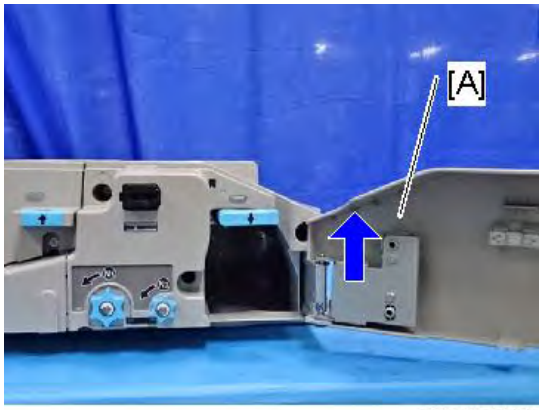
1. Remove the rear cover [A].

Door

1. Remove the small cover [A] and clip ring.



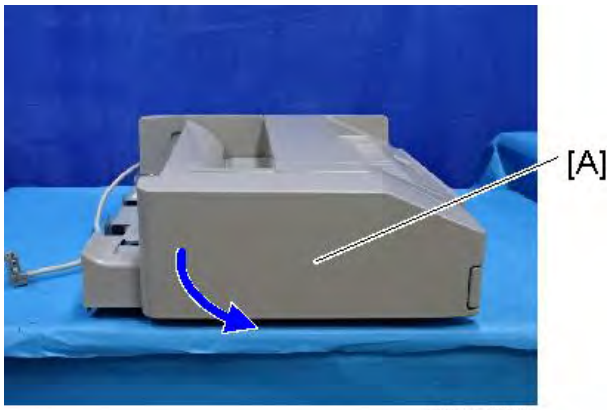
2. Open the door [A] and remove it by sliding upward.



m0ajm1124

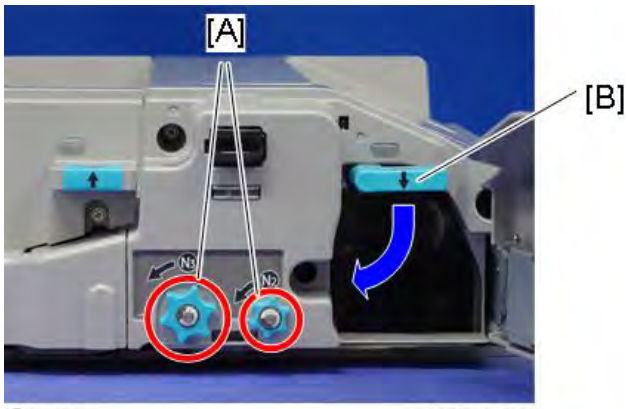
Front Right Cover

1. Open the door [A].



m0ajm1118

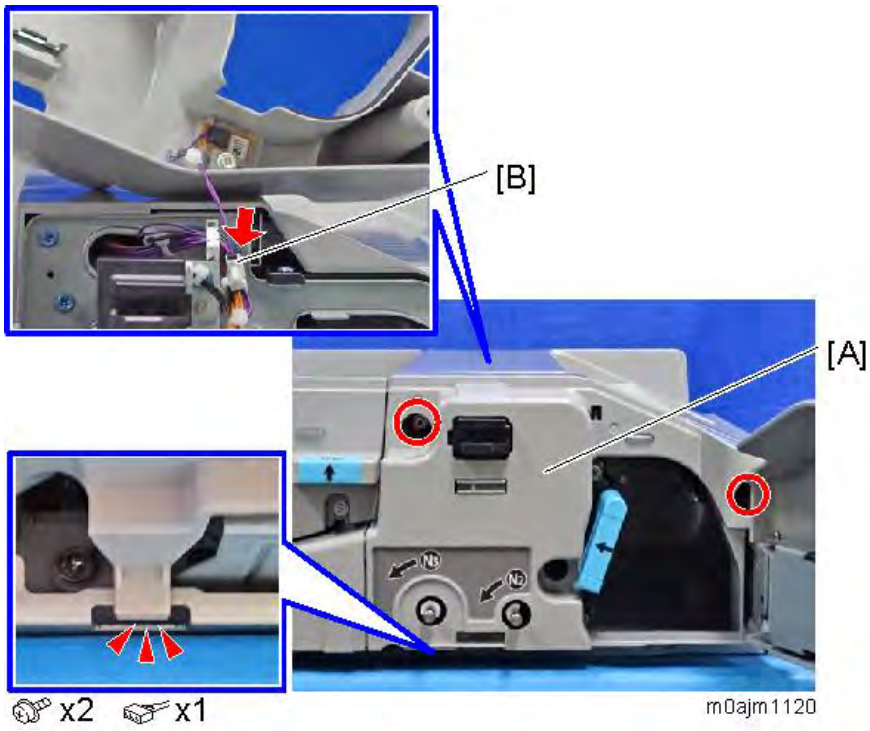
2. Remove the knobs [A], and then lower the lever [B].



x2 m0ajm1119

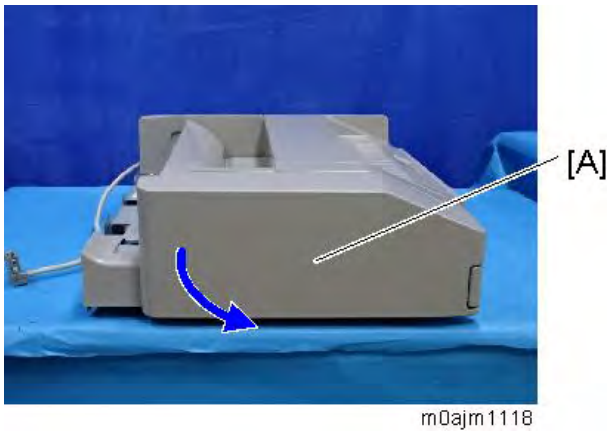
3. Remove the front right cover [A].

Remove the connector [B] connected to the LED on the back of the cover.

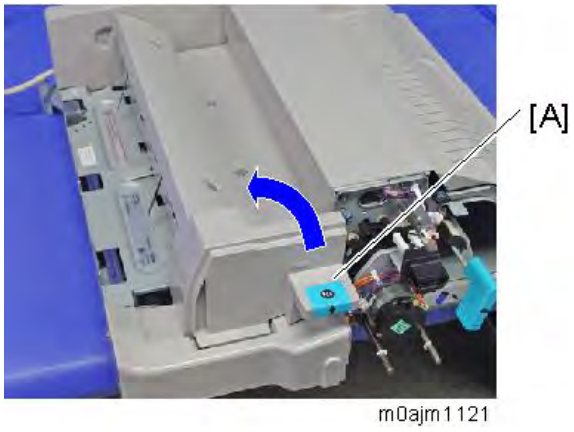


Front Left Cover

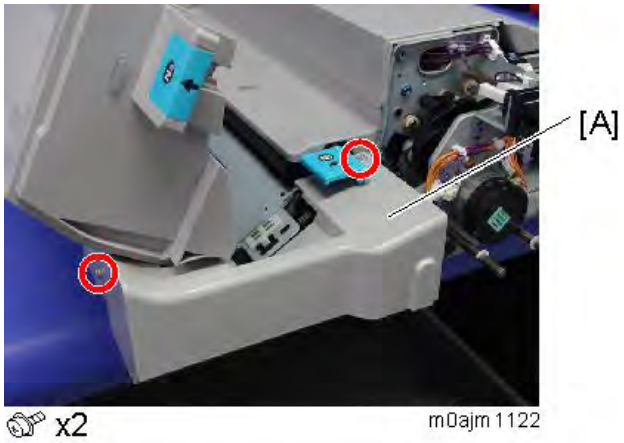
1. Open the door [A].



2. Open the exit unit [A].



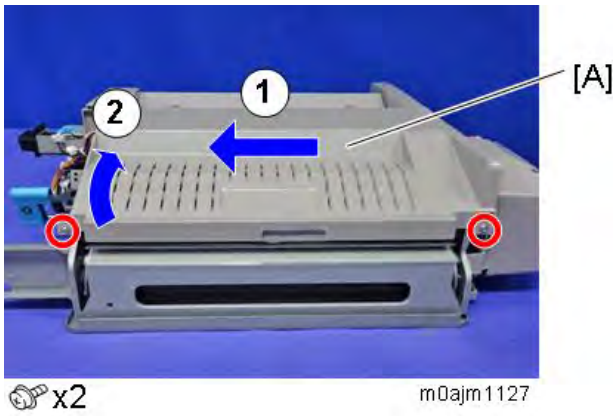
3. Remove the front left cover [A].



Top Cover

1. Remove the front right cover. (Front Right Cover)

2. Slide the top cover [A] to the left, turn the left side, and then remove the cover.

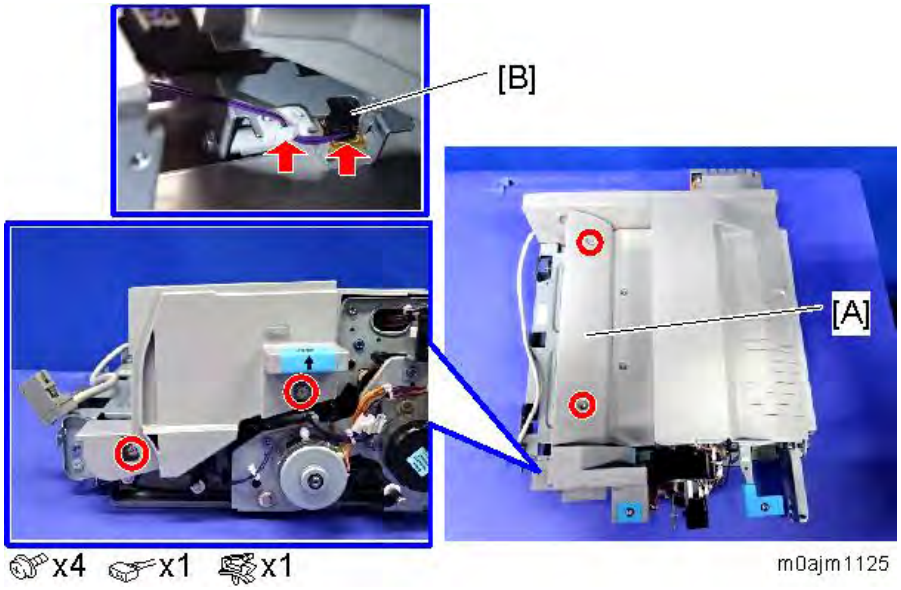


Exit Unit Cover

1. Remove the front left cover. (Front Left Cover)

2. Remove the exit unit cover [A].

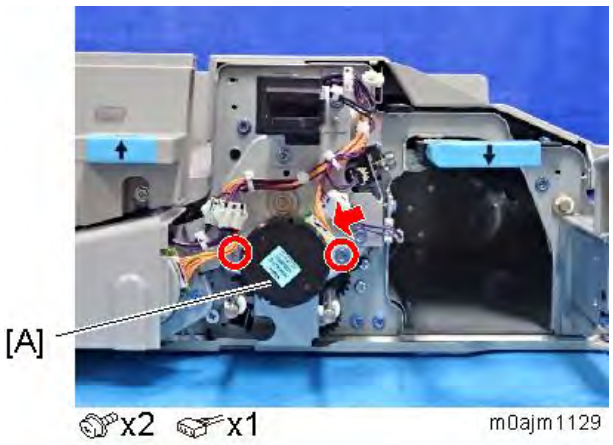
Disconnect the connector and open the clamp for the LED [B] on the back of the cover.


[B]
[A]
x4
x1
x1
m0ajm1125

Motors, Solenoid

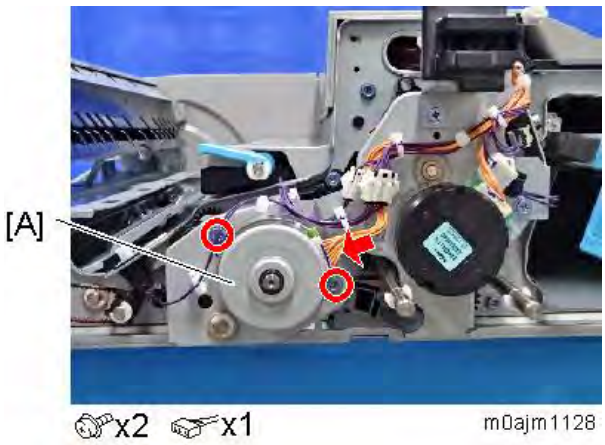
JG Crease Motor

1. Remove the front right cover. (Front Right Cover)
2. Remove the JG crease motor [A].



Transport Motor

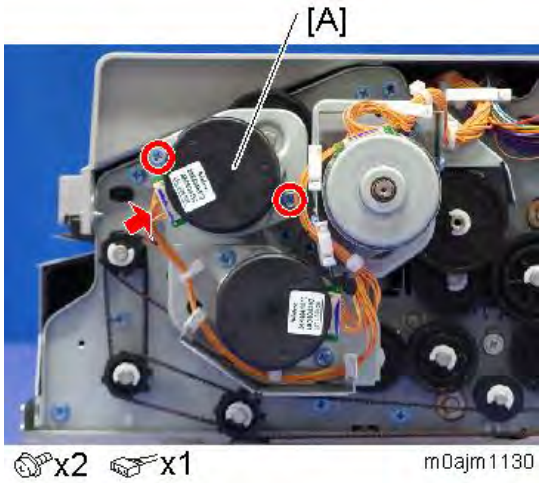
1. Remove the front right cover. (Front Right Cover)
2. Remove the front left cover. (Front Left Cover)
3. Remove the transport motor [A].



Registration Motor

1. Remove the rear cover. (Rear Cover)

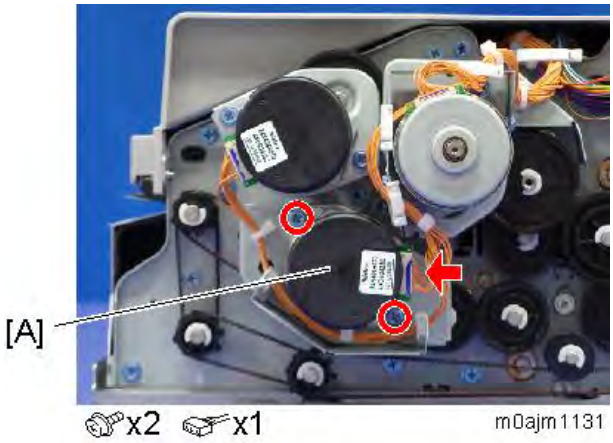
2. Remove the registration motor [A].



2nd Fold Motor

1. Remove the rear cover. (Rear Cover)

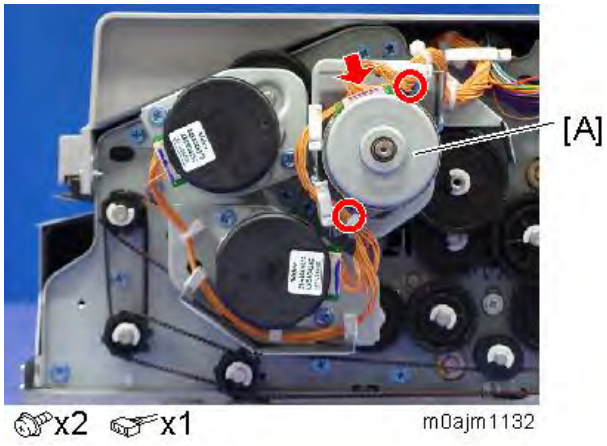
2. Remove the 2nd fold motor [A]



1st Fold Motor

1. Remove the rear cover. (Rear Cover)

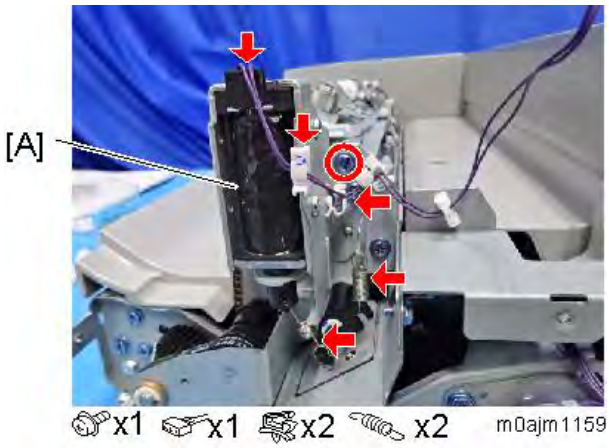
2. Remove the 1st fold motor [A].



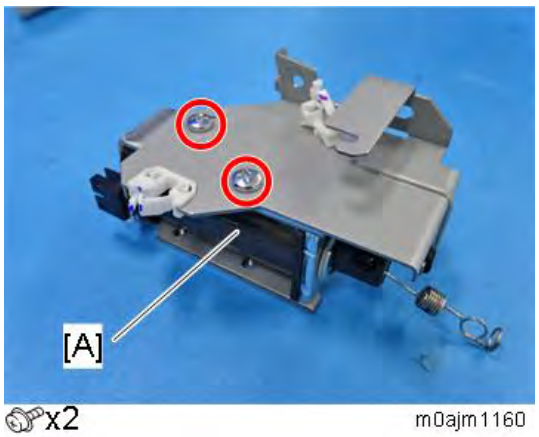
Junction Gate Solenoid

1. Remove the exit unit cover. (Exit Unit Cover)

2. Remove the junction gate solenoid unit [A].



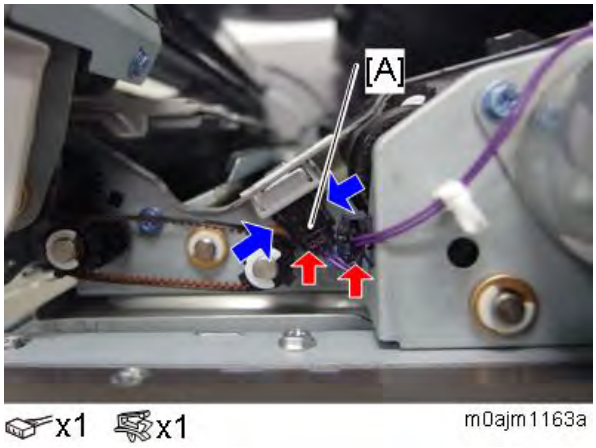
3. Remove the junction gate solenoid [A].



Switches

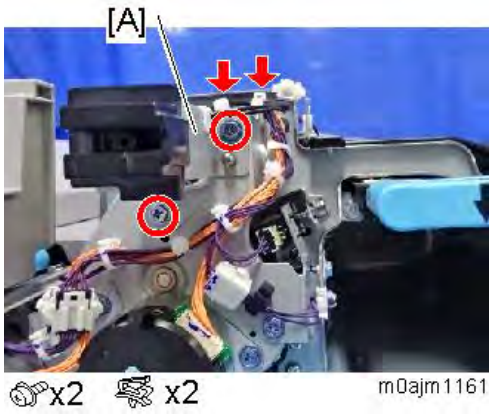
Exit Unit Switch

1. Remove the front left cover. (Front Left Cover)
2. Remove the exit unit switch [A].

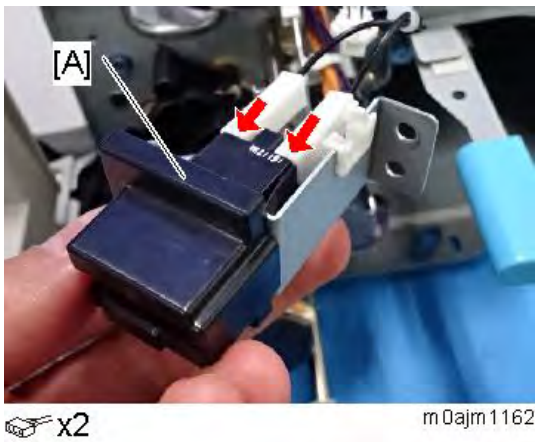


Front Door Switch

1. Remove the front right cover. (Front Right Cover)
2. Remove the front door switch bracket [A].



3. Remove the front door switch [A].

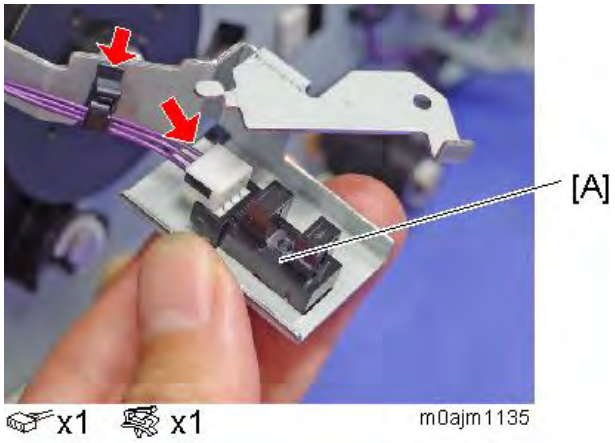


Sensors

Crease HP Sensor

1. Remove the rear cover. (Rear Cover)
2. Remove the crease HP sensor bracket [A].

3. Remove the crease HP sensor [A].

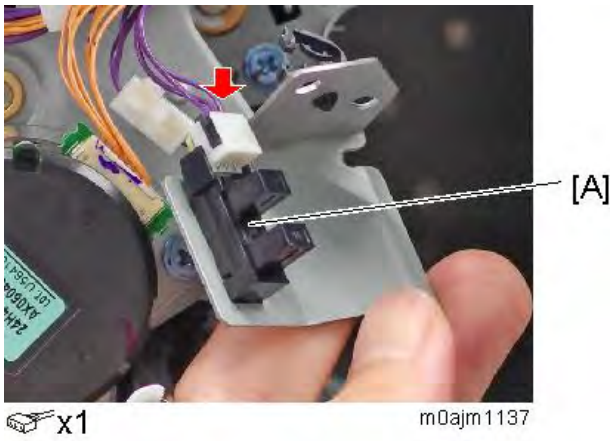


Junction Gate HP Sensor

1. Remove the front right cover. (Front Right Cover)

2. Remove the junction gate HP sensor bracket [A].

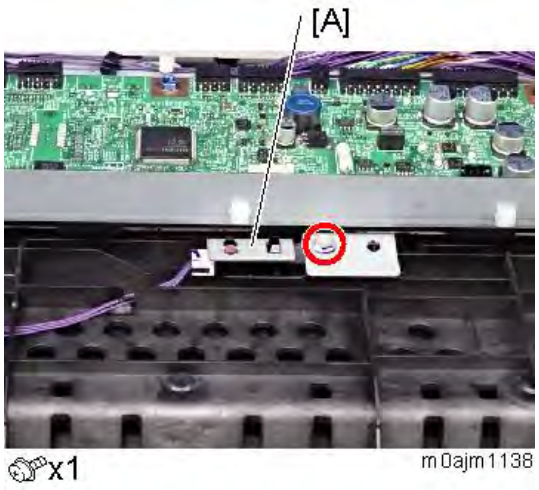
3. Remove the junction gate HP sensor [A].



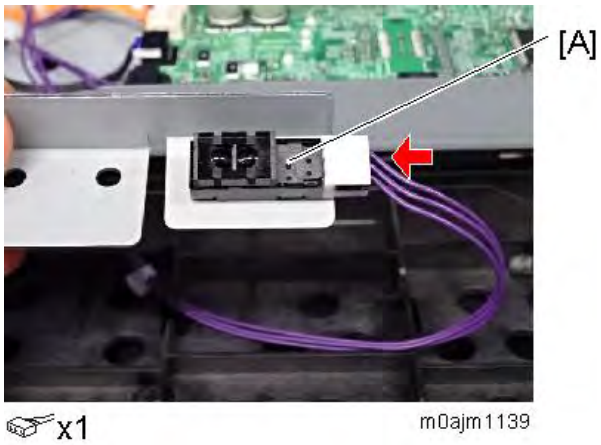
Registration Sensor

1. Remove the top cover. (Top Cover)

2. Remove the registration sensor bracket [A].



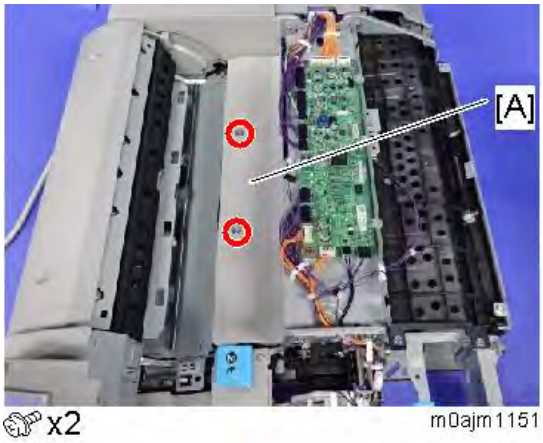
3. Remove the registration sensor [A].



Crease Sensor

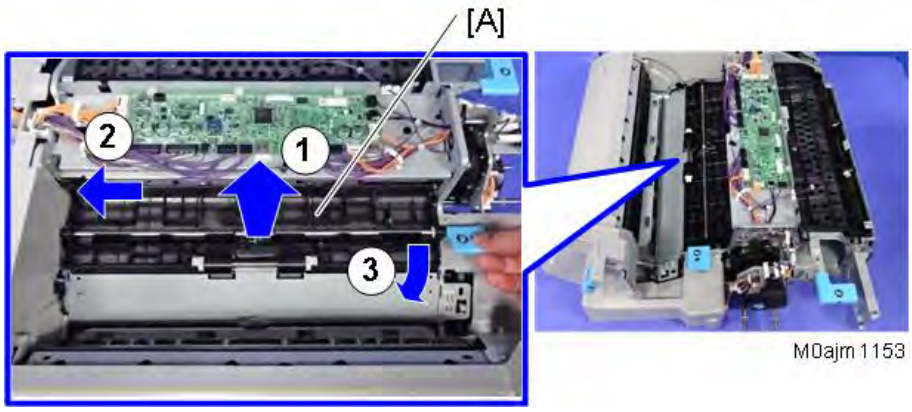
1. Remove the top cover. (Top Cover)

2. Remove the N5 cover [A].

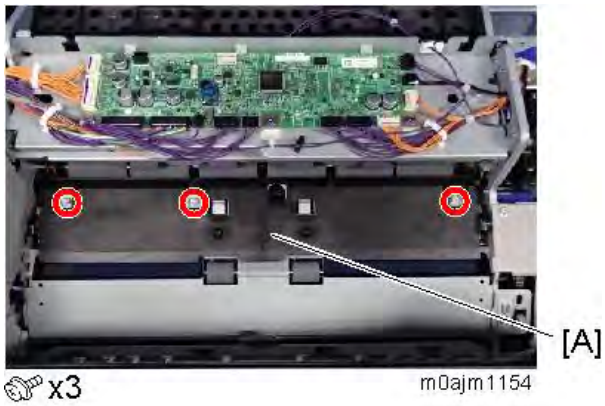


3. Remove the fixing plate [A].

4. Lift the N5 cover [A], slide it to the left, and then remove it by pulling.



5. Remove the crease roller cover [A].



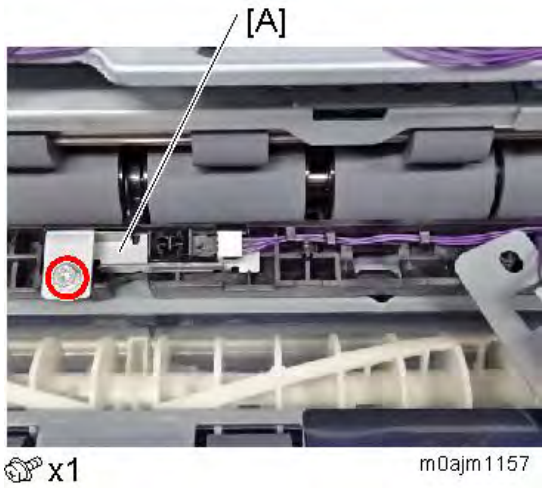
6. Remove the crease sensor bracket [A].

7. Remove the crease sensor [A].

1st Fold Sensor

1. Remove the crease sensor bracket. (Crease Sensor)

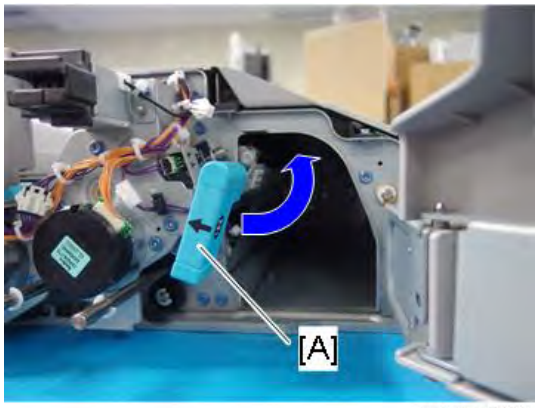
2. Remove the 1st fold sensor bracket [A].



3. Remove the 1st fold sensor [A].

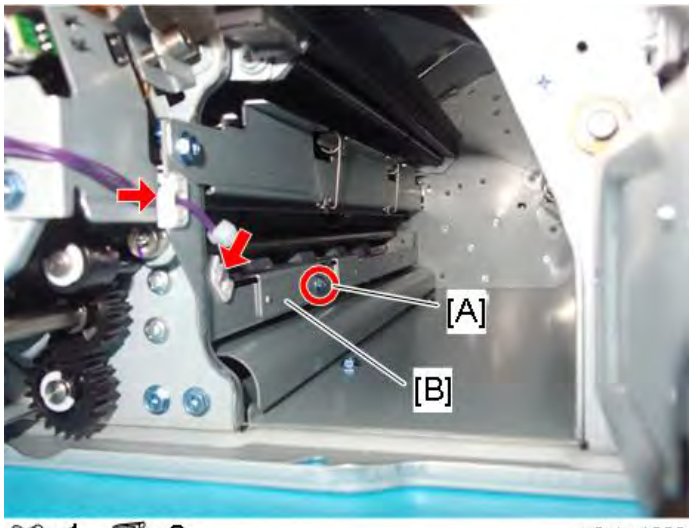
2nd Fold Sensor

1. Remove the front right cover. (Front Right Cover)
2. Raise the N1 lever [A].



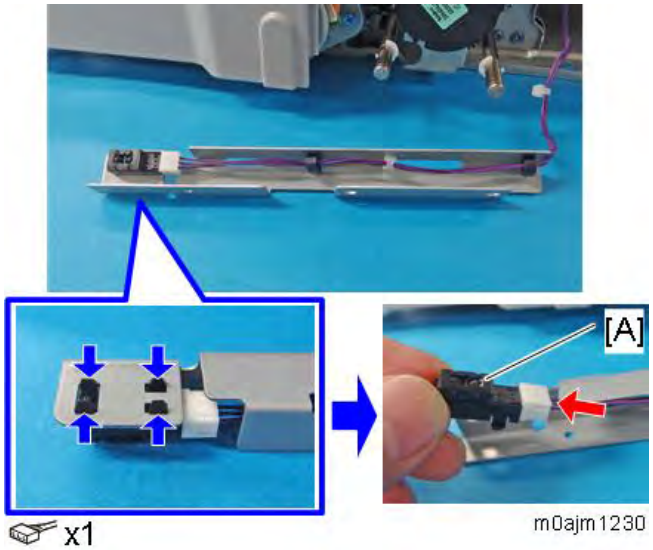
m0ajm1228

3. Remove the screw [A] with a short screwdriver, and remove the bracket [B].



x1 x2 m0ajm1229

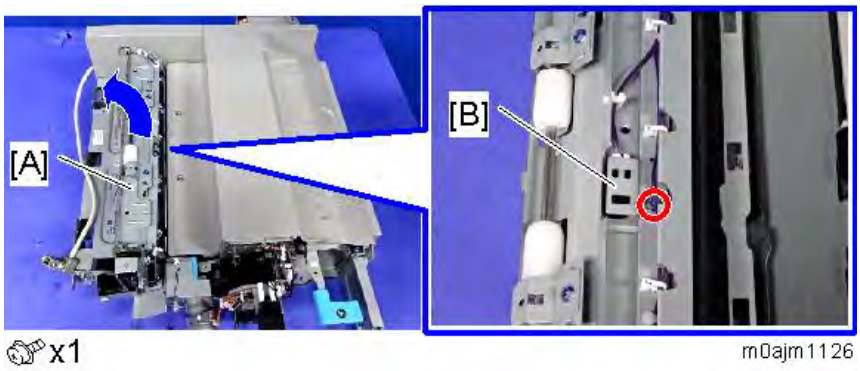
4. Remove the 2nd fold sensor [A].



x1 m0ajm1230

Folder Tray Exit Sensor

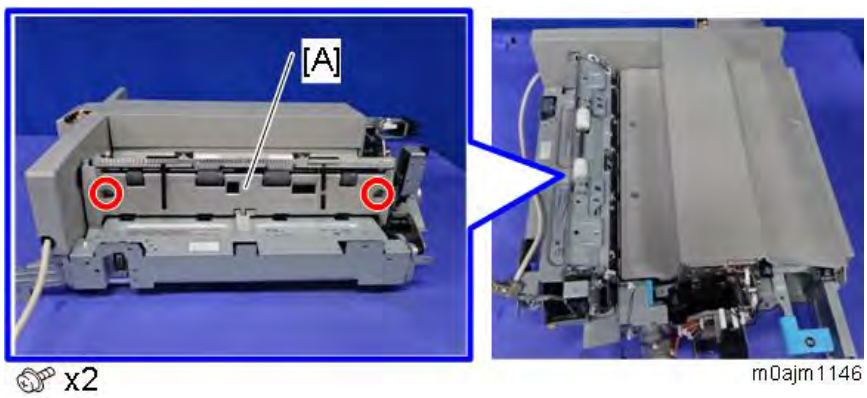
1. Remove the exit unit cover. (Exit Unit Cover)
2. Raise the exit unit [A] and remove the folder tray exit sensor bracket [B].



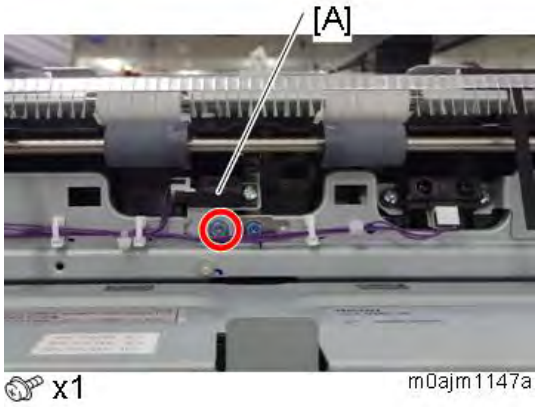
3. Remove the folder tray exit sensor [A].

Folder Tray Full Sensor

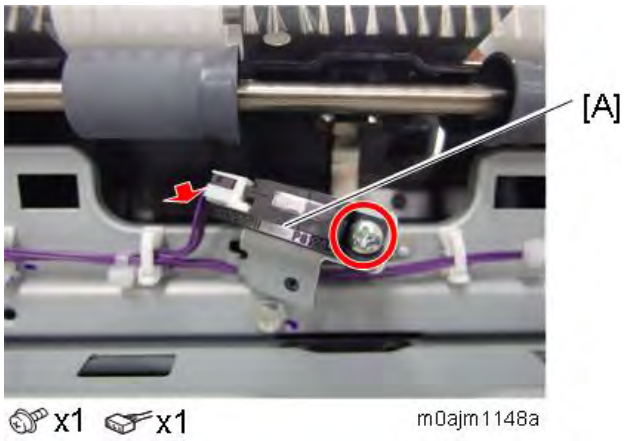
1. Remove the exit unit cover. (Exit Unit Cover)
2. Remove the exit fence [A].



3. Remove the folder tray full sensor bracket [A].



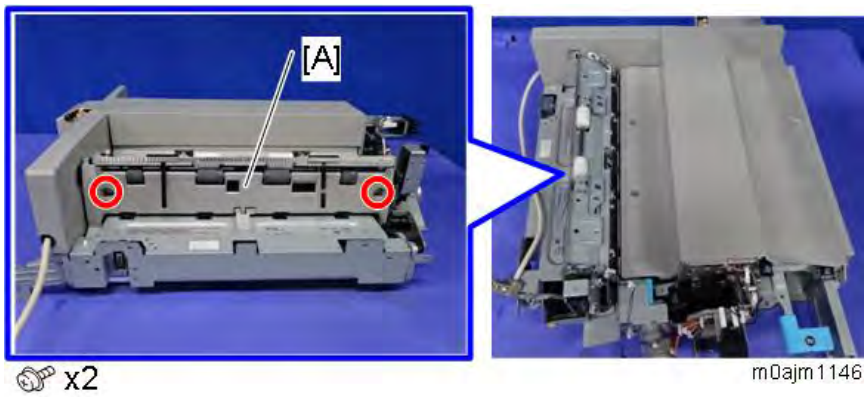
4. Remove the folder tray full sensor [A].



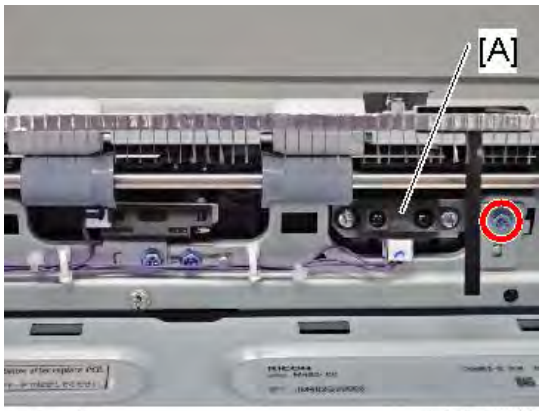
Folder Tray Full Sensor 2

1. Remove the exit unit cover. (Exit Unit Cover)

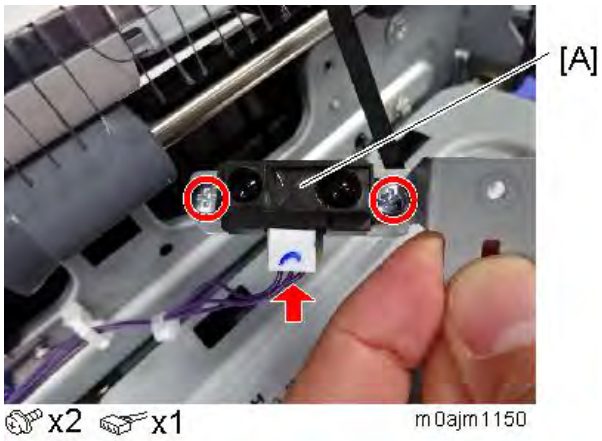
2. Remove the exit fence [A].



3. Remove the folder tray full sensor 2 bracket [A].



4. Remove the folder tray full sensor 2 [A].

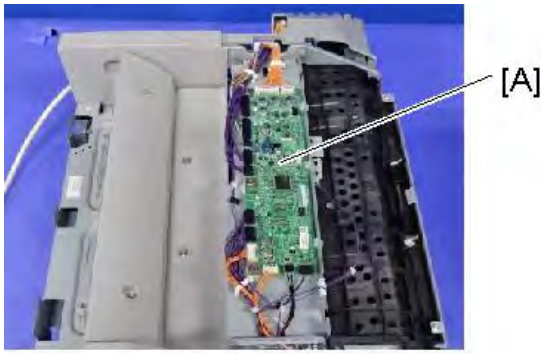


Horizontal Path Exit Sensor

1. Put the internal multi-fold unit upside down.

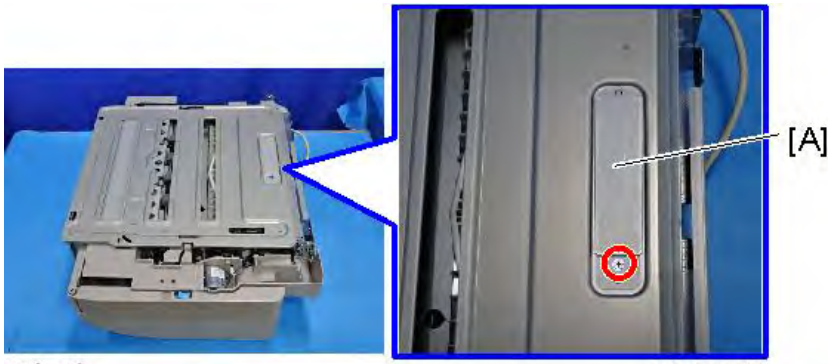
⚠CAUTION

Do not turn over the unit with the top cover removed, as shown in the image below, to avoid damage to the circuit board [A].



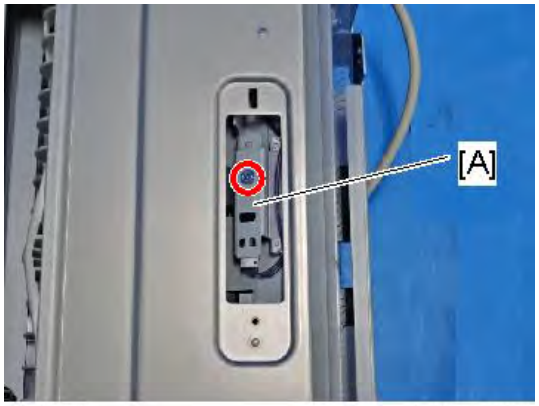
m0ajm1141

2. Remove the horizontal path exit sensor cover [A].



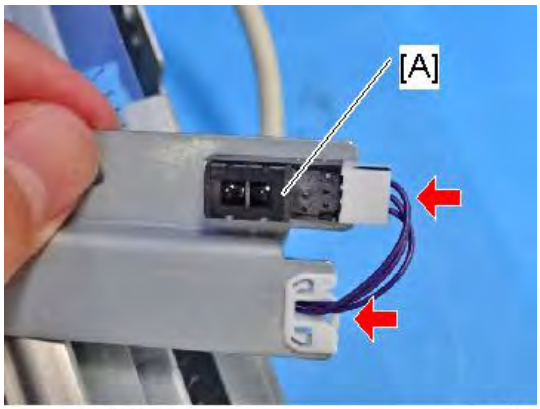
m0ajm1142

3. Remove the horizontal path exit sensor bracket [A].



m0ajm1143

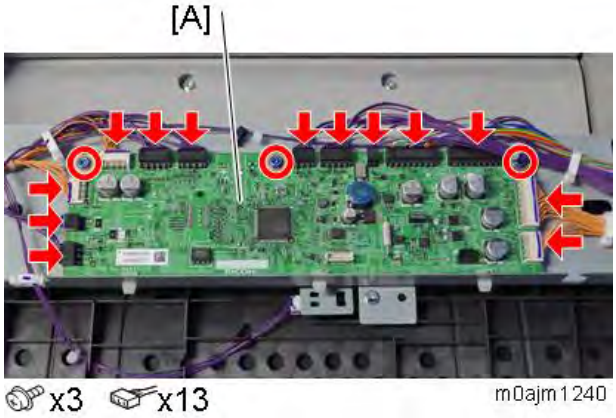
4. Remove the horizontal path exit sensor [A].



x1 x1 m0ajm1144

PCB

1. Remove the top cover. (Top Cover)
2. Remove the PCB [A].



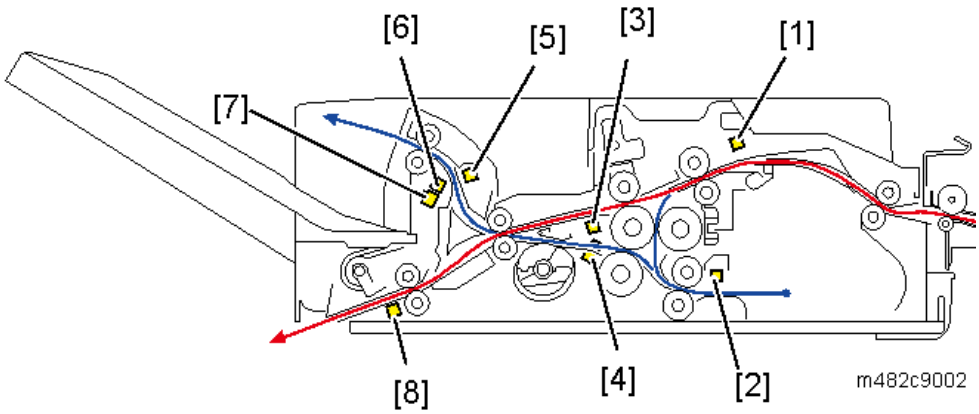
What to do After Replacing the PCB

After replacing the PCB, set the unit to the adjustment values that are specified in the label [A] on the left frame, in the following SP modes.

- 6-324-001 (NV Adj. Data Mod. 1st Fold Pos. Factory Setting)
- 6-324-002 (NV Adj. Data Mod. 2nd Fold Pos. Factory Setting)
- 6-324-003 (NV Adj. Data Mod. Crease Pos. Factory Setting)

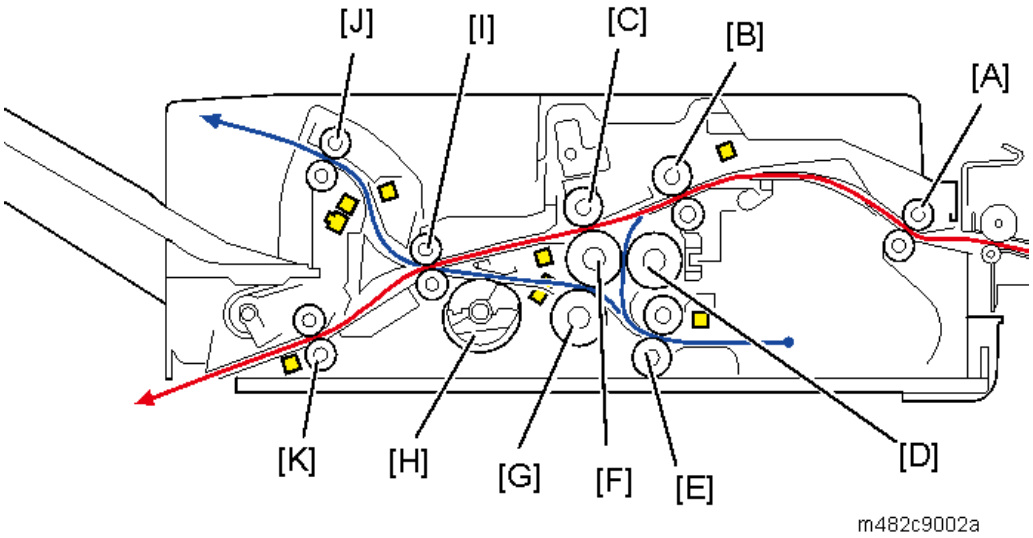
2. Detailed Descriptions

Sensor Layout



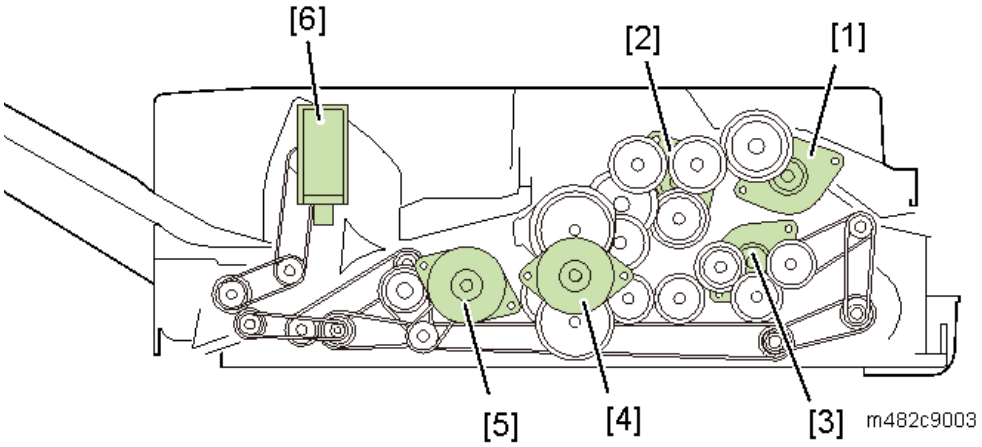
No.	Description	No.	Description
1	Registration sensor	5	Folder tray exit sensor
2	2nd fold sensor	6	Folder tray full sensor 1
3	1st fold sensor	7	Folder tray full sensor 2
4	Crease sensor	8	Horizontal path exit sensor

Roller Layout



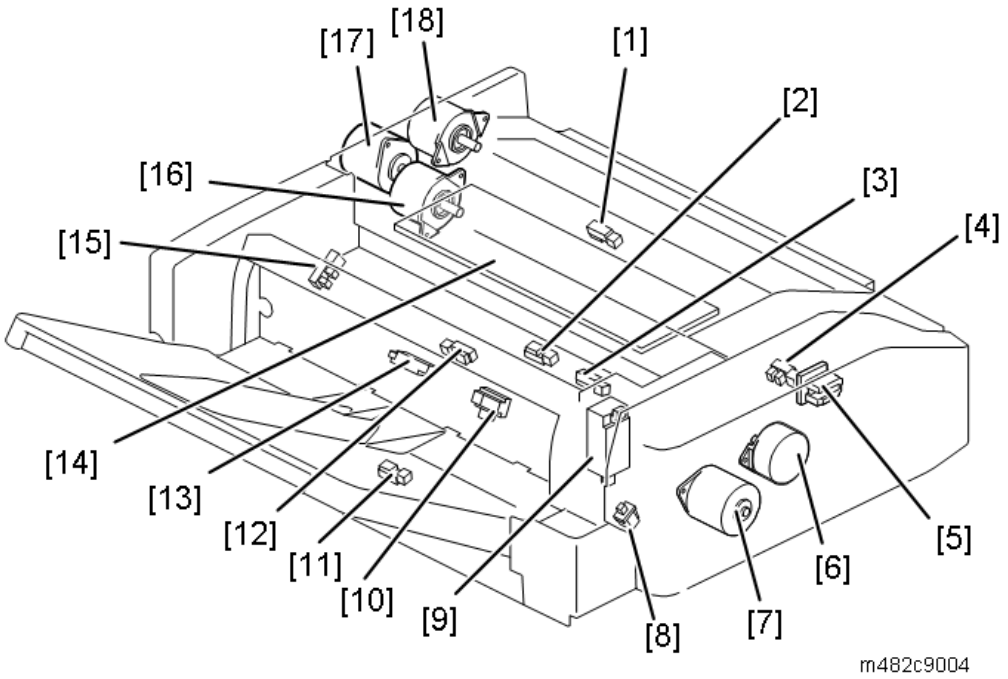
No.	Description	No.	Description
A	Paper entrance roller	G	Folding roller 3
B	Registration roller	H	Crease roller
C	1st fold roller (F/R)	I	Relay transport roller
D	Folding roller 1	J	Folder tray exit roller
E	2nd fold roller (F/R)	K	Horizontal path exit roller
F	Folding roller 2		

Drive Layout



No.	Description	No.	Description
1	Registration motor	4	JG crease motor
2	1st fold motor	5	Transport motor
3	2nd fold motor	6	Junction gate solenoid

Parts Layout



No.	Description	No.	Description
1	Registration sensor	10	Folder tray full sensor 2
2	1st fold sensor	11	Horizontal path exit sensor
3	Crease sensor	12	Folder tray exit sensor
4	Junction gate HP sensor	13	Folder tray full sensor 1
5	Front door open/closed switch	14	PCB
6	JG crease motor	15	Crease HP sensor
7	Transport motor	16	2nd fold motor
8	Exit unit switch	17	1st fold motor
9	Junction gate solenoid	18	Registration motor

Mechanism

Fold Types

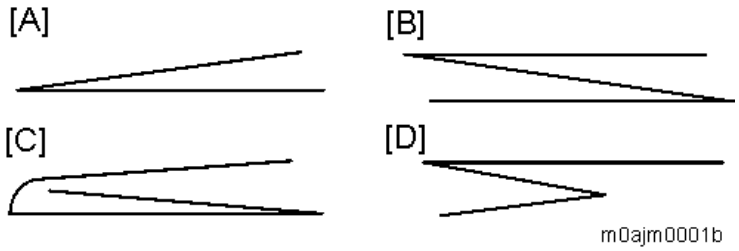
This unit is capable of the following fold types:

[A] : Half Fold

[B] : Letter Fold-out

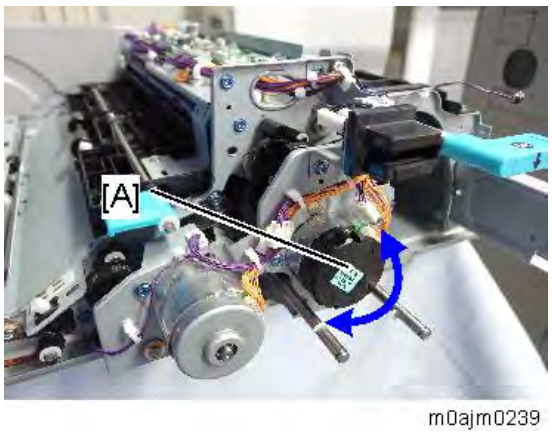
[C] : Letter Fold-in

[D] : Z-fold



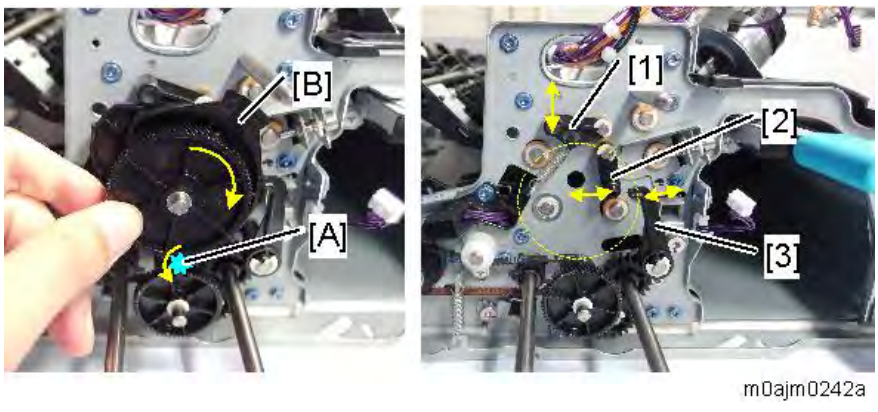
Junction Gate / Crease Mechanism

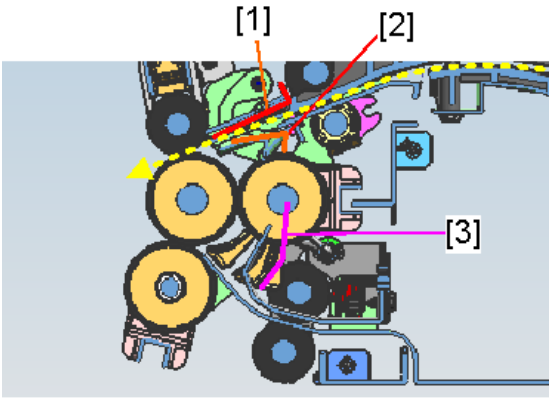
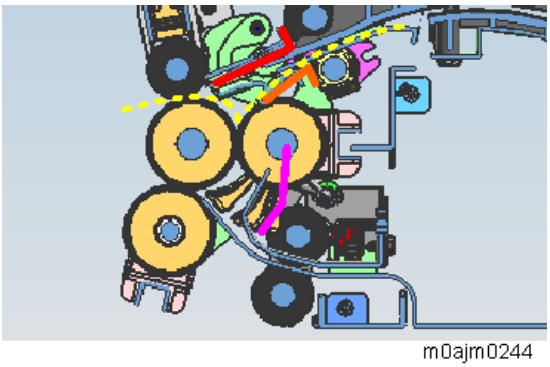
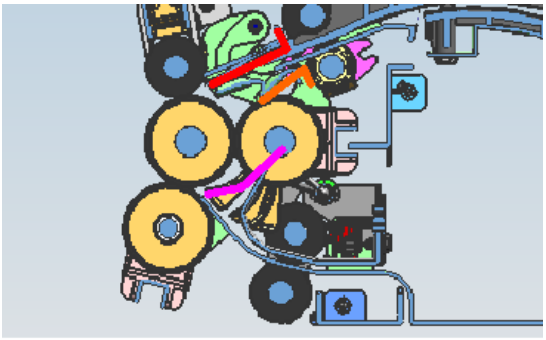
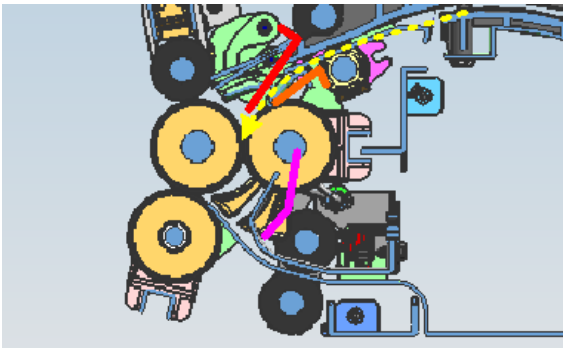
The JG crease motor [A] rotates clockwise/counterclockwise to operate the junction gate / crease roller.



Junction Gate

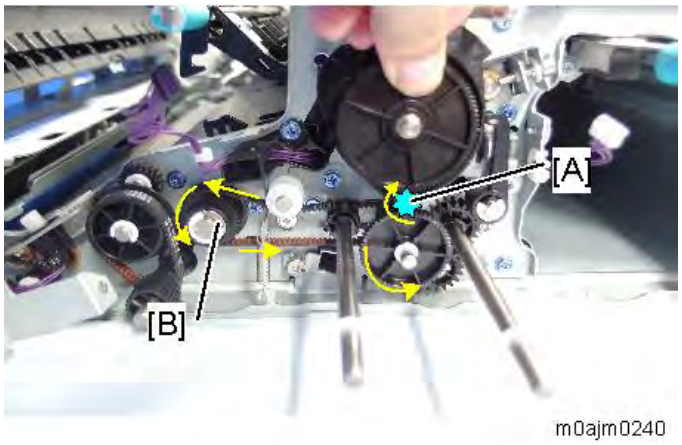
- When the JG crease motor [A] rotates clockwise, the junction gates 1, 2, and 3 operate.
- The cam moves the levers 1, 2, and 3 to switch the corresponding junction gates on and off.



Paper feeding	Junction Gate Status
When feeding paper without folding	 m0ajm0243 [1]: Junction Gate 1 [2]: Junction Gate 2 [3]: Junction Gate 3
When entering Folding Roller 1	 m0ajm0244
When adjusting the letter fold position	 m0ajm0245
When performing half fold	 m0ajm0246

Crease

- When the JG crease motor [A] rotates counterclockwise, the crease motor [B] operates.



Number of Fold Operations

You can change the strength of the fold by changing the number of times that the crease roller mechanism presses the paper to make the fold. To do this, use SP6-315-001.

SP No.	Name	[Min to Max/Init./Step]
6-315-001	Set Number of Creasing	[0 to 4 / 1 / times] 0: -1 1: 0 2: 1 3: 2 4: 3

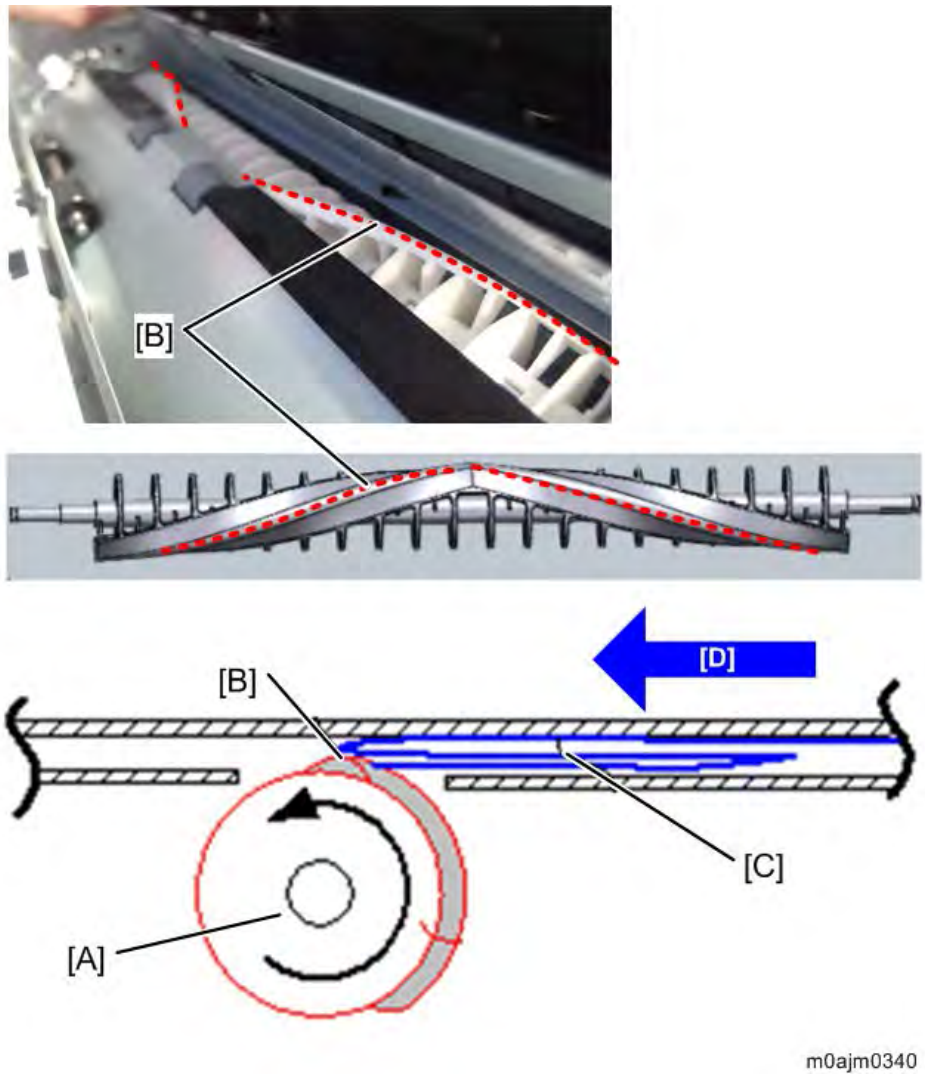
For each fold, you can specify the number of times that the mechanism presses the paper from 0 to 4.

As the default, the number of times is set to 1. You can change the number with this SP setting.

Note: If you set the SP value to 0 (-1), the number of times is set to 0.

If the number of times increases, the throughput decreases.

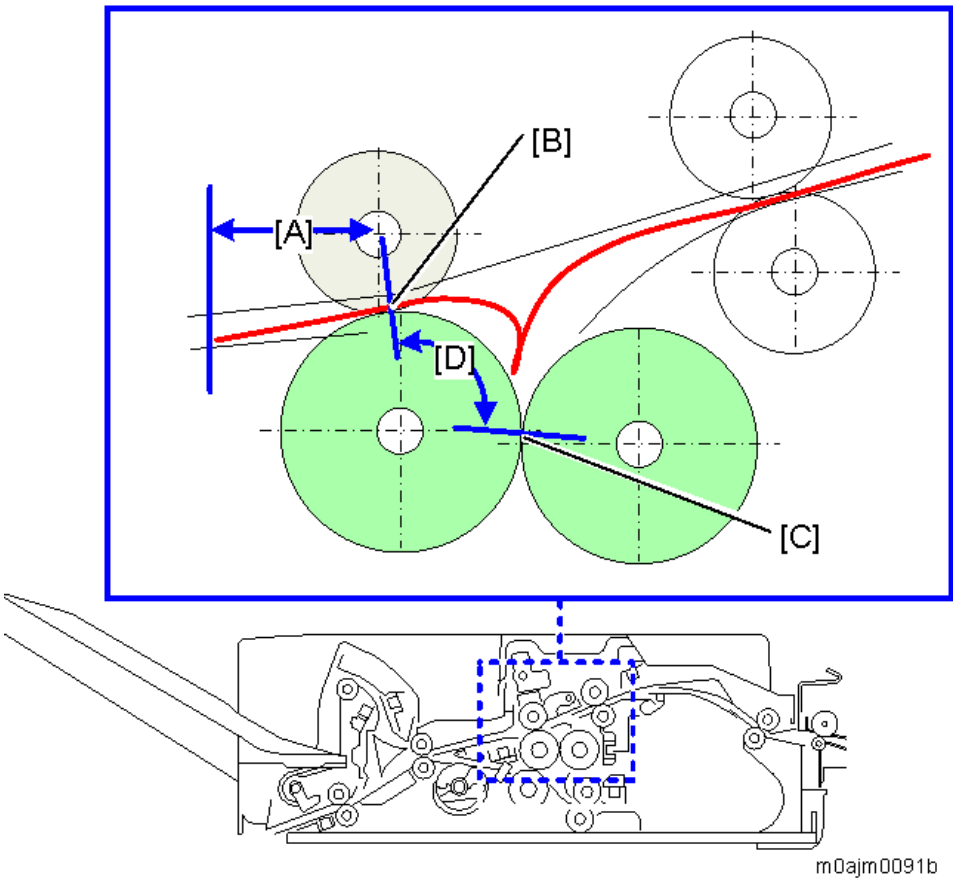
The internal multi-fold unit makes a crease fold by rotating the crease roller [A], which has a protrusion [B] as shown below, along the fold of the paper [C]. (Paper feed direction [D])



Folding Mechanism

By the bidirectional movement of the roller, the paper is fed to the fold position, and the paper stays in close contact with the roller when folding. This enables precise folding regardless of the characteristics of the paper. After feeding the paper to the 1st fold roller (F/R), the machine can control precisely where to stop the paper [A] by using a proportional-integral-differential (PID) controller.

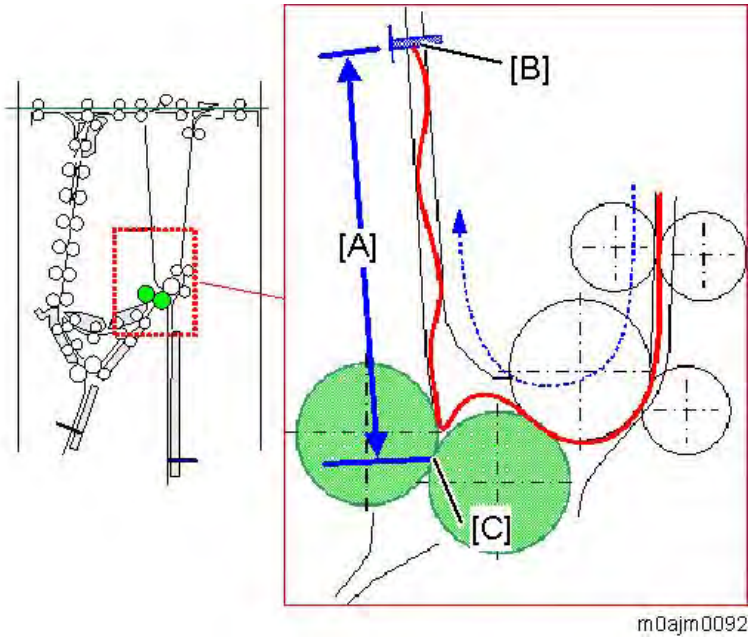
The distance [D] between the folding position [C] and the fold-assessment position [B] is short (about 30 mm regardless of the fold type or paper size). Furthermore, folding is performed with the paper in contact with the folding roller, preventing arching regardless of the paper curl, thickness, grain, and stiffness.



Note:

In the previous multi-fold unit, the folding position was determined by the stopper [B]. The distance [A] from the folding position [C] to the stopper is long (about 100 to 240 mm, depending on the fold type and paper size). Furthermore, the arch of the paper in the space to the stopper was influenced by the paper curl, thickness, grain, and stiffness.

Even if the stop position was accurate, the arch of the paper influenced the fold length.



Letter Fold-in / Letter Fold-out / Z-fold

[1] The leading edge of the paper passes the registration roller.

[2] The leading edge of the paper passes the 1st fold roller (F/R).

[3] When the paper is fed to the fold-assessment position, the 1st fold roller (F/R) reverses, forming an arch in the paper.

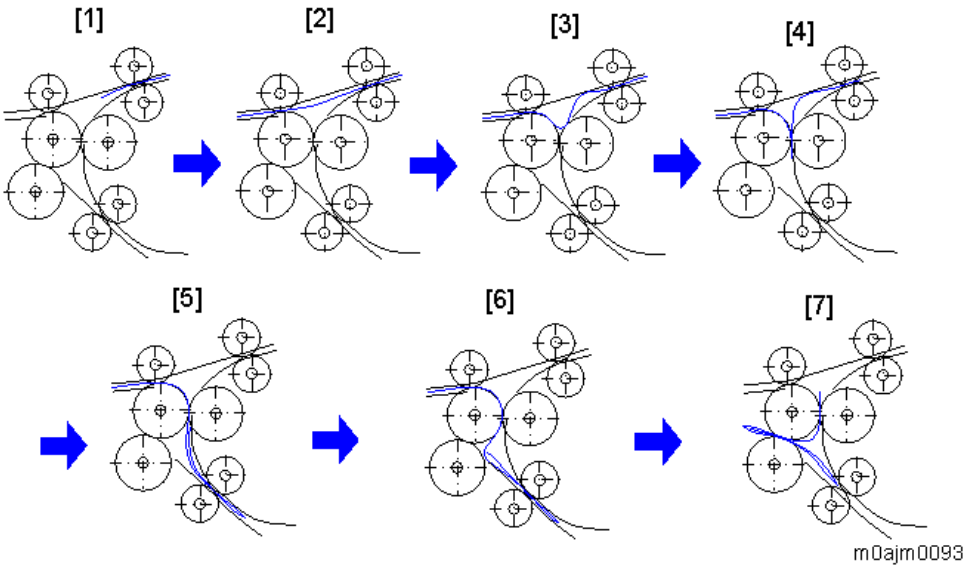
[4] When this arched part passes through the nips of the folding rollers 1 and 2, the first fold is performed.

[5] After the paper passes the folding roller, the 2nd fold roller pulls in the paper and feeds it to the 2nd fold position.

[6] At the fold position, the 2nd fold roller (F/R) rotates in reverse to form an arch in the paper.

[7] The 2nd fold is formed when this arched part is fed through the nips of the folding rollers 2 and 3. Depending on the difference in the fold positions, Letter Fold-In, Letter Fold-Out, or Z-Fold is performed.

The following diagrams show a Letter Fold-In example.



Half Fold

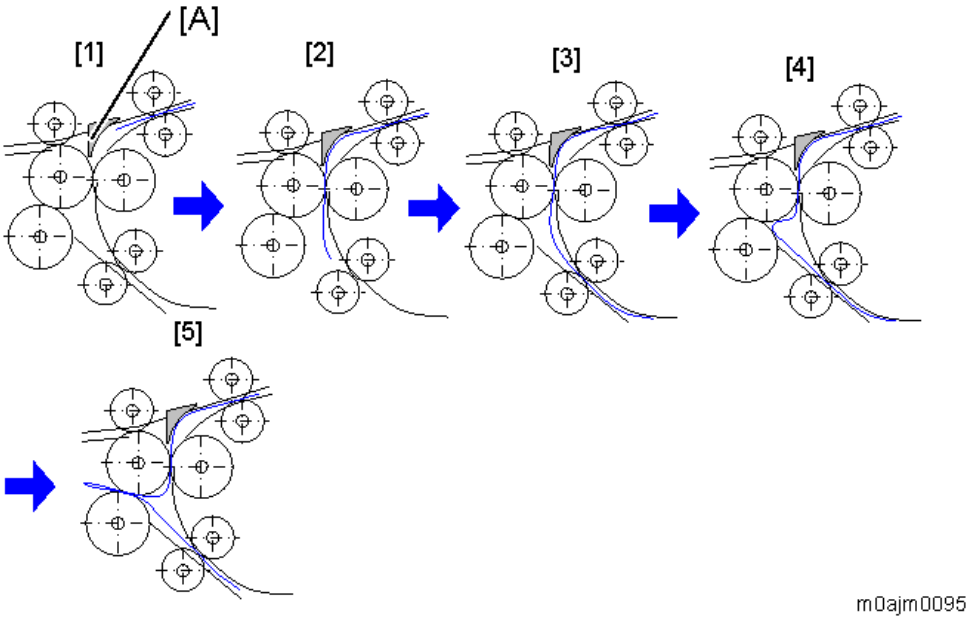
[1] The leading edge of the paper passes the registration roller.

[2] The paper is fed to the folding rollers 1 and 2 by the junction gate [A].

[3] The leading edge of the paper passes the 2nd fold roller (F/R) and is fed to the fold position.

[4] At the fold position, the 2nd fold roller (F/R) rotates in reverse to form an arch in the paper.

[5] The 2nd fold is formed when this arched part is fed through the nips of the folding rollers 2 and 3.


[A]
[1]
[2]
[3]
[4]
[5]
m0ajm0095

Paper Feed Unit PB3250
Machine Code: M495
Field Service Manual
Ver 1.0

Latest Release: Sep, 2016
Initial Release: Sep, 2016
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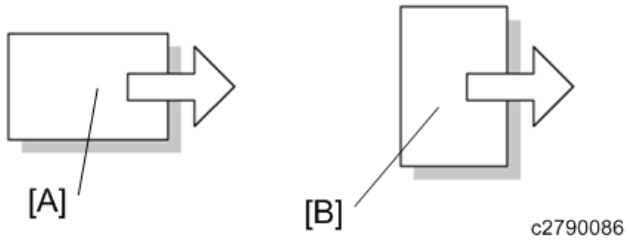
Symbols, Abbreviations and Trademarks

Symbols, Abbreviations

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

Symbol	What it means
	Clip ring
	Screw
	Connector
	Clamp
	E-ring
	Flat Flexible Cable
	Timing Belt
SEF	Short Edge Feed
LEF	Long Edge Feed
K	Black
C	Cyan
M	Magenta
Y	Yellow
B/W, BW	Black and White
FC	Full color



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

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- Windows® Internet Explorer® 7
- Windows® Internet Explorer® 8

The proper names of the Windows operating systems are as follows:

- The product names of Windows Vista are as follows:

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Microsoft® Windows Vista® Business

Microsoft® Windows Vista® Home Premium

Microsoft® Windows Vista® Home Basic

Microsoft® Windows Vista® Enterprise

- The product names of Windows 7 are as follows:

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Microsoft® Windows® 7 Professional

Microsoft® Windows® 7 Ultimate

Microsoft® Windows® 7 Enterprise

- The product names of Windows 8 are as follows:

Microsoft® Windows® 8

Microsoft® Windows® 8 Pro

Microsoft® Windows® 8 Enterprise

- The product names of Windows 8.1 are as follows:

Microsoft® Windows® 8.1

Microsoft® Windows® 8.1 Pro

Microsoft® Windows® 8.1 Enterprise

- The product names of Windows 10 are as follows:

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Microsoft® Windows® 10 Pro

Microsoft® Windows® 10 Enterprise

Microsoft® Windows® 10 Education

- The product names of Windows Server 2003 are as follows:

Microsoft® Windows Server® 2003 Standard Edition

Microsoft® Windows Server® 2003 Enterprise Edition

- The product names of Windows Server 2003 R2 are as follows:

Microsoft® Windows Server® 2003 R2 Standard Edition

Microsoft® Windows Server® 2003 R2 Enterprise Edition

- The product names of Windows Server 2008 are as follows:

Microsoft® Windows Server® 2008 Standard

Microsoft® Windows Server® 2008 Enterprise

- The product names of Windows Server 2008 R2 are as follows:

Microsoft® Windows Server® 2008 R2 Standard

Microsoft® Windows Server® 2008 R2 Enterprise

- The product names of Windows Server 2012 are as follows:

Microsoft® Windows Server® 2012 Foundation

Microsoft® Windows Server® 2012 Essentials

Microsoft® Windows Server® 2012 Standard

- The product names of Windows Server 2012 R2 are as follows:

Microsoft® Windows Server® 2012 R2 Foundation

Microsoft® Windows Server® 2012 R2 Essentials

Microsoft® Windows Server® 2012 R2 Standard

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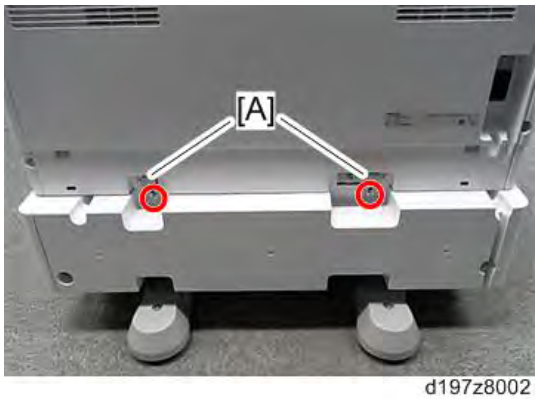
1. Replacement and Adjustment

Precautions Concerning Stabilizers

Stabilizers are necessary for meeting the requirements of IEC60950-1, the international standard for safety.
The aim of these components is to prevent the products, which are heavy, from toppling as a result of people running into or leaning on them, which can lead to serious accidents such as persons becoming trapped under the product. (U.S.: UL60950-1, Europe: EN60950-1)
Therefore, removal of such components must always be with the consent of the customer.
Do not remove them under your own judgment.

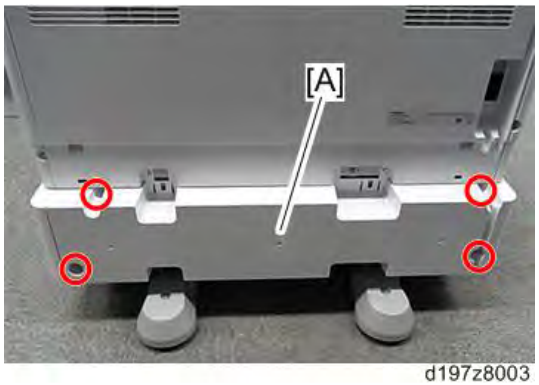
Rear Cover

1. Remove the securing brackets [A] (×1 each).



d197z8002

2. Remove the rear cover [A] (×4).



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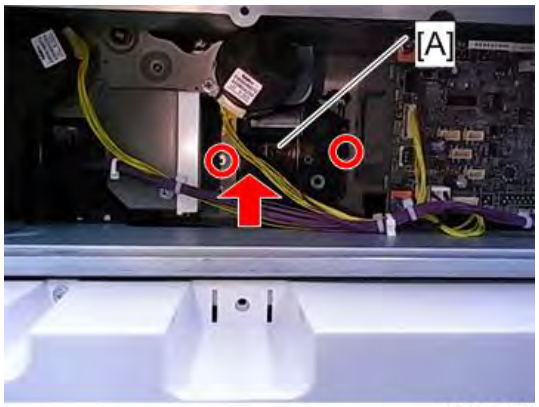
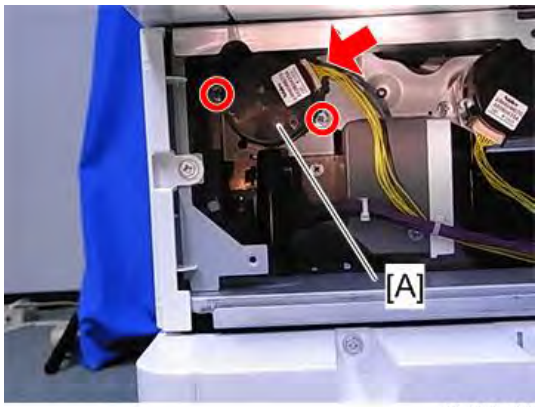
Tray Lift Motor

1. Remove the rear cover. (Rear Cover)
2. Remove the tray lift motor [A] (×2, ×1).



Transport Motor

1. Remove the rear cover. (Rear Cover)
2. Remove the transport motor [A] (×2, ×1).



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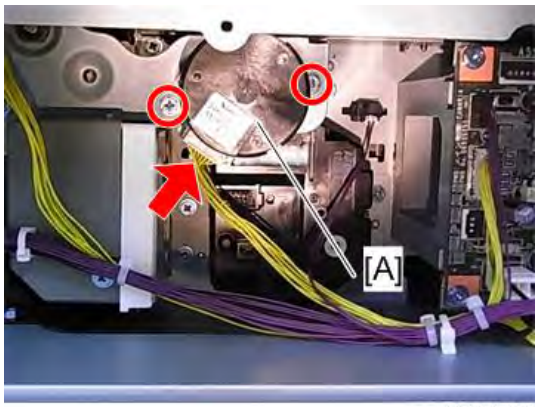
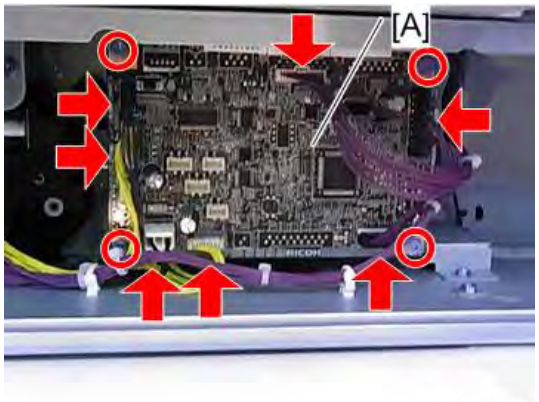
Paper Feed Motor

1. Remove the rear cover. (Rear Cover)
2. Remove the paper feed motor [A] (×2, ×1).



Controller Board

1. Remove the rear cover. (Rear Cover)
2. Remove the controller board [A] (×4, ×7).



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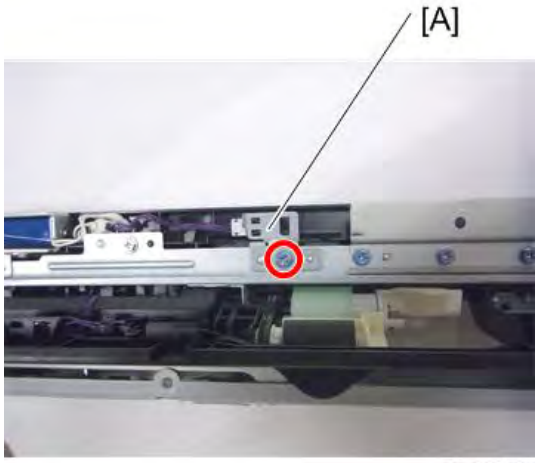
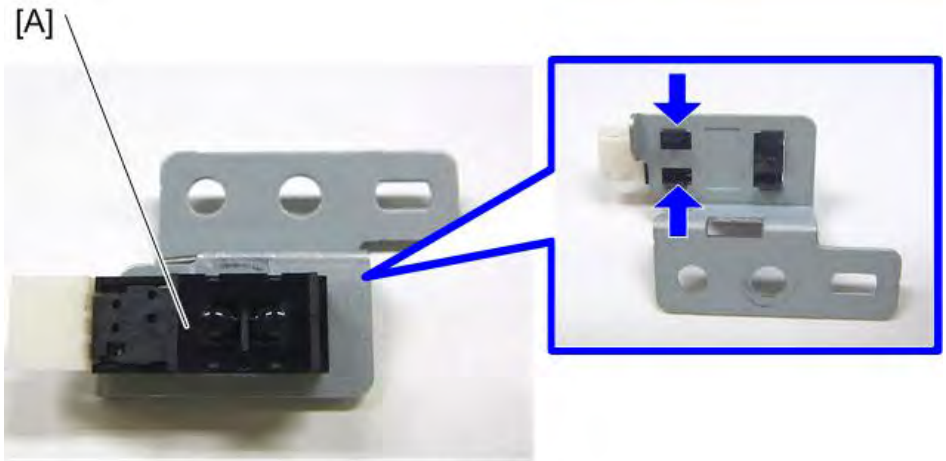
Transport Sensor, Upper Limit Sensor, Paper End Sensor, Paper Feed Sensor

1. Remove the paper feed unit. (Paper Feed Unit)
2. Remove the transport sensor bracket [A] (×1, ×1).



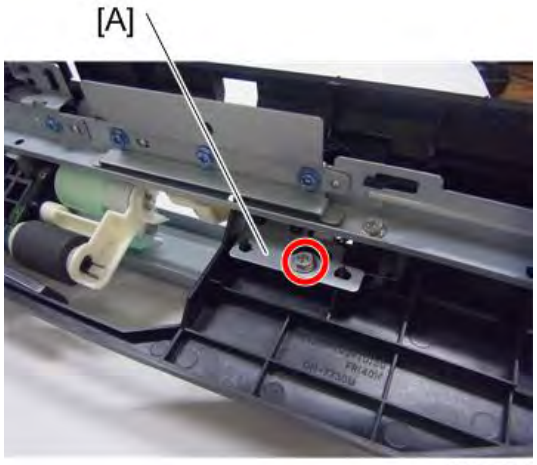
d1462196

3. Remove the transport sensor [A].



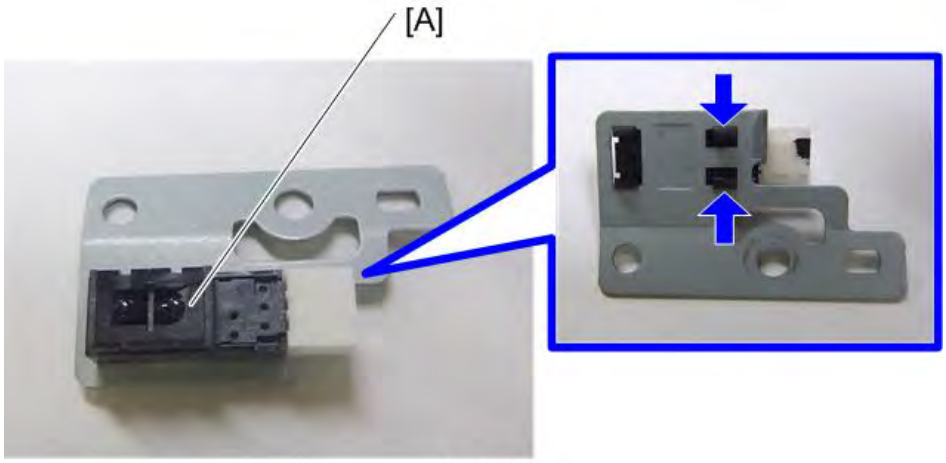
d1462197

4. Remove the paper feed sensor bracket [A] (×1, ×1).



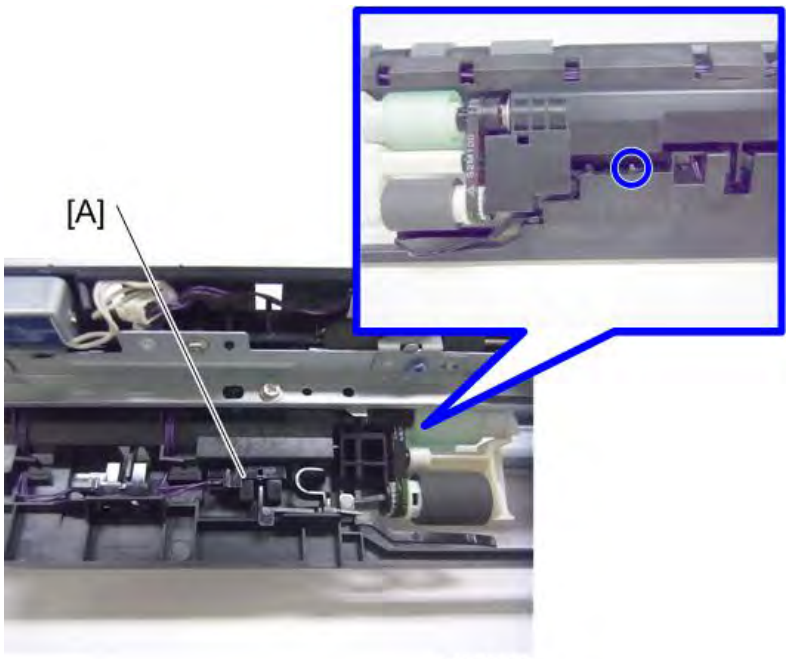
d1462194

5. Remove the paper feed sensor [A].



d1462195

6. Remove the paper end sensor [A] (×1).



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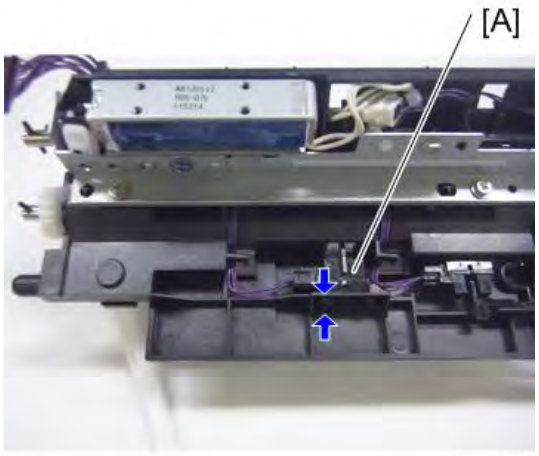
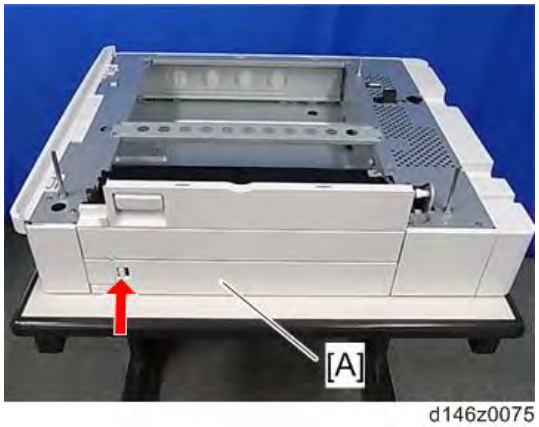
7. Remove the upper limit sensor [A] (×1).



d1462198

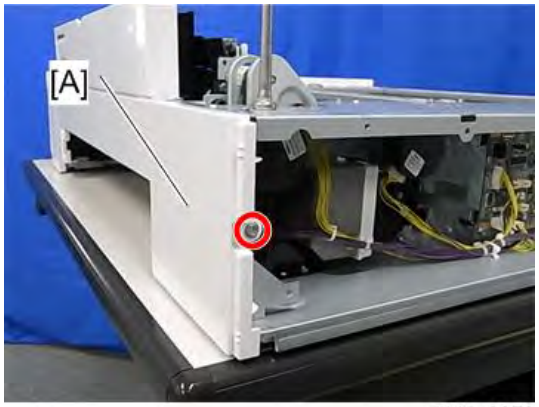
Paper Feed Unit

1. Pull out the paper tray.
2. Remove the rear cover. (Rear Cover)
3. Remove the right lower cover [A] (hook ×1).



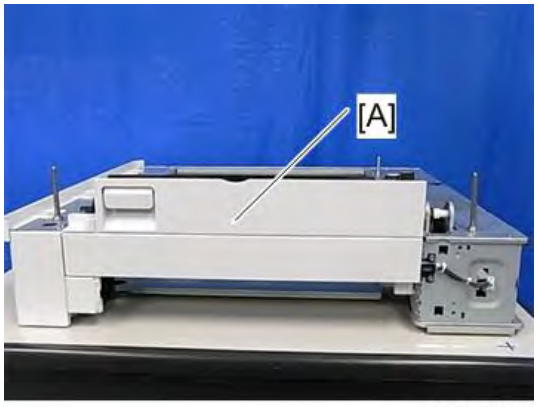
d146z0075

4. Remove the right rear cover [A] (×1).



d146z0076

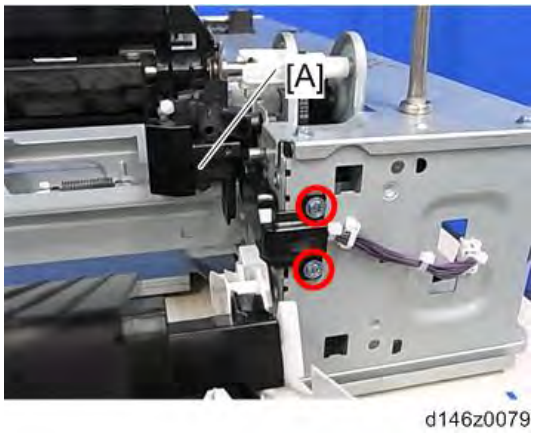
5. Open the transport cover [A].



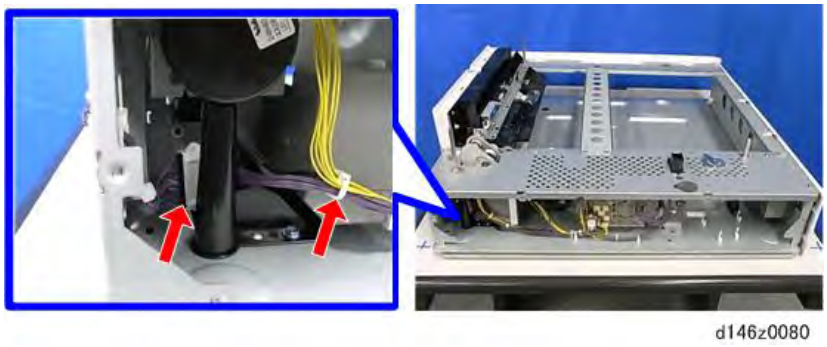
d146z0077

6. Remove the transport guide [A] (tab ×1).

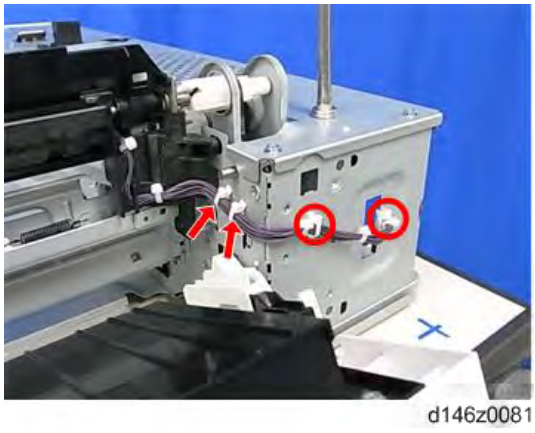
7. Remove the harness guide [A] (×2).



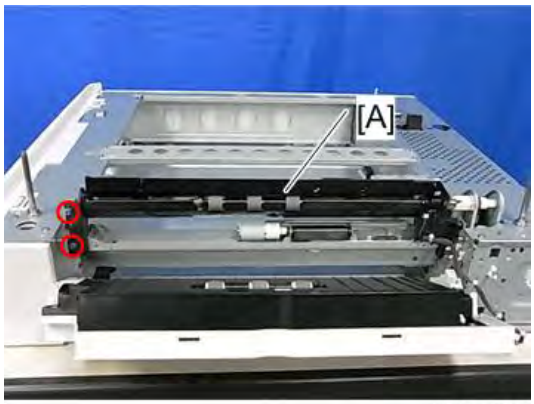
8. Release the clamp, and then disconnect the harness at the right rear of the unit (×1, ×1).



9. Release the four clamps (×4).



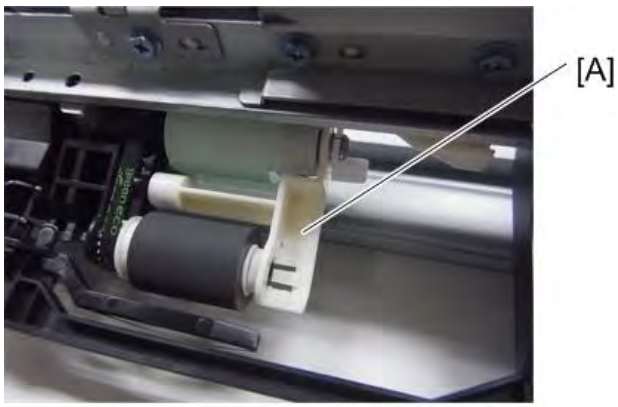
10. Remove the paper feed unit [A] (×2).



d146z0082

Pick-up Roller, Feed Roller, Friction Roller

1. Remove the paper feed unit. (Paper Feed Unit)
2. Remove the holder [A] (×1).



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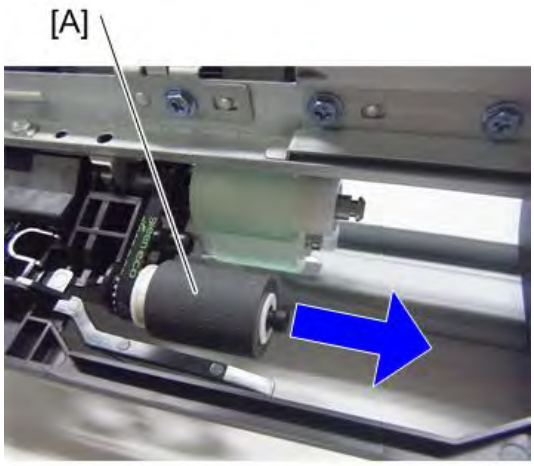
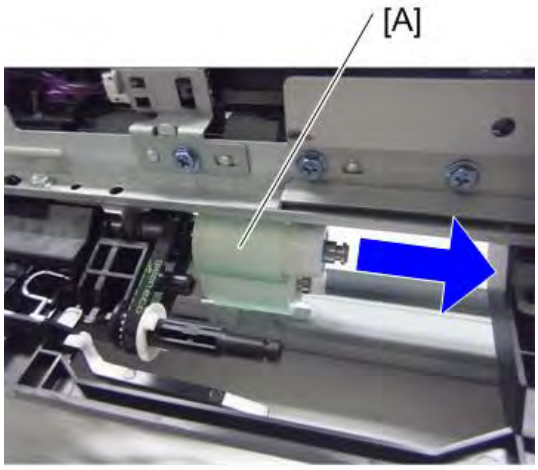
3. Remove the pick-up roller [A].



d1462189

4. Remove the feed roller [A].



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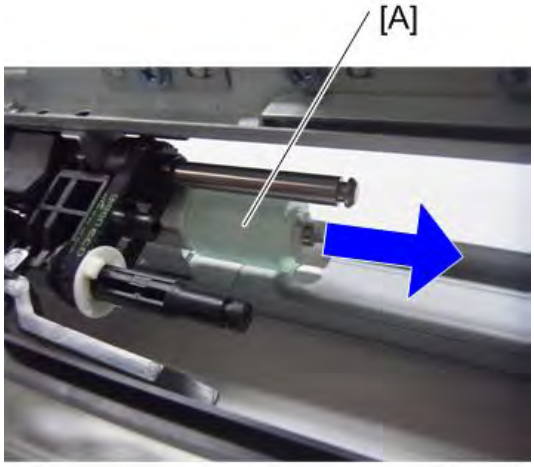
5. Remove the friction roller [A] (×1).



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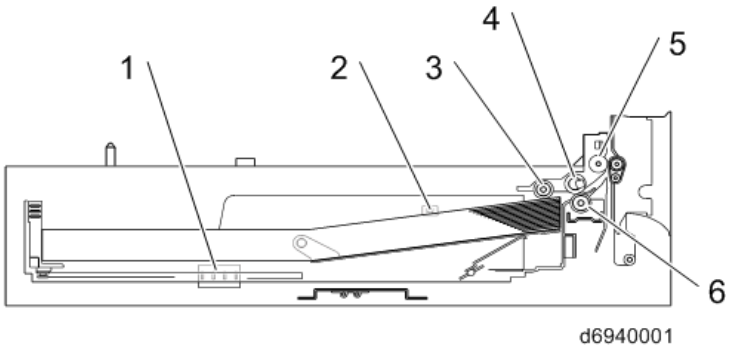
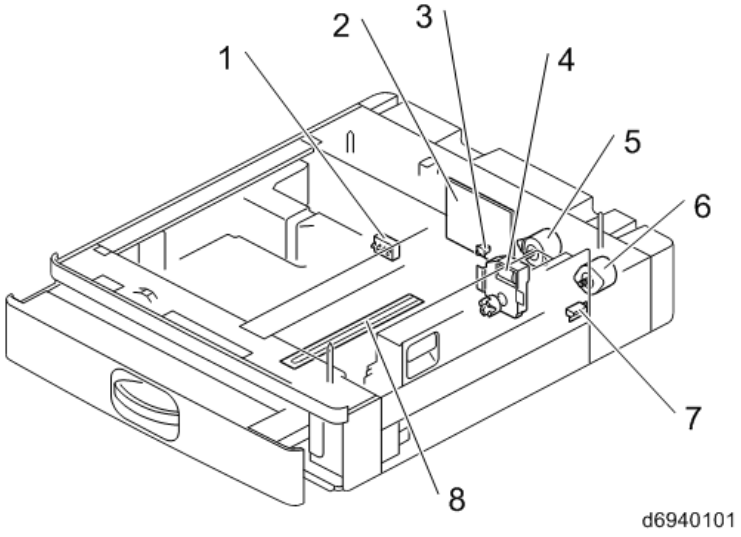
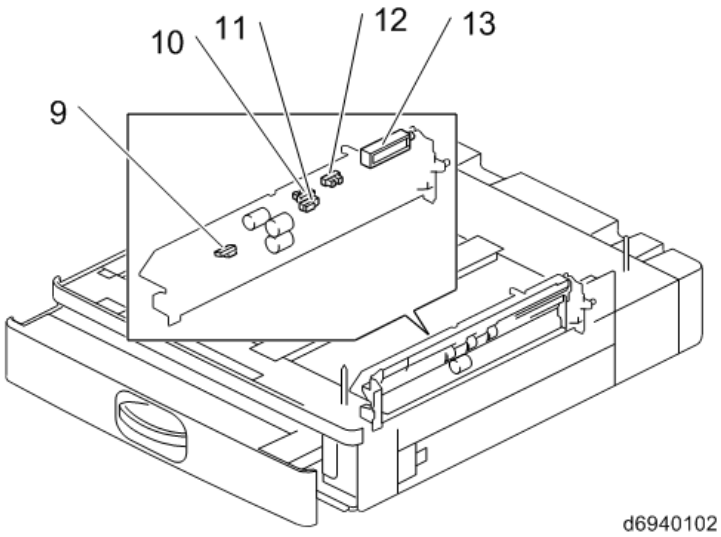
2. Detailed Descriptions

Parts Layout



No.	Description	No.	Description
1	Paper size switch	4	Feed roller
2	Tray set switch	5	Transport roller
3	Pick-up roller	6	Friction roller





No.	Description	No.	Description
1	Paper size switch	8	Anti-condensation heater
2	Controller board	9	Paper feed sensor
3	Tray set switch	10	Paper end sensor
4	Tray lift motor	11	Vertical transport sensor
5	Paper feed motor	12	Upper limit sensor
6	Transport motor	13	Pick-up solenoid
7	Vertical transport cover open/closed switch		

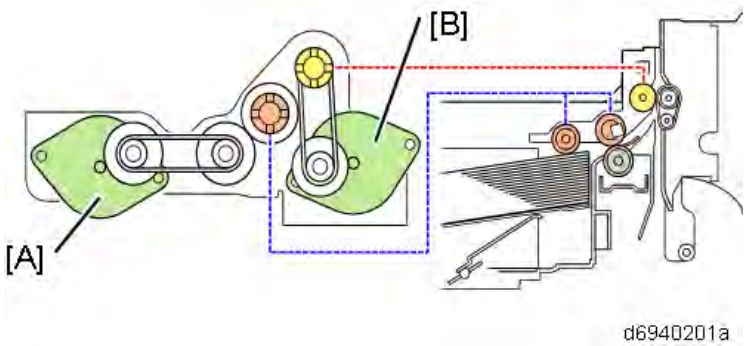
Mechanism

Paper Feed Separation Mechanism

The feed system is a RF paper feed system. The paper feed unit has a pick-up roller, feed roller, and friction roller. The feed roller and friction roller are high durability rollers.

Drive Mechanism

The pick-up roller and feed roller are driven by the paper feed motor [A]. The transport roller is driven by the transport motor [B]. The friction roller is not driven.



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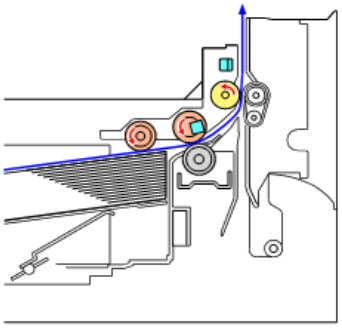
Friction Roller/Pick-Up Roller Release Mechanism

When the tray is set, the friction roller comes in contact with the feed roller. The pick-up roller touches the top sheet of paper.

When the tray is opened, contact between the feed roller and friction roller, and contact between the pick-up roller and paper are released.

Paper Feed Transport Mechanism

In order to feed the paper at regular intervals, there is a paper feed sensor near the pick-up roller, and this sensor is used to adjust the paper feed timing.



d6940202

1. The paper feed motor turns ON, and feeds the first sheet of paper.
2. To prevent the next sheet from being fed, the pick-up solenoid turns ON just before the trailing edge of the first sheet passes through the pick-up roller, and the pick-up roller leaves the paper surface.

3. Slightly before the trailing edge of the first sheet leaves the paper feed roller, the paper feed motor turns OFF. However, at this time, if the paper feed sensor does not detect paper (the second sheet is not fed to the paper feed sensor position), the paper feed motor does not turn OFF. Pre-feed is performed as follows:

1. The pick-up solenoid turns OFF, and the second sheet of paper is fed to the paper feed sensor position.
2. When the trailing edge of the second sheet passes the feed roller, the paper feed motor is turned OFF. The pick-up solenoid remains OFF.

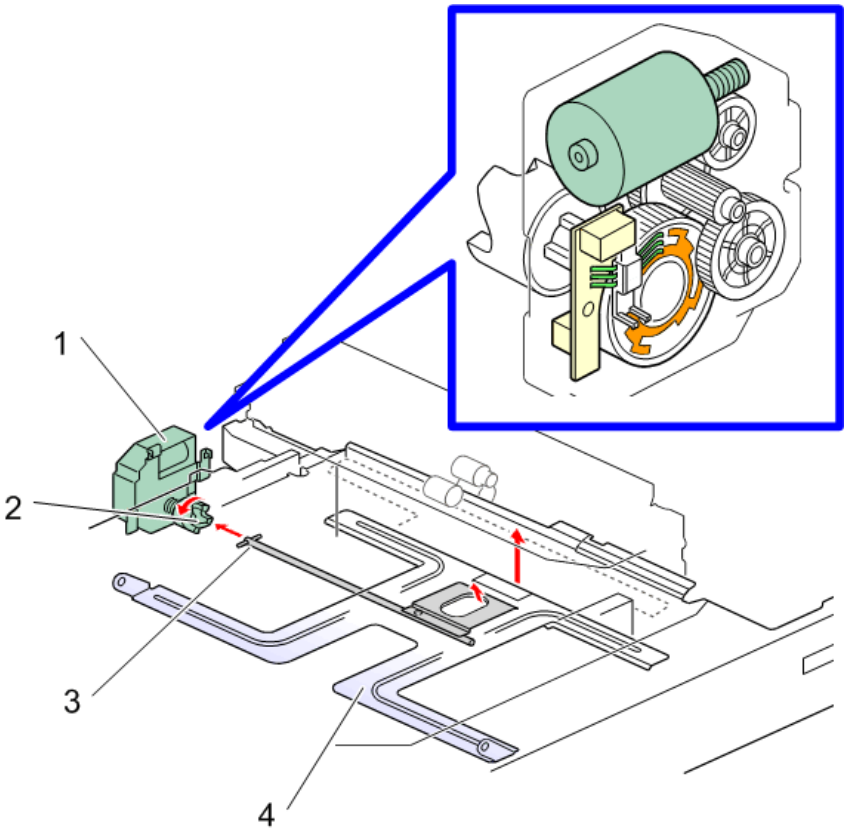
4. Just when the trailing edge of the first sheet passes the feed roller, the pick-up solenoid turns OFF. The pick-up roller is brought into contact with the paper surface.

5. When the first sheet has been fed a specified distance by the downstream transport roller, the paper feed motor turns ON to feed the second sheet.

Tray Bottom Plate Lift

When the paper feed tray is set in the main frame, the tray set sensor switch turns ON. The coupling of the lift motor connects with the shaft at the rear of the tray, and the motor rotates to lift the tray bottom plate. The tray bottom plate rises until the paper surface lifts up the pick-up roller and the upper limit sensor turns OFF (the sensor is blocked). The tray is now ready to feed.

When the paper feed tray is removed, the coupling is disengaged, and the bottom plate descends. At this time, the lift motor rotates until the coupling returns to the home position.



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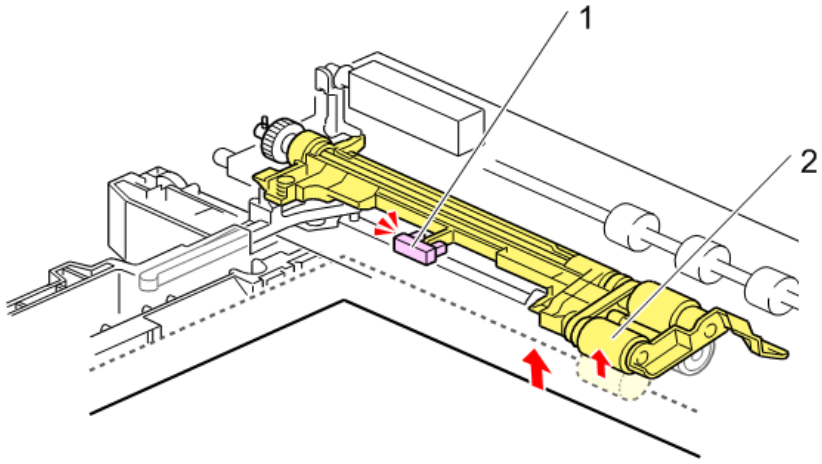
No.	Description	No.	Description
1	Lift motor	3	Tray shaft (rear)

No.	Description	No.	Description
2	Coupling	4	Tray bottom plate



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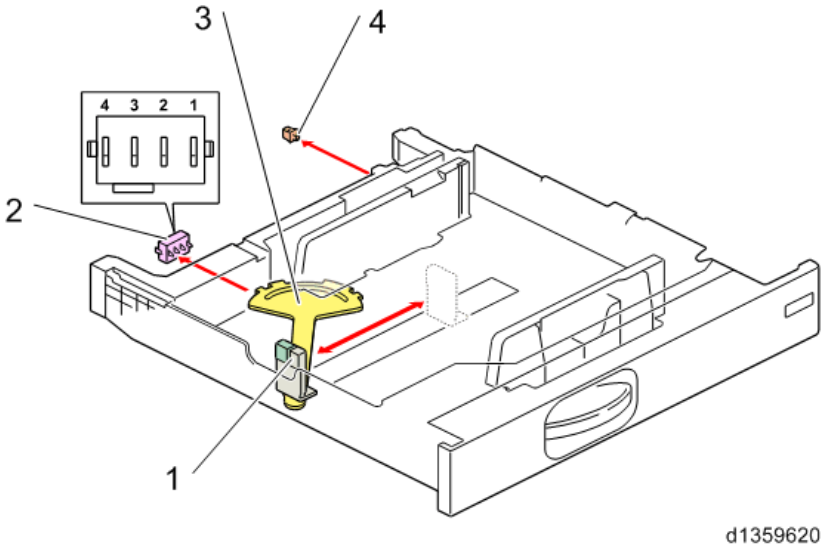
No.	Description	No.	Description
1	Upper limit sensor	2	Pick-up roller

Paper Size Detection

The end fence is linked mechanically with the size detection actuator. When the end fence is moved, the size detection actuator also moves.

When the paper feed tray is set, 4 paper size switches turn ON/OFF depending on the position of the size detection actuator. Paper size is detected by the detected combination of these switches.



d1359620

No.	Description	No.	Description
1	End fence	3	Size detection actuator
2	Paper size switch	4	Tray set switch

Paper size switch operation

Paper size	Paper size switch			
	SW4	SW3	SW2	SW1
SRA3 (12”×18”)	1	0	1	0
A3 (DLT)	0	1	0	0
B4 (LG)	0	0	1	1
	0	1	1	1
A4_SEF	1	1	1	0
LT_SEF	1	1	0	0
B5_SEF	1	0	0	0
A4_LEF (LT_LEF)	0	0	0	1
B5_LEF (Exe_LEF)	0	0	1	0
A5_LEF	0	1	0	1

Remaining Paper/Paper End Detection

Remaining paper detection

Remaining paper in the paper feed tray is detected by a combination of ON/OFF status (contact/non-contact) of contact-type remaining paper sensors (boards) CN-3 and CN-5.

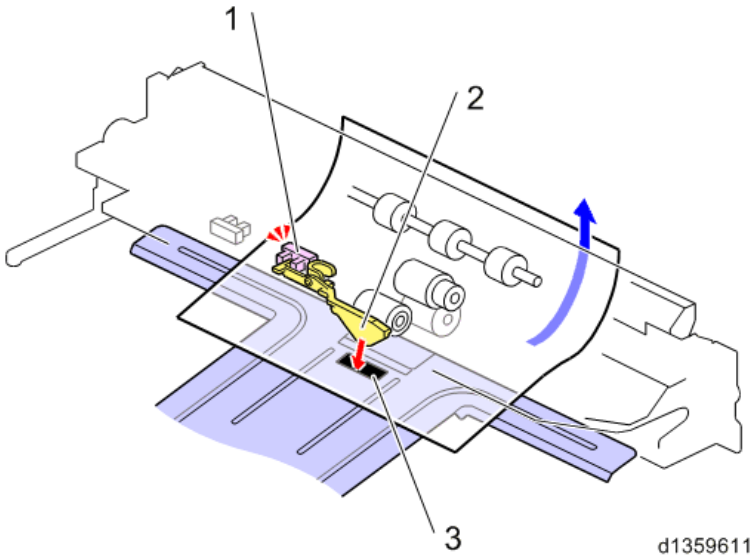
When the amount of remaining paper decreases, and the lift motor rotates, the remaining paper sensors CN-3 and CN-5 in the motor are turned ON/OFF.

The following 4 levels of remaining paper can be detected.

Remaining paper	100%	70%	30%	10%
CN-3	OFF	ON	ON	OFF
CN-5	OFF	OFF	ON	ON
Control panel display	4 bars	3 bars	2 bars	1 bar

Paper end detection

When there is no more paper in the paper feed tray, the paper end feeler turns ON the paper end sensor (the sensor is unblocked).



No.	Description	No.	Description
1	Paper end sensor	3	Slot in the tray base plate
2	End feeler		

LCIT PB3260
Machine Code: M496
Field Service Manual
Ver 1.0

Latest Release: Sep, 2016
Initial Release: Sep, 2016
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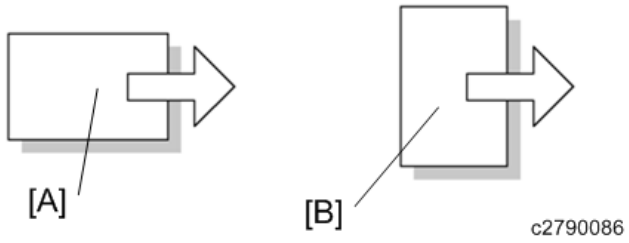
Symbols, Abbreviations and Trademarks

Symbols, Abbreviations

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

Symbol	What it means
	Clip ring
	Screw
	Connector
	Clamp
	E-ring
	Flat Flexible Cable
	Timing Belt
SEF	Short Edge Feed
LEF	Long Edge Feed
K	Black
C	Cyan
M	Magenta
Y	Yellow
B/W, BW	Black and White
FC	Full color



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

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- Windows® Internet Explorer® 8

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Microsoft® Windows Vista® Business

Microsoft® Windows Vista® Home Premium

Microsoft® Windows Vista® Home Basic

Microsoft® Windows Vista® Enterprise

- The product names of Windows 7 are as follows:

Microsoft® Windows® 7 Home Premium

Microsoft® Windows® 7 Professional

Microsoft® Windows® 7 Ultimate

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- The product names of Windows 8 are as follows:

Microsoft® Windows® 8

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- The product names of Windows Server 2012 are as follows:

Microsoft® Windows Server® 2012 Foundation

Microsoft® Windows Server® 2012 Essentials

Microsoft® Windows Server® 2012 Standard

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Microsoft® Windows Server® 2012 R2 Foundation

Microsoft® Windows Server® 2012 R2 Essentials

Microsoft® Windows Server® 2012 R2 Standard

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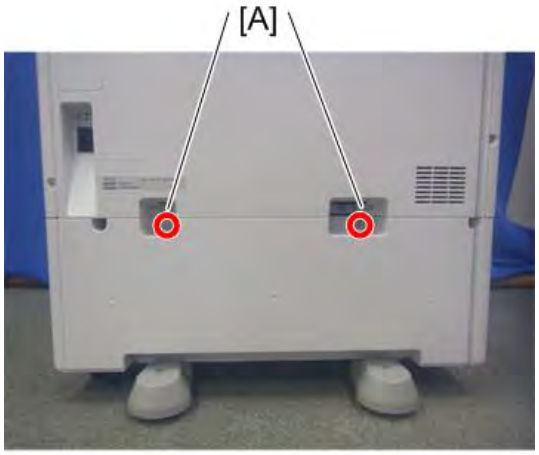
1. Replacement and Adjustment

Precautions Concerning Stabilizers

Stabilizers are necessary for meeting the requirements of IEC60950-1, the international standard for safety.
The aim of these components is to prevent the products, which are heavy, from toppling as a result of people running into or leaning onto them, which can lead to serious accidents such as persons becoming trapped under the product. (U.S.: UL60950-1, Europe: EN60950-1)
Therefore, removal of such components must always be with the consent of the customer.
Do not remove them under your own judgment.

Rear Cover

1. Remove the connecting brackets [A] (2 brackets, ×2).



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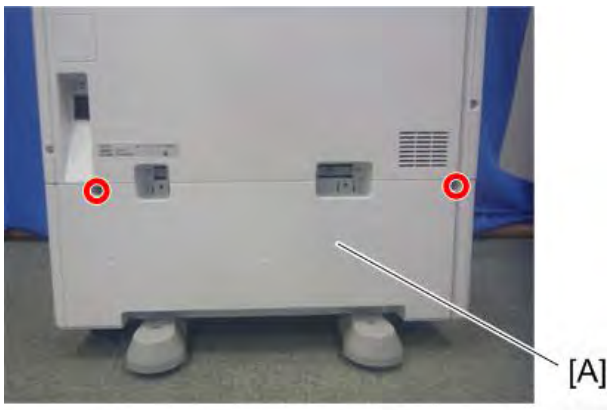
2. Remove the rear cover [A] (×2).



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Left and Right Trays

1. Open the paper tray [A].

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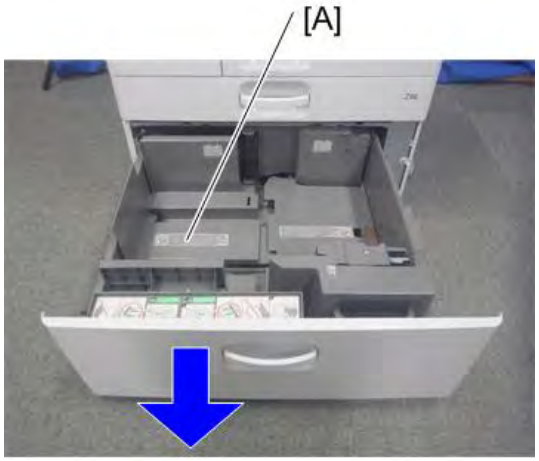
2. Remove the left tray [A].



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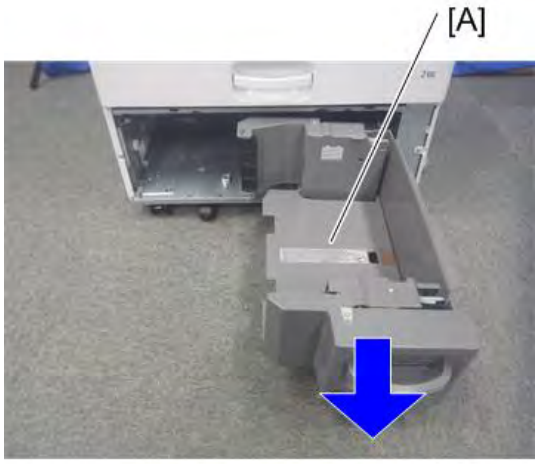
3. Remove the right tray [A].



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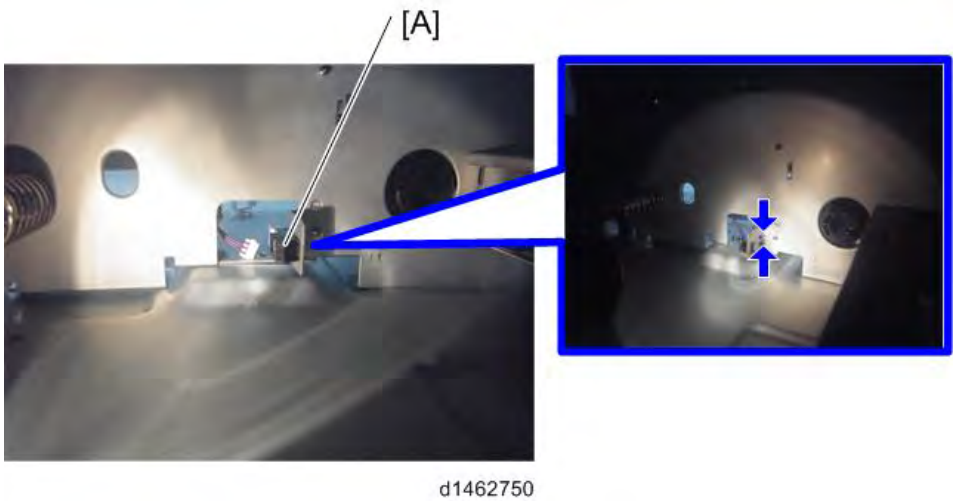
Left Tray Paper Sensor

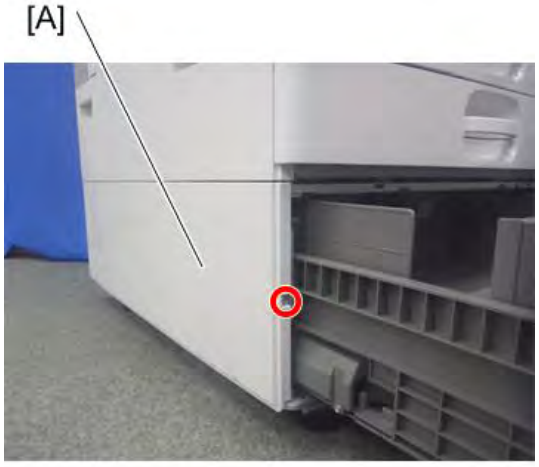
1. Remove the left tray. (Left and Right Trays)
2. Remove the rear cover. (Rear Cover)
3. Remove the left tray paper sensor [A] (×1).



d1462750

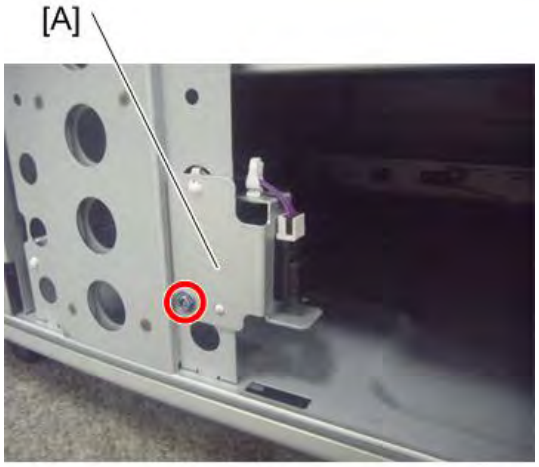
Paper Transfer Home Position Sensor

1. Open the paper tray.
2. Remove the left cover [A] (×1).



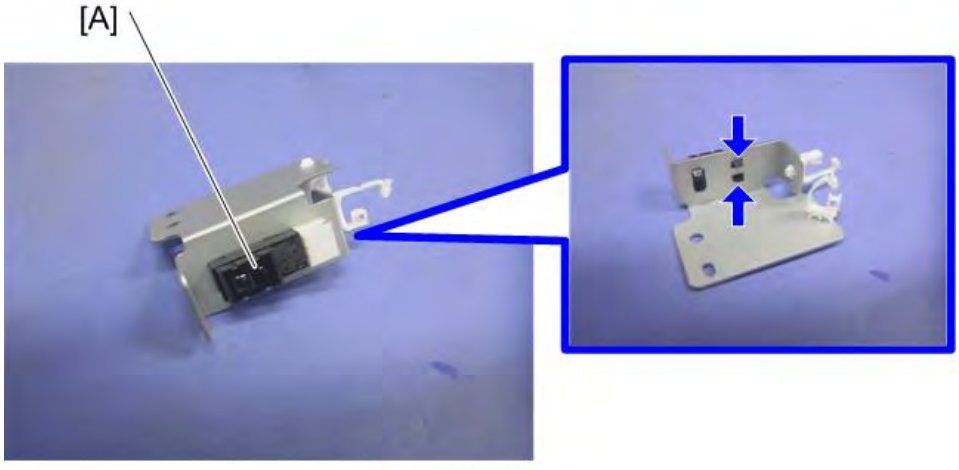
d1462751

3. Remove the paper transfer home position sensor unit [A] (×1, ×1, ×2).



d1462752

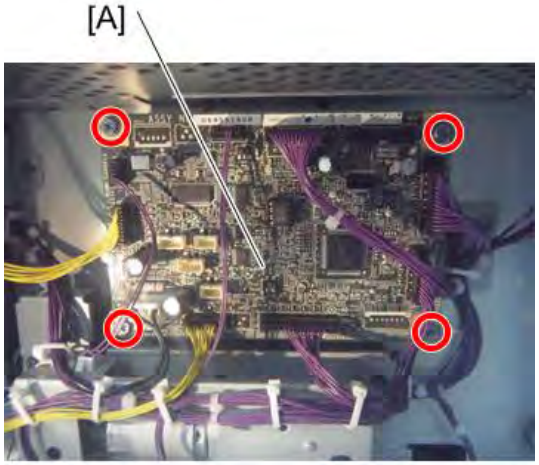
4. Remove the paper transfer home position sensor [A].



d1462753

Controller Board

1. Remove the rear cover. (Rear Cover)
2. Remove the controller board [A] (×4, ×9).



d1462754

Paper Feed Unit

1. Open the paper tray.
2. Open the paper transport cover [A].

d1462767

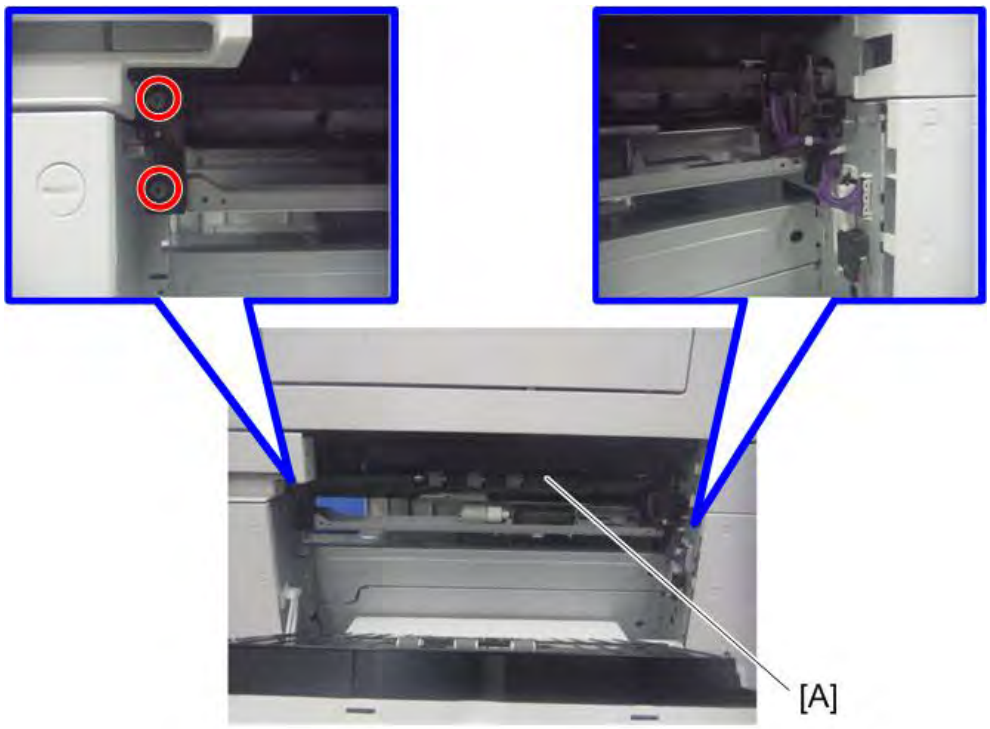
3. Remove the interlock switch cover [A] (×1).

d1462768

4. Remove the paper feed guide plate [A].

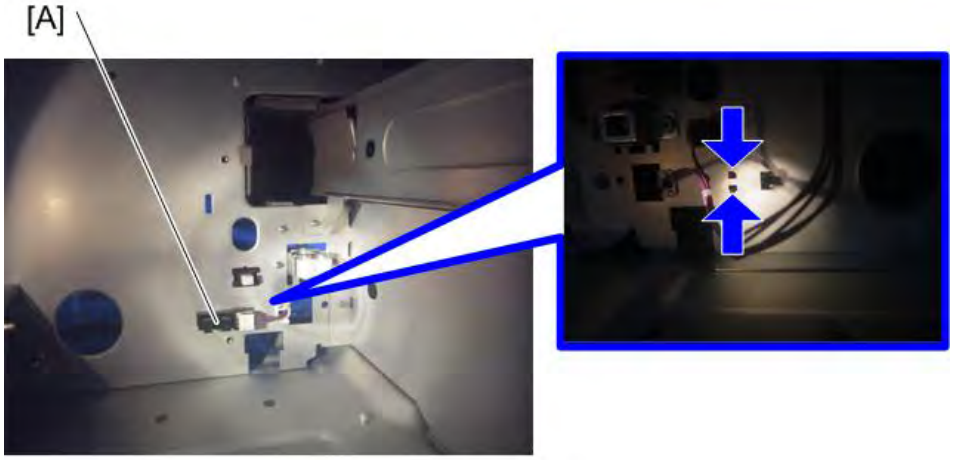
d1462769

5. Remove the paper feed unit [A] (×2, ×1, ×1).



Lower Limit Sensor

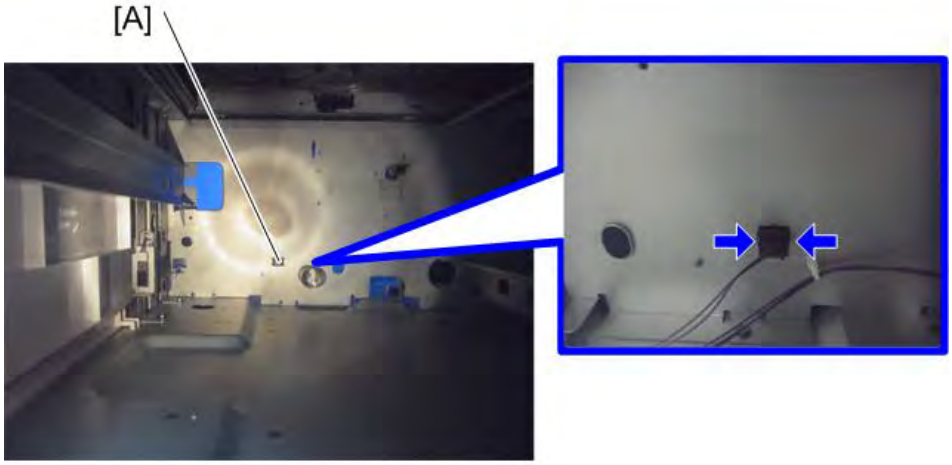
1. Remove the right tray. (Left and Right Trays)
2. Remove the rear cover. (Rear Cover)
3. Remove the tray lift/paper transfer unit. (Tray Lift/Paper Transfer Unit)
4. Remove the lower limit sensor [A] (×1).



d1462762

Left Tray Set Sensor Switch

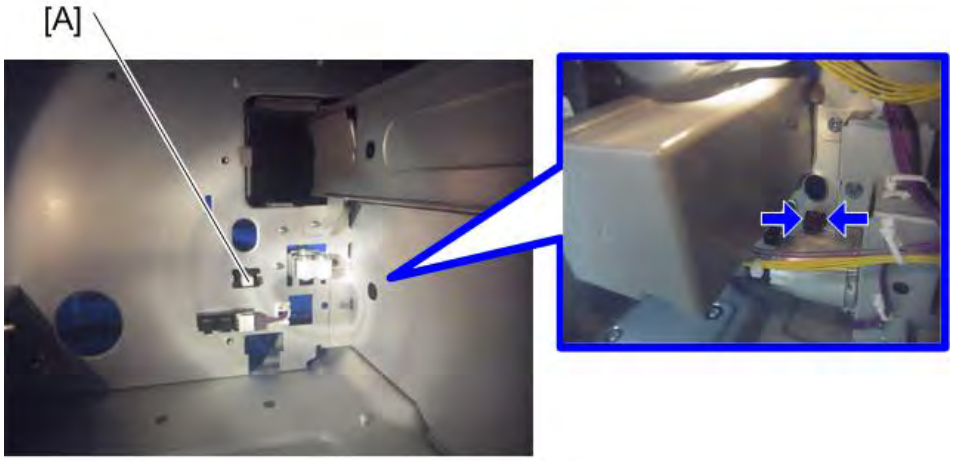
1. Remove the left tray. (Left and Right Trays)
2. Remove the rear cover. (Rear Cover)
3. Remove the left tray set sensor switch [A] (×1).



d1462763

Right Tray Set Sensor Switch

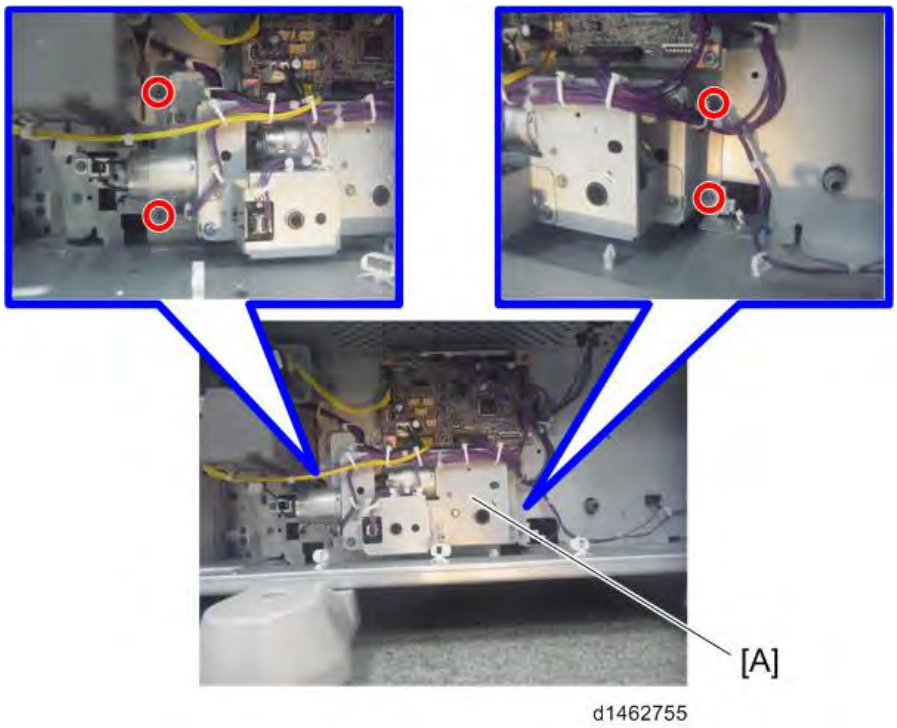
1. Remove the right tray. (Left and Right Trays)
2. Remove the rear cover. (Rear Cover)
3. Remove the right tray set sensor switch [A] (×1).



d1462764

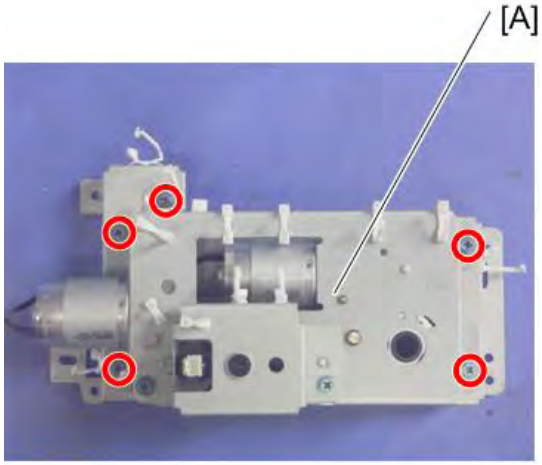
Tray Lift/Paper Transfer Unit

1. Remove the rear cover. (Rear Cover)
2. Remove the tray lift/paper transfer unit [A] (×4, ×3, ×14).



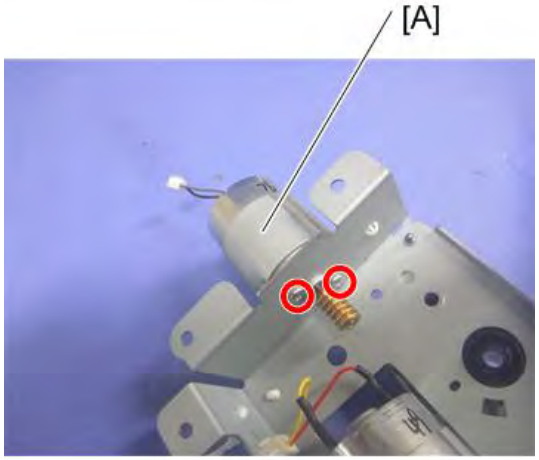
Tray Lift Motor

1. Remove the tray lift/paper transfer unit. (Tray Lift/Paper Transfer Unit)
2. Remove the tray motor unit [A] (×5).



d1462756

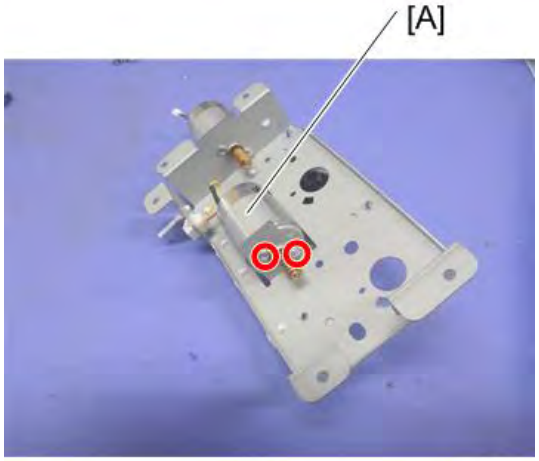
3. Remove the tray lift motor [A] (×2).



d1462757

Paper Transfer Motor

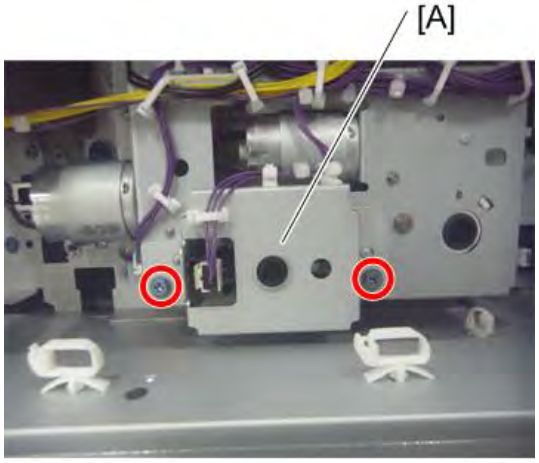
1. Remove the tray motor unit. (Tray Lift Motor)
2. Remove the paper transfer motor [A] (×2, ×1).



d1462758

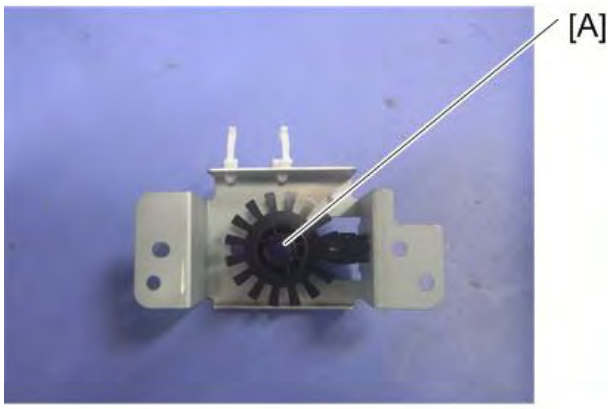
Remaining Paper Sensor

1. Remove the rear cover. (Rear Cover)
2. Remove the remaining paper sensor unit [A] (×2, ×1, ×3).



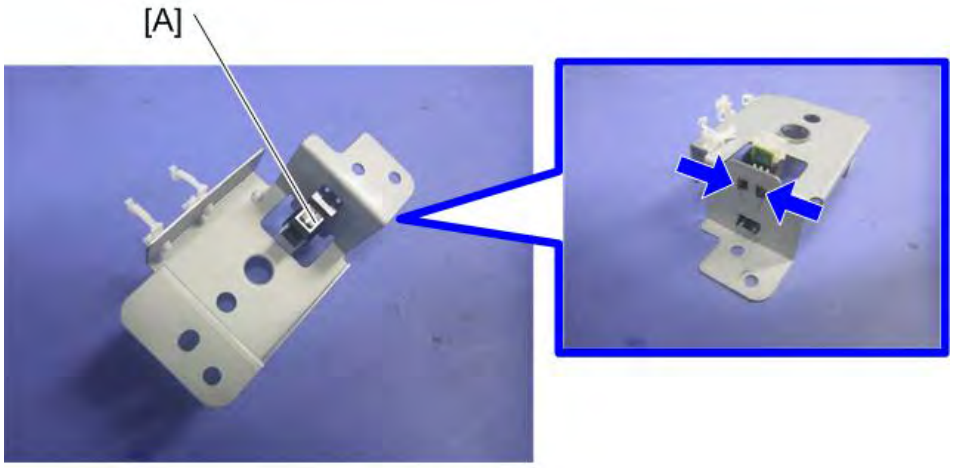
d1462759

3. Remove the actuator [A].



d1462760

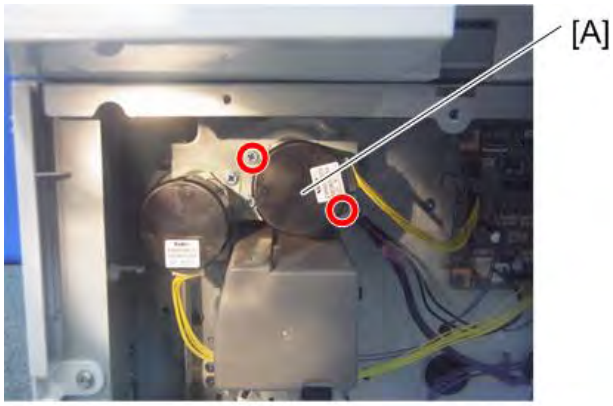
4. Remove the remaining paper sensor [A].



d1462761

Paper Feed Motor

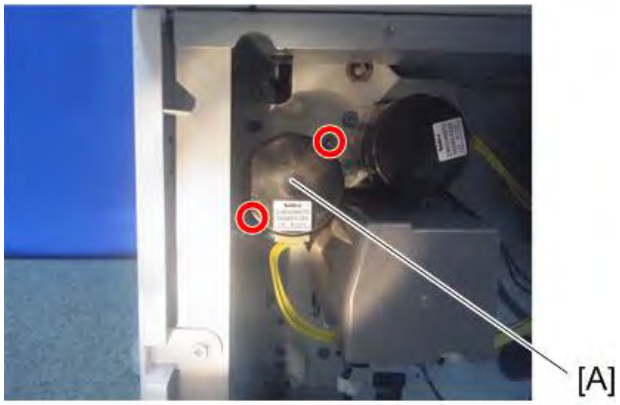
1. Remove the rear cover. (Rear Cover)
2. Remove the paper feed motor [A] (×2, ×1).



d1462765

Paper Transport Motor

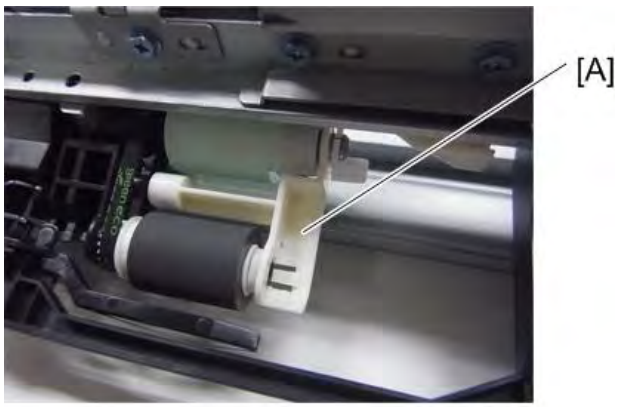
1. Remove the rear cover. (Rear Cover)
2. Remove the paper transport motor [A] (×2, ×1).



d1462766

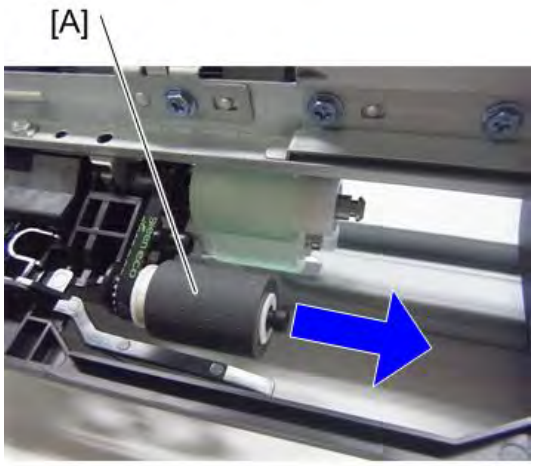
Pick-up Roller, Feed Roller, Friction Roller

1. Remove the paper feed unit. (Paper Feed Unit)
2. Remove the holder [A] (×1).



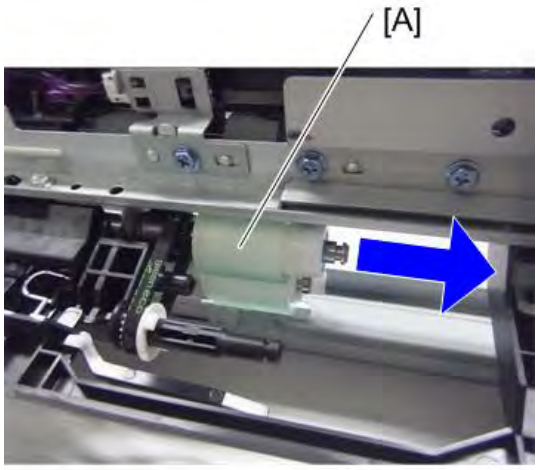
d1462188

3. Remove the pick-up roller [A].



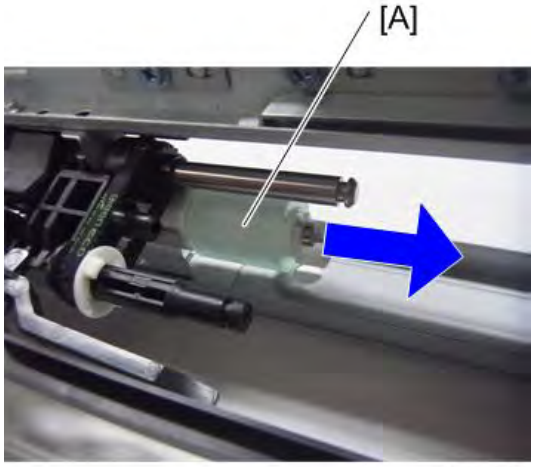
d1462189

4. Remove the feed roller [A].



d1462190

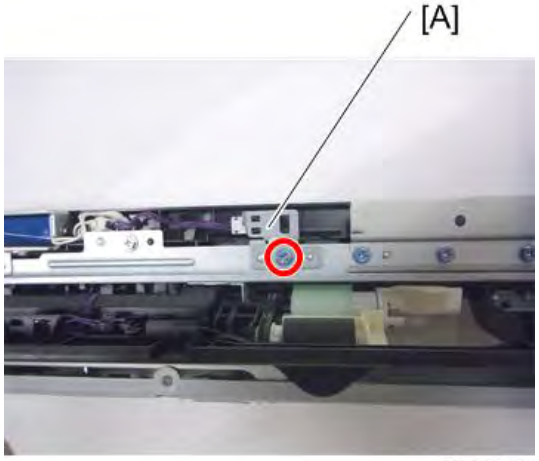
5. Remove the friction roller [A] (×1).



d1462191

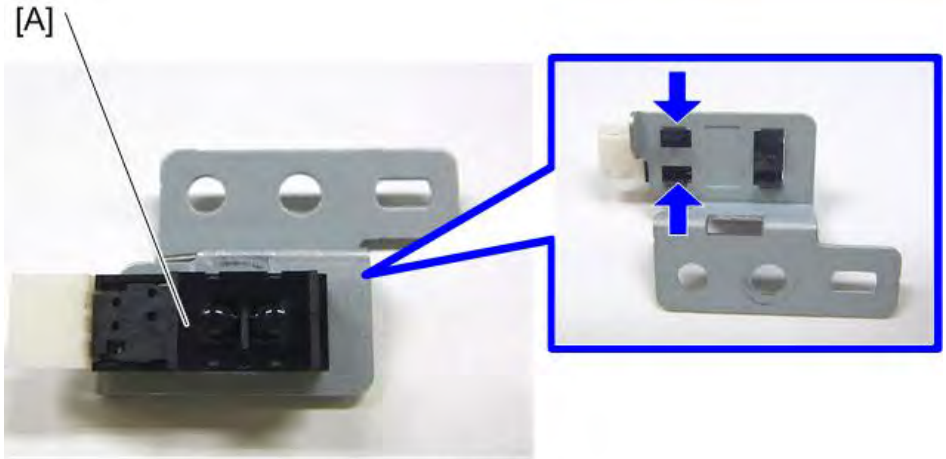
Paper Transport Sensor, Paper Feed Sensor, Paper End Sensor, Upper Limit Sensor

1. Remove the paper feed unit. (Paper Feed Unit)
2. Remove the paper transport sensor unit [A] (×1, ×1).



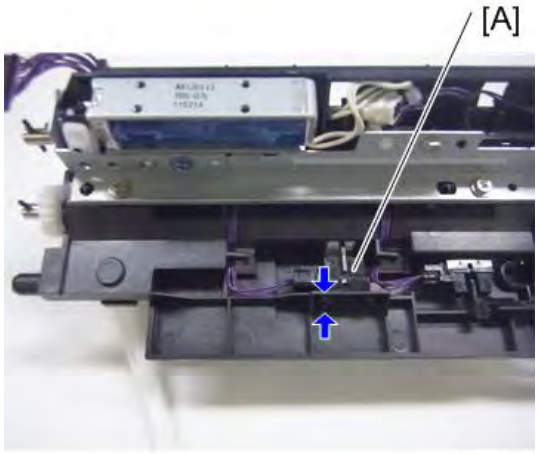
d1462196

3. Remove the paper transport sensor [A].



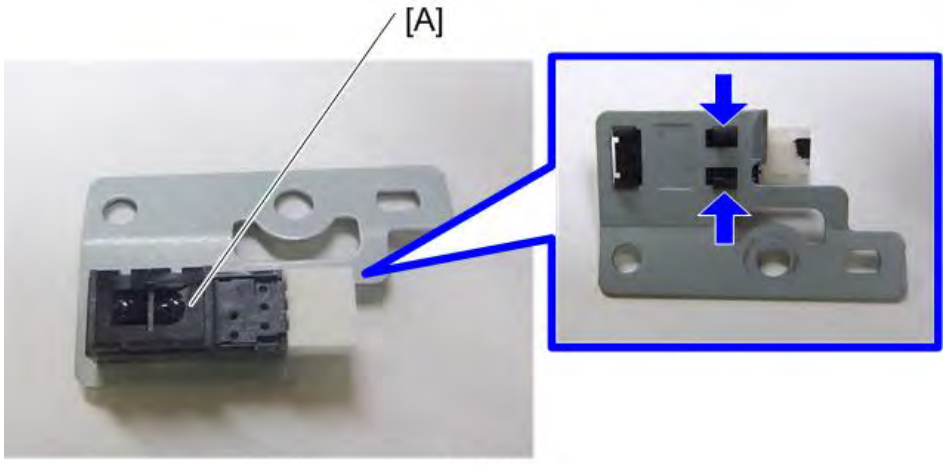
d1462197

4. Remove the paper feed sensor unit [A] (×1).



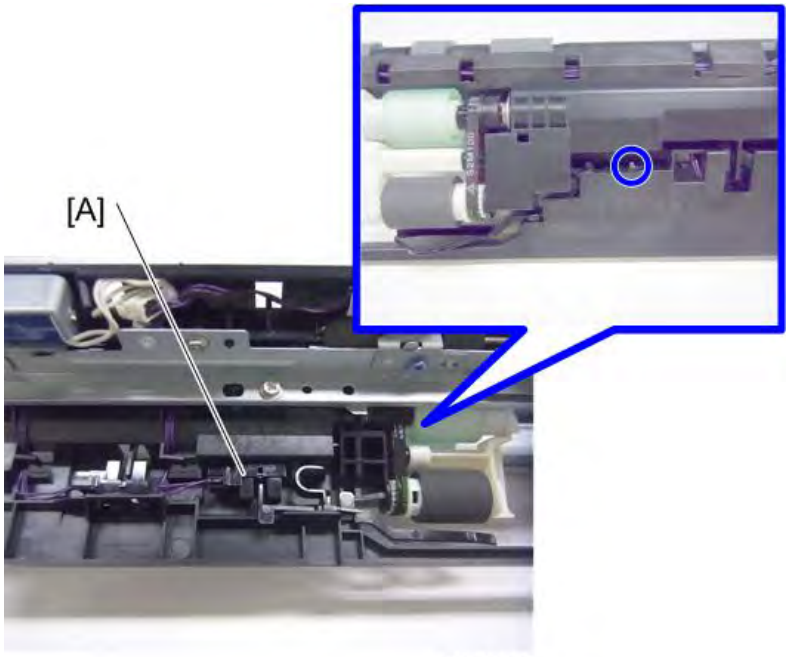
d1462198

5. Remove the paper feed sensor [A].



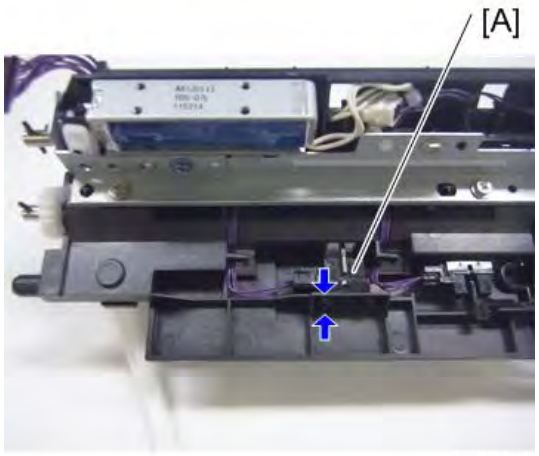
d1462195

6. Press the claw shown by the blue circle, and remove the paper end sensor [A] (×1).



d1462200

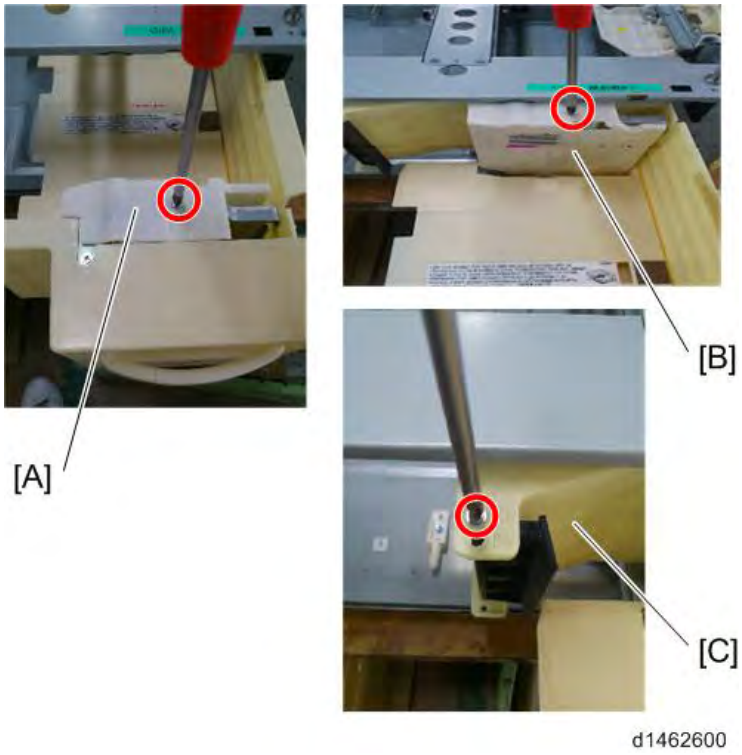
7. Remove the upper limit sensor [A] (×1).



d1462198

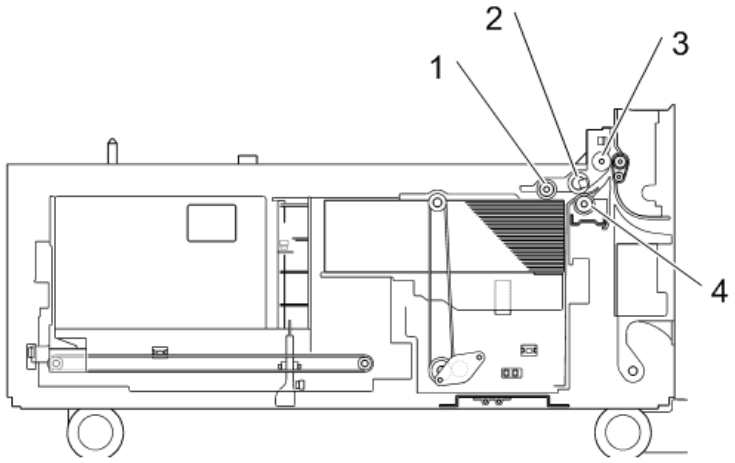
Right Tray Side Fence

1. Open the left and right trays.
2. Remove the right tray side fence (front) [A], right tray side fence (rear) [B], and right tray end fence [C] (×3).

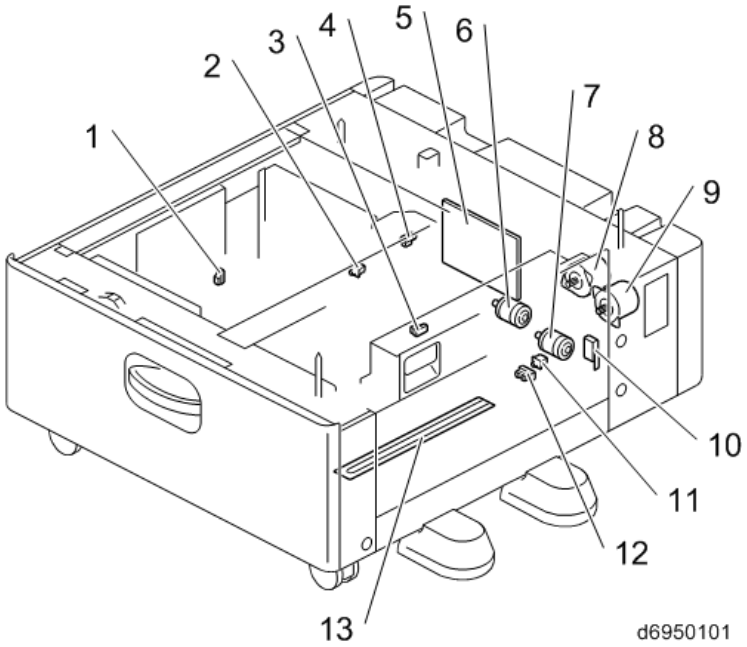


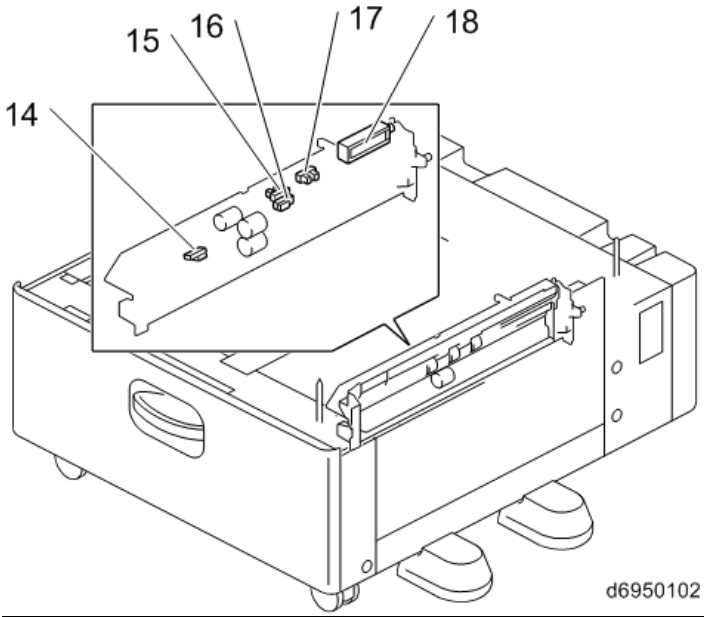
2. Detailed Descriptions

Parts Layout



No.	Description	No.	Description
1	Pick-up roller	3	Paper transport roller
2	Feed roller	4	Friction roller





No.	Description	No.	Description
1	Paper transfer home position sensor	10	Paper transport cover open/closed switch
2	Left tray set switch	11	Right tray set switch
3	Left tray paper end sensor	12	Lower limit sensor
4	Transfer fence home position sensor	13	Anti-condensation heater
5	Controller board	14	Paper feed sensor
6	Paper transfer motor	15	Paper end sensor
7	Paper lift motor	16	Paper transport sensor
8	Paper feed motor	17	Upper limit sensor
9	Paper transport motor	18	Pick-up solenoid

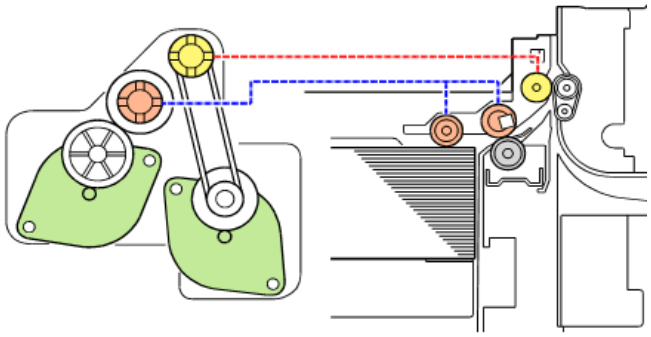
Mechanism

Paper feed separation mechanism

The feed system is a RF paper feed system. The paper feed unit has a pick-up roller, feed roller, and friction roller. The feed roller and friction roller are high durability rollers.

Drive mechanism

The pick-up roller and feed roller are driven by the paper feed motor. The transport roller is driven by the transport motor. The friction roller is not driven.



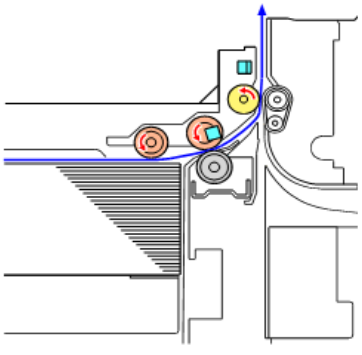
d6950201

Friction roller/pick-up roller release mechanism

When the right tray is set, the friction roller comes in contact with the feed roller. The pick-up roller touches the top sheet of paper that is to be fed.
When the right tray is opened, contact between the feed roller and friction roller, and contact between the pick-up roller and paper are released.

Paper feed transport mechanism

In order to feed the paper at regular intervals, there is a paper feed sensor between the pick-up roller and the feed roller, and this sensor is used to adjust the paper feed timing.



d6950202

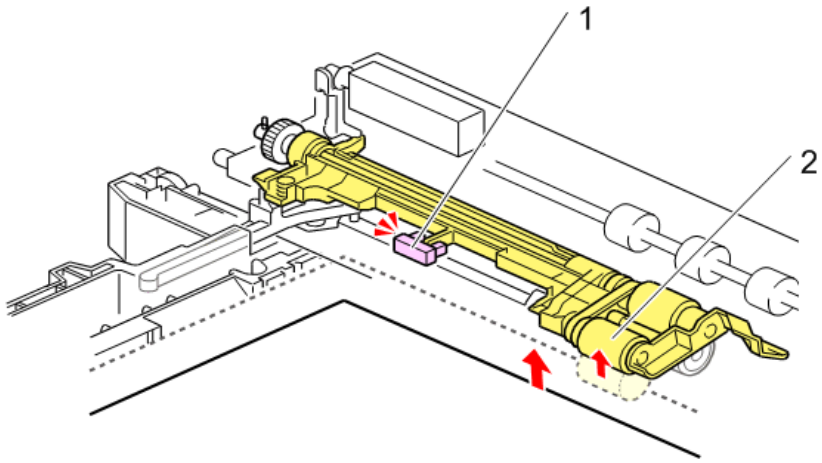
Tray lift/descent mechanism

Tray lift

When the right tray is set, the tray set switch on the rear plate turns ON, and the tray lift motor starts rotating. Simultaneously, the remaining paper sensor performs a pulse count to determine the amount of paper in the tray. The tray lift motor and rotation shaft are joined by a coupling, so that when the rotation shaft rotates, the tray bottom plate rises. The tray bottom plate rises until the actuator turns OFF the upper limit sensor (the sensor is blocked). If there is paper, lifting stops. If there is no paper, the tray bottom plate descends.

Note

- After the right tray is set, if the upper limit sensor is OFF, it will turn ON. The tray descends until the lower limit sensor turns OFF. After stopping temporarily, the tray bottom plate then rises to the upper limit.

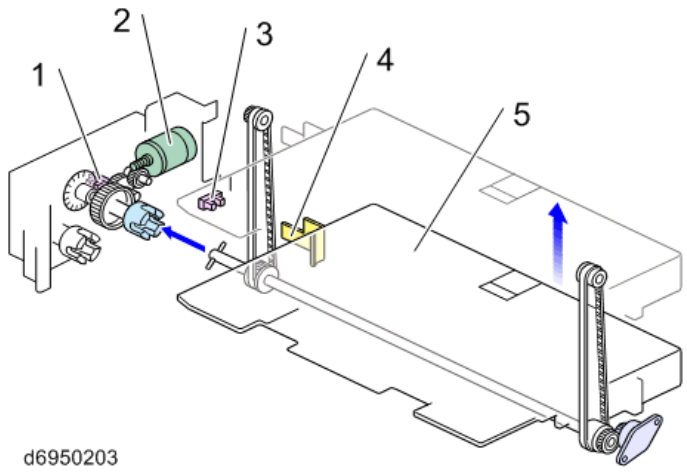


d1359609

No.	Description
1	Upper limit sensor
2	Pick-up roller

Tray descent

If there is no paper when the upper limit operation is completed, the tray bottom plate descends until the lower limit sensor turns OFF (the sensor is blocked). The tray bottom plate will descend if paper end is detected during paper transport.



No.	Description
1	Remaining paper sensor (inside lift/transfer unit)
2	Tray lift motor (inside lift/transfer unit)
3	Lower limit sensor
4	Actuator
5	Tray bottom plate

Left tray transfer fence mechanism

After the right tray has finished descending, if there is paper in the left tray, the left tray transfer fence shifts, and the paper in the left tray is transferred to the paper feed tray. When the paper has been transferred to the right tray, the left tray transfer fence returns to its original position, until the transfer home position sensor turns OFF (the sensor is blocked).

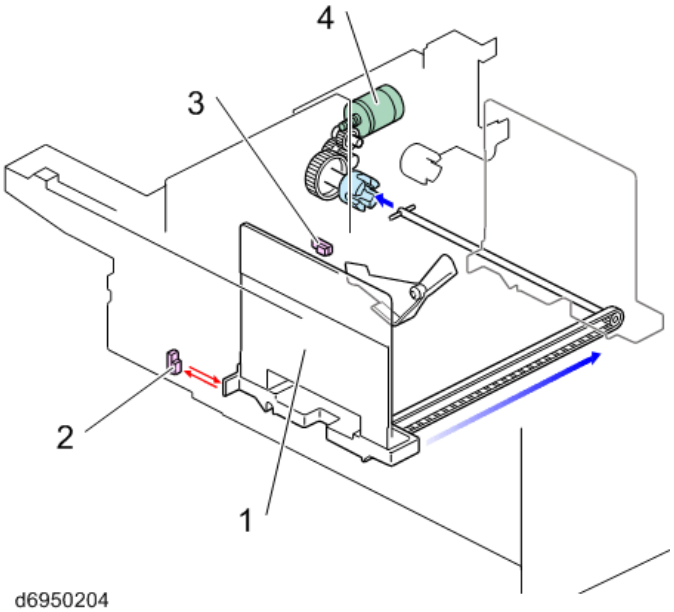
The left tray end fence is moved by the transfer motor (DC motor inside the lift/transfer unit).

When the right tray has finished descending, the transfer motor is driven, and the left tray transfer fence begins to shift.

After the left tray paper sensor detects no paper (detection is by a feeler), the left tray transfer fence shifts for a certain time that depends on the paper size. After shifting, the transfer motor turns OFF.

Note

- The time for which the left tray transfer fence shifts is set for either A4 or LT paper, so that the paper stops at the feed position of the right tray



d6950204

No.	Description
1	Left tray transfer fence
2	Paper transfer home position sensor
3	Left tray paper sensor
4	Paper transfer motor (inside lift transfer unit)

Remaining paper detection

Right tray remaining paper detection

The remaining paper sensor in the lift/transfer unit performs a pulse count.

Left tray remaining paper detection

The left tray paper sensor is turned ON/OFF using a feeler.

If there is paper in the left tray, paper end will not be displayed even if there is no paper in the right tray.

Remaining paper	Left tray paper sensor	Display
100%	OFF	4 bars
Paper end	ON	None