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SERVICE MANUAL

Rev. 09/20/2022

LANIER RICOH SAVIN®

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Ricoh USA, Inc.

LEGEND

PRODUCT CODE	COMPANY		
	LANIER	RICOH	SAVIN
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DOCT	IM C530F	IM C530F	IM C530F

DOCUMENTATION HISTORY

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MARKS GIVING CAUTION

Maintenance operations requiring special cautions or additional information regarding descriptions in this manual are presented as "Warning," "Caution," or "Note," depending on their nature.

WARNING

- If instructions are not observed, death or serious injury may result.

CAUTION

- If instructions are not observed, injuries to workers or physical damage to assets (including this laser printer) may result.

Note

- Essentials for procedures, steps, rules, and others.

SAFETY

To prevent possible accidents during maintenance operation, you should observe strictly the "Warning" and "Caution" information in this manual.

Avoid dangerous operations and operations out of the scope of this manual.

Various processes not covered by this manual may be required in actual operations, and should be performed carefully, always giving attention to safety.

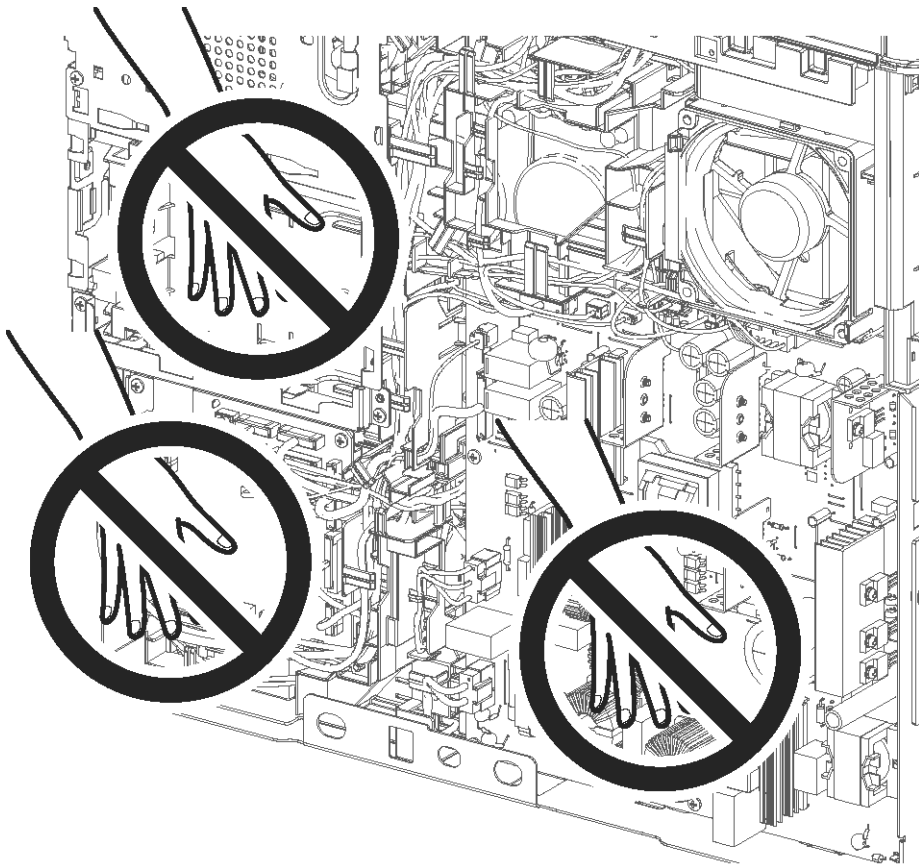
Power Source

Keep the power plug disconnected during the maintenance operation to prevent electric shock, burns and other damages.

If the power supply should be kept connected to measure voltage or for other similar reasons, take sufficient care to prevent electric shock, by following the procedures in this manual.

CAUTION

- While the printer is on, never touch live parts if not required.
- Power is supplied to the inlet, LVPS, MCU, and Controller Board even while the printer is off. Never touch its live components.
- Do not touch live parts unless otherwise specified.



FR01001XA

Driving Units

When servicing gears or other driving units, be sure to turn off the power switch and unplug the power cord.

Drive them manually when required.

⚠ CAUTION

- Do not do the print work removing the cover of the printer to confirm the operation of driving part.

High-temperature Units

When servicing high-temperature units (securing unit, etc.), be sure to turn them off to prevent burns, injuries and other troubles. Remove the power plug and start service processes after they have cooled down sufficiently.

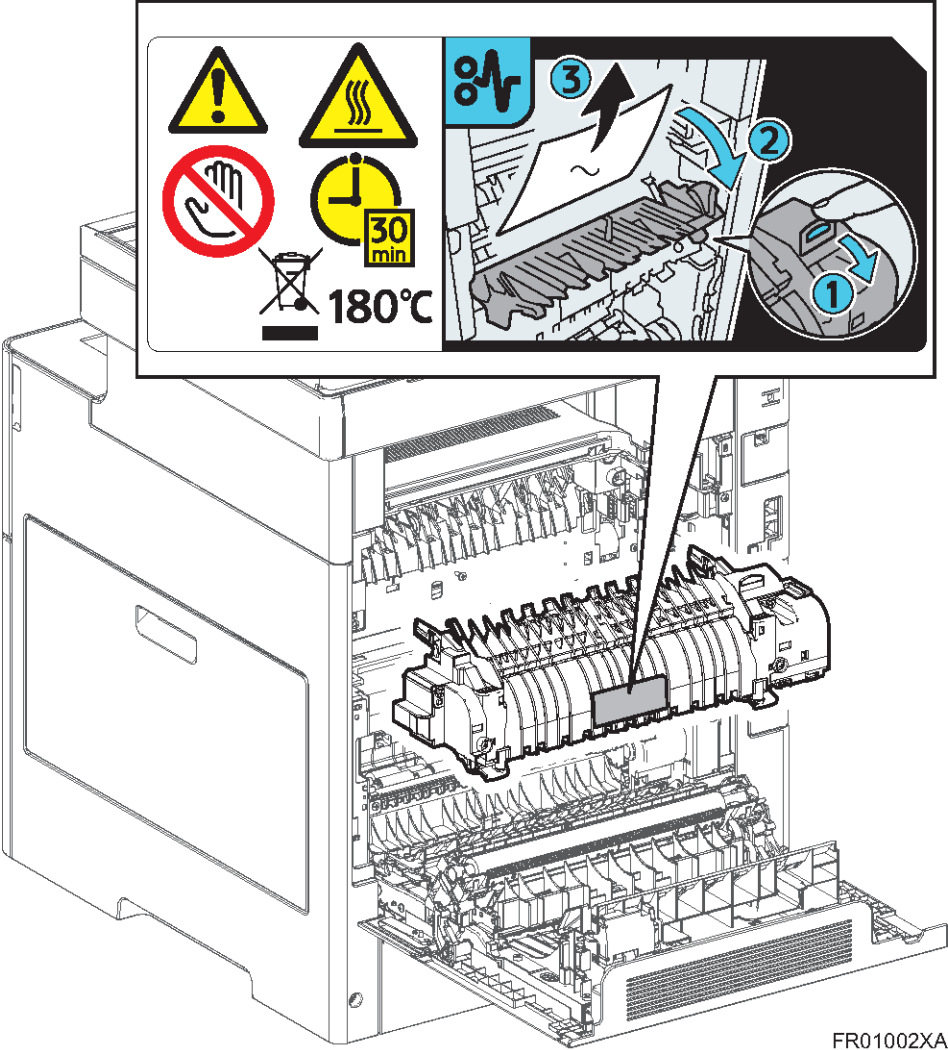
⚠ CAUTION

- Because high-temperature units are still hot after they complete an operation, wait at least 40 minutes before starting maintenance service.

Warning/Caution Signs

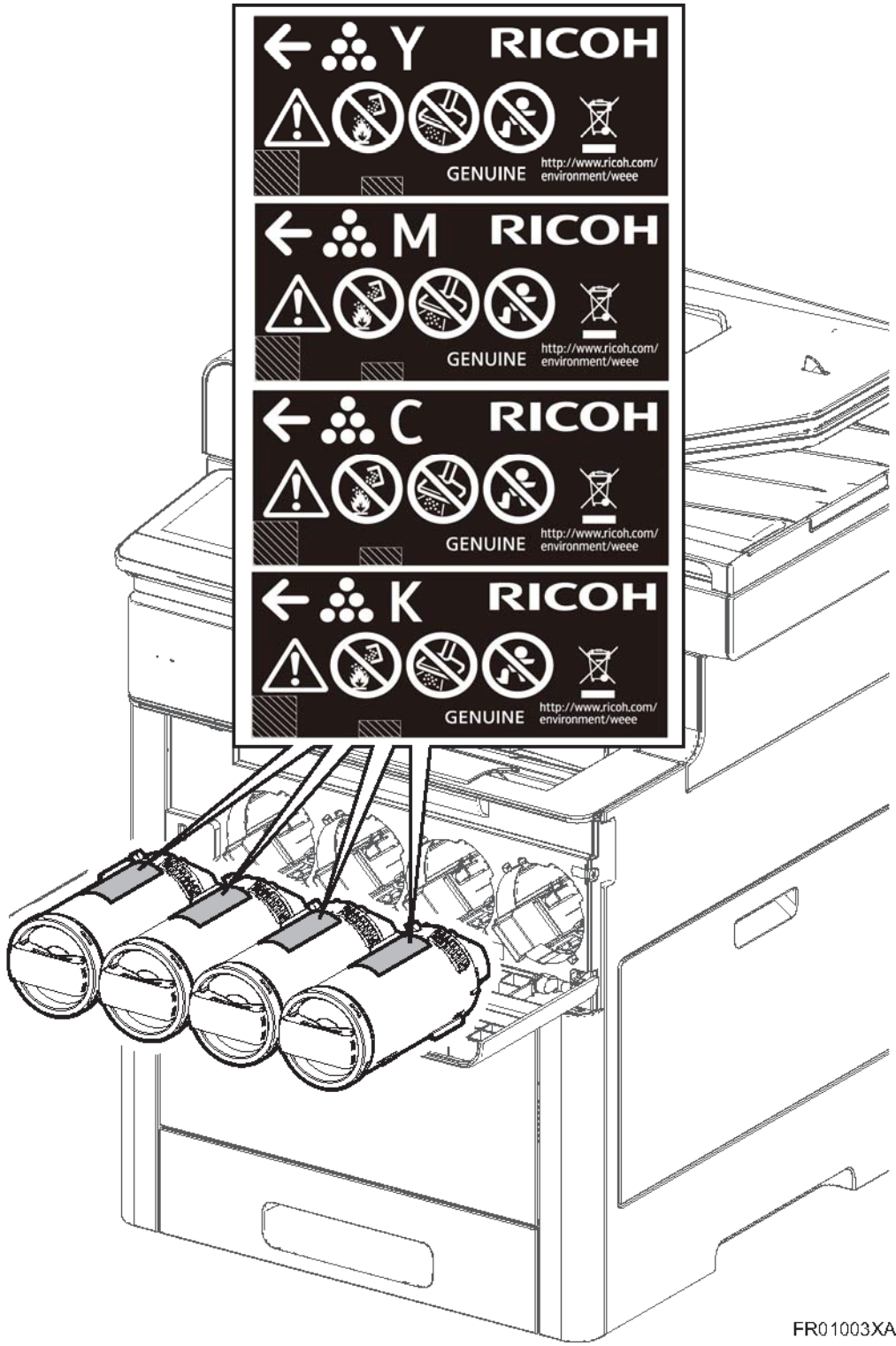
Warning decals and caution decals are attached to this laser printer to prevent accidents. Check those decals for their peeling or stains when servicing the printer.

Caution decal for Fusing Unit

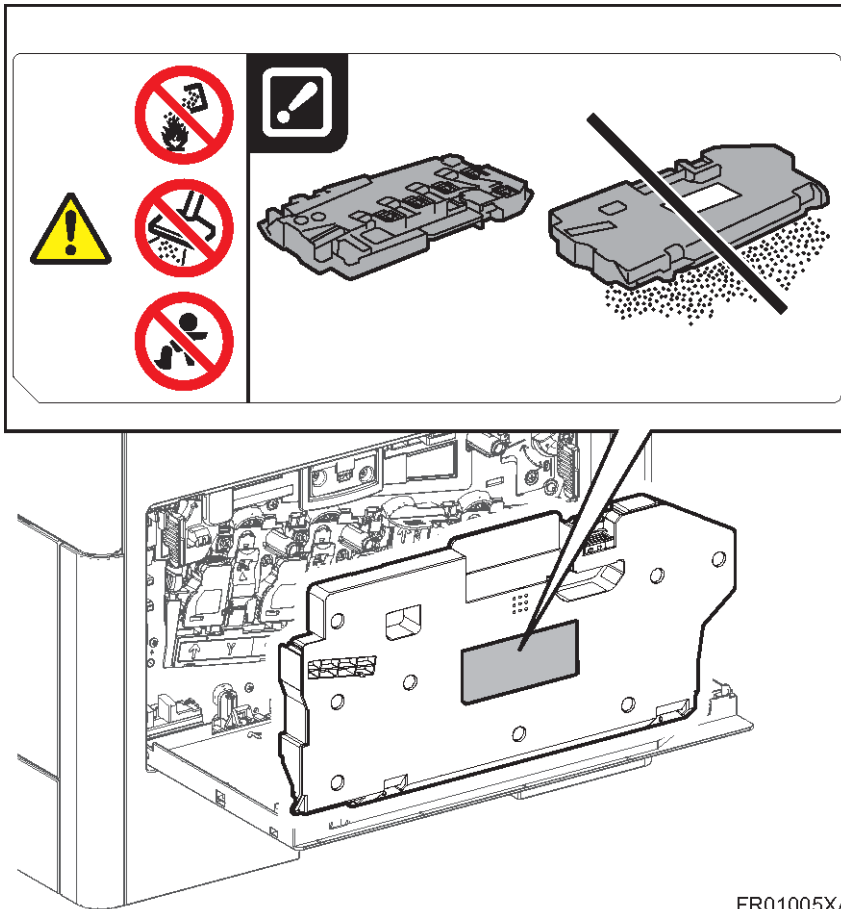


FR01002XA

Caution notice for Toner Cartridges



Caution decal for Waste Toner Bottle



FR01005XA

Notes on Toner Cleaning

Never clean spilt toner using a household vacuum cleaner as it may result in ignition, explosion, burns, or injury.

⚠ WARNING

- Never clean spilt toner using a household vacuum cleaner.
- Doing so may ignite the toner due to sparks generated inside the cleaner.



ShA01006XA

Notes on Storage of Print Media

When storing unused print media outside the device, prevent image quality deterioration due to moisture absorption by resealing the print media with the original packaging or other container such as a plastic bag.

Notes on Routing of Harness Wires

Before starting the service operation, carefully check how the harness wires are routed. When routing them, check that they are routed in the same way as they were before the servicing, and that they are not pinched or do not interfere with the corners or edges of any operating components.

⚠ CAUTION

- When a harness wiring is removed for service work, make sure that the harness wiring goes through same route as before. Check that the harness is set to the harness guide properly, the harness is not trapped when the cover is closed, no unnecessary slackness is found and that the harness does not touch other parts (especially the drive unit).

Note on Handling of Parts

When performing the service operation, give adequate consideration to the following to prevent injury or accidents.

- When handling heavy parts (or devices), give adequate consideration to your posture to prevent back problems.

CAUTION

- Handling a heavy object in an improper posture may strain your back or cause you to drop the object.
- Avoid inadvertently touching the edges of parts as they may be sharp.
- If your hands are smeared with oil, wipe it off sufficiently to prevent your hands from slipping.
- When pulling out parts or cables, do not yank but pull gently and gradually.

CAUTION

- When replacing the parts, replace the parts by the provided parts unit. Do not remove and replace any parts other than the provided parts. Never break down the provided parts or replace the parts therein. Mounting of any parts other than the provided parts is not guaranteed in quality or safety, and is strictly forbidden.

Battery

Lithium battery is used in the following component.

- Controller Board

WARNING

- If the battery is not set correctly, it has fear of explosion.
- Moreover, when a battery is exchanged for the battery of another kind, there is fear of explosion.
- Dispose of a used battery according to the statute of each country.

Modifications

Never modify the printer (safety device in particular) under any circumstances.

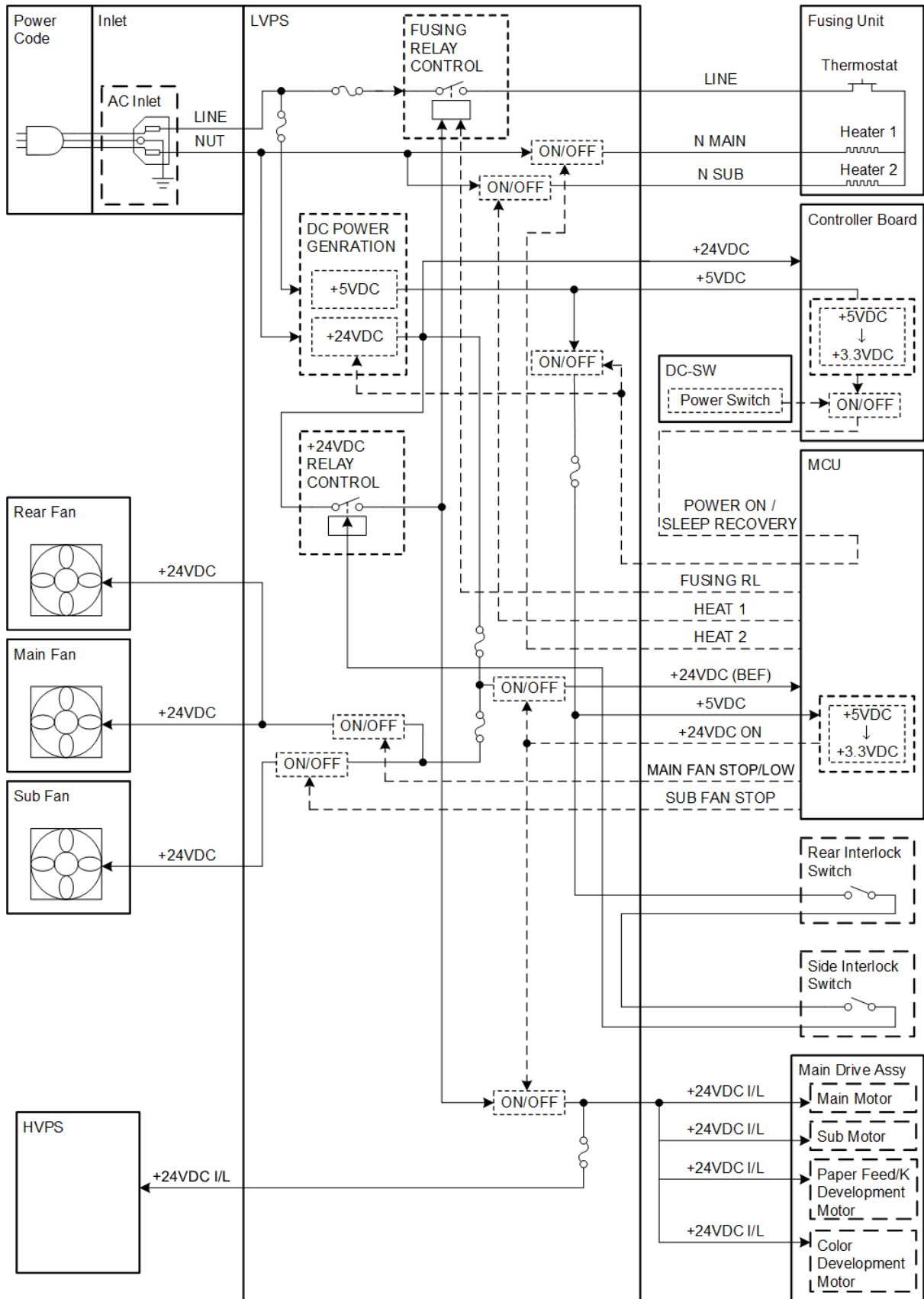
Safety Devices

Use caution so that the safety devices for preventing accidents (interlocks switches, fuses, thermostats, etc.) and the protective parts for users (covers, operation panel, etc.) can function as intended.

The printer is provided with the following interlock switch as a safety device.

- Side Interlock Switch
- Rear Interlock Switch








Schematic Diagram of Safety System

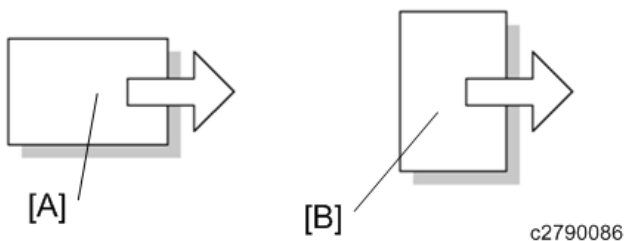


SYMBOLS, ABBREVIATIONS AND TRADEMARKS

Symbols and 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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PRODUCT INFORMATION

1. PRODUCT INFORMATION

1.1 MACHINE CODES AND PERIPHERAL CONFIGURATION

1.1.1 MAIN MACHINE

Machine Code	Product Name	Note
D0CS	IM C530FB	Short model
D0CT	IM C530F	Tall model

The machine codes have the following suffix codes, which show where the machine is delivered to.

Code	Area	Power
-17	North America/Central, Latin America	120-127V, 60Hz
-27	Europe/Russia/Middle East, Near East, Africa	220-240V, 50-60Hz

1.1.2 OPTIONS

External Options

Item	Machine Code	Remarks	New or Common
Paper Feed Unit PB1180	D3GX-17	550 sheets Only for EU/LA	New
LCIT PB1190	D3GY-17	2000 sheets	New
Internal Finisher SR1020	D3H0-17	Only for IM 530F Only for EU	New
Caster Table Type M43	D3H1-17	Only for LA	New

NA = North America, LA = Latin America, EU = Europe

Internal Options

Item	Machine Code	Remarks	New or Common
IEEE 802.11 Interface Unit Type M43	D3J4-01		New
NFC Card Reader Type M43	D3J4-02	Only for EU/LA	New
Optional Counter Interface Unit Type M12	B870-21		Common (IM C6000 series)

1.2 SPECIFICATIONS

See "Appendices" for the following information:

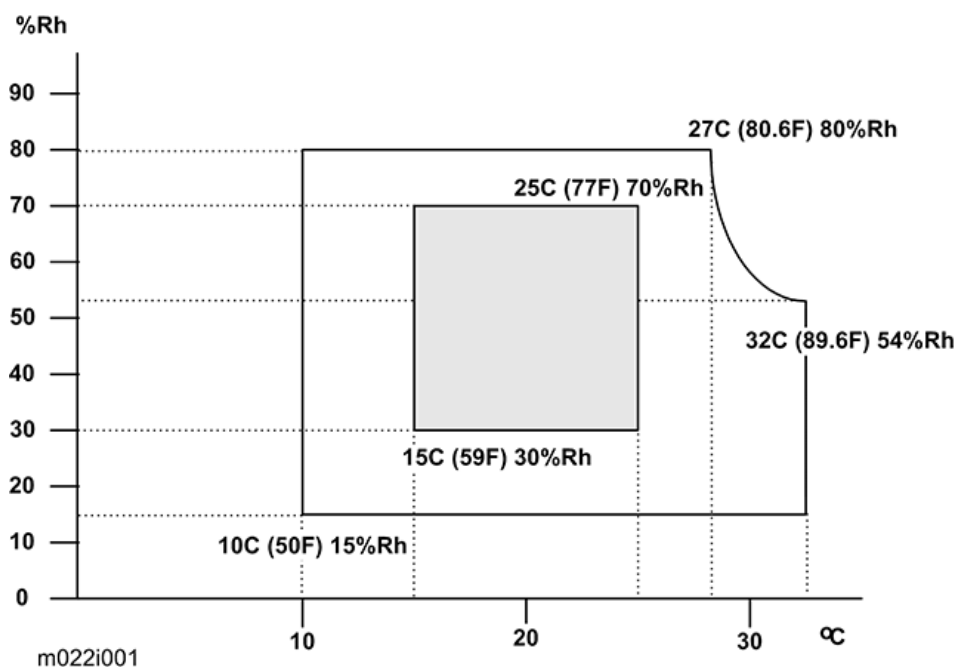
- General Specifications
- Supported Paper Sizes

INSTALLATION

2. INSTALLATION

2.1 INSTALLATION REQUIREMENTS

2.1.1 ENVIRONMENT

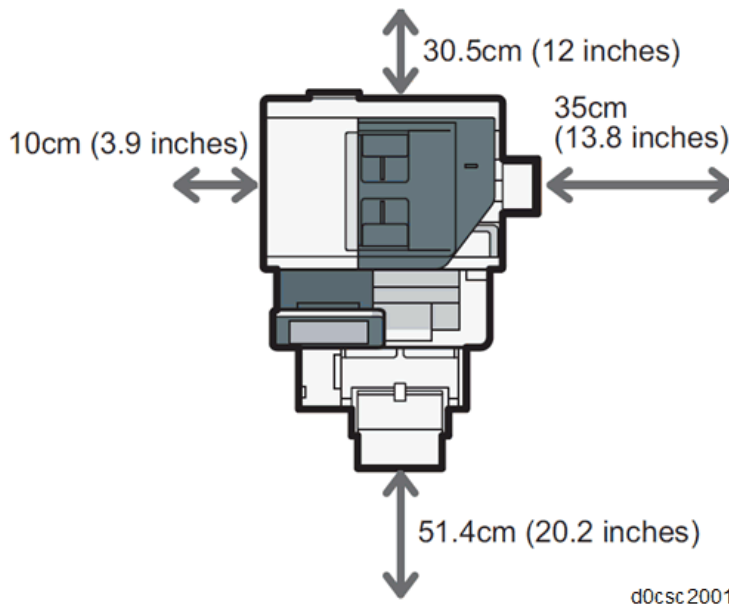


1. Temperature Range: 10°C to 32°C (50°F to 89.6°F)
2. Humidity Range: 15% to 80% RH
3. Ambient Illumination: Less than 1500 lux (do not expose to direct sunlight)
4. Ventilation: 3 times/hr/person or more
5. Avoid direct exposure to the following:
 - 1) Cool air from an air conditioner
 - 2) Heat from a heater
6. Do not install the machine in areas that are exposed to corrosive gas.
7. Do not install the machine at any location over 2,000 m (6,500 ft.) above sea level. [NA: Can be installed up to 2,500m (8,202 ft.)]
8. Install the machine on a sturdy, level base. (Inclination on any side must be no more than 5 mm.)
9. Do not install the machine in areas that get strong vibrations.

2.1.2 MACHINE SPACE REQUIREMENTS

⚠ CAUTION

- This machine uses high voltage power sources and can generate ozone gas. High ozone density is harmful to human health. Therefore, the machine must be installed in a well-ventilated room.



Put the machine near the power source with the clearance shown above.

2.1.3 POWER REQUIREMENTS

⚠ CAUTION

- Insert the plug firmly into the outlet.
- Do not use an outlet extension plug or cord.
- Ground the machine.

1. Input voltage level:

- 120 to 127 V, 60 Hz: More than 12 A
- 220 V to 240 V, 50 Hz/60 Hz: More than 8 A

2. Permissible voltage fluctuation:

NA: 108 V (120 V-10%) – 138 V (127 V+8.66 %)

EU: 198 V (220 V-10%) – 264 V (240 V+10 %)

3. Do not put any items on the power cord.

2.2 MAIN MACHINE INSTALLATION

★ Important

To install the main machine and the optional tray and/or LCT at the same time, first install the optional tray and/or LCT, and then install the main unit and other options.

2.2.1 IMPORTANT NOTICE ON SECURITY ISSUES

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

↓ Note

For more details about this security issue, see “Notes for Using This Machine Safely” supplied with the machine.

1. Set the Administrator/Supervisor Login password or skip this screen temporarily.
 - If your customer change the password soon, go to step 2.
 - If you want to skip this screen, go to step 3.



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2. Ask your customer to change the login password for Supervisor and Administrator 1 as follows.
 1. Enter the password, and then press [OK].
 2. Enter the password again to confirm the previous entry, and then press [OK] to register the password.
 3. Press [OK]. The home screen is displayed.
3. Execute SP5-755-002 (Display Setting: Hide Administrator Password Change Scrn) to skip the [Program/Change Administrator] screen.

The home screen is displayed.

★ Important

- The Program/Change Administrator screen will be displayed every time the power is turned ON.
- We recommend that customers set the passwords from the Program/Change Administrator screen.
- The passwords for Supervisor or Administrator 1 to 4 can be set via "System Settings". However, if the passwords are set in the Program/Change Administrator screen, this screen will be displayed every time the power is turned ON.

↓ Note

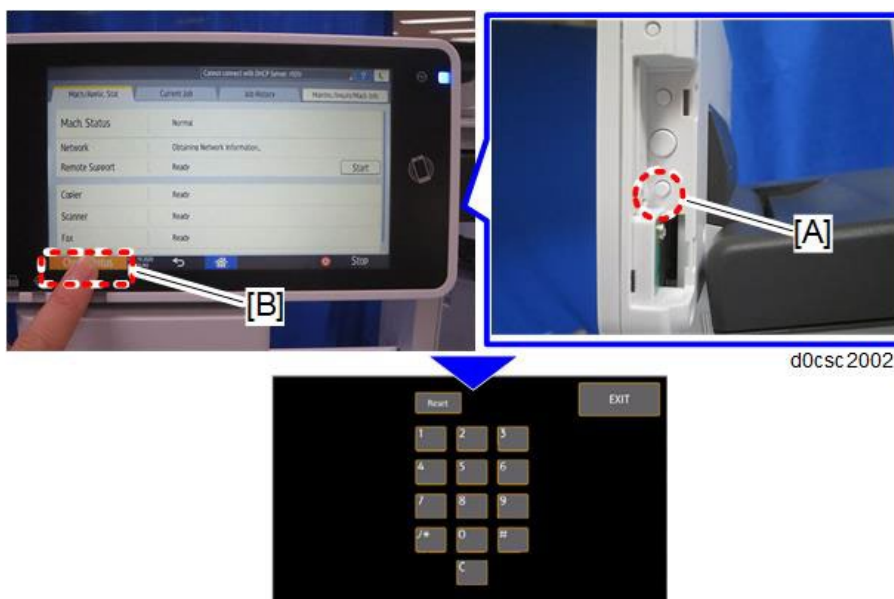
If a password is not necessary, this screen can be disabled with the following procedure.

1. On the Program/Change Administrator screen, press [Change] next to Supervisor and then press [OK] without entering any password.
2. Press [OK] again when the Confirm password screen is displayed.
3. For Administrator 1, do the same procedure as steps 1 and 2.
4. Press [OK]. The home screen is displayed.

↓ Note

To display the numeric keypad on the screen to enter the SP mode, press and hold the [EX3] button [A]* located on the right side of the operation panel, and then press "Check Status [B]" at the same time.

*: The button [A] appears when the cover on the right side of the operation panel is removed.



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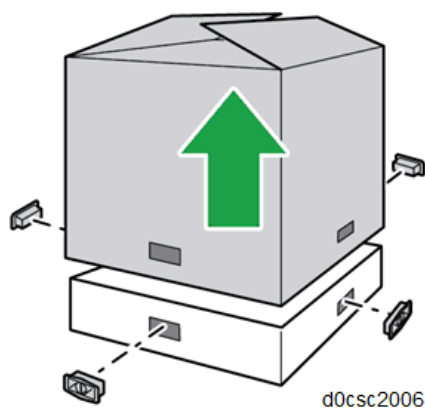
2.2.2 REMOVAL OF PACKING TAPES AND RETAINERS

⚠ CAUTION

- To avoid damaging the machine, never attempt to lift it by gripping the operation panel or any part of the scanner unit.



1. Remove the packing box and check the supplied accessories.

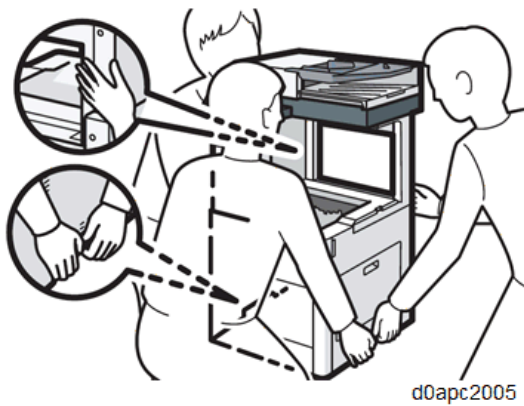


2. The center of gravity of the machine is at the rear and may tip easily because the rear is much heavier than the front. Carefully lift the machine by the inset grips on the sides, and then keep it horizontal as you move it.

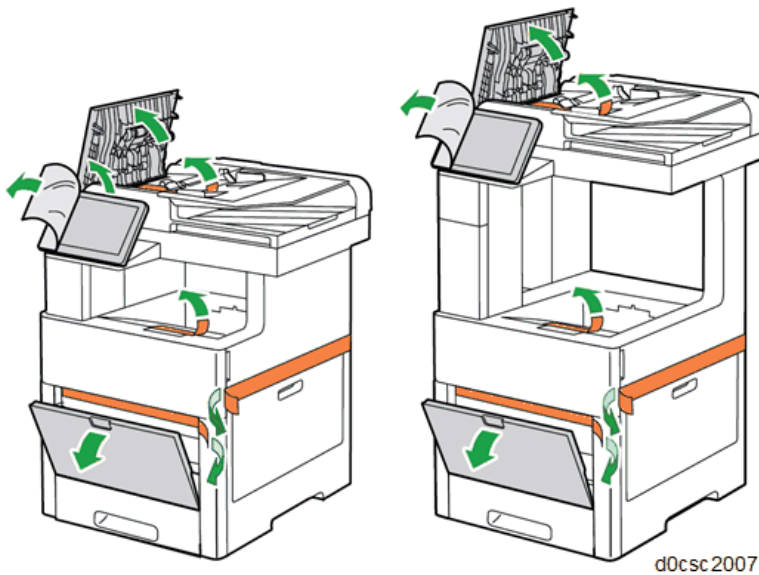
For IM C530FB at least two people are needed to lift the machine.



For IM C530F at least three people are needed to lift the machine.



3. Remove the packing tapes and the retainers.



2.2.3 ACCESSORY CHECK

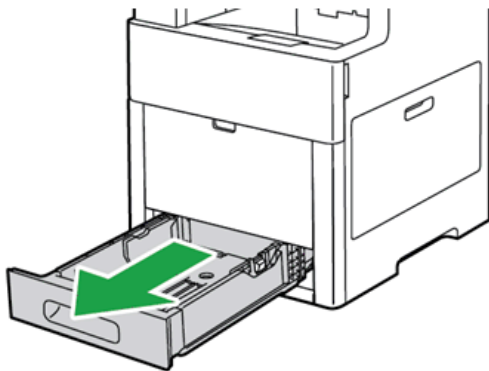
Check the quantity and condition of these accessories.

Description	Q'ty	
	NA	EU
Power cord	1	1
Modular cable	1	-
Dust cover for paper tray	1	1
Sheet - EULA (End User License Agreement)	1	1
Sheet - Note for Using This Machine Safely	1	1
Sheet - User Registration Sheet	1	-
Sheet - PRINTER LIMITED WARRANTY	1	-

Description	Q'ty	
	NA	EU
Sheet - Note to the user (Caution for NFC Tag)	-	1
Sheet - Help desk	1	-
Sheet - For printing with AirPrint	1	1
CD-ROM - Driver	1	1
Manual - Safety Information	1	1
Manual - Setup Guide	1	1
Seal - Caution	1	1
Plate - Logo	1	1

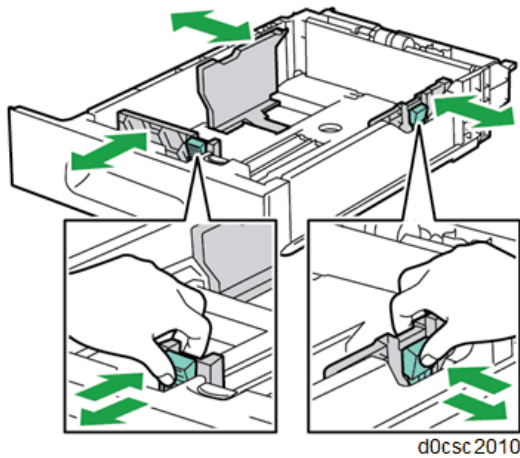
2.2.4 LOADING PAPER

1. Pull out the paper tray carefully until it stops. Lift the front side of the tray, and then pull it out of the machine.



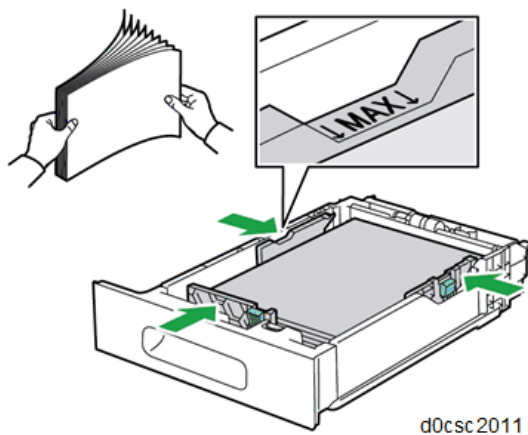
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- Pinch the lever of the end fence and align it with the paper size. Next, pinch the lever of the right fence, and then align the right and left fences with the paper size marks.

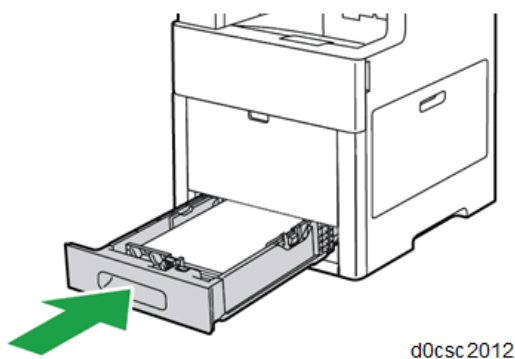


- Load the paper print side up.

Do not stack paper higher than the limit mark (MAX) shown below.



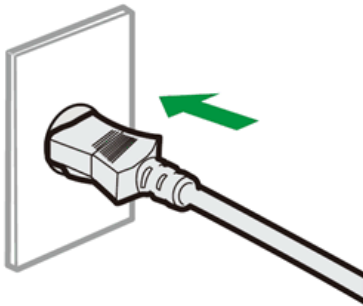
- Insert the paper tray into the machine, and then push it in slowly until it stops.



2.2.5 TURNING THE POWER ON

- Connect the power cord to the power connector point at the back of the machine.

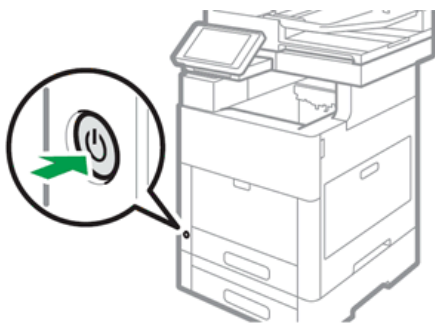
2. Connect the power cord to the power source.



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3. Connect the network cable, if the client IP addresses are automatically provided through a system such as DHCP in the network settings. If a static IP address is provided to the client machines, contact the customer network administrator to determine the appropriate time to connect the network cable.

4. Press the main power switch.

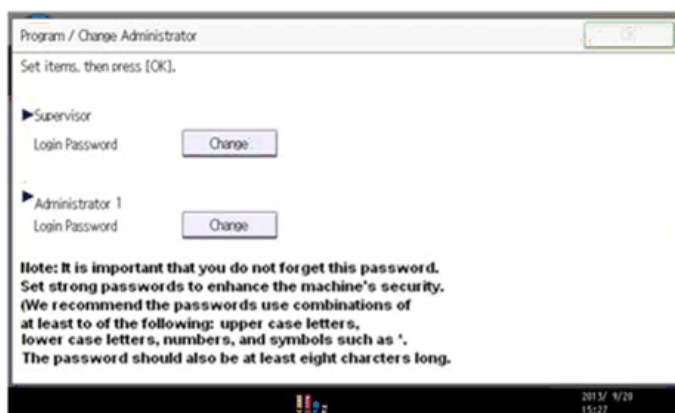


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Toner Initialization starts. Toner filling takes about 5 minutes.

5. After the start screen, the [Program/Change Administrator] screen appears.

Follow the procedure described in "**Important Notice on Security Issues**".



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6. After the toner initialization is completed, the machine beeps, and a message is displayed. Cycle the machine OFF/ON.

Note

Never switch OFF the main power until the machine finishes the initial settings and emits a beep to signal that it is ready.

2.2.6 IMAGE QUALITY TEST

The following procedures are required after installing all the peripherals.

- Paper Registration (Refer to **Registration Adjustment**)
- ACC (Automatic Color Calibration) (Refer to **ACC (Automatic Color Calibration)**)
- Scanner ACC (Refer to **Scanner ACC**)
- Color Registration (Skew Adjustment) (Refer to **Color Registration (Skew Adjustment)**)
- Checking the Copy Image with Test Chart (Refer to **How to Use the Color Charts**)

2.2.7 AUTO REMOTE FIRMWARE UPDATE (ARFU) SETTINGS

Specify ARFU settings as required.

Important

Operating Conditions:

- ARFU requires an internet connection. Be sure to get permission from the customer before setting up ARFU.

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].



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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 any of these messages appear, ARFU can be executed. 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 Next Date) 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

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

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

(In "Settings" icon > System Settings > Network/Interface)

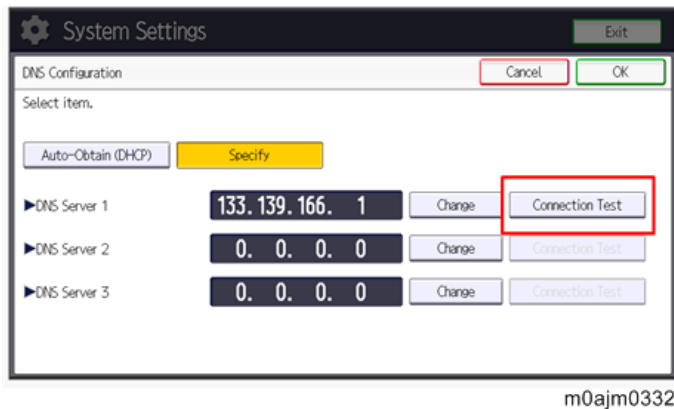
4-2. IPv4 address of the DNS server

Check the DNS IPv4 address and check the connection.

(In "Settings" icon > System Settings > Network/Interface > DNS Configuration)

Note

- How to find the IP address:
Ask the customer for 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.



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

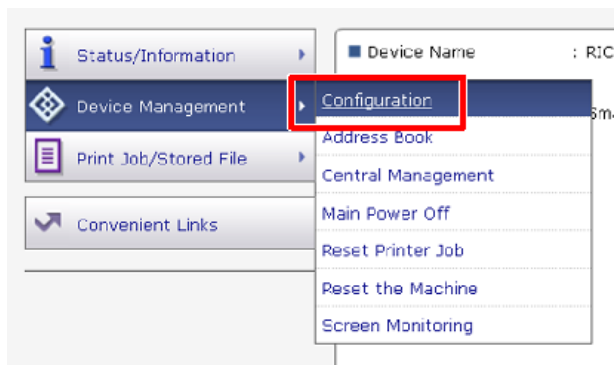
↓ Note

- These settings 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.***

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

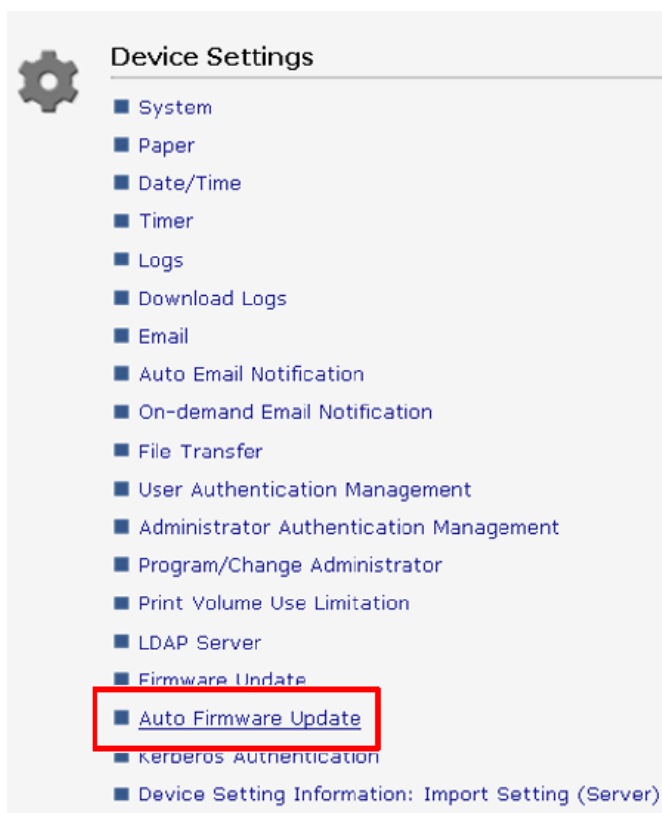
1. Start Web Image Monitor.
2. Log in as the machine administrator.

3. Go to [Device Management], and then click [Configuration].



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4. Click "Auto Firmware Update".



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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 to prohibit updating.

Auto Firmware Update Settings

OK Cancel

Settings to Prohibit Updates

■ **Timer to Prohibit Updates** : Active Inactive

Start Time : AM 9 hr.

End Time : PM 5 hr.

■ **Day of the Week to Prohibit Updates:** Sunday Monday Tuesday Wednesday Thursday Friday Saturday

Proxy Server Settings

■ **Proxy Server** : Enable Disable

■ **Proxy Address** :

■ **Port Number** :

■ **User Name** :

■ **Password** :

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2.2.8 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 if the counting method used in meter charge mode is based on developments, prints, or coverage.	"1": Prints
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. The user can send a fax message with the counter list.	

Counter Display Method

There are 3 types (Developments, Prints, and Coverage). The display mode can be set by SP5-045-001 (Accounting counter: Counter Method).

Value	Mode	Descriptions
0	Development Count	YMC Development Counter Bk Development Counter
1	Print Count (Default)	Color Copy Counter B&W Copy Counter Color Print Counter B&W Print Counter Color Total Counter B&W Total Counter
2	Coverage Count	Color Total Counter B&W Total Counter Color Coverage Counter 1 Color Coverage Counter 2 Color Coverage Counter 3
7	Coverage Count (YMC)	Color Total Counter B&W Total Counter Color Coverage Counter 1 (YMC)

Value	Mode	Descriptions
		Color Coverage Counter 2 (YMC)
		Color Coverage Counter 3 (YMC)

2.2.9 SETTINGS FOR @REMOTE SERVICE

Note

Prepare and check the following points before visiting the customer. For details, ask the @Remote key person.

Check points before making @Remote settings

- The setting of SP5-816-201 in the mainframe must be "0".
- Print the SMC with SP5-990-002 and check the device ID2 from SP5-811-003, make sure it is programmed correctly.
 - 6 spaces must be put between the 3-digit prefix and the following 8-digit number (e.g. xxx_____xxxxxxxx).
 - ID2 (SP5-811-003) and the serial number (SP5-811-001) 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.
- The following settings must be correctly programmed.
 - Proxy server IP address (SP5-816-063)
 - Proxy server Port number (SP5-816-064)
 - Proxy User ID (SP5-816-065)
 - Proxy Password (SP5-816-066)

- Get a Request Number

Execute the @Remote Settings

- Enter the SP mode.
- Input the Request number obtained from @Remote Center GUI, and then enter [OK] with SP5-816-202.
- Confirm the Request number, and then click [EXECUTE] with SP5-816-203.
- Check the confirmation result with SP5-816-204.

Value	Meaning	Solution/ Workaround
0	Succeeded	-

Value	Meaning	Solution/ Workaround
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 username and password.
6	Communication error	Check the network condition.
8	Other error	See "SP5-816-208 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	Modem unplugged	
26	Busy line	

5. Make sure that the screen displays the Location Information with SP5-816-205 only when it has been input at the Center GUI.
6. Click [EXECUTE] to execute the registration with SP5-816-206.
7. Check the registration result with SP5-816-207.

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.

Value	Meaning	Solution/ Workaround
5	Proxy error (Authentication error)	Check Proxy user name and password.
8	Other error	See "SP5-816-208 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	Modem unplugged	
26	Busy line	

8. Exit the SP mode.

SP5-816-208 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	Check the mainframe condition. If the

Code	Meaning	Solution/ Workaround
	in use.	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.

2.2.10 MOVING THE MACHINE

⚠ CAUTION

- To avoid damaging the machine, never attempt to lift it by gripping the operation or any part of the scanner unit.



- To avoid dangerous electrical shock, never handle power cord with wet hands.
- To avoid the double hazard of a fire or electrical shock, before moving the machine switch the machine off, and then disconnect the power cord from the power source. Disconnect the power cord from the machine to prevent damage from tangling under the machine.
- To prevent personal injury and damage to the optional paper feed units installed under the machine, never push on the top of the machine to move it.
- To avoid damaging the power cord, which can lead to a serious electrical shock, grip the head of the power cord to remove it from the power source. Never pull on the cord to disconnect it from the power source.

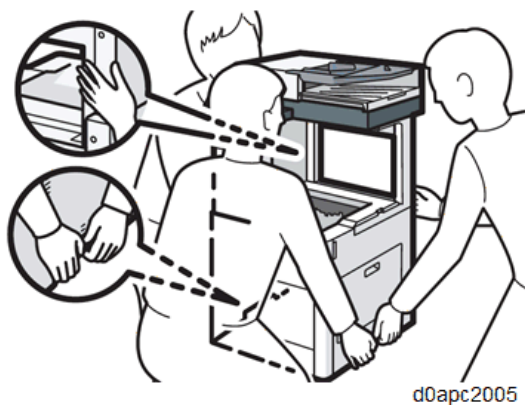
★ Important

- Turn the machine off.
- Remove all paper from the paper tray.
- Close the front cover, bypass tray, and all other covers.
- Unplug the power cord and disconnect the ethernet cable before moving the machine.
- The center of gravity of the machine is at the rear and may tip easily because the rear is much heavier than the front. Carefully lift the machine by the inset Grips on the sides, and then keep it horizontal as you move it.

For the **IM C530FB** at least two people are needed to lift the machine.



For the **IM C530F** at least three people are needed to lift the machine.



- Move the machine carefully while keeping it horizontal. Do not expose the machine to vibration or tilt it at a sharp angle. Vibration or shock could damage the memory and lead to loss of valuable stored documents.
- Connect the cable correctly to the original port, and then plug the AC adapter into the power source.
- Never push on the ADF when moving the machine. To prevent image distortion and other problems, never apply force to the ADF.

2.3 PAPER FEED UNIT PB1180 (D3GX-17)

2.3.1 NUMBER OF PAPER FEED UNIT THAT CAN BE INSTALLED

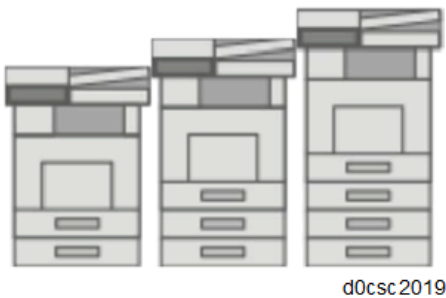
IM C530FB (Short model)

- Up to four optional paper feed units (for a total of 5 trays) can be installed on the floor.
- The caster table is required for a floor installation.
- When using the optional LCIT PB1190, only one optional paper feed unit can be installed.
- Up to three optional paper feed units (for a total of 4 trays) can be installed on a flat table.

Floor Configurations



Table Configurations



IM C530F (Tall model)

- Up to four optional paper feed units (for a total of 5 trays) can be installed on the floor.
- The caster table is required for a floor installation.
- When using the optional LCIT PB1190, only one optional paper feed unit can be installed.
- Only one optional paper feed units (for a total of 2 trays) can be installed on a flat table.

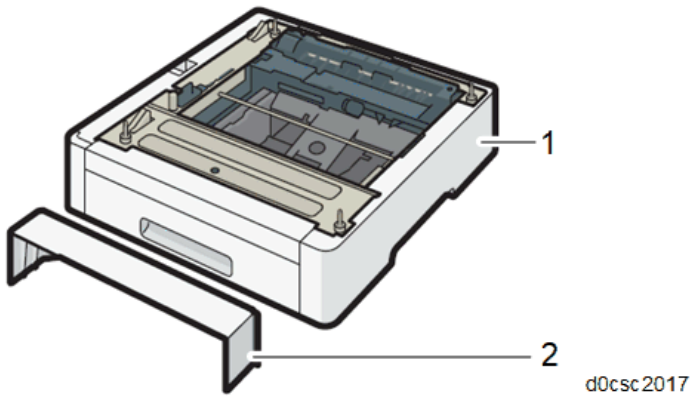
Floor Configurations



Table Configurations



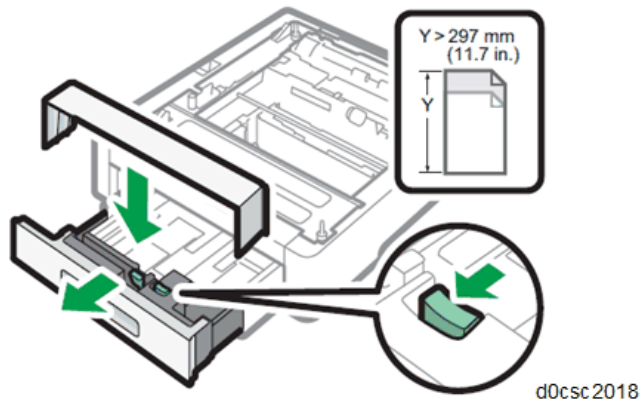
2.3.2 ACCESSORY CHECK



No.	Description	Q'ty	Remark
1	CASSETTE ASSY	1	
2	DUST COVER 550	1	For LG paper only

Note

- When using LG size paper, set the side fence for LG, and then set the dust cover on top. When the dust cover is not in use, it must be stored in a safe place at the work site by the client.



2.3.3 INSTALLATION PROCEDURE

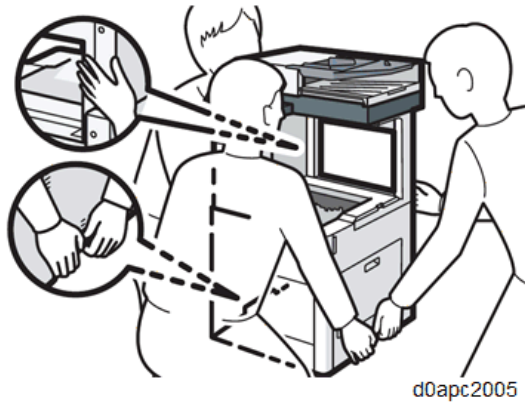
⚠ CAUTION

- To avoid the danger of electrical shock, before installing this option always turn the machine OFF.
- Unplug the power cord and disconnect the ethernet cable before moving the machine.
- The center of gravity of the machine is at the rear and may tip easily because the rear is much heavier than the front. Carefully lift the machine by the inset Grips on the sides, and then keep it horizontal as you move it.

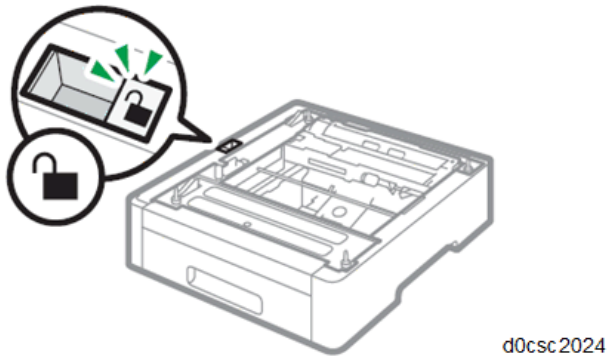
For the IM C530FB at least two people are needed to lift the machine.



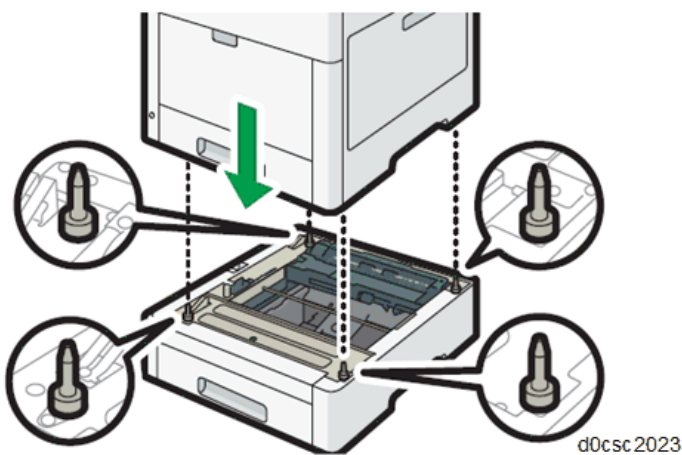
For the IM C530F at least three people are needed to lift the machine.



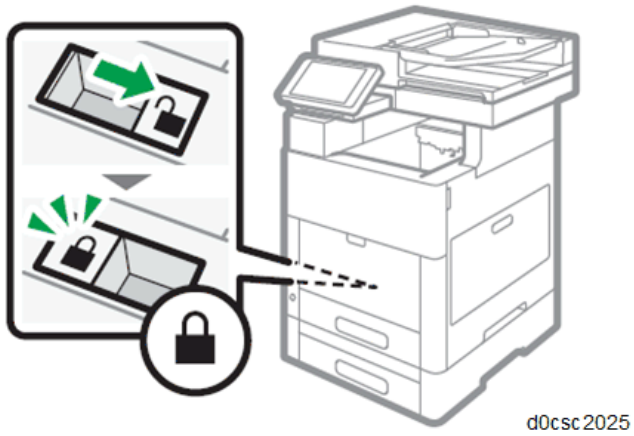
1. Unlock the lever on the optional paper feed unit.



2. There are four vertical pins on the optional paper feed unit. Align the pins with the holes on the underside of the machine, and then carefully lower the machine onto the pins.



3. Lock the lever on the optional paper feed unit.

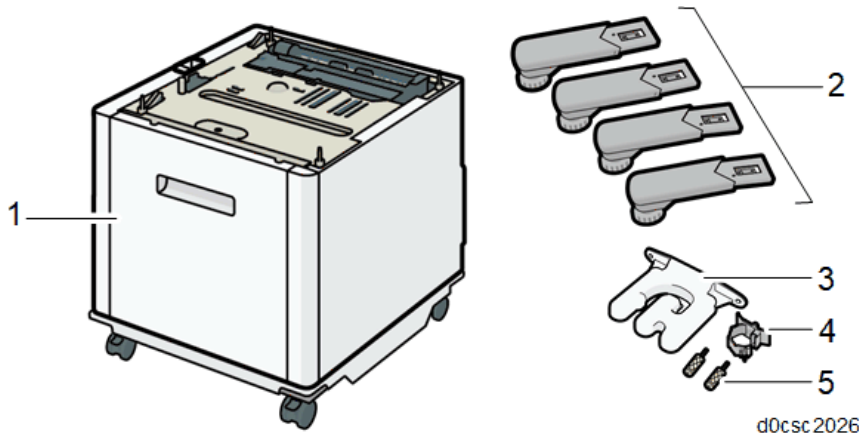


d0csc 2025

4. Plug in the power cord, and then turn on the machine.
5. Print the configuration page to confirm that the optional paper feed unit is attached correctly.

2.4 LCIT PB1190 (D3GY-17)

2.4.1 ACCESSORY CHECK



1 Installation

	Description	Q'ty	Remark
1	FEEDER ASSY	1	
2	STAND: FL	2	
	STAND: FR	2	
3	GUIDE	1	
4	CLAMP	1	
5	PIN	2	

2.4.2 INSTALLATION PROCEDURE

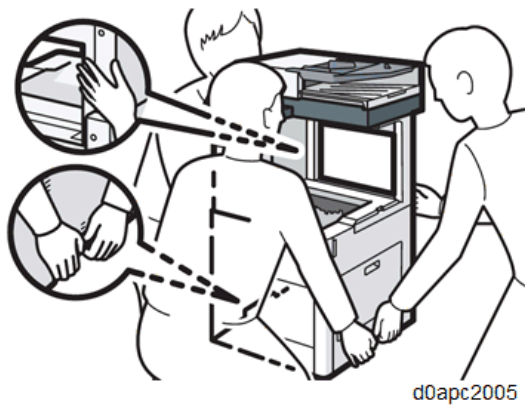
⚠ CAUTION

- To avoid the danger of electrical shock, before installing this option always turn the machine OFF.
- Unplug the power cord and disconnect the ethernet cable before moving the machine.
- The center of gravity of the machine is at the rear and may tip easily because the rear is much heavier than the front. Carefully lift the machine by the inset Grips on the sides, and then keep it horizontal as you move it.

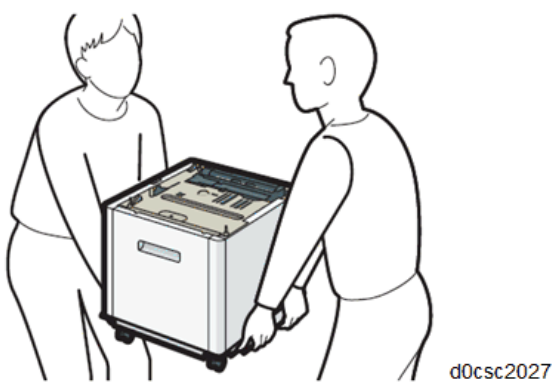
For **IM C530FB** at least two people are needed to lift the machine.



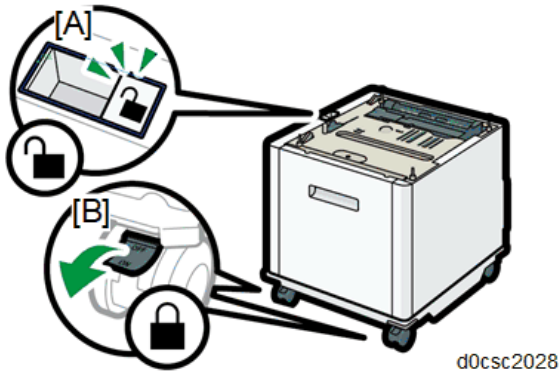
For **IM C530F** at least three people are needed to lift the machine.



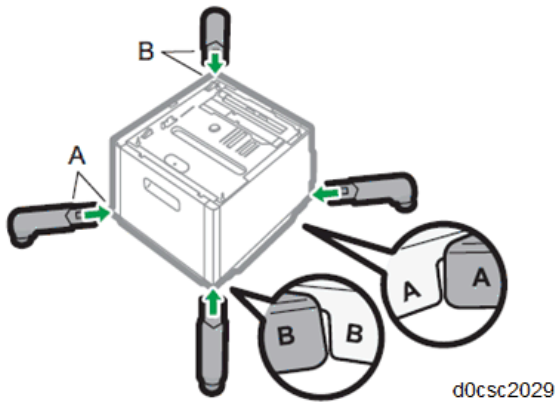
- When lifting this option, two people lift it from both sides as shown.



1. Unlock the lever [A] on the optional paper feed unit and lock the front casters [B].

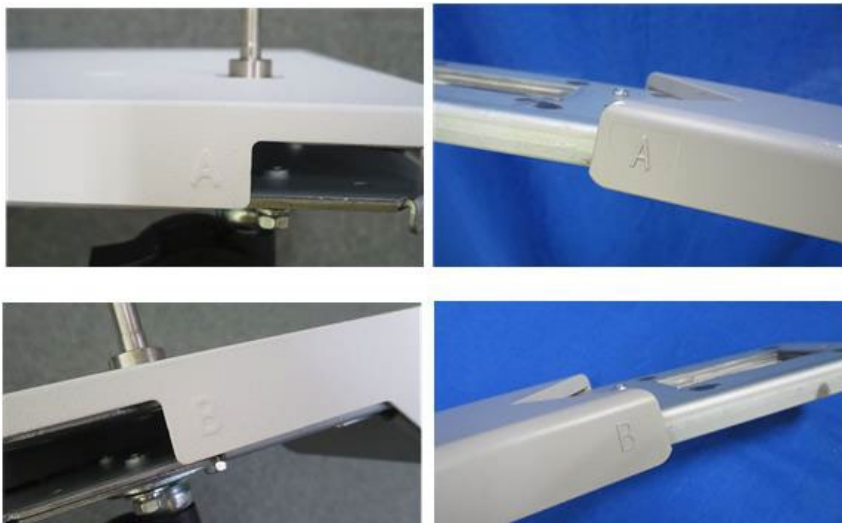


2. Attach the four stands.

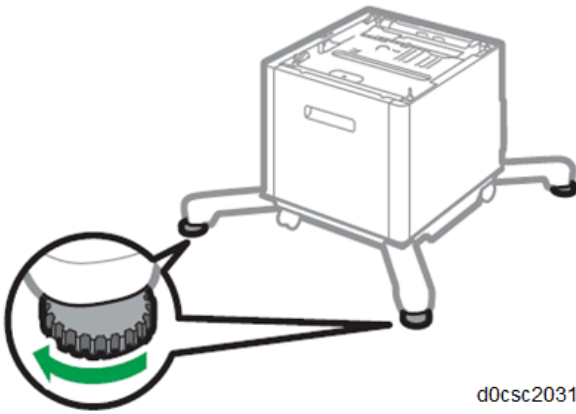


Note

- Match the "A" stamped on the LCT with the "A" on each stand, while matching the "B" on the LCT with the "B" and each stand as shown above.

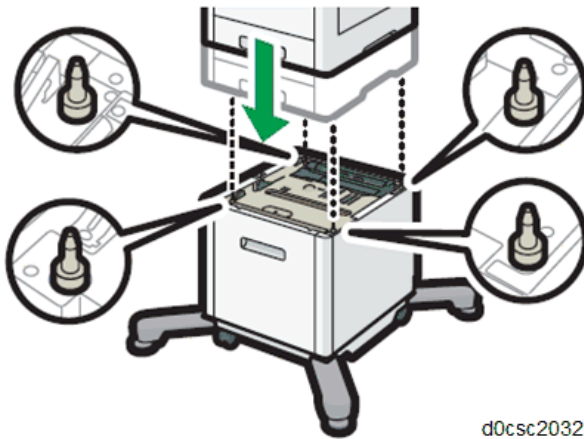


3. Turn the adjusters until the LCT cannot move.



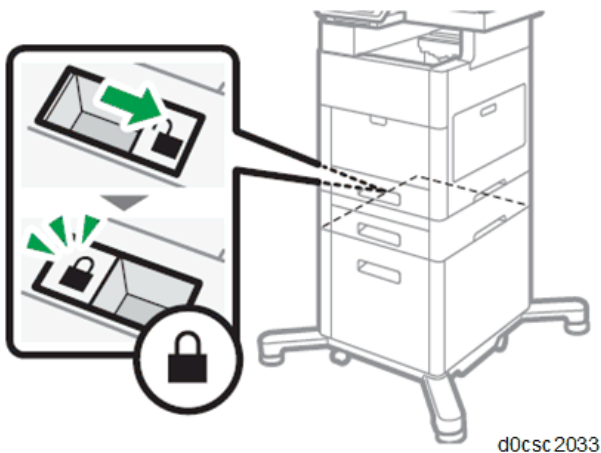
d0csc2031

4. There are four vertical pins on the LCT. Align the pins with the holes on the underside of the machine, and then carefully lower the machine.



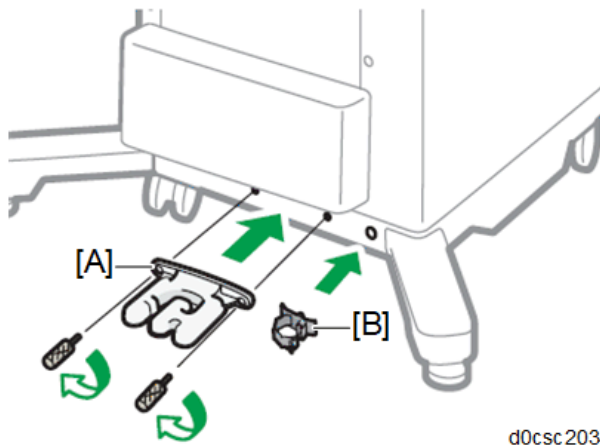
d0csc2032

5. Lock the lever on the LCT.



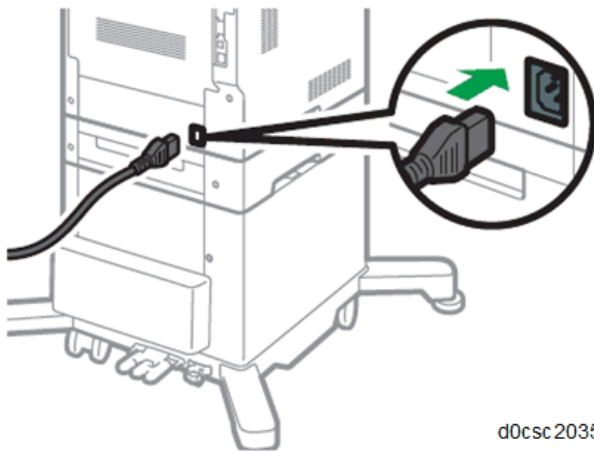
d0csc2033

6. Attach the power cord guide [A] and clamp [B] to the back of the LCT.



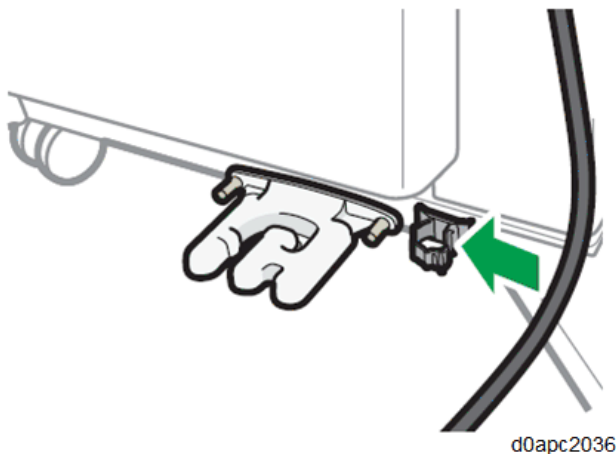
d0csc2034

7. Connect the power cord to the machine.



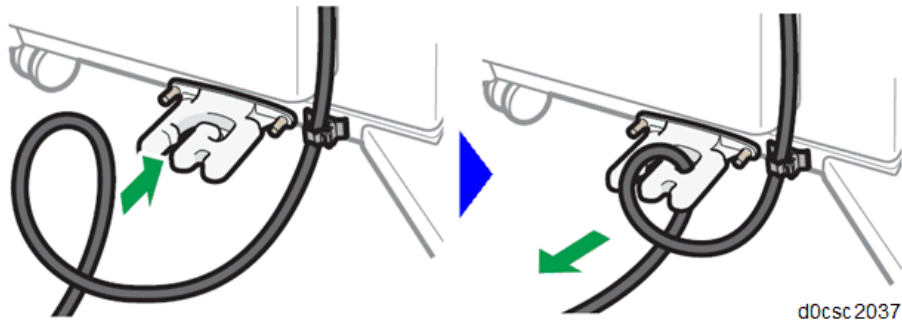
d0csc2035

8. Clamp the power cord.



d0apc2036

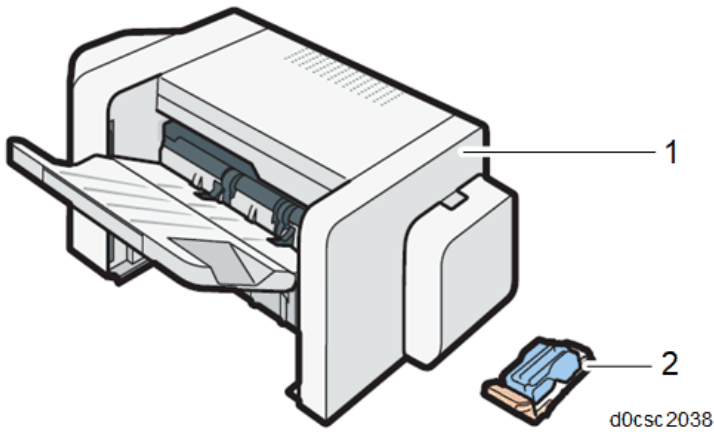
9. Loop with the power cord, and then attach it to the power cord guide as shown.



10. Plug in the power cord, and then turn on the machine.
11. Print the configuration page to confirm that the LCT is attached correctly.

2.5 INTERNAL FINISHER SR1020 (D3H0-17)

2.5.1 ACCESSORY CHECK



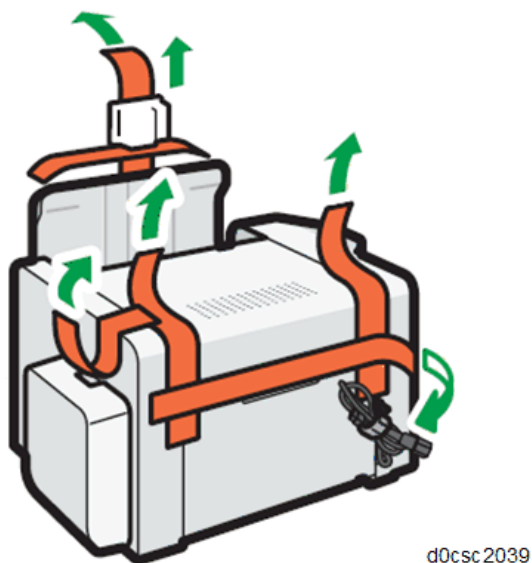
No.	Description	Q'ty	Remark
1	FINISHER ASSY	1	
2	STAPLE CARTRIDGE	1	Type T staples
-	INSTALLATION PROCEDURE	1	

2.5.2 INSTALLATION PROCEDURE

⚠ CAUTION

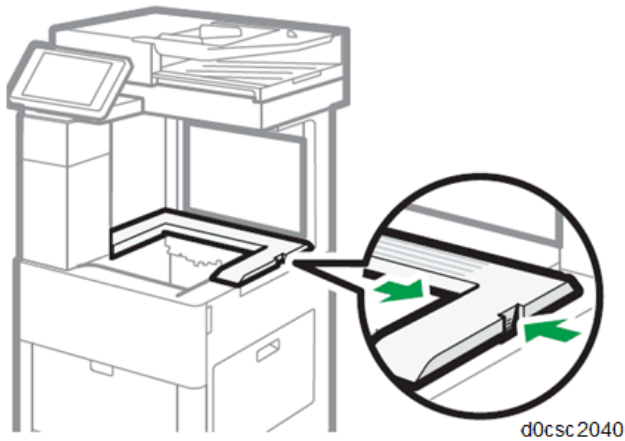
- To avoid the danger of electrical shock, before installing this option always turn the main machine OFF, and then disconnect the power cord from the power source.

1. Remove all tapes and the protective sheet.

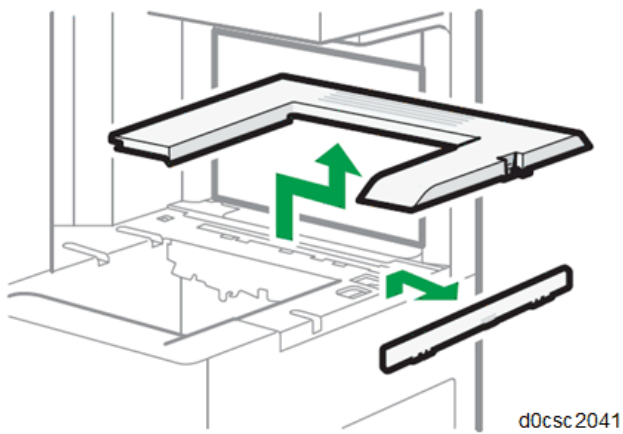


d0csc2039

2. Press to release the hook as shown.



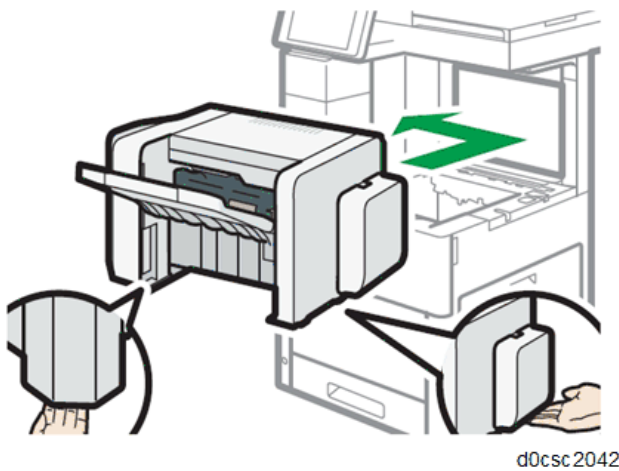
3. Remove the Top Exit Cover and the Right Upper Cap.



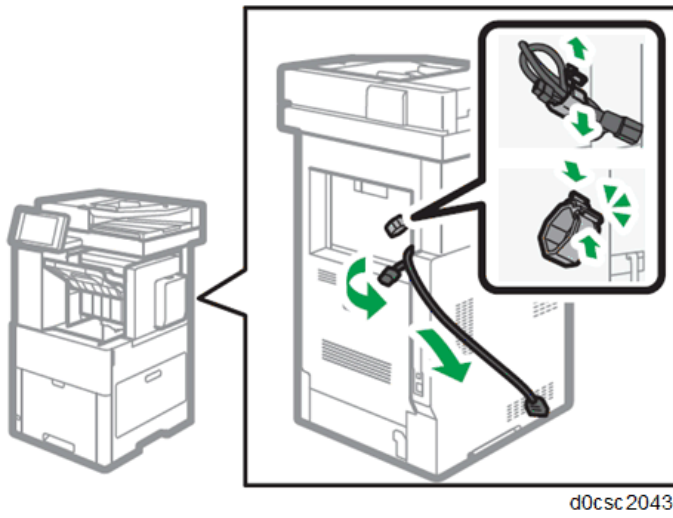
Note

- The customer should keep the removed Top Exit Cover.

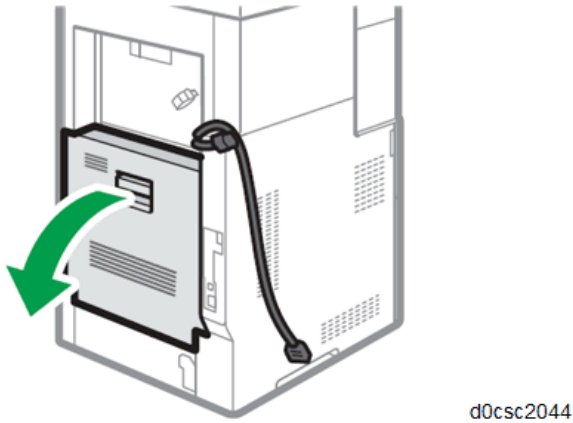
4. Set the Finisher in the machine.



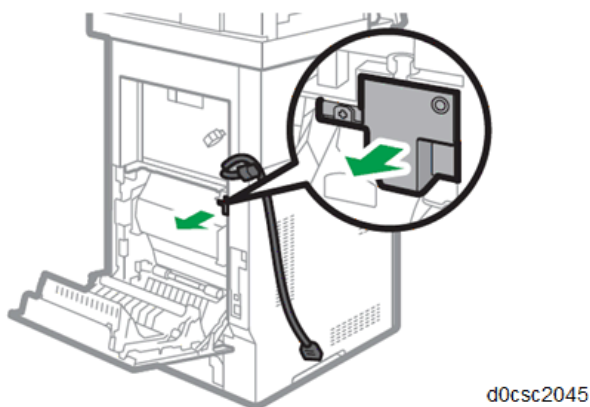
5. Unclamp the cables bundled at the back of the Finisher.



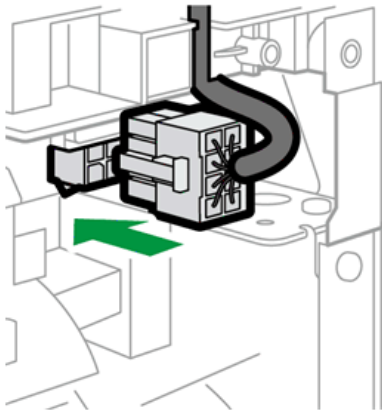
6. Open the COVER REAR ASSY AIO.



7. Pull out the connector cover.

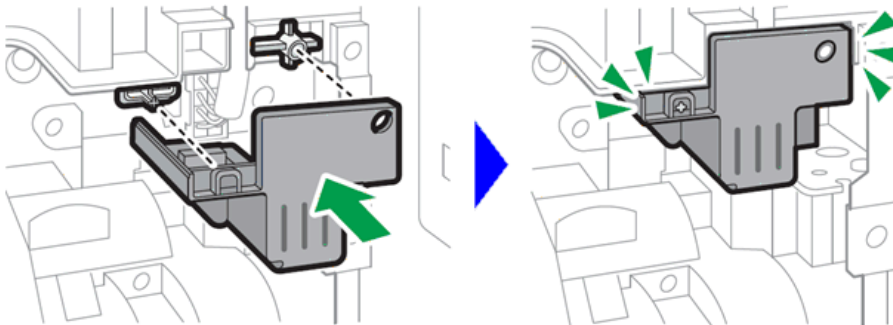


8. Connect the single cable from the Finisher.



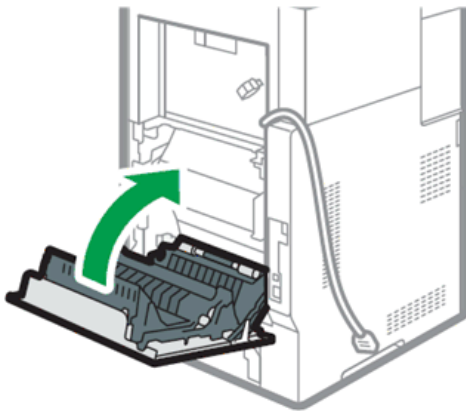
d0csc2046

9. Attach the connector cover removed in Step 7.



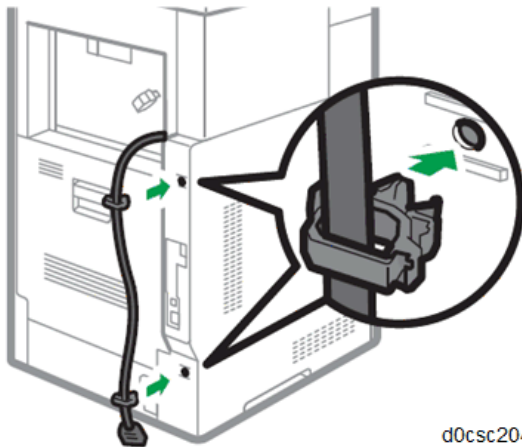
d0csc2047

10. Close the Rear Cover.



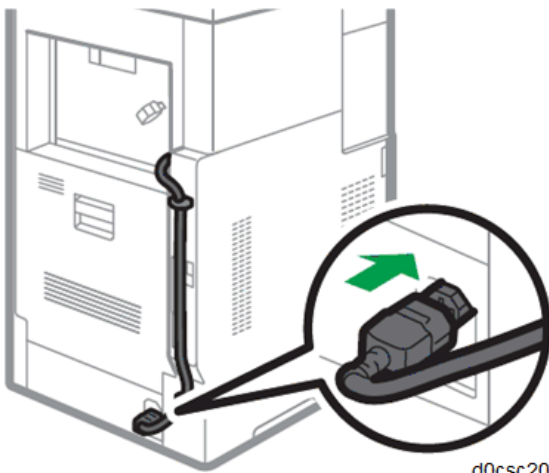
d0csc2048

11. Attach the two clamps, and then clamp the other cable from the Finisher as shown.



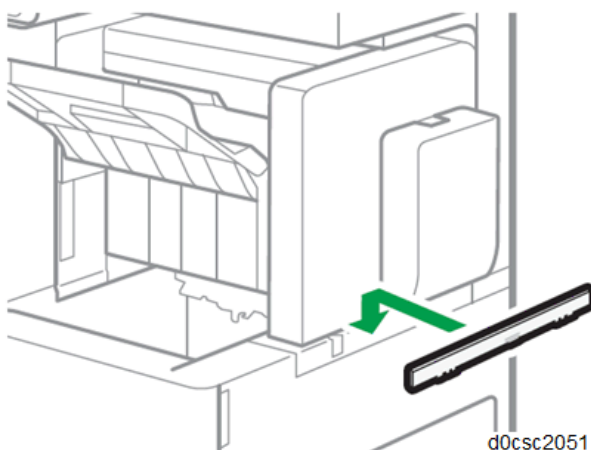
d0csc2049

12. Connect the cable from the Finisher to the machine.



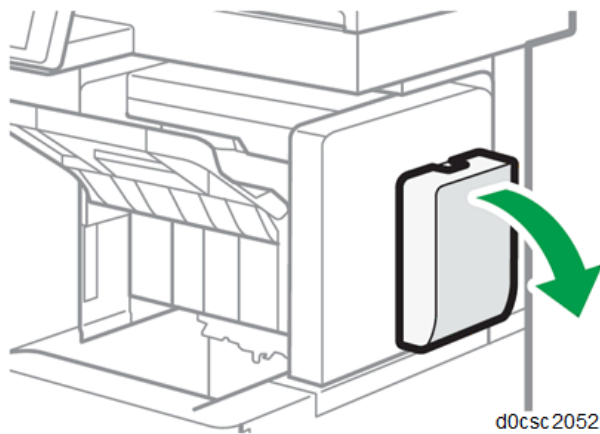
d0csc2050

13. Attach the Right Upper Cap removed in Step 3.

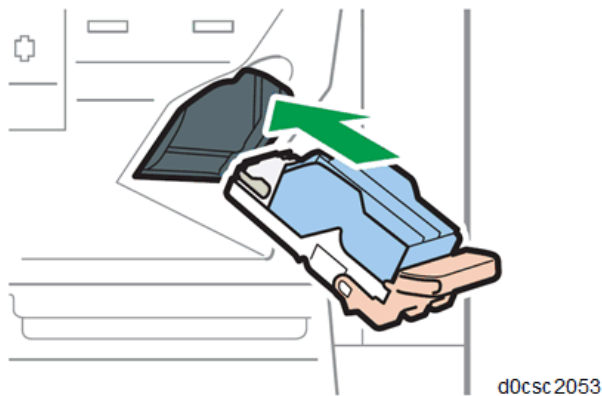


d0csc2051

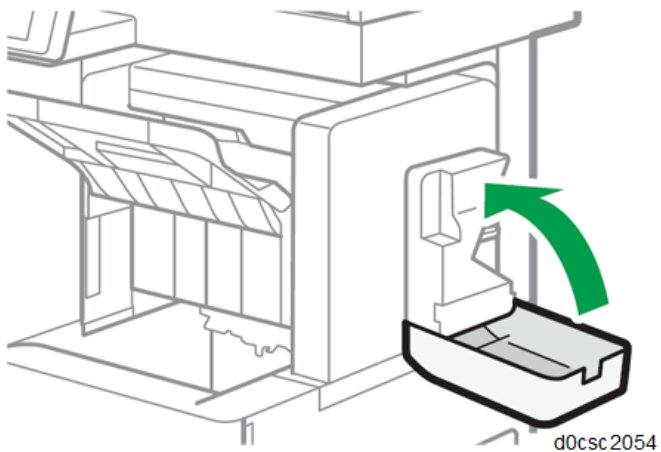
- 14.** Remove the Stapler Cover.



- 15.** Attach the Stapler Cartridge.



- 16.** Attach the Stapler Cover removed in Step 14.

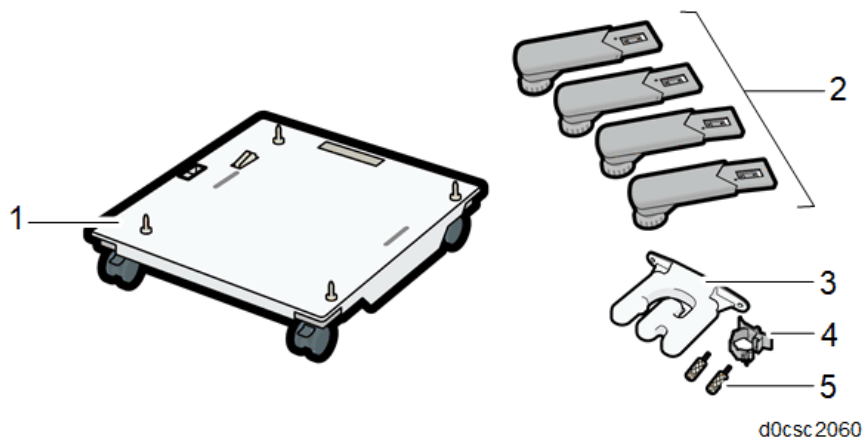


- 17.** Plug in the power cord, and then turn the machine on.

- 18.** Print the configuration page to confirm that the Finisher is installed correctly.

2.6 CASTER TABLE TYPE M43 (D3H1-17)

2.6.1 ACCESSORY CHECK



1 Installation

No.	Description	Q'ty	Remark
1	CASTER ASSY	1	
2	STAND: FL	2	
	STAND: FR	2	
3	GUIDE	1	
4	CLAMP	1	
5	PIN	2	

2.6.2 INSTALLATION PROCEDURE

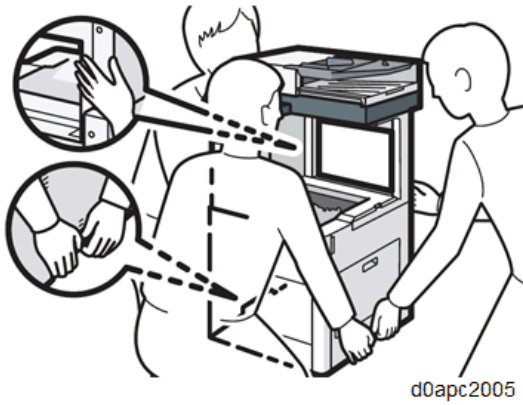
⚠ CAUTION

- To avoid the danger of electrical shock, before installing this option always turn the machine OFF.
- Unplug the power cord and disconnect the ethernet cable before moving the machine.
- The center of gravity of the machine is at the rear and may tip easily because the rear is much heavier than the front. Carefully lift the machine by the inset Grips on the sides, and then keep it horizontal as you move it.

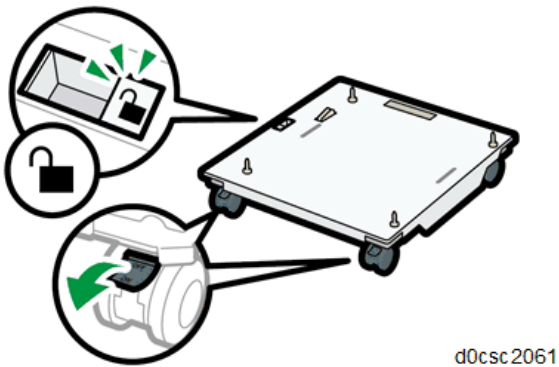
For **IM C530FB** at least two people are needed to lift the machine.



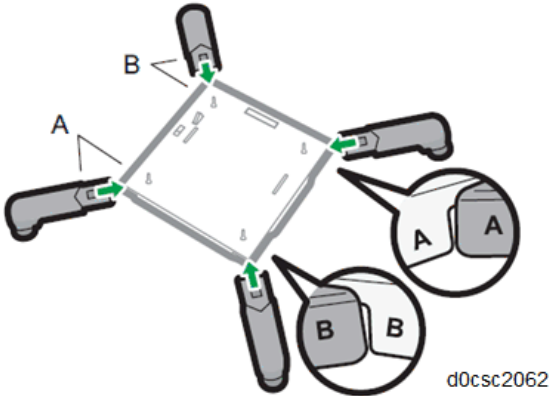
For **IM C530F** at least three people are needed to lift the machine.



1. Unlock the lever [A] on the caster table and lock the front casters [B].



2. Attach the four stands.



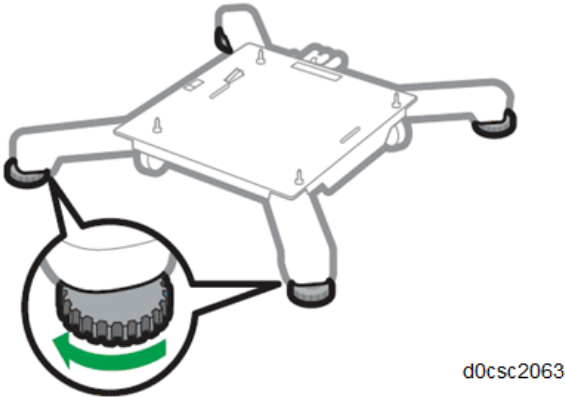
1 Installation

Note

- Match the "A" stamped on the table with the "A" on each stand, while matching the "B" on the table with the "B" and each stand as shown above.



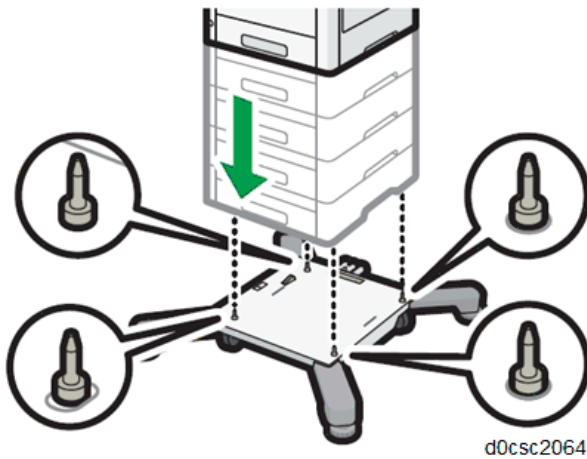
3. Turn the adjusters until the caster table cannot move.



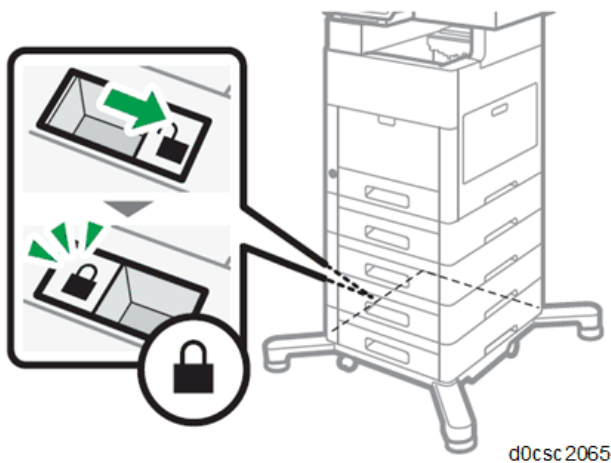
- There are four vertical pins on the caster table. Align the pins with the holes on the underside of the machine, and then carefully lower the machine.

Note

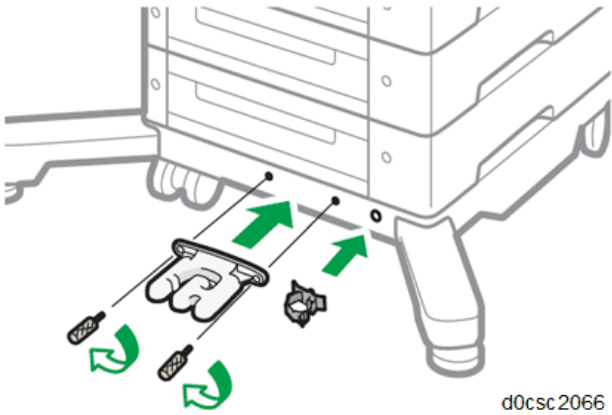
- To attach several optional paper trays at the same time, first attach one paper tray on the caster table, and then attach another paper tray on them, and so on.



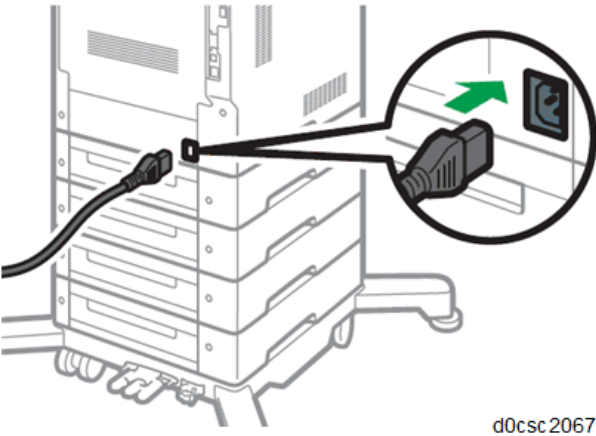
- Lock the lever on the caster table.



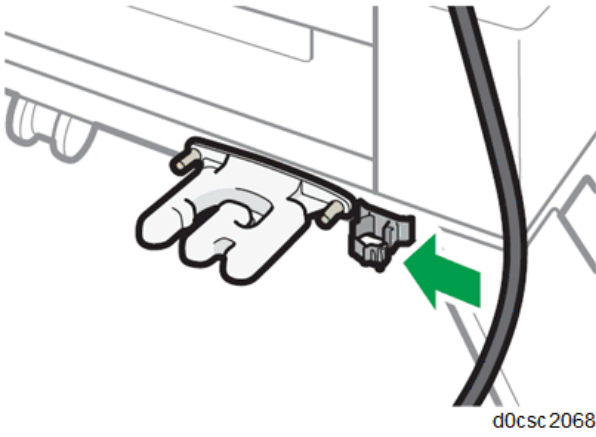
6. Attach the power cord guide [A] and clamp [B] to the back of the caster table.



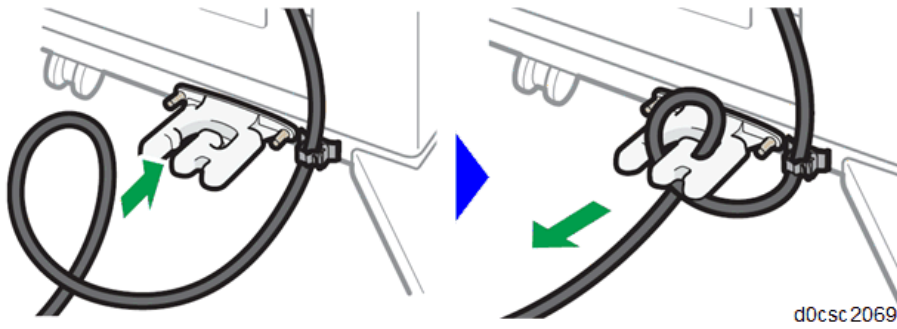
7. Connect the power cord to the machine.



8. Clamp the power cord.



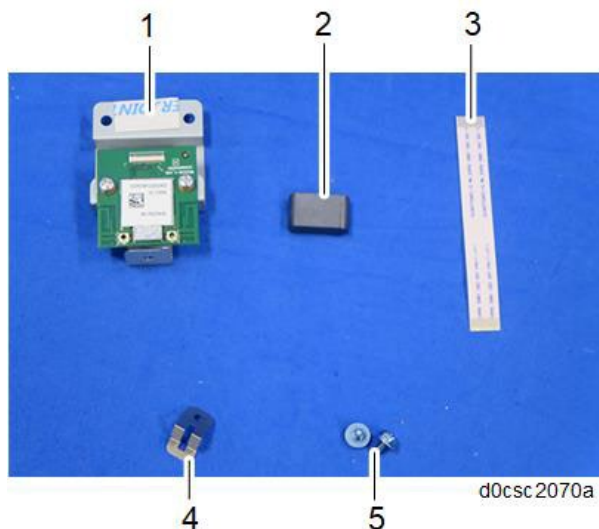
9. Loop with the power cord, and then attach it to the power cord guide as shown.



10. Plug in the power cord, and then turn the machine on.

2.7 IEEE 802.11 INTERFACE UNIT TYPE M43 (D3J4-01)

2.7.1 ACCESSORY CHECK



1 Installation

No.	Description	Q'ty	Remark
1	WIFI module	1	
	Bracket	1	
	Screw (M3x6)	2	
2	Ferrite core	1	
3	FFC	1	
4	Grounding plate	1	
5	Blue screw (M3x6)	2	
-	Decal	1	

2.7.2 INSTALLATION PROCEDURE

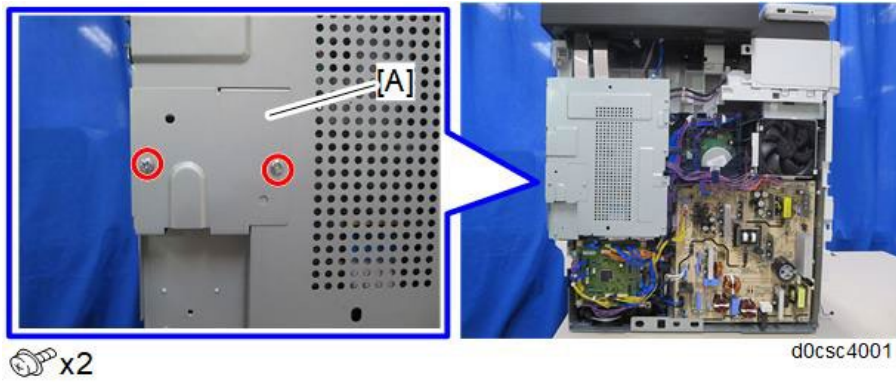
⚠ CAUTION

- To avoid the danger of electrical shock or damage to the machine, before installing this option always turn the main machine OFF, and then disconnect the power cord from the power source.

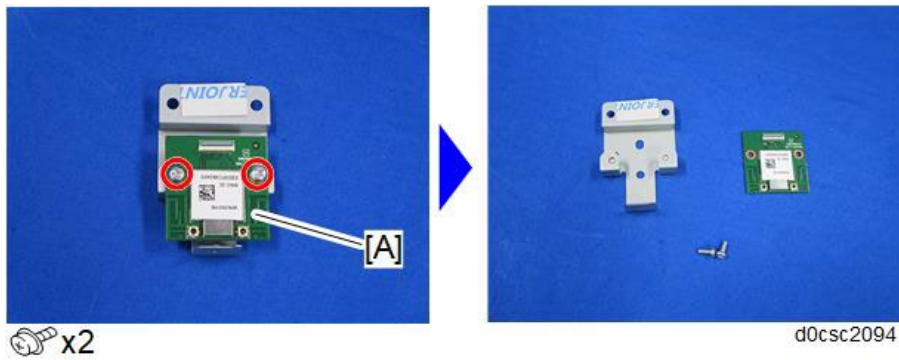
- Remove Paper Tray. (**Paper Tray**)
- Remove Bypass Tray Assy. (**Bypass Tray Assy**)
- Remove Toner Cover. (**Toner Cover**)
- Remove Front Left Cover. (**Front Left Cover**)

5. Remove Left Cover. (**Left Cover**)

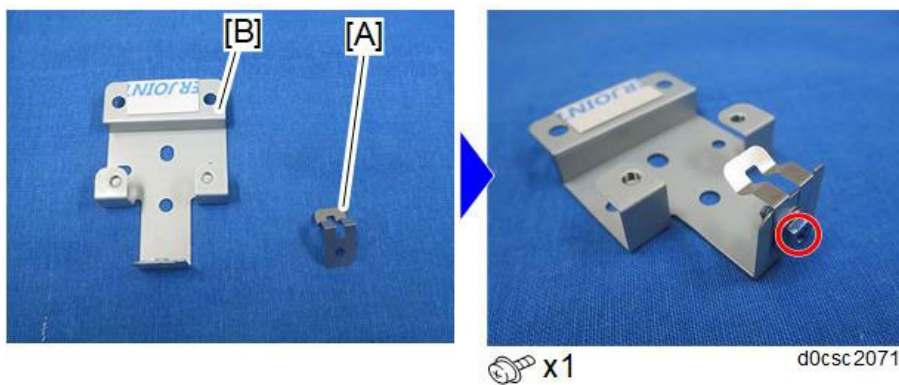
6. Remove WIFI Cover [A].



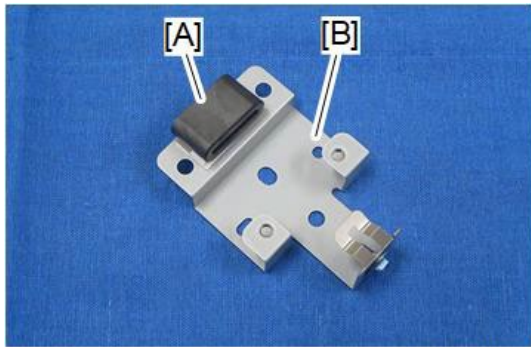
7. Remove the WIFI module [A] from the bracket.



8. Attach the grounding plate [A] on the bracket [B] with the blue screw (M3X6mm).

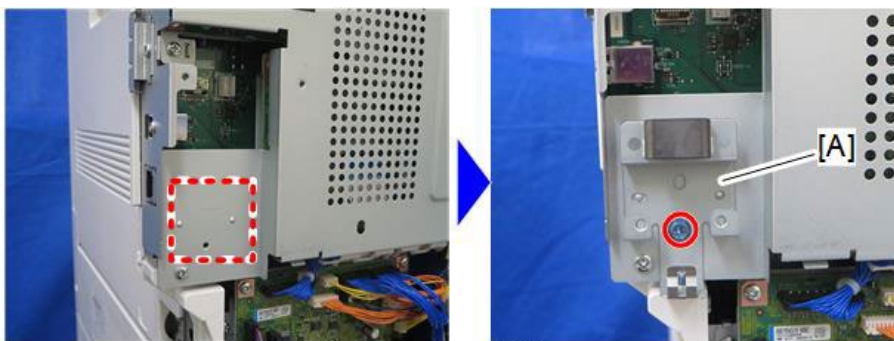


9. Peel the double-sided tape and attach the ferrite core [A] on the bracket [B].



d0csc2072

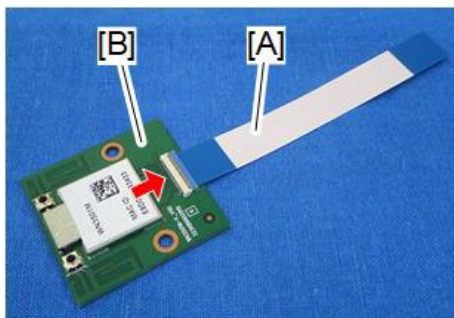
10. Attach the bracket [A] with the blue screw (M3X6mm).



🔩 x1

d0csc2073

11. Connect the FFC [A] to the WIFI module [B].

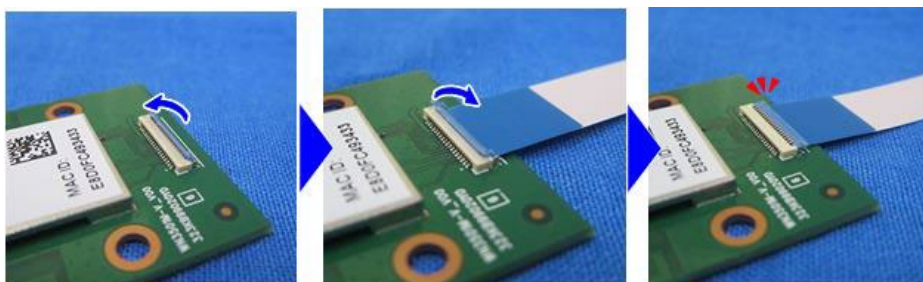


📶 x1

d0csc2074

Note

- To connect the FFC, first gently flip the lock tab up to open it, insert the FFC, and then carefully close the lock tab.

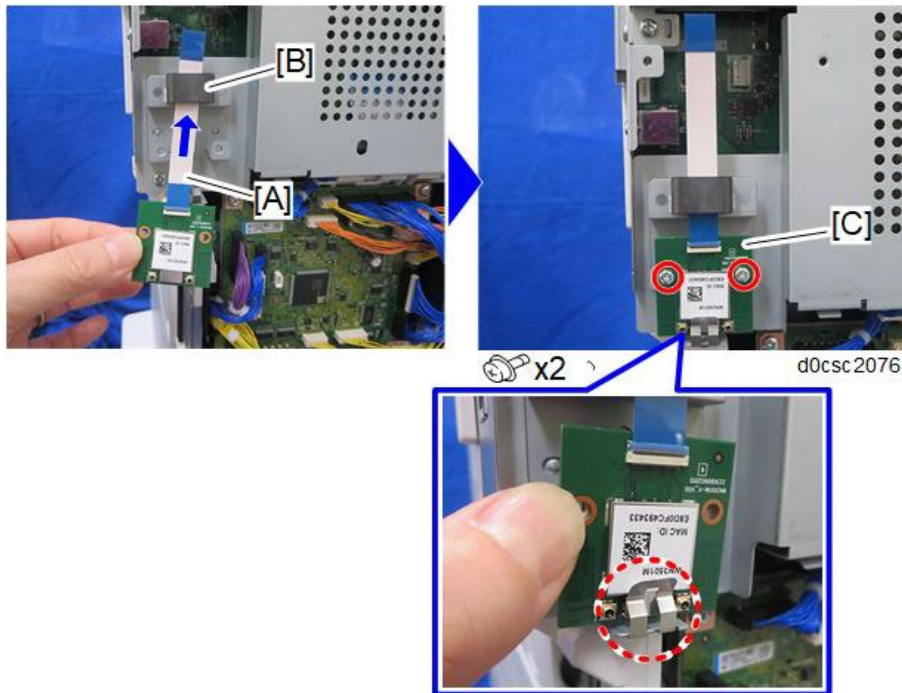


d0csc2075

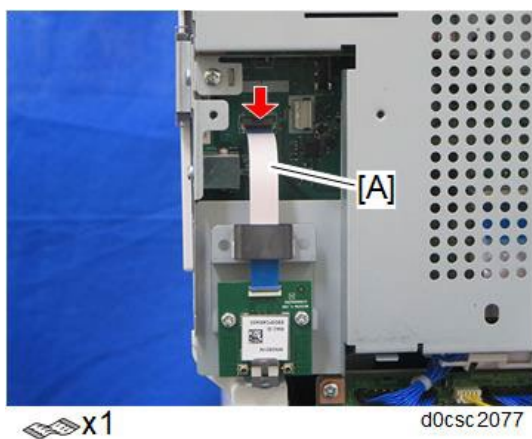
12. Route the FFC [A] through the ferrite core [B], and then attach the WIFI module [C] with two screws (M3X6mm).

Note

- Make sure that the WIFI module [C] is touching the grounding plate.

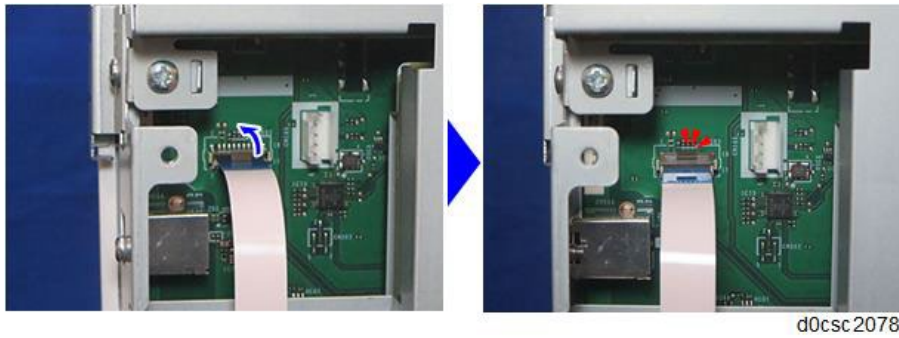


13. Connect the FFC [A] to the controller board.



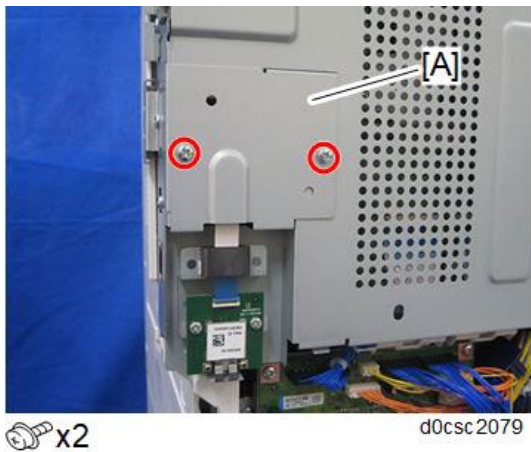
Note

- To connect the FFC, first gently flip the lock tab up to open it, insert the FFC, and then carefully close the lock tab.



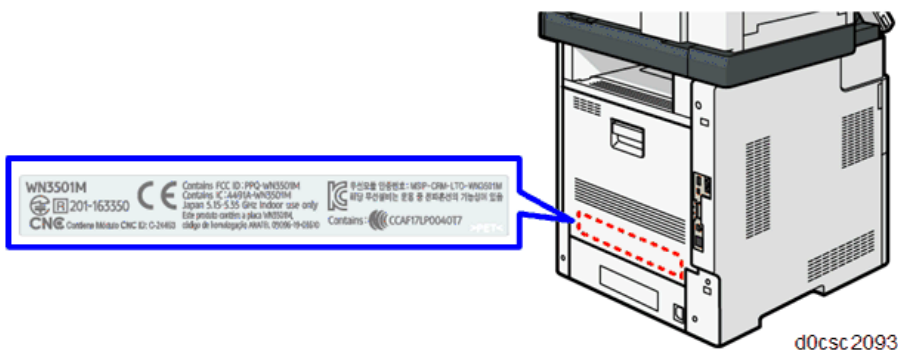
1 Installation

14. Attach the WIFI cover [A] removed in Step 6.



15. Reassemble the machine.

16. Attach the decal on the Rear Cover of the machine.



Note

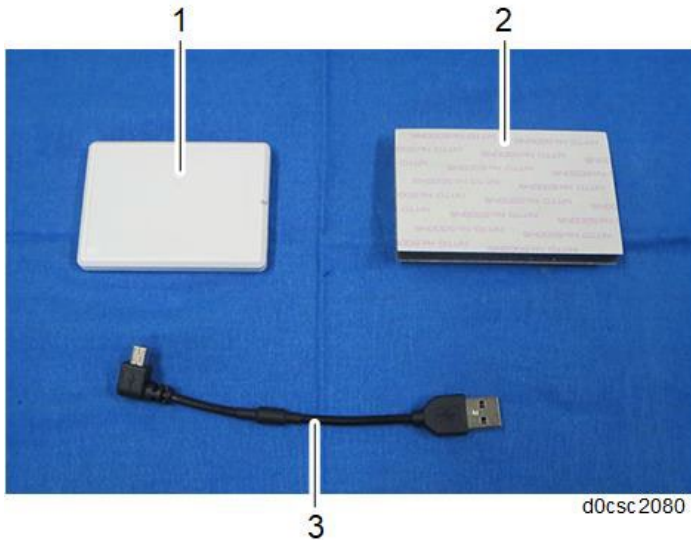
- When installing this option and NFC Card Reader Type M43 at same time, 2 decals should be attached. Line up 2 decals vertically.

17. Plug in the power cord, and then turn the machine on.

- 18.** On the operation panel, select "System Settings > Network/Interface > Machine: LAN Type", and then set to "Wireless LAN".
- 19.** Select "System Settings > Network/Interface > Machine: Wireless LAN > Country/Region", and then select your country.
If none of the choices apply, select "All Countries".

2.8 NFC CARD READER TYPE M43 (D3J4-02)

2.8.1 ACCESSORY CHECK



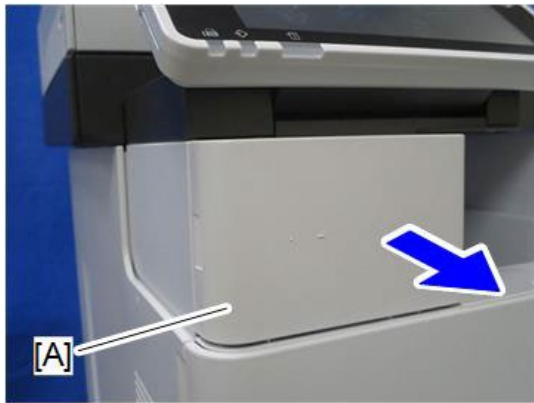
No.	Description	Q'ty	Remark
1	NFC Card Reader	1	
2	Sponge	1	
3	USB Cable	1	
-	Decal	2	

2.8.2 INSTALLATION PROCEDURE (SHORT MODEL)

⚠ CAUTION

- To avoid the danger of electrical shock or damage to the machine, before installing this option always turn the main machine OFF, and then disconnect the power cord from the power source.

1. Remove IC Card Cover [A].



d0csc2081

2. Peel the double-sided tape one side, and then attach the cushion [A] into the hole under the operation panel.



d0csc2082

3. Connect the USB cable [A] to the NFC card reader [B].



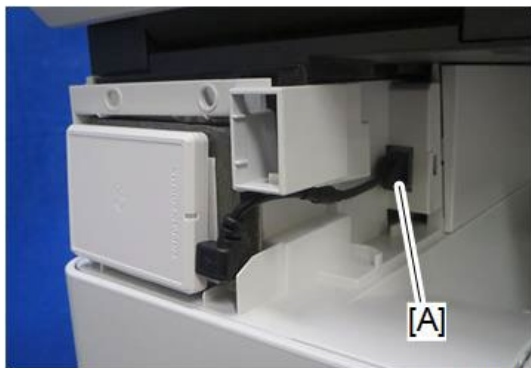
d0csc2083

4. Peel the double-sided tape, and then attach the NFC card reader [A] as shown below.



d0csc2084

5. Connect the USB cable [A] to the machine.



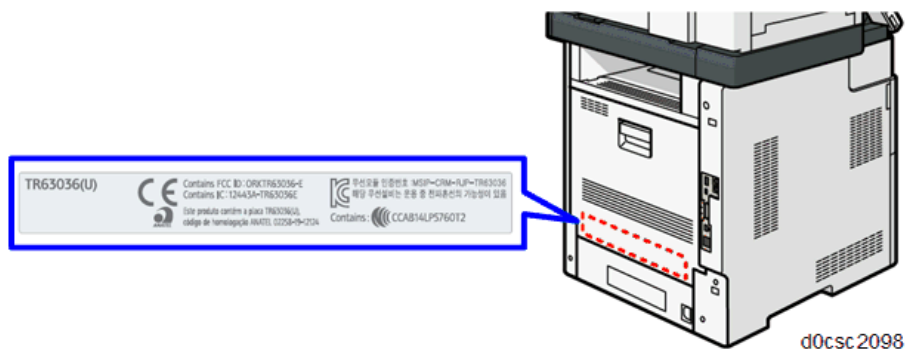
d0csc2085

6. Reassemble the machine.
7. Attach the decal on the IC Card Cover of the machine.



d0apc2097

8. Attach the decal on the Rear Cover of the machine.



Note

- When installing this option and IEEE 802.11 Interface Unit M43 at same time, 2 decals should be attached. Line up 2 decals vertically.

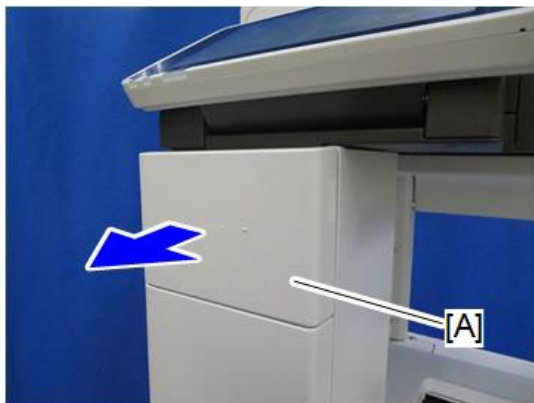
9. Plug in the power cord, and then turn the machine on.

2.8.3 INSTALLATION PROCEDURE (TALL MODEL)

⚠ CAUTION

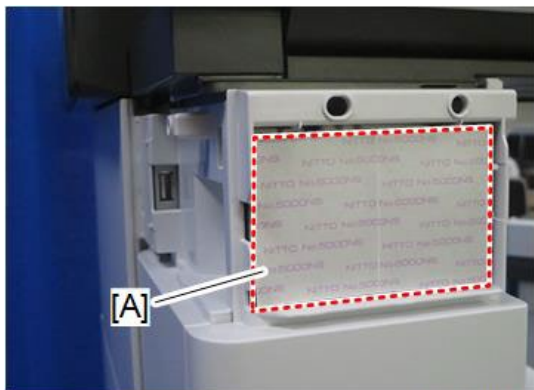
- To avoid the danger of electrical shock or damage to the machine, before installing this option always turn the main machine OFF, and then disconnect the power cord from the power source.

1. Remove IC Card Cover [A].



d0csc2086

2. Peel the double-sided tape one side, and then attach the cushion [A] into the hole under the operation panel.



d0csc2087

3. Connect the USB cable [A] to the NFC card reader [B].



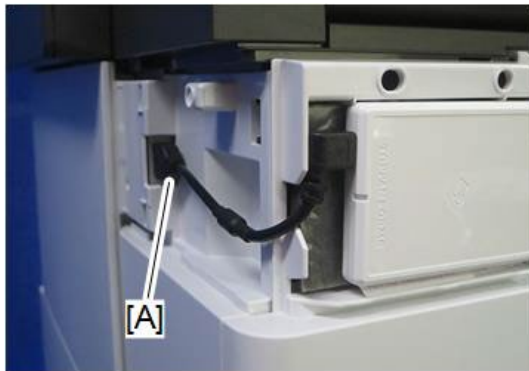
d0csc2083

4. Peel the double-sided tape, and then attach the NFC card reader [A] as shown below.



d0csc2088

5. Connect the USB cable [A] to the machine.



d0csc2089

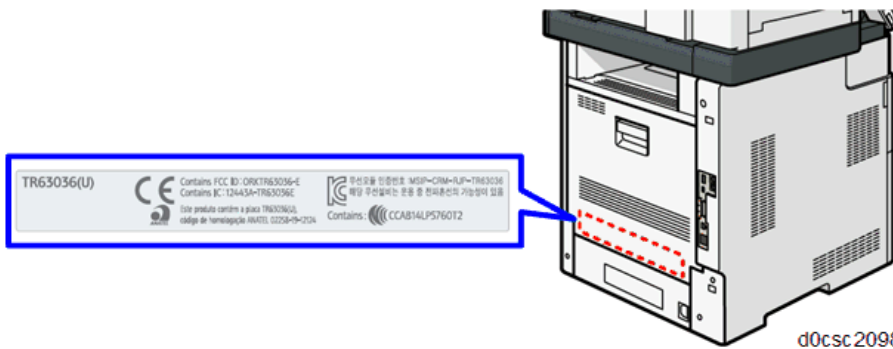
6. Reassemble the machine.

7. Attach the decal on the IC Card Cover of the machine.



d0apc2097

8. Attach the decal on the Rear Cover of the machine.



d0csc2098

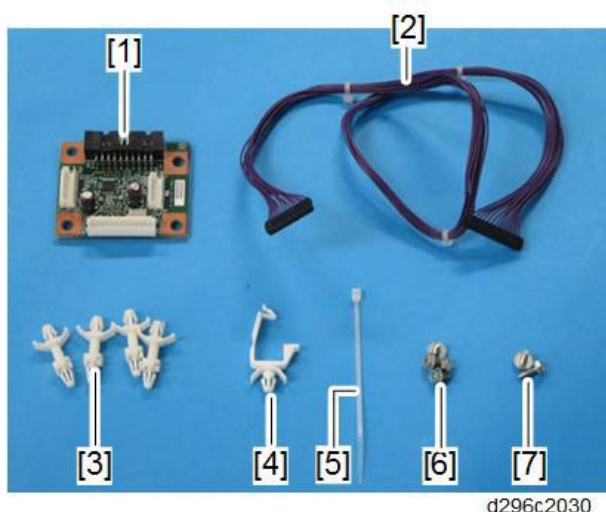
Note

- When installing this option and IEEE 802.11 Interface Unit M43 at same time, 2 decals should be attached. Line up 2 decals vertically.

9. Plug in the power cord, and then turn the machine on.

2.9 OPTIONAL COUNTER INTERFACE UNIT TYPE M12 (B870-21)

2.9.1 ACCESSORY CHECK



No.	Description	Q'ty	Remarks
1	Counter interface board	1	
2	Harness (Counter interface board to Controller Board)	1	
3	Standoffs	4	Not used
4	Clamp	1	
5	Lock band	3	Not used
5	Standoffs	4	Not used
6	Screws - 3 x 6	4	Only two used
7	Screws - 3 x 8	2	Not used
-	Caution chart	1	

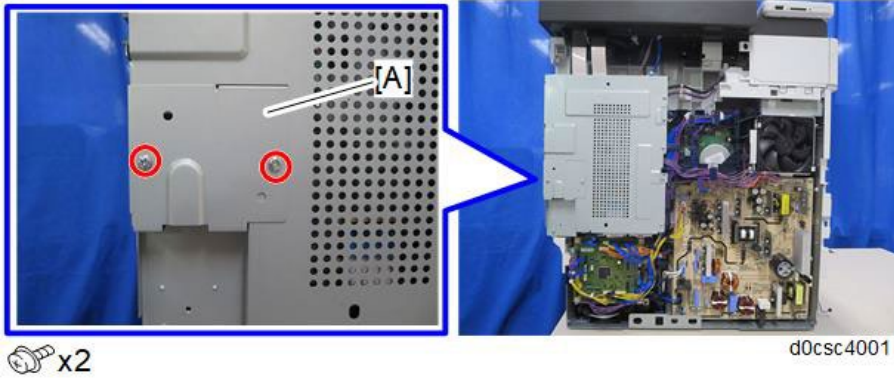
2.9.2 INSTALLATION PROCEDURE

⚠ CAUTION

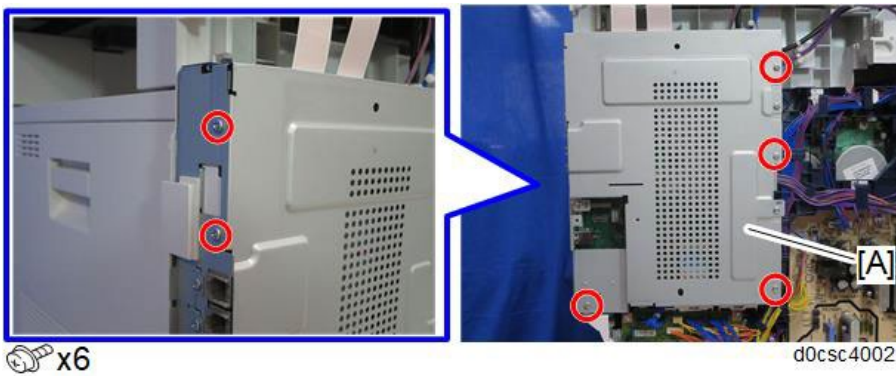
- To avoid the danger of electrical shock or damage to the machine, before installing this option always turn the main machine OFF, and then disconnect the power cord from the power source.

1. Remove Paper Tray. (*Paper Tray*)

2. Remove Bypass Tray Assy. (*Bypass Tray Assy*)
3. Remove Toner Cover. (*Toner Cover*)
4. Remove Front Left Cover. (*Front Left Cover*)
5. Remove Left Cover. (*Left Cover*)
6. Remove the WIFI cover [A].



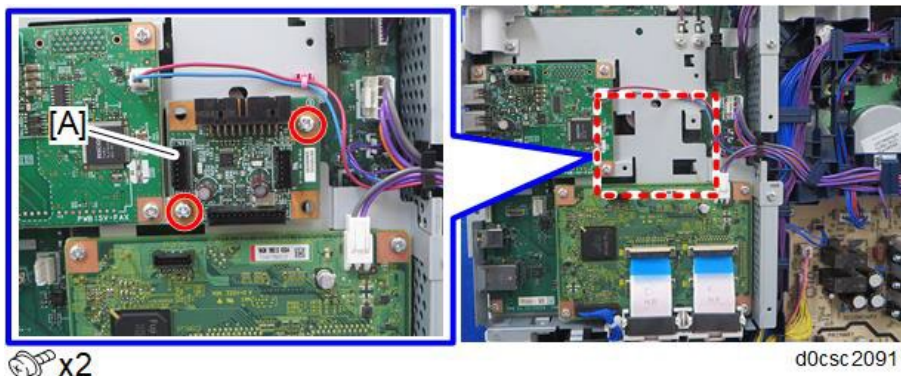
7. Remove the Controller Box Cover [A].



8. Remove the cover [A].

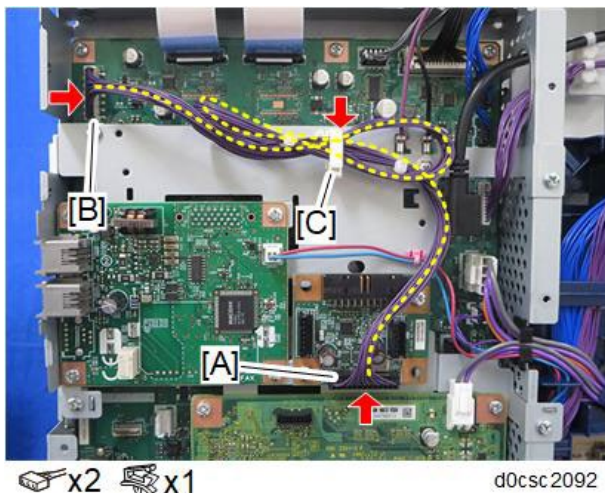


9. Attach the counter interface board [A] with the two screws (M3x6).



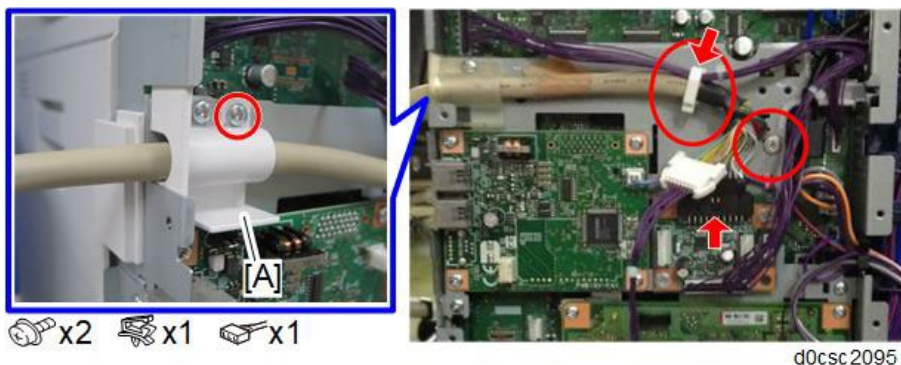
10. Connect the harness between the counter interface board CN3 (13 pin) [A] and the Controller Board CN205 [B].

11. Attach the clamp [C], and then route the harness as shown below.



12. Connect the optional counter I/F cable and the grounding wire.

13. Rotate the cover [A] 90 degrees to secure the I/F cable.



14. Reassemble the machine.

2.10 NETWORK SETTINGS

2.10.1 SPECIFYING NETWORK SETTINGS ACCORDING TO CUSTOMER'S ENVIRONMENT

Specifying Network Settings

Check the customer's network environment and specify network settings according to the functions to be used (such as a scanner, printer, and Document Server setting).

1. Press the "Settings" icon.
2. Press [System Settings] > [Network/Interface].
3. Configure the required settings in [Network/Interface].

For the settings to be specified, see the user manual.

Checking Communication by the Ping Command

Check whether a network connection between the machine and the client computer has been established.

1. Press the "Settings" icon.
2. Press [System Settings] > [Network/Interface] > [Ping Command].
3. Enter the client PC's IP address and press [Ping Command].

After confirming the communication, the result is displayed.

2.11 SECURITY SETTINGS (DATA ENCRYPTION)

You can encrypt data contained in the Address Book, authentication information, and stored documents to prevent data leaks in case the memory is removed from the machine.

Once encryption is enabled, all data subsequently stored on the machine will be encrypted.

The encryption algorithm used in the machine is AES-256.

★ Important

- The encryption key is required for data recovery or migration to another machine. You recommend the customers to keep the encryption key secure by storing it in an SD card or printing it on a sheet.
- If the encryption key is lost and is needed, the Controller Board and Controller NVRAM must be replaced at the same time.
- To transfer data from the machine to another machine, you must decrypt the encrypted data.

2.11.1 BEFORE YOU BEGIN THE PROCEDURE

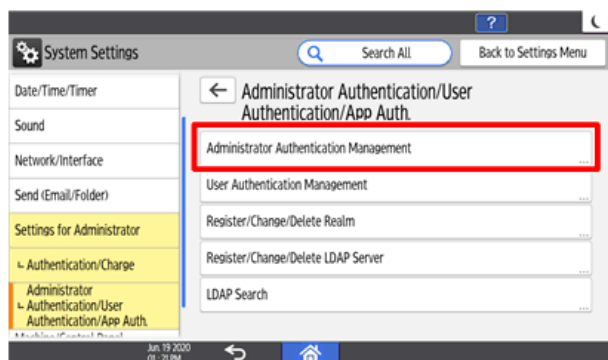
1. Make sure that the following settings are not at their factory default values:

- Supervisor login password
- Administrator login name
- Administrator login password

If any of these settings are at a factory default value, tell the customer these settings must be changed before you do the installation procedure.

2. Make sure that “Administrator Authentication” is On.

Press "Settings" icon > [System Settings] > [Setting for Administrator] > [Authentication/Charge] > [Administrator Authentication/User Authentication/App Auth.] > [Administrator Authentication Management].



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For each administrator privilege to activate Administrator Authentication, select [On] from the list.

- User Management
- Machine Management
- Network Management
- File Management

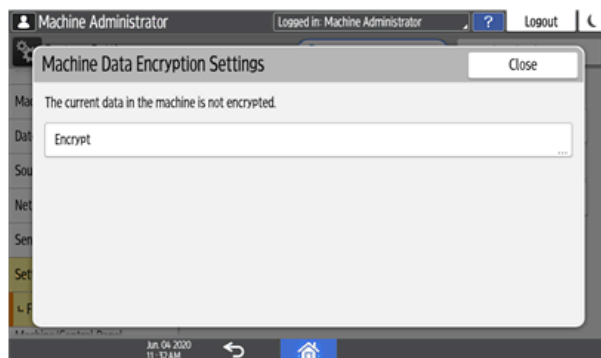
If this setting is disabled (not selected), tell the customer this setting must be enabled (selected) before the the security setting.

2.11.2 ENABLE ENCRYPTION SETTING

★ Important

- The machine cannot be operated while encrypting data, updating the encryption key, or canceling encryption.
- Do not turn off the power of the machine while encrypting data, updating the encryption key, or canceling encryption. If you turn off the power, the memory may be damaged and all data may be unusable.
- The encryption process takes several minutes. Once the encryption process starts, it cannot be stopped.

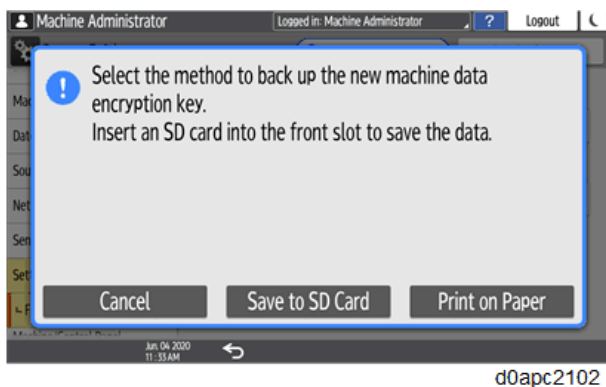
1. Turn ON the main power.
2. Log in as the administrator from the operation panel.
3. Press the "Settings" icon.
4. Press [System Settings] > [Setting for Administrator] > [File Management] > [Machine Data Encryption Settings].
5. Press [Encrypt].



Note

- If the data has been encrypted, you can decrypt the data, update the encryption key, or back up the encryption key.
- Cancel Encryption: Cancels encryption.
- Back Up Encryption Key: Makes a backup of the encryption key. The encryption setting is not changed.

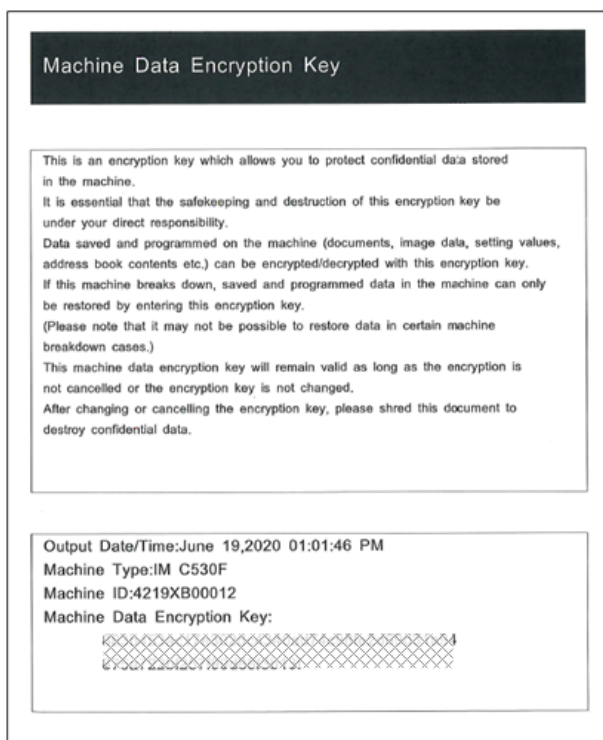
6. Select the location to store the encryption key.



d0apc2102

If you have selected [Save to SD Card], load an SD card into the media slot of the operation panel and press [OK] to back up the encryption key.

If you have selected [Print on Paper], press the [Print] key. Print out the machine's data encryption key.



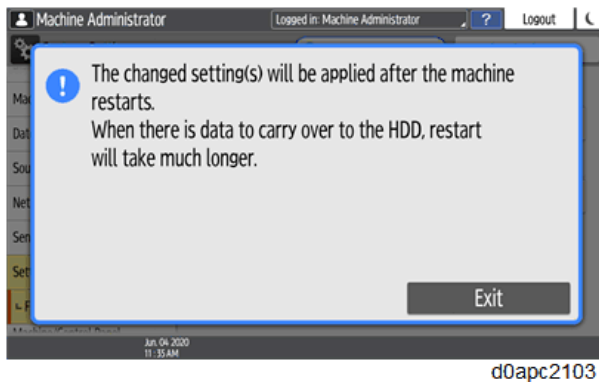
d0apc2104

★ Important

- You recommend the customers to keep the encryption key secure by storing it in an SD card or printing it on a sheet.
- If the encryption key is lost and is needed, the Controller Board and the Controller NVRAM must be replaced at the same time.

7. Press [OK].

8. Press [Exit].



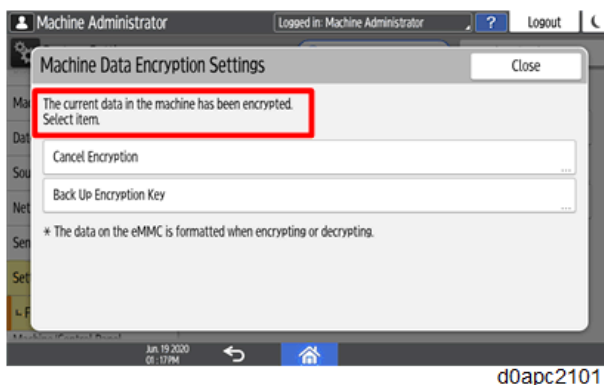
9. Press [Home] icon, and then log out of the machine.

10. Turn OFF the main power, and then turn it 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. Log in as the machine administrator from the operation panel.
2. Press "Settings" icon.
3. Press [System Settings]> [Settings for Administrator] > [File Management] > [Machine Data Encryption Settings].
4. Confirm whether the encryption has been completed or not on this display.



2.11.3 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. Turn ON the main power.
2. Log in as the machine administrator from the operation panel.
3. Press "Settings" icon.
4. Press [System Settings] > [Settings for Administrator] > [File Management] > [Machine Data Encryption Settings].
5. Press [Back Up Encryption Key].
6. 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]. After the machine's data encryption key is backed up, press [Exit].

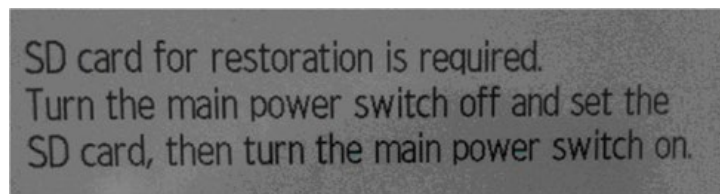
If you have selected [Print on Paper], press the [Print] key. Print out the machine's data encryption key.

7. Press [Exit].
8. Press [Home] icon, and then log out of the machine.

2.11.4 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_XXXXXXXXXX.txt" and save it in the "XXXXXXXXXX" folder. Write the encryption key in the text file.

```
/restore_key/XXXXXXXXXX/key_XXXXXXXXXX.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_XXXXXXXXXX.txt" file.

5. Turn ON the 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.
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.

How to do a forced startup with no encryption key

If the encryption key back-up has been lost, follow the procedure below to do a forced start-up.

Important

- 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 operation panel 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 the SD card slot.
7. Turn ON the main power.
The machine automatically clears the data encryption.
8. Turn OFF the main power when the machine has returned to normal status.
9. Remove the SD card from SD card slot.
10. Turn ON the main power.
11. Execute the SP-5-801-001 (Memory Clear: All Clear) and SP-5-801-002 (Memory Clear: Engine).
12. Set necessary user settings in the "Settings" menu.

SP descriptions

- **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.

2.12 "WEB HELP SUPPORT" SETTINGS

2.12.1 OVERVIEW

The Web Help Support function is a feature that assists users on the operation panel. When a user encounters a problem when operating the machine, the solution is displayed on the operation panel, and users can attempt to resolve the problem by themselves. By offering this solution, we aim to reduce the number of calls, thereby improving the rate of self-resolution. This function is available when the machine is connected to the Internet.

[A]: Tap "?" to display help contents



The Web Help Support function is preinstalled and enabled by default. Specify whether or not to enable or disable the function in SP or UP mode.

2.12.2 HOW TO ENABLE/DISABLE WEB HELP SUPPORT

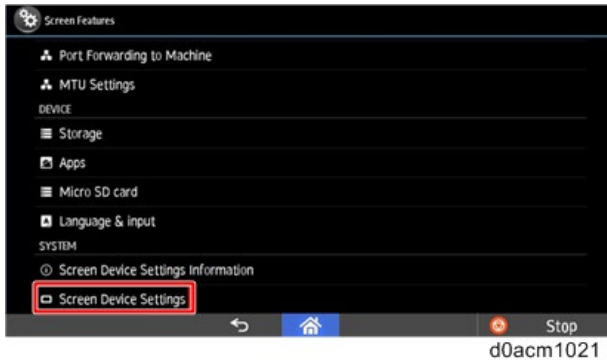
This function is enabled by default. If the customer does not want to use this function, it can be disabled via UP or SP modes as follows:

UP setting

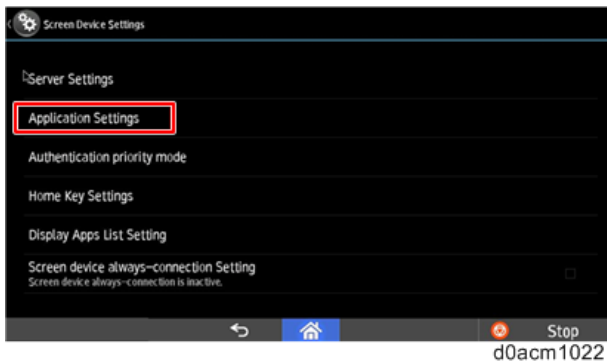
1. Enable machine administrator authentication and login as administrator.
2. Press "Settings" icon.
3. Press [System Settings].
4. Press [Machine] > [Others] > [Support Settings].
5. Select [On] or [Off] for "Help Functions".

SP setting

1. Log in to Screen SP mode.
2. Select "Screen Device Settings".



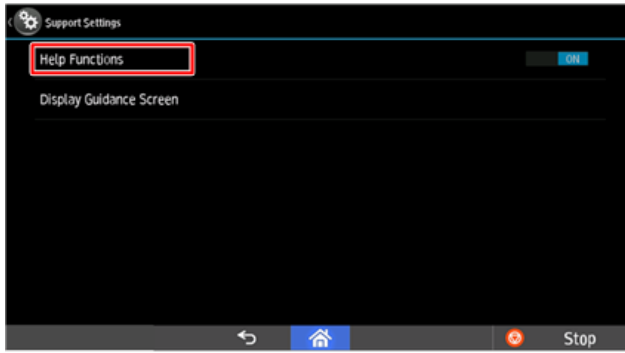
3. Select "Application Settings".



4. Select "Settings" for "Support Settings".



5. Enable or disable Help Functions.



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If this function is disabled in SP mode (5-828-091(Network Setting Web)), the function in the UP setting menu will not be displayed.

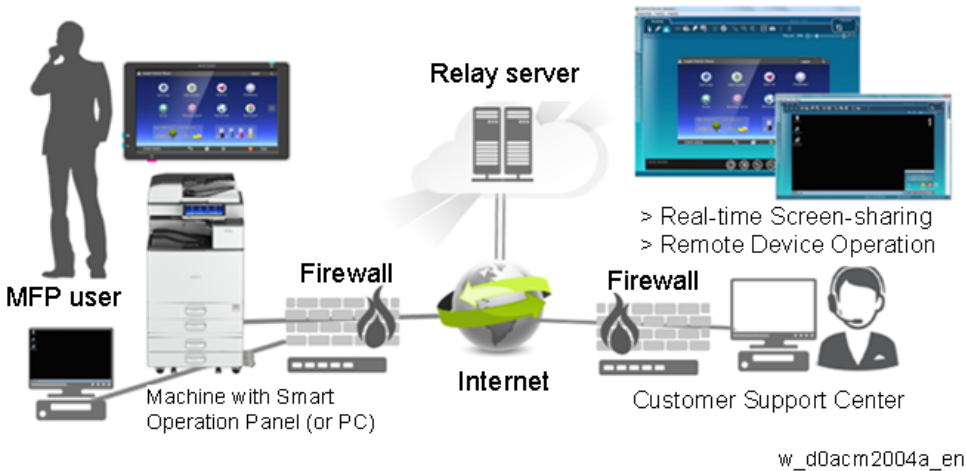


2.13 "REMOTECONNECT SUPPORT" SETTINGS

2.13.1 OVERVIEW

The RemoteConnect Support function allows monitoring and remote control of the customer's machine's operation panel.

- Allows the customer support operator to remotely connect with client's machine equipped with the Smart Operation panel, or PC over the internet.
- Enable the support center to diagnose and resolve the issue through real-time screen sharing, remote guidance, and operation.

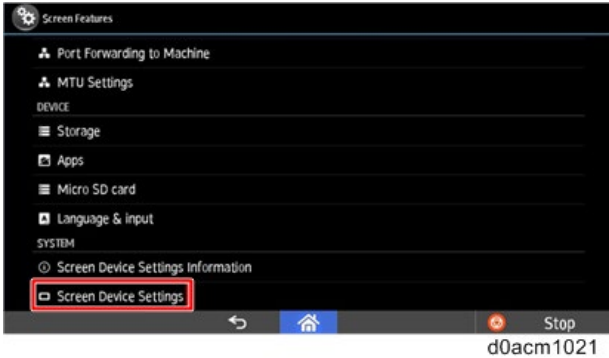


Previously, to avoid security concerns, the function was disabled by default. However, this has changed and the application is now enabled by default.

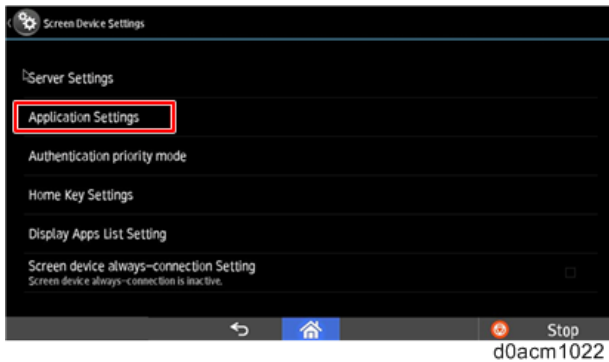
So, it's necessary to confirm with customers whether enabling the remote function is acceptable. After explaining the function and benefits, if it is unacceptable for the customer, disable it via SP mode.

2.13.2 HOW TO ENABLE/DISABLE REMOTECONNECT SUPPORT

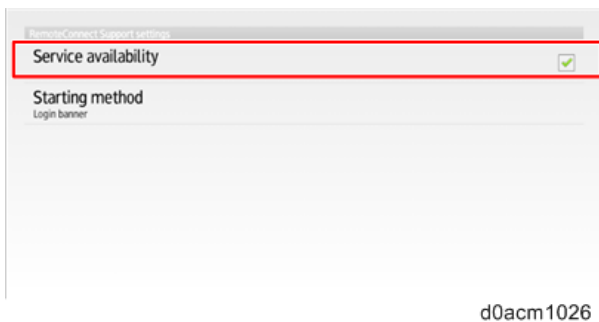
1. Log in to Screen SP mode.
2. Select "Screen Device Settings".



3. Select "Application Settings".



4. Select "Settings" in "RemoteSupportService" and check "Service availability".



Note

- The setting is located in RemoteSupport Service. However, the name of the settings menu is "RemoteConnect Support".

"RemoteConnectSupport" can be found in the application list, but this does not have any settings. Be sure to open the settings of "RemoteSupportService".



5.

6. Confirm if a connection can be established.

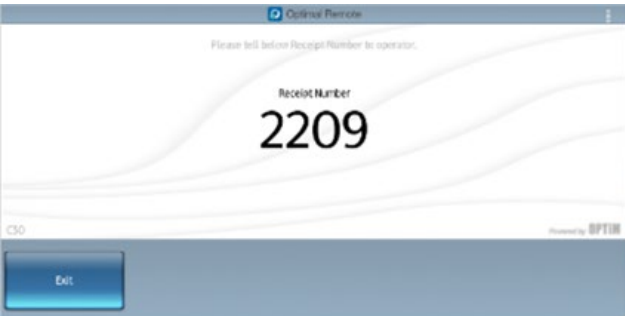
To confirm if RemoteConnect Support is working properly, open the application from the "Check Status" menu or by pressing down on the status bar on the Smart Operation Panel for over five seconds.

After pressing down for over five seconds, stop pressing on the panel and RemoteConnect Support will open.



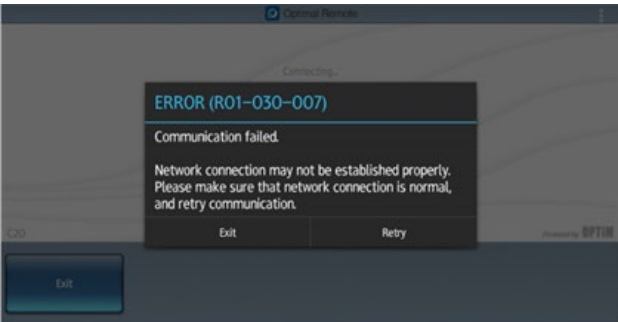
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If setup was done correctly, four digits will be displayed on the panel. If the setup was not done correctly, the four digits will not be displayed.



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RemoteConnect Service requires an Internet connection, so the following error message might appear after long-pressing the status bar if an Internet connection is not detected. To check the connection, open the web browser in Smart Operation Panel and navigate to a webpage to confirm that the machine is connected to the Internet.



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Note

- If the webpage cannot be connected, check the general network configuration settings, such as the IP address and proxy settings.

2.13.3 UNINSTALLING REMOTECONNECT SUPPORT

Some customers might ask for this feature to be disabled because of security precautions. In many cases, disabling RemoteConnect Support should be sufficient.

However, if a customer asks for RemoteConnect Support to be completely uninstalled, remove it by conducting the following procedure:

1. Log in to Screen SP mode.
2. Select Apps > Install.
3. Select Uninstall for the following two applications:

Firmware Type	Part Number	Version
RemoteConnectSupport	D0BQ1499B	1.1
RemoteSupportService	D0CS5110	1.00

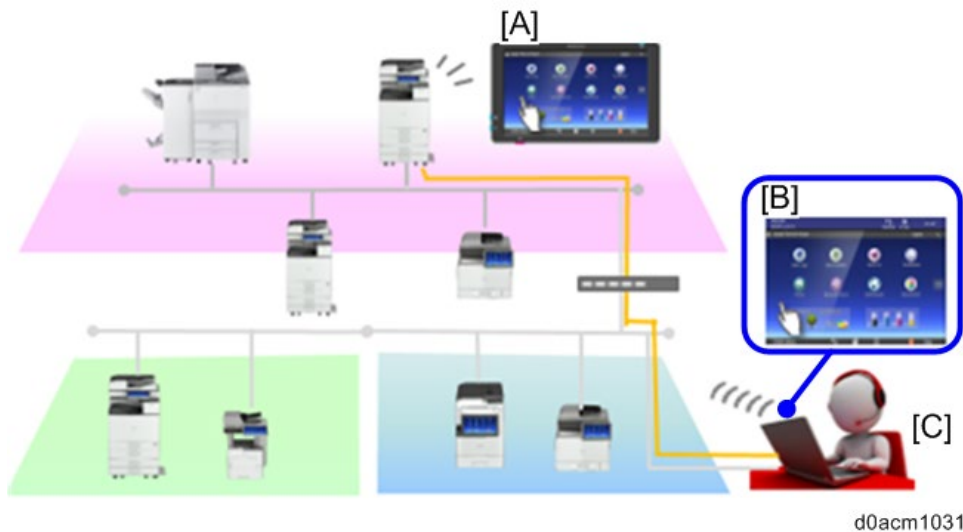


2.14 "REMOTE PANEL OPERATION" SETTINGS

2.14.1 OVERVIEW

Remote Panel Operation will be pre-installed in models that have Smart Operation Panel G2.5. This is a built-in function.

Using Web Image Monitor, you can view on the computer screen the operation panels of devices on the same network as well as remotely control such devices. For example, in a large company, the machine administrator can use the remote control to check for errors, operate machines, and change settings to provide support and manage machines easily.



[A]: Smart Operation Panel G2.5

[B]: Web browser

[C]: IT manager/ administrator

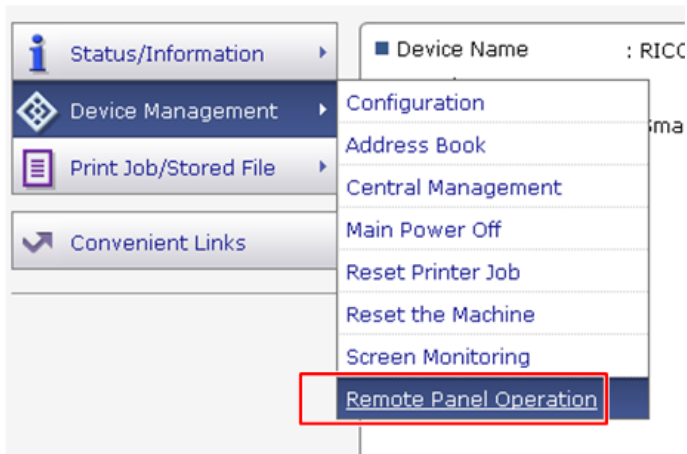
- Eliminating a trip to the device
- Reducing end user's wait time

Usage

- Remote Panel Operation enables the IT manager or in-house help desk staff to remotely view and operate the Smart Operation Panel G2.5 screen through a Web UI.
- It can be used to provide real-time interactive user support and also facilitate customer training.

Startup

1. Log in to Web Image Monitor as the administrator.
2. Click [Device Management] > [Remote Panel Operation]



Notes

- When connected by the Remote Panel Operation function, the machine does not automatically switch to Sleep mode, and the Auto Logout and System Auto Reset functions do not operate.
- You cannot connect to a single unit from multiple computers and operate it by the Remote Panel Operation function.
- The Remote Panel Operation function is supported by Internet Explorer 11 and later versions, Google Chrome 62 and later versions, Firefox 56 and later versions, and Microsoft Edge 40 and later versions.

About the Settings

- This function has been preinstalled. (Its icon does not appear on the operation panel.)
- For security reasons, the settings have not been specified by default. Enable or disable each setting according to the customer's request.

2.14.2 HOW TO ENABLE/DISABLE REMOTE PANEL OPERATION/MONITORING

1. Enable machine administrator authentication and login as administrator.
2. Press the "Settings" icon on the Home screen.
3. Press [System Settings].
4. Press [Settings for Administrator] > [Remote Panel Operation].
5. Select [Active] or [Inactive] for "Remote Operation/Monitoring".

Note

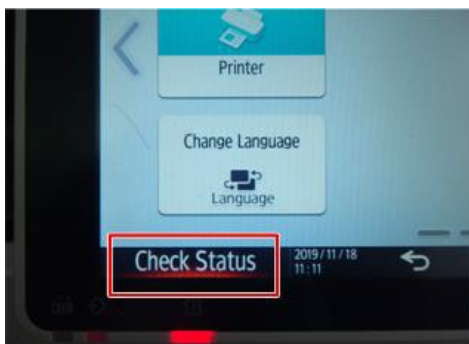
- "Remote Operation/Monitoring" Functions is disabled by default. When it is disabled, Remote Panel Operation is not displayed in the Web Image Monitor.

2.15 INSTRUCTIONS FOR THE CUSTOMERS

Please explain the following points to customers when installing the machine. These items are explained in more detail in the operating instructions.

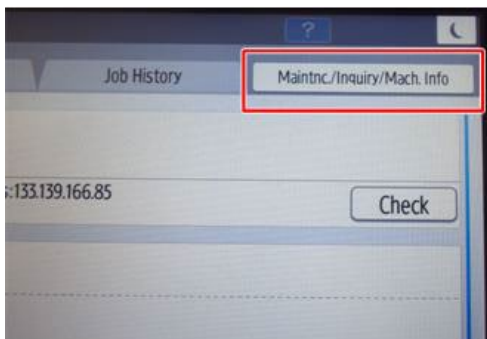
- How to add paper to the paper feed unit and the by-pass feed unit.
- How to install a toner bottle
- How to handle paper jams
- How to appear Supplies Replacement Video list

1. Click "Check Status".



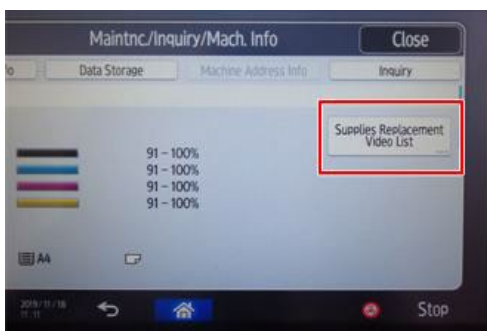
d0cam0128

2. Click "Maintnc/Inquiry/Mach.Info".




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3. Click "Supplies Replacement Video List".



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4. Select the color that you want to replace, then click .

PREVENTIVE MAINTENANCE

3. PREVENTIVE MAINTENANCE

3.1 MAINTENANCE TABLES

See "Appendices" for the following information:

- Maintenance Tables

3.2 PM/YIELD PARTS SETTINGS

3.2.1 REPLACEMENT PROCEDURE OF THE PM/YIELD PARTS

★ Important

- For the following units, there is a new unit detection mechanism. It is not necessary to reset the PM counters.
 - Waste Toner Bottle
 - PCDU (YMCK)

1. Enter the SP mode.
2. Output the SMC log data with SP5-990-001.
3. In the SMC data, check the values of the counters in SP7-621-002 to 205*1, to determine what parts should be replaced.
4. Set the following SPs (PM Counter Clear) to "1" to reset the PM counter.

Item	SP No. (SP Name)
ITB Unit (Image transfer belt unit)	SP7-622-093 (PM Counter Clear: #ITB Unit)
Paper Transfer Roller Unit	SP7-622-109 (PM Counter Clear: #PTR Unit)
Fusing Unit	SP7-622-115 (PM Counter Clear: #Fuser Unit)
Paper Feed Roller Assy/ Separation Roller Assy * Replace the Paper Feed Roller Assy and Separation Roller Assy at same time.	SP7-622-145 (PM Counter Clear: #Paper Feed Roller Unit)
SPDF Feed Assy/ SPDF Separation Roller * Replace the SPDF Feed Assy and SPDF Separation Roller at same time.	SP7-622-205 (PM Counter Clear: #DF Paper Feed Roller Unit)

5. Turn OFF the power, and unplug the power cord.
6. Replace the PM parts and turn ON the power.
The machine will reset the PM counters.

7. Exit the SP mode.

***1: PM Counter**

SP No.	SP Name
SP7-621-002	PM Counter Pages: #PCDU:K
SP7-621-025	PM Counter Pages: #PCDU:C
SP7-621-048	PM Counter Pages: #PCDU:M
SP7-621-071	PM Counter Pages: #PCDU:Y
SP7-621-093	PM Counter Pages: #ITB Unit
SP7-621-109	PM Counter Pages: #PTR Unit
SP7-621-115	PM Counter Pages: #Fuser Unit
SP7-621-145	PM Counter Pages: #Paper Feed Roller Unit
SP7-621-205	PM Counter Pages: #DF Paper Feed Roller Unit

3.2.2 AFTER INSTALLING THE NEW PM/YIELD PARTS

Execute Automatic Color Calibration (ACC) and Forced Line Position Adjustment.

1. Execute Automatic Color Calibration. (**ACC (Automatic Color Calibration)**)
2. Execute Color Registration. (**Color Registration (Skew Adjustment)**)
3. Check the copy image with Test Chart. (Refer to **How to Use the Color Charts**)

REPLACEMENT AND ADJUSTMENT

4. REPLACEMENT AND ADJUSTMENT

4.1 GENERAL CAUTIONS

⚠ CAUTION

- Turn off the main power switch and disconnect the power cord.
- After replacement, make sure that all removed harnesses are connected again and secured in their clamps.



4.2 NOTES ON THE MAIN POWER SWITCH

4.2.1 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.

4.2.2 CHARACTERISTICS OF THE PUSH SWITCH (MAIN POWER 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, but other electrical components will be damaged.

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 after the LED on the operation panel is turned OFF and press the push switch to discharge any residual voltage, see information below.

Note

- If you unplug the power cord before turning off the LED, some icons on the operation panel will not appear at the next start-up. Restarting the machine again will solve this issue.

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, there is still residual charge inside the machine for a while. 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, press the main power switch. 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 after 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.

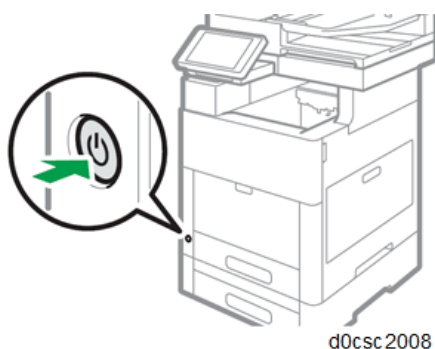
Note

- 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 when 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.

4.2.3 SHUTDOWN METHOD

1. Press the main power switch on the machine.
2. The shutdown message appears. After the shutdown process, the main power is turned off automatically. The LED on the operation panel is turned off when the machine completes the shutdown.



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.
3. Unplug the power cord after shutdown.
 4. Press the main power switch for a second to remove the residual charge inside the machine.

4.2.4 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.

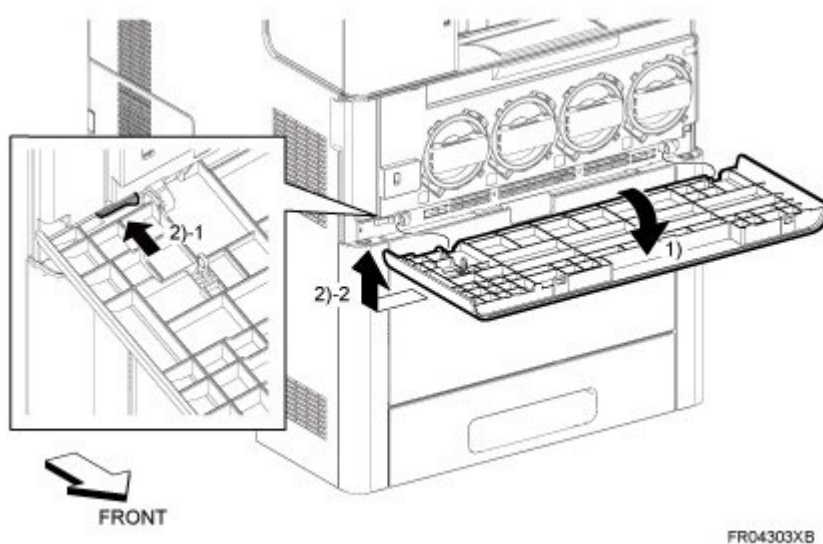
Important

- 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.

4.3 EXTERIOR COVERS

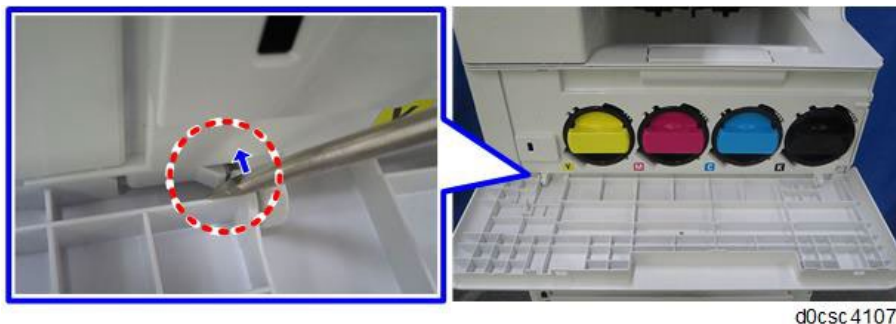
4.3.1 TONER COVER

1. Open the Toner Cover.
2. Push the hook to remove the Toner Cover in the direction of the arrow.



Note

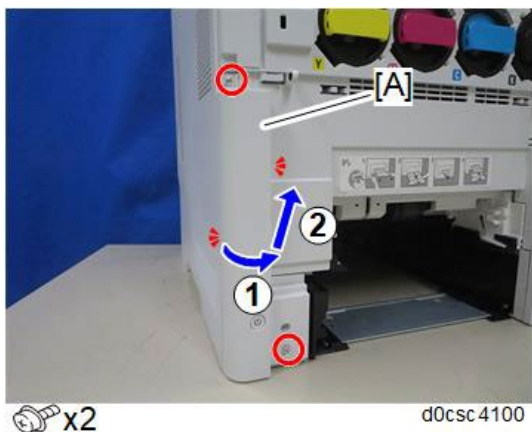
- Push the hook with a flathead screwdriver.



4.3.2 FRONT LEFT COVER

1. Remove the Paper Tray. (**Paper Tray**)
2. Remove the Bypass Tray Assy. (**Bypass Tray Assy**)
3. Remove the Toner Cover. (**Toner Cover**)

4. Remove the two screws (M3X6mm) and release the hooks to remove the Front Left Cover [A].

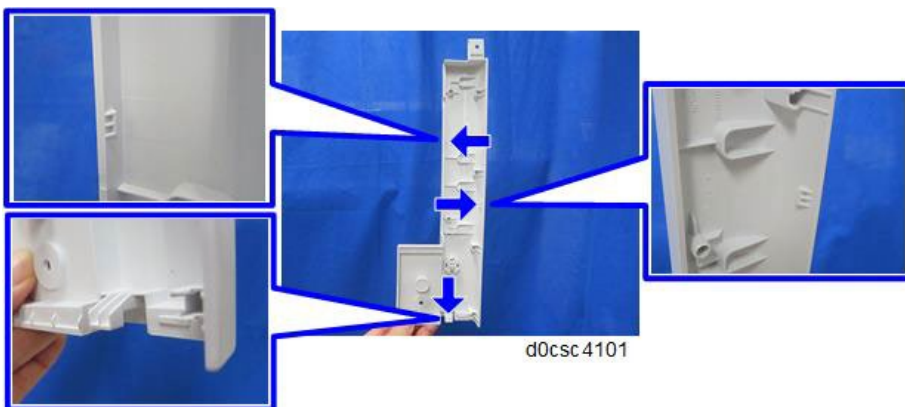


x2

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Note

- There are many hooks and bosses inside the cover. Before removing the cover, see the photos below.

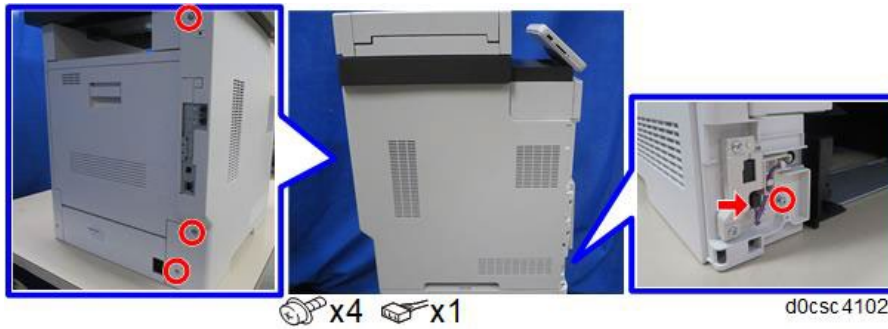


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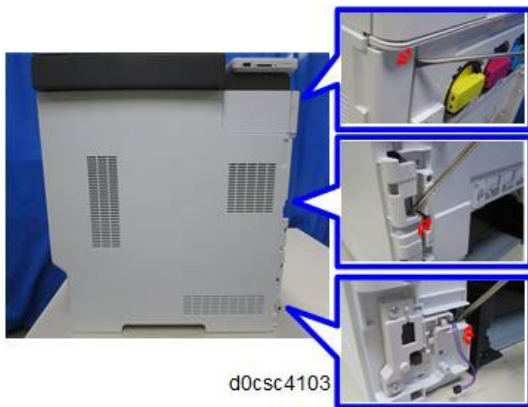
4.3.3 LEFT COVER

1. Remove the Paper Tray. (**Paper Tray**)
2. Remove the Bypass Tray Assy. (**Bypass Tray Assy**)
3. Remove the Toner Cover. (**Toner Cover**)
4. Remove the Front Left Cover. (**Front Left Cover**)

- Remove the two tapping screws (M4X10mm) and two screws (M3X6mm) and disconnect the connector to the power switch.

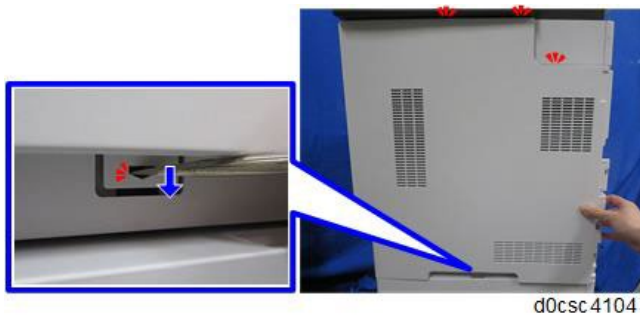


- Release two hooks and one boss at the front of the Left Cover.

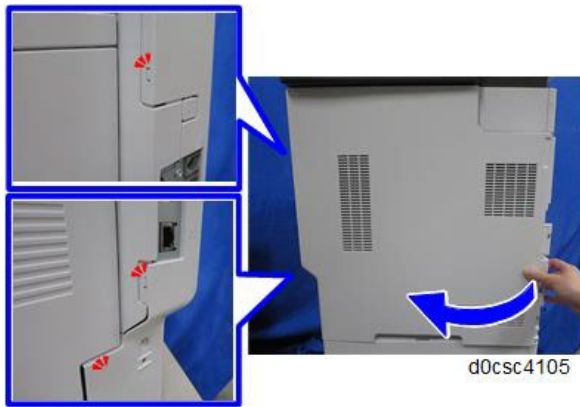


- Release three hooks at the upper of the Left Cover.

- Release one hook at the bottom of the Left Cover with a flat-head screwdriver.

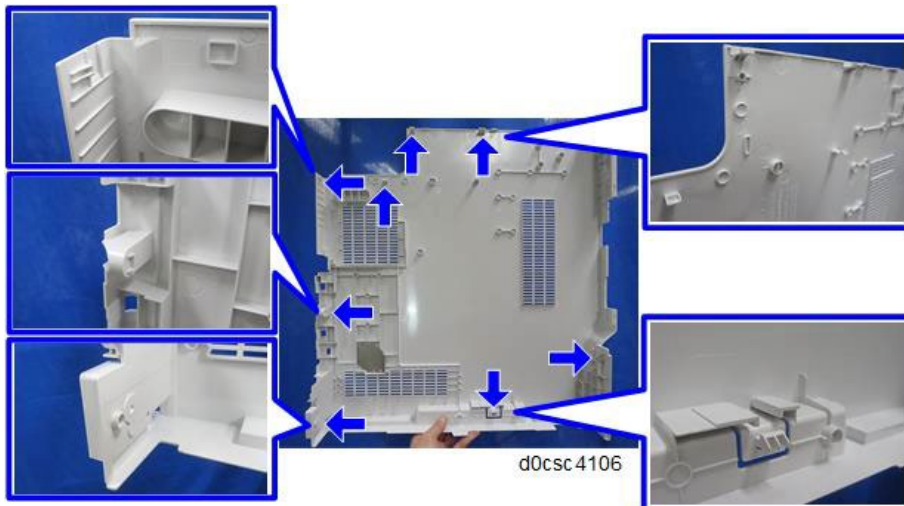


9. Release three bosses at the rear of the Left Cover and remove it.



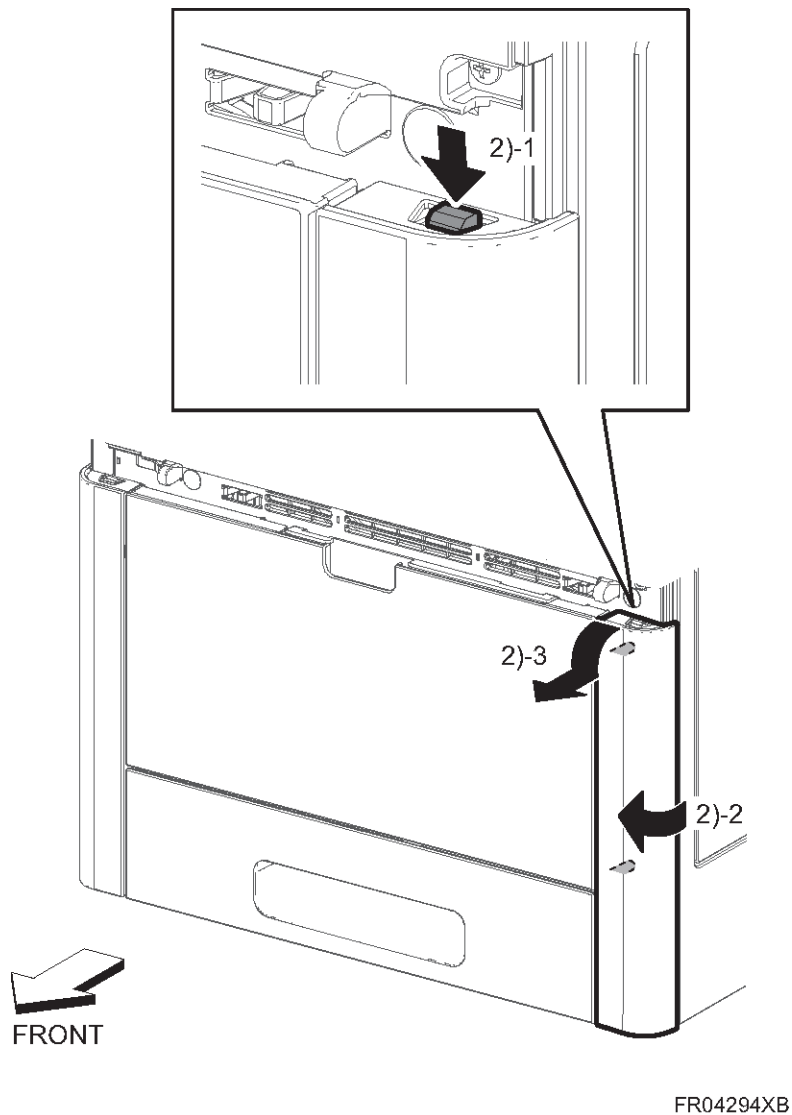
Note

- There are many hooks and bosses inside the cover. Before removing the cover, see the photos below.



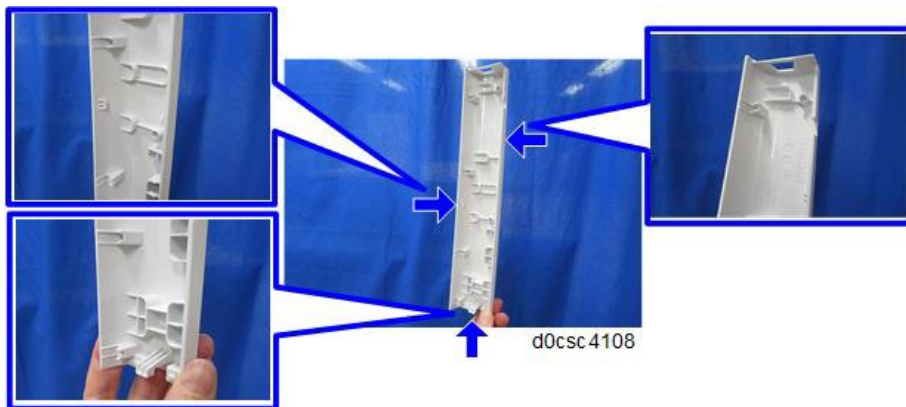
4.3.4 FRONT RIGHT COVER

1. Remove the Toner Cover. (**Toner Cover**)
2. Push the hook and release the hook to remove the Front Right Cover in the direction of the arrow.



Note

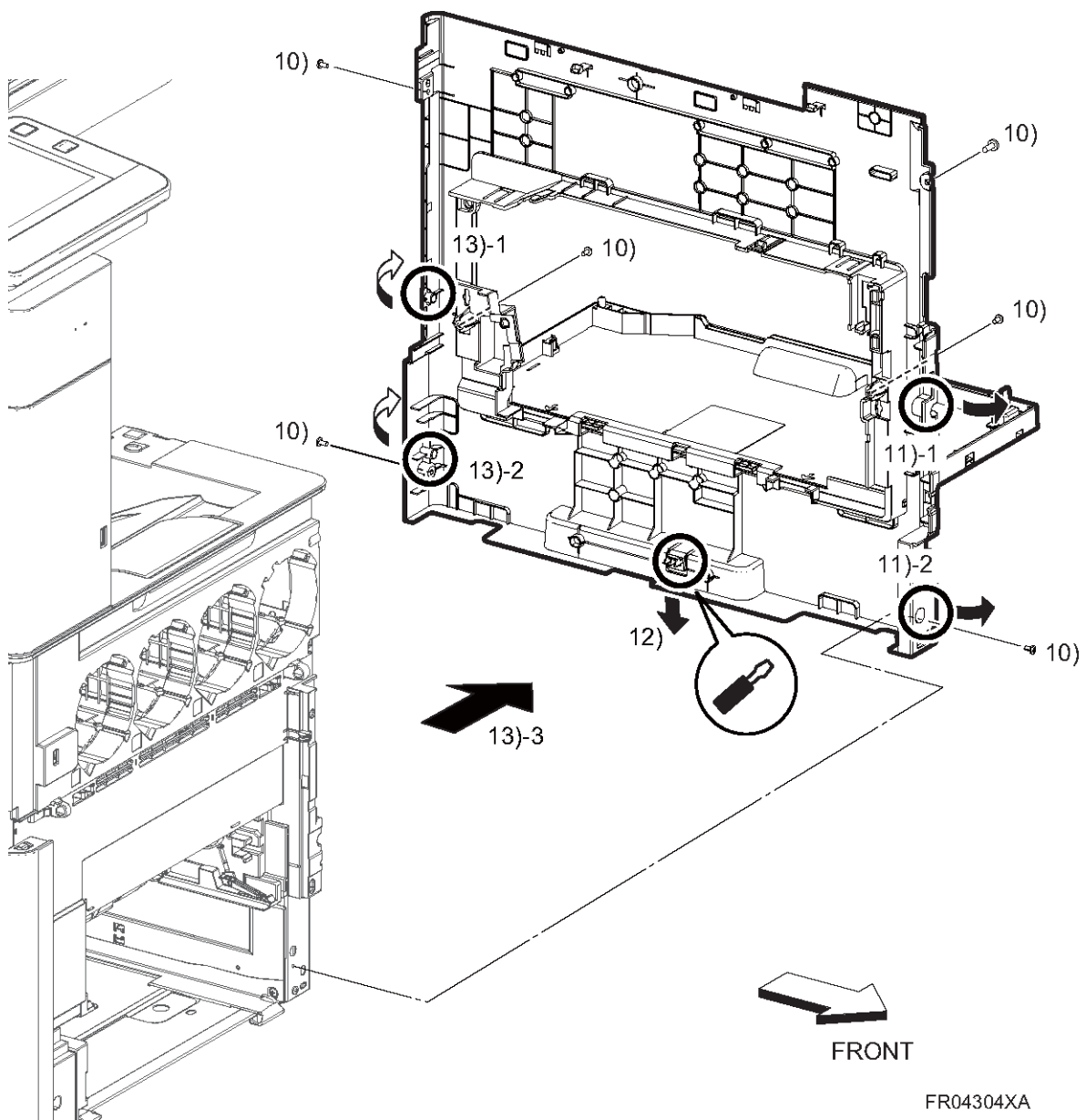
- Push this hook down forcefully.
- There are many hooks and bosses inside the cover. Before removing the cover, see the photos below.



4.3.5 RIGHT COVER

1. Remove the Paper Tray. (**Paper Tray**)
2. Remove the Bypass Tray Assy. (**Bypass Tray Assy**)
3. Remove the Toner Cover. (**Toner Cover**)
4. Remove the Front Right Cover. (**Front Right Cover**)
5. Remove the Top Exit Cover. (**Top Exit Cover**) (Only IM C530F: Tall model)
6. Remove the Right Upper Cap. (**Right Upper Cap**) (Only IM C530F: Tall model)
7. Open the Rear Cover
8. Open the Waste Toner Bottle Cover.
9. Remove the Waste Toner Bottle.
10. Remove one tapping screw (M4X10mm) and five screws (M3X6mm).
11. Release one hook and one boss at the front of the Right Cover.
12. Release one hook at the bottom of the Right Cover with a flat-head screwdriver

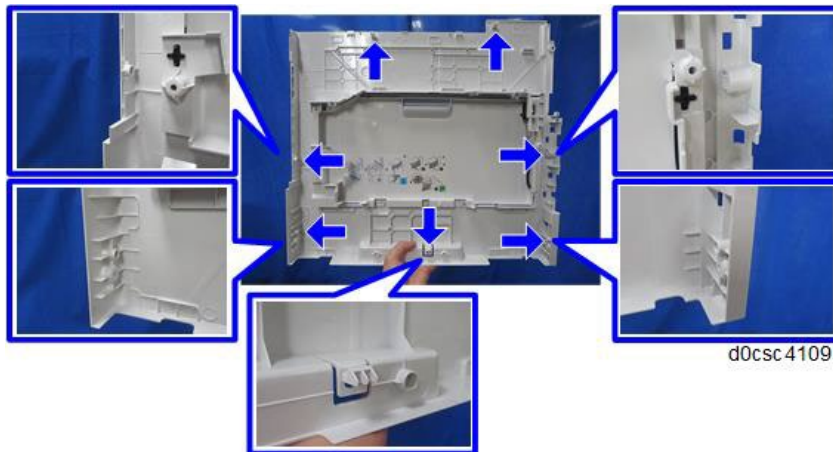
13. Release two bosses at the rear of the Right Cover, and then remove the Right Cover.



Replacement and Adjustment

Note

- There are many hooks and bosses inside the cover. Before removing the cover, see the photos below.



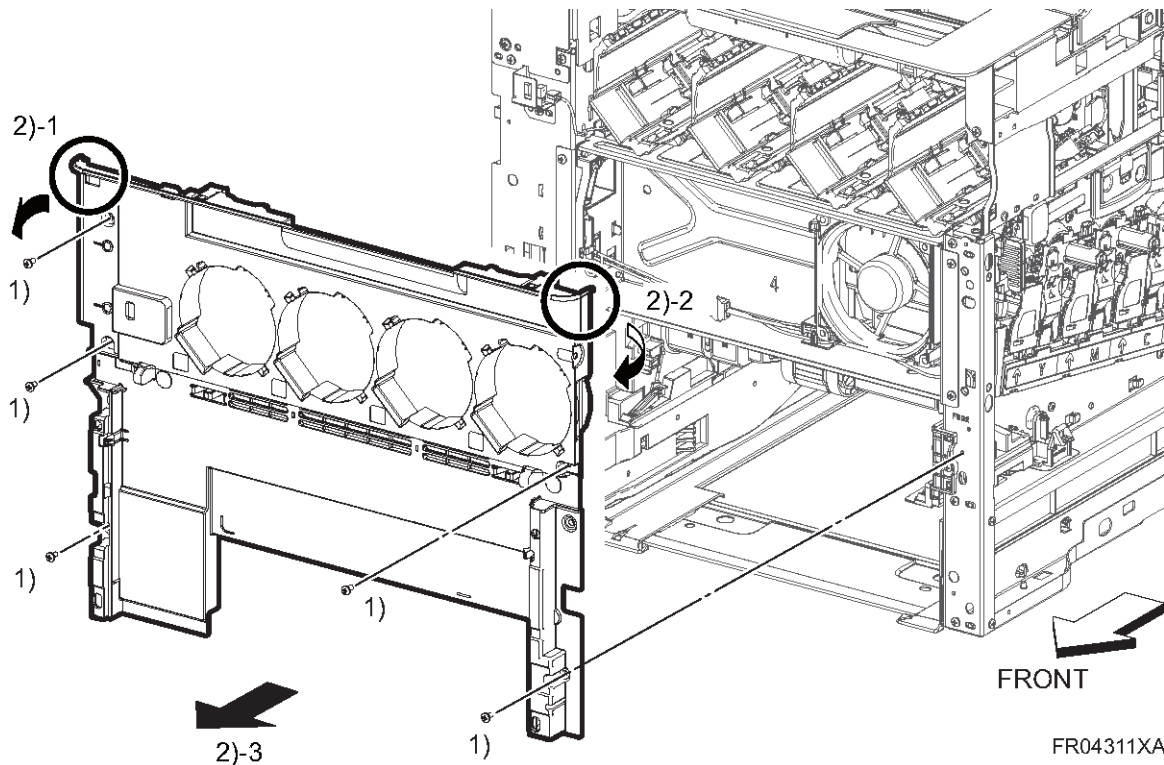
4.3.6 FRONT INNER COVER

[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**) (Only IM C530F: Tall model)
- Right Upper Cap (**Right Upper Cap**) (Only IM C530F: Tall model)
- Right Cover (**Right Cover**)

[Removal]

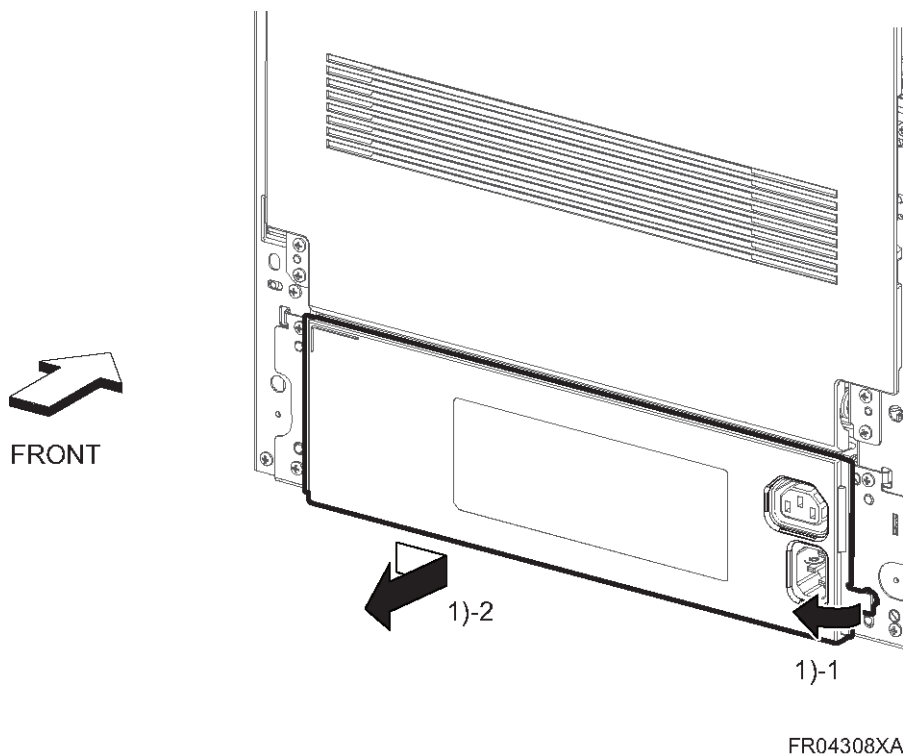
1. Remove five screws (Silver, M3X6mm).
2. Release two hooks and remove the Front Inner Cover.

**4.3.7 REAR BOTTOM COVER****[Before removal]**

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**) (Only IM C530F: Tall model)
- Right Upper Cap (**Right Upper Cap**) (Only IM C530F: Tall model)
- Right Cover (**Right Cover**)

[Removal]

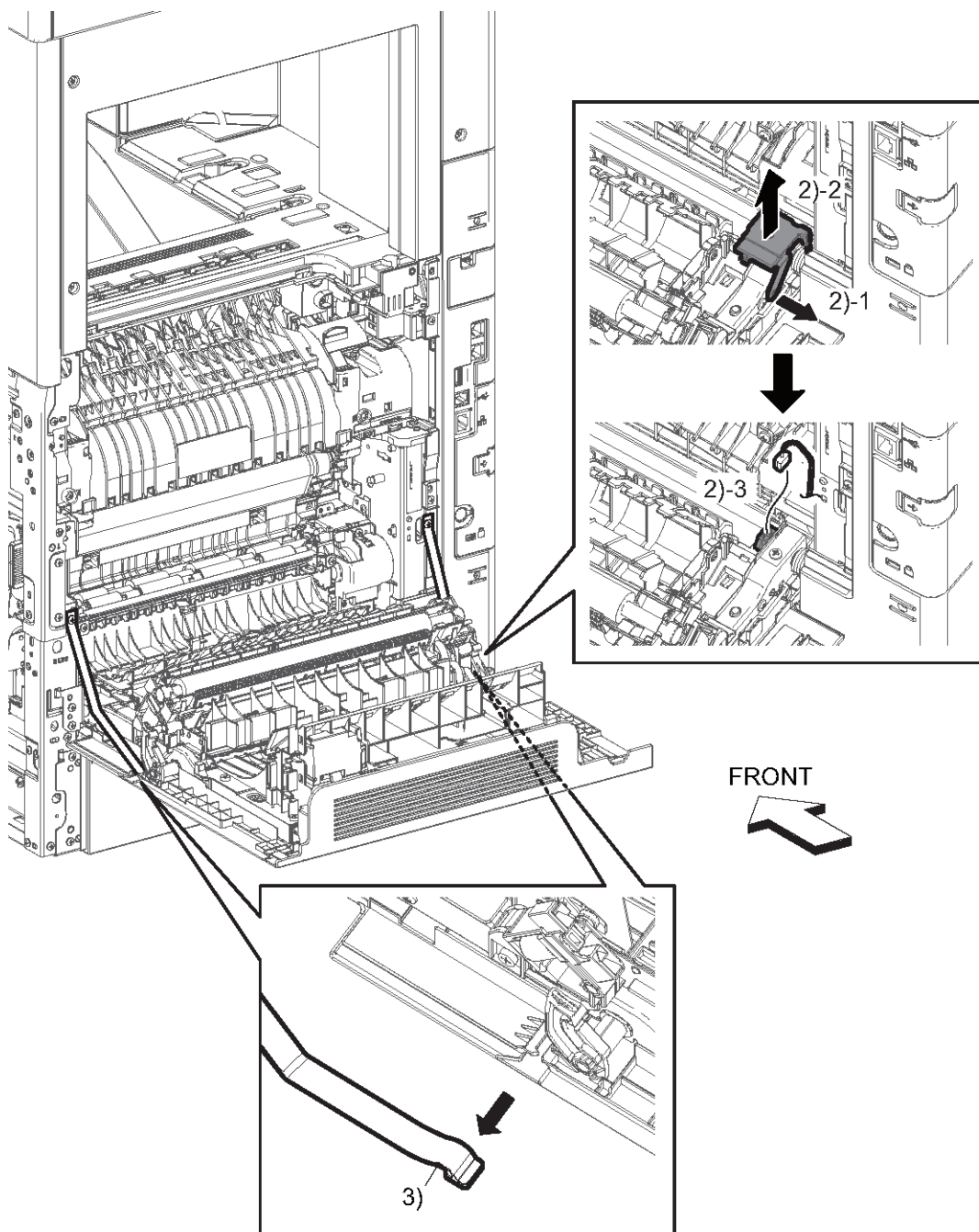
1. Release the boss and remove the Rear Bottom Cover.

**4.3.8 REAR COVER****[Before removal]**

- Paper Tray (***Paper Tray***)
- Bypass Tray Assy (***Bypass Tray Assy***)
- Toner Cover (***Toner Cover***)
- Front Right Cover (***Front Right Cover***)
- Top Exit Cover (***Top Exit Cover***) (Only IM C530F: Tall model)
- Right Upper Cap (***Right Upper Cap***) (Only IM C530F: Tall model)
- Right Cover (***Right Cover***)

[Removal]

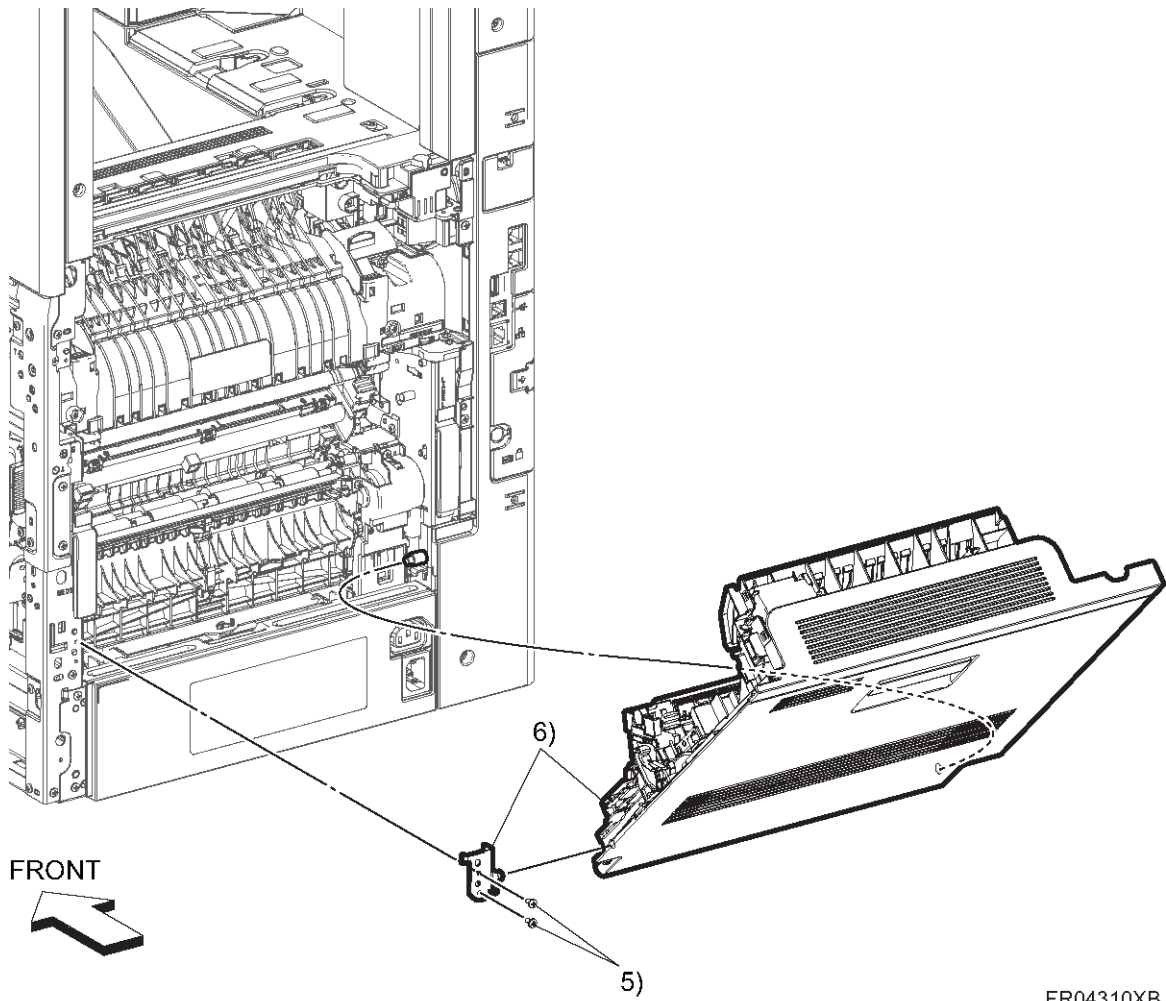
1. Open the Rear Cover.
2. Release the lever to remove the harness cover, and disconnect the connector (P/J296).
3. Release two straps.



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4. Close the Rear Cover.
5. Remove two screws (Silver, M3X6mm) fixing the hinge.

6. Remove the hinge and Rear Cover while opening the Rear Cover.

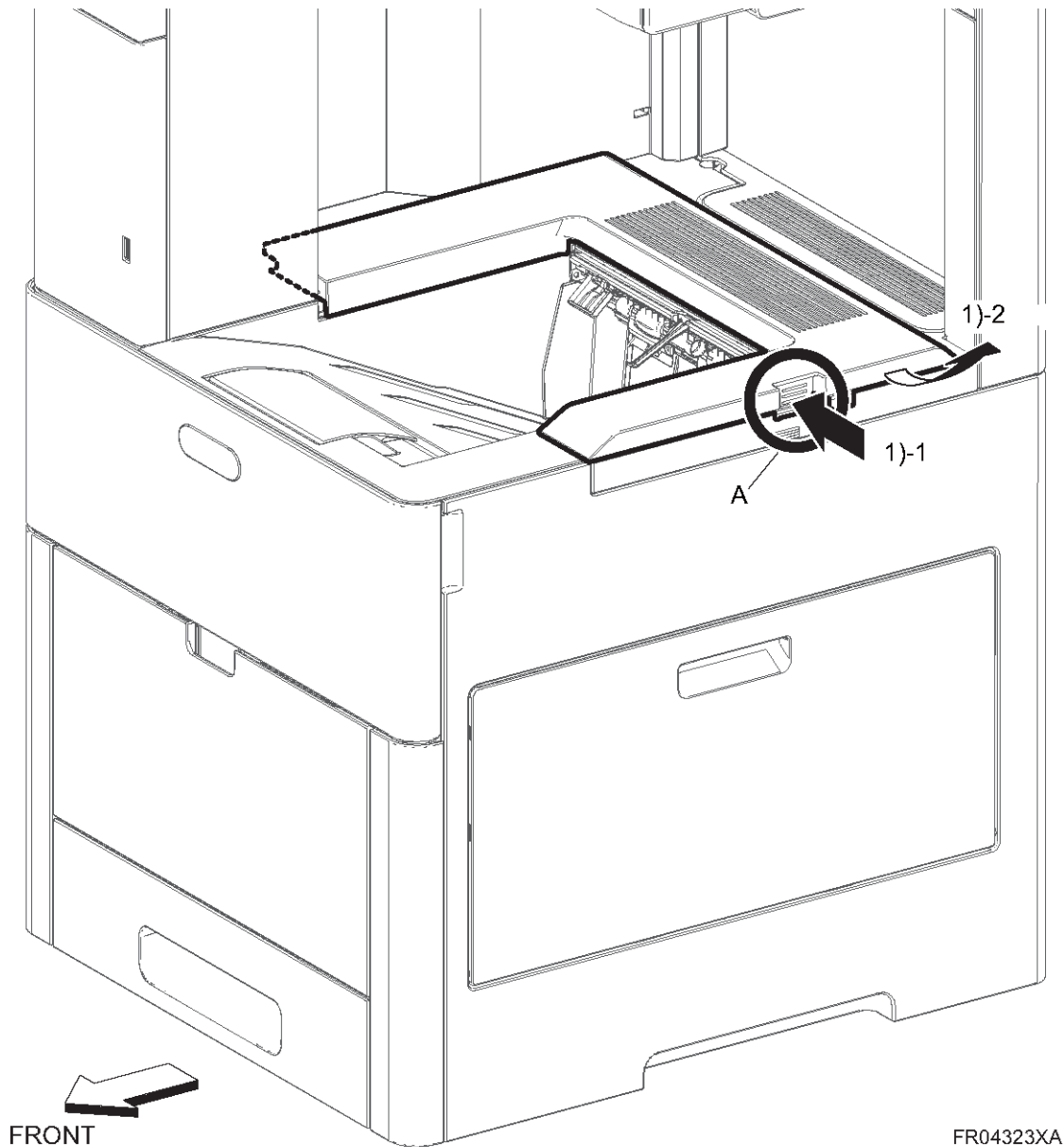


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4.3.9 EXTERIOR COVERS (ONLY IM C530F: TALL MODEL)

Top Exit Cover

1. Push the part [A], and then lift the Top Exit Cover to remove it in the direction of the arrow.



of Replacement
 and
 Adjustment

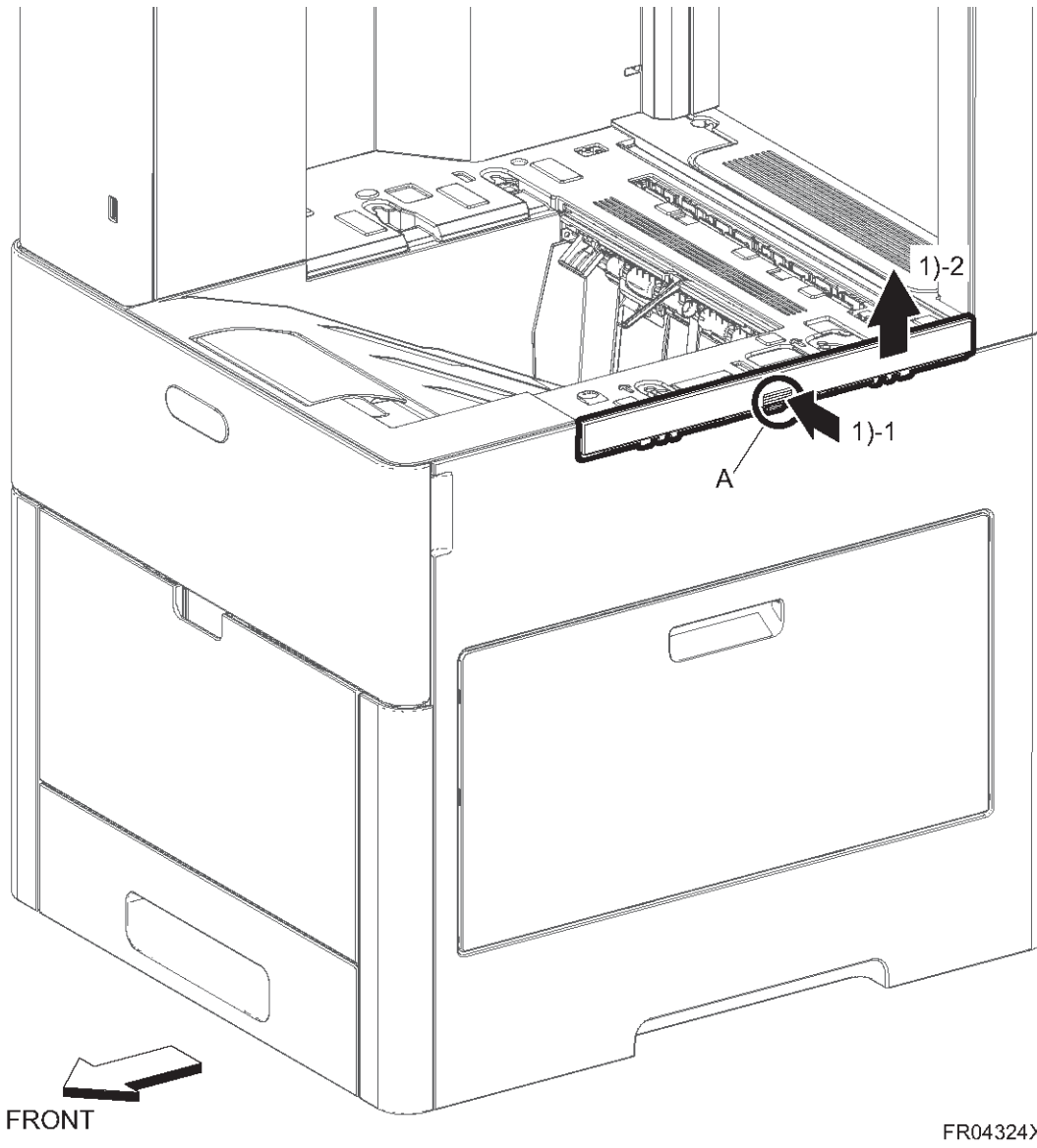
Right Upper Cap

[Before removal]

- Top Exit Cover. (*Top Exit Cover*)

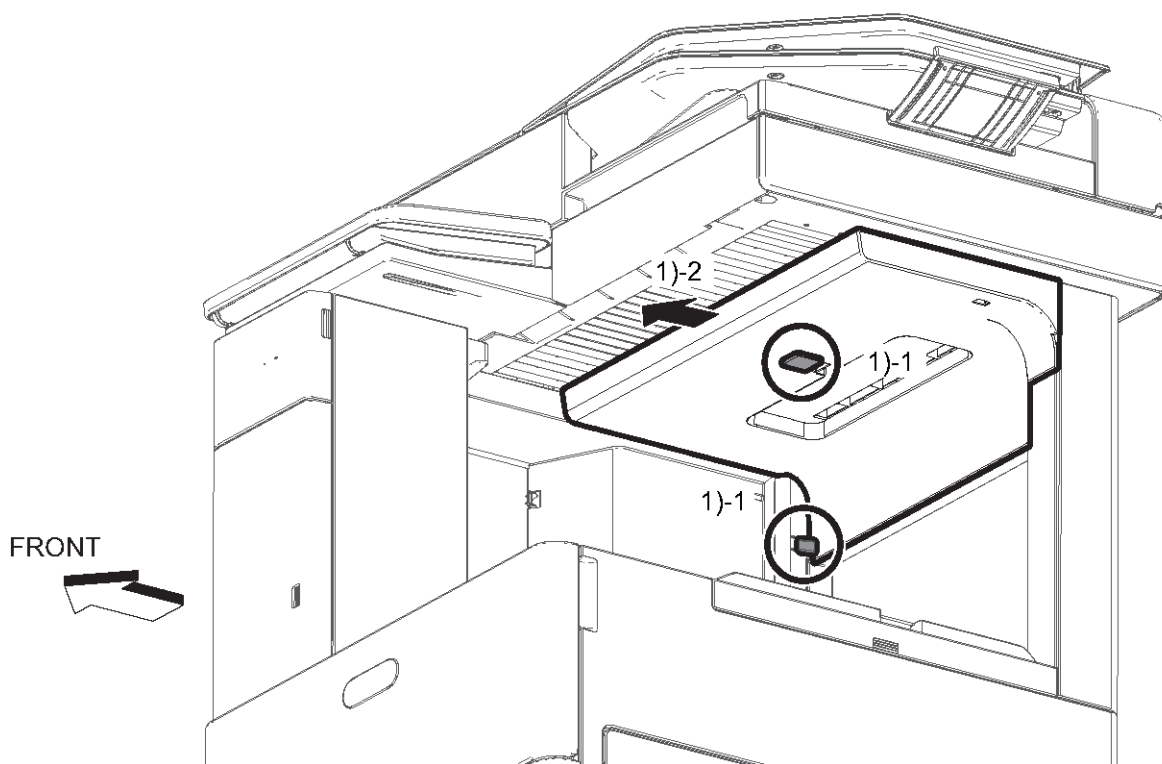
[Removal]

1. Push the part [A], and remove the Right Upper Cap.



Upper Inner Cover

1. Push two levers, and remove the Upper Inner Cover.



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Replacement and Adjustment

IC Card Cover

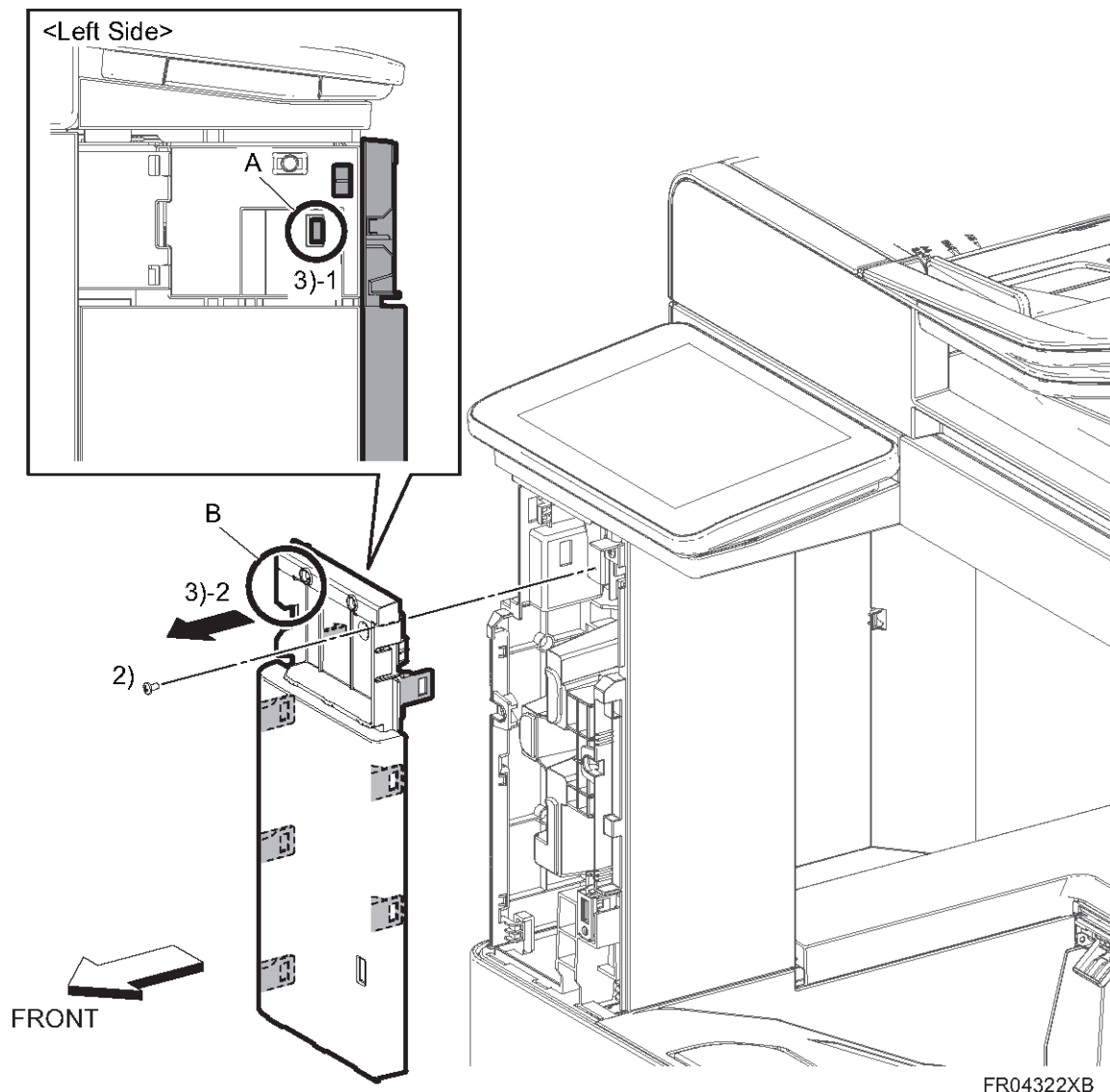
1. Remove the IC Card Cover [A].



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Front Upper Cover

1. Remove the IC Card Cover. (*IC Card Cover*)
2. Remove one screw (Silver, M3X6mm).
3. Push the part [A], and then pull the part [B] to remove the Front Upper Cover.



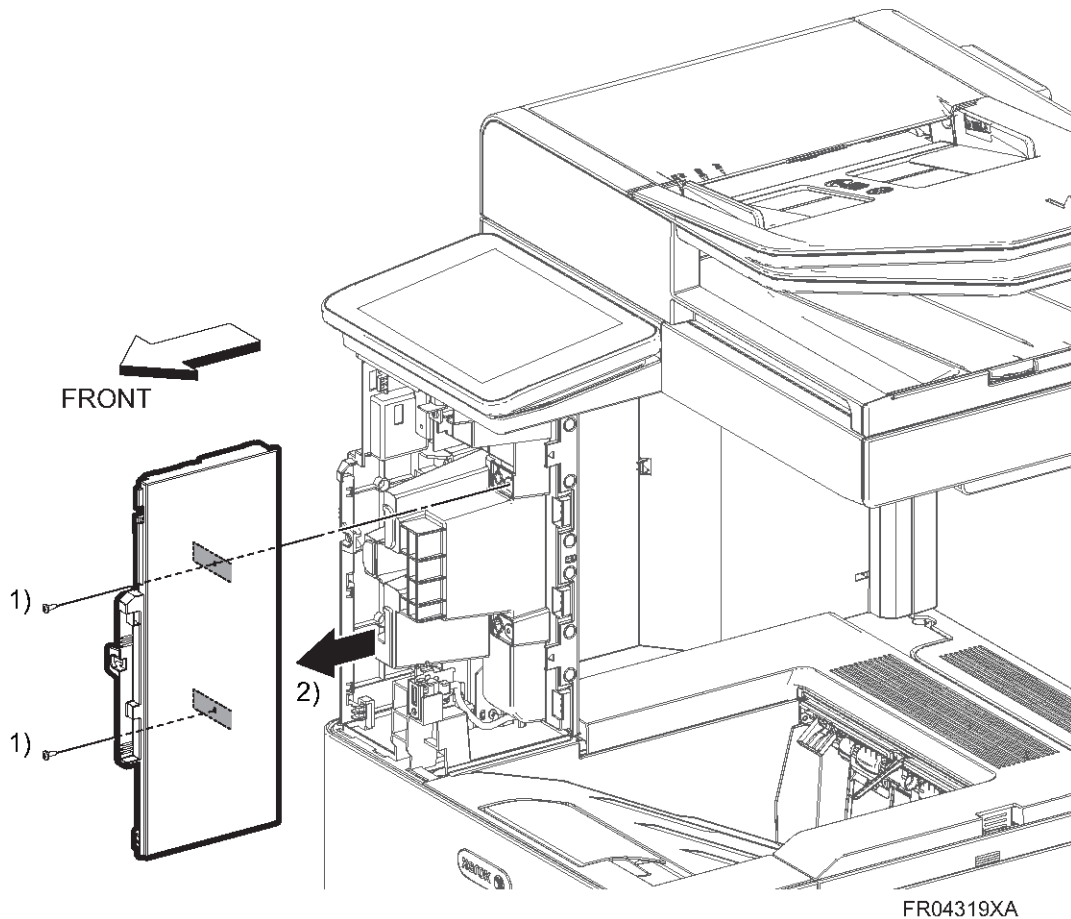
Left Inner Cover

[Before removal]

- IC Card Cover (*IC Card Cover*)
- Front Upper Cover (*Front Upper Cover*)

[Removal]

1. Remove two screws (Silver, tapping, M3X8mm).
2. Remove the Left Inner Cover.

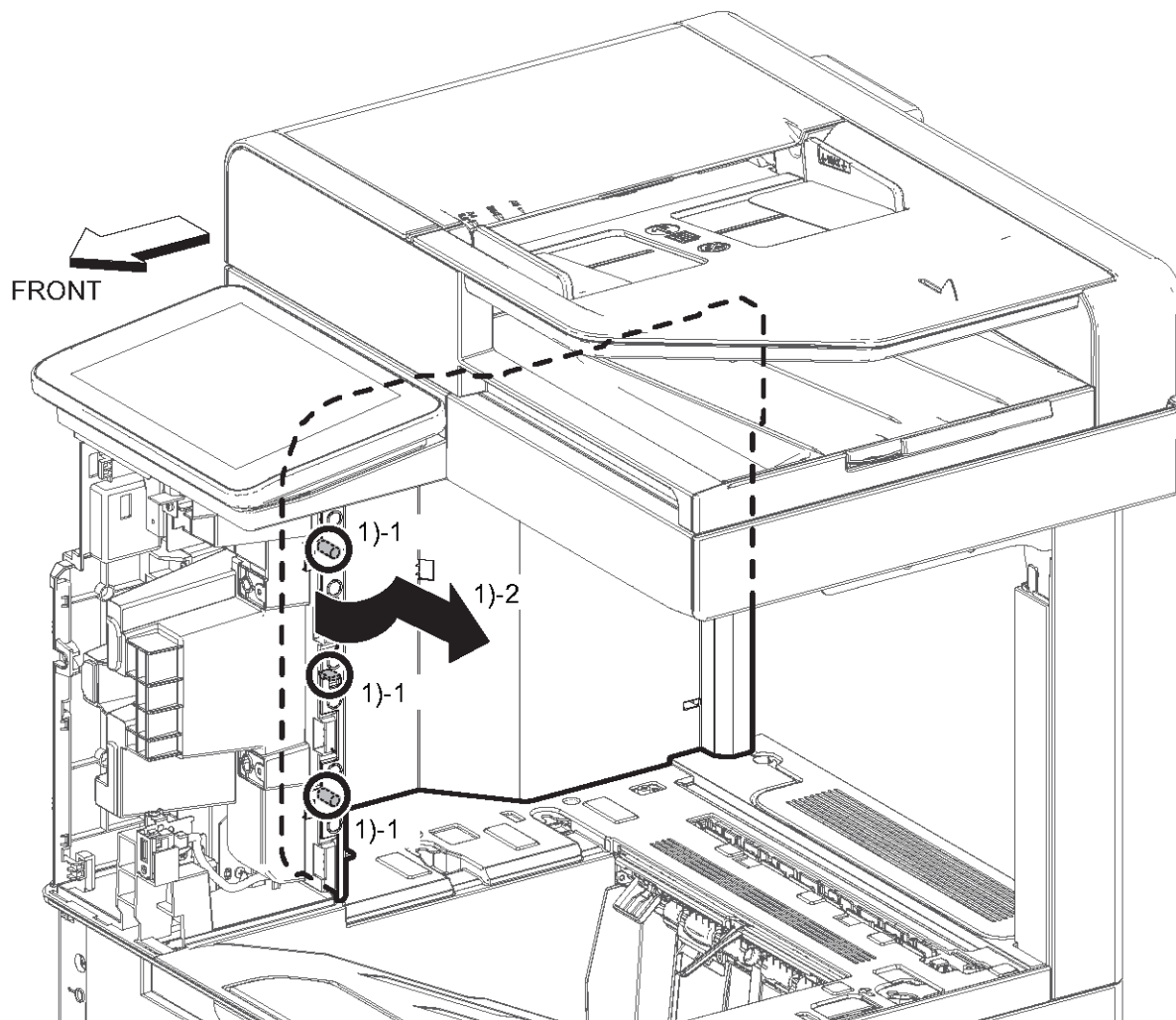
**Rear Left Inner Cover****[Before removal]**

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- IC Card Cover (**IC Card Cover**)
- Front Upper Cover (**Front Upper Cover**)
- Left Inner Cover (**Left Inner Cover**)
- Left Upper Cover (**Left Upper Cover**)
- Rear Upper Cover (**Rear Upper Cover**)

- Upper Inner Cover (**Upper Inner Cover**)

[Removal]

1. Flex the Rear Left Inner Cover to release the hook and bosses, and remove the Rear Left Inner Cover.



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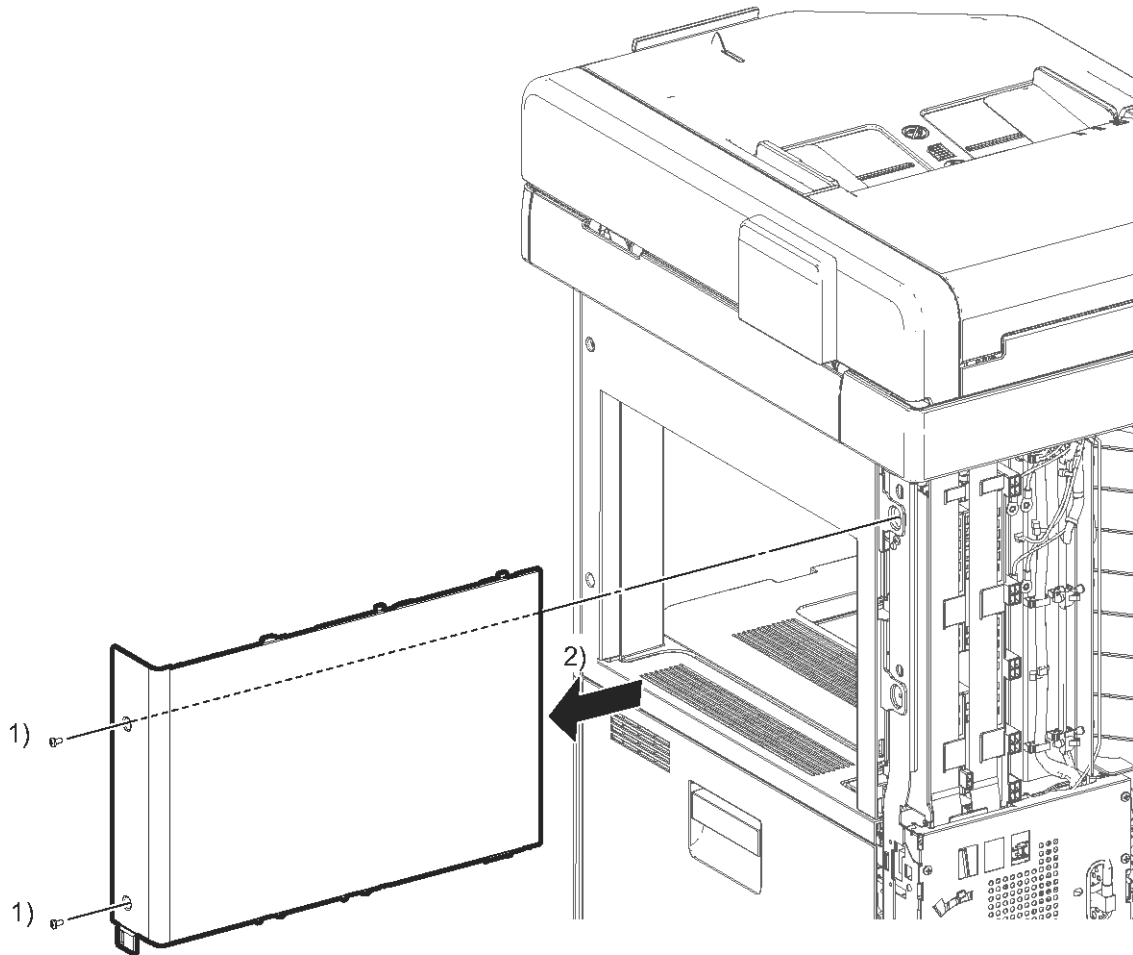
Left Upper Cover

[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)

[Removal]

1. Remove two screws (Silver, M3X6mm).
2. Remove the Left Upper Cover.



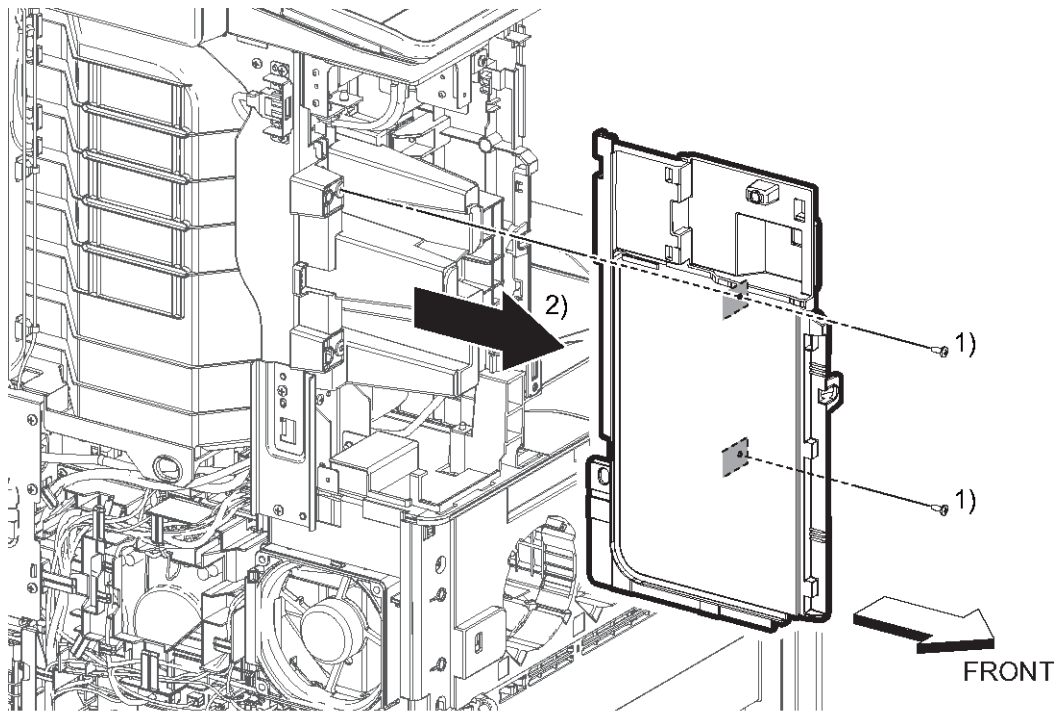
FR04326XA

Left Sub Cover**[Before removal]**

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- IC Card Cover (**IC Card Cover**)
- Front Upper Cover (**Front Upper Cover**)
- Left Upper Cover (**Left Upper Cover**)

[Removal]

1. Remove two screws (Silver, tapping, M3X8mm).
2. Remove the Left Sub Cover.



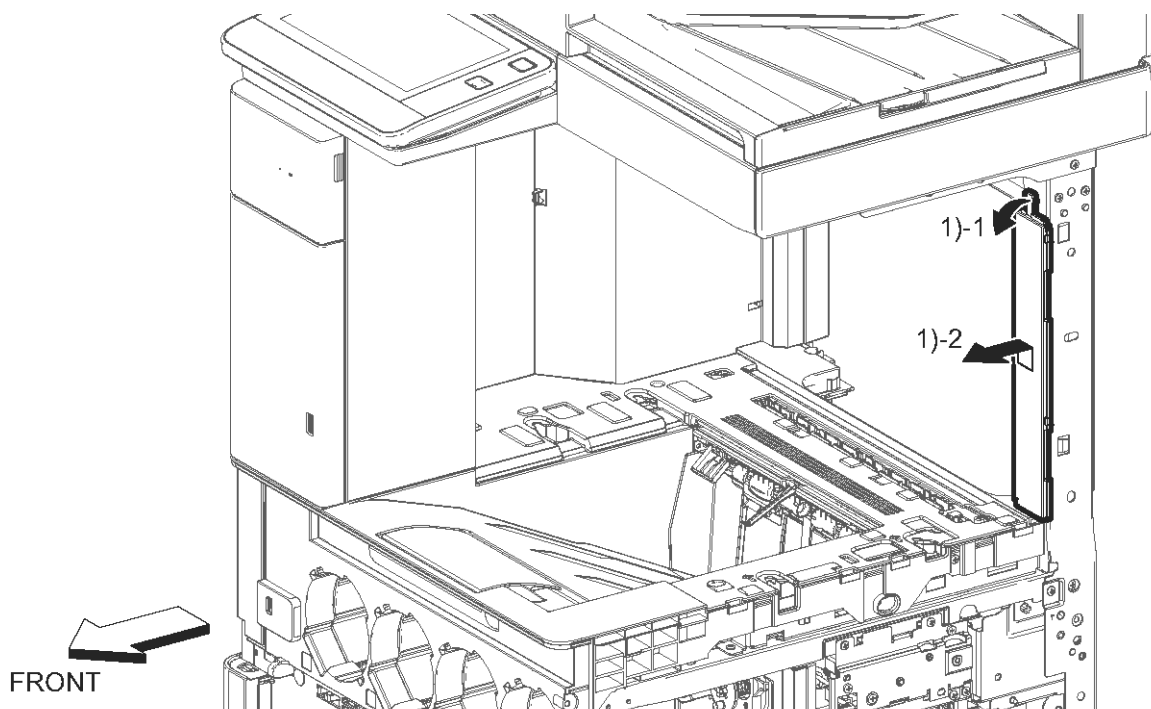
FR04321XA

Right Inner Cover**[Before removal]**

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**)
- Right Upper Cap (**Right Upper Cap**)
- Right Cover (**Right Cover**)
- Rear Upper Cover (**Rear Upper Cover**)
- Right Upper Cover (**Right Upper Cover**)
- Upper Inner Cover (**Upper Inner Cover**)

[Removal]

1. Release the boss, and then remove the Right Inner Cover.



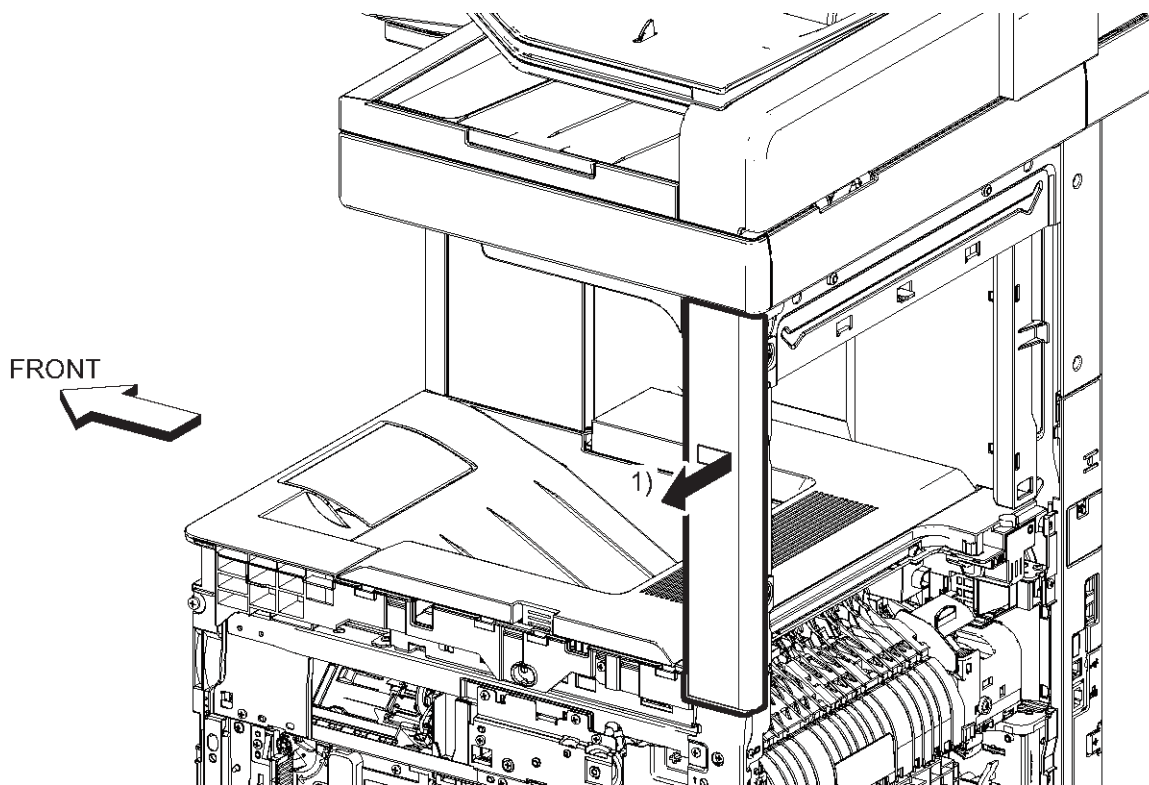
FR04315XB

Right Upper Cover**[Before removal]**

- Paper Tray (***Paper Tray***)
- Bypass Tray Assy (***Bypass Tray Assy***)
- Toner Cover (***Toner Cover***)
- Front Right Cover (***Front Right Cover***)
- Top Exit Cover (***Top Exit Cover***)
- Right Upper Cap (***Right Upper Cap***)
- Right Cover (***Right Cover***)

[Removal]

1. Remove the Right Upper Cover in the direction of the arrow.



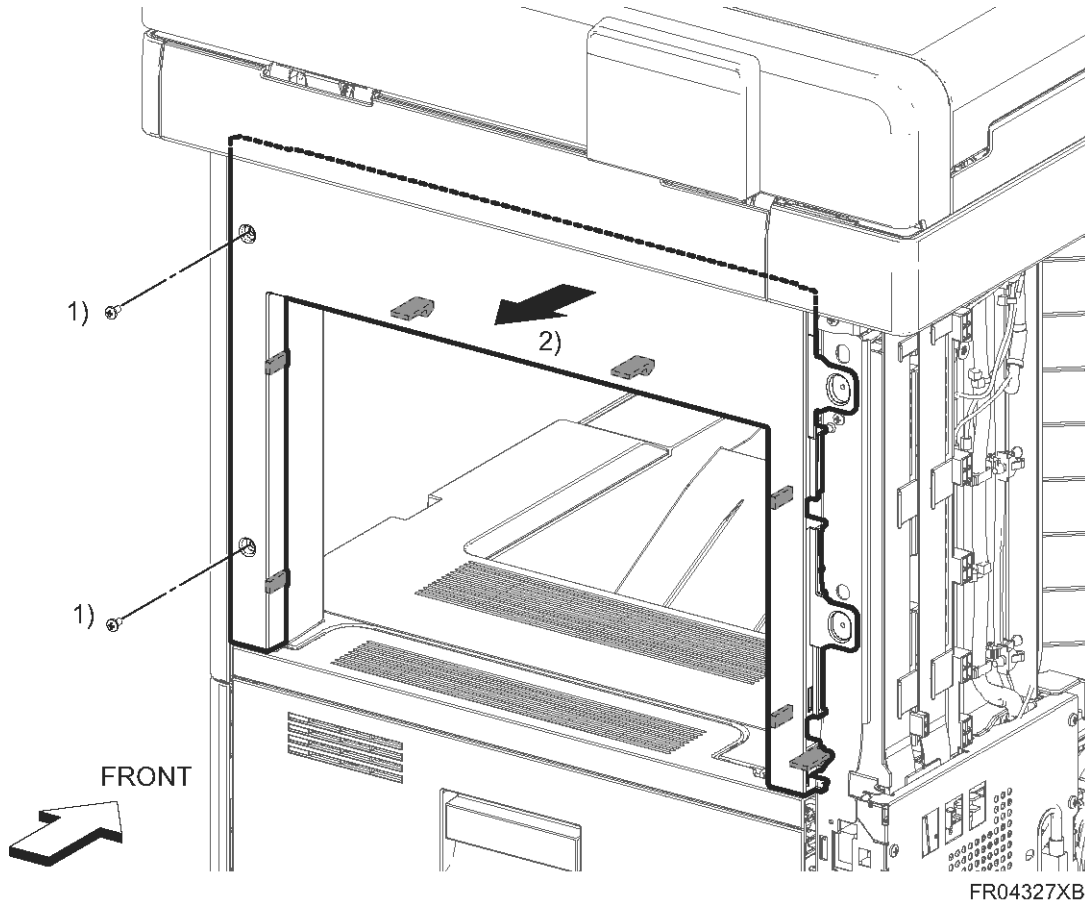
FR04317XB

Rear Upper Cover**[Before removal]**

- Paper Tray (***Paper Tray***)
- Bypass Tray Assy (***Bypass Tray Assy***)
- Toner Cover (***Toner Cover***)
- Front Left Cover (***Front Left Cover***)
- Left Cover (***Left Cover***)
- Left Upper Cover (***Left Upper Cover***)

[Removal]

1. Remove two screws (Silver, M3X6mm).
2. Remove the Rear Upper Cover.

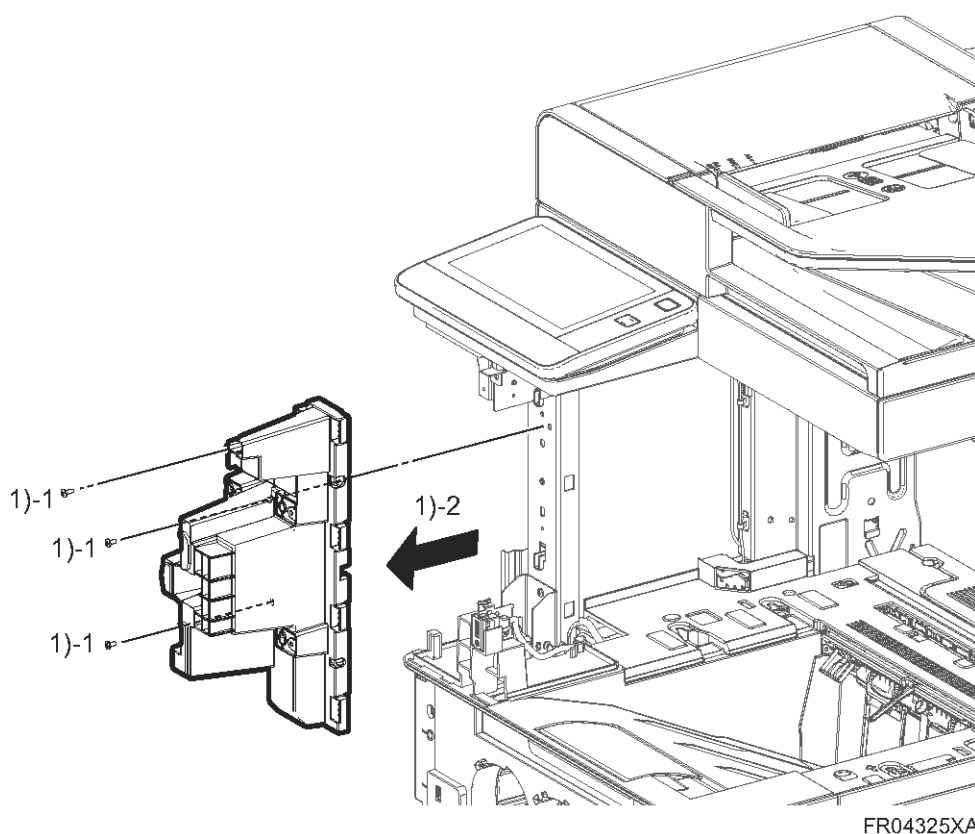
**Frame****[Before removal]**

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Top Exit Cover (**Top Exit Cover**)
- IC Card Cover (**IC Card Cover**)
- Front Upper Cover (**Front Upper Cover**)
- Left Inner Cover (**Left Inner Cover**)

- Left Upper Cover (**Left Upper Cover**)
- Rear Upper Cover (**Rear Upper Cover**)
- Upper Inner Cover (**Upper Inner Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)

[Removal]

1. Remove three screws (Silver, M3X6mm), and remove the Frame.



Top Cover/ Option Blind Cover

[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)

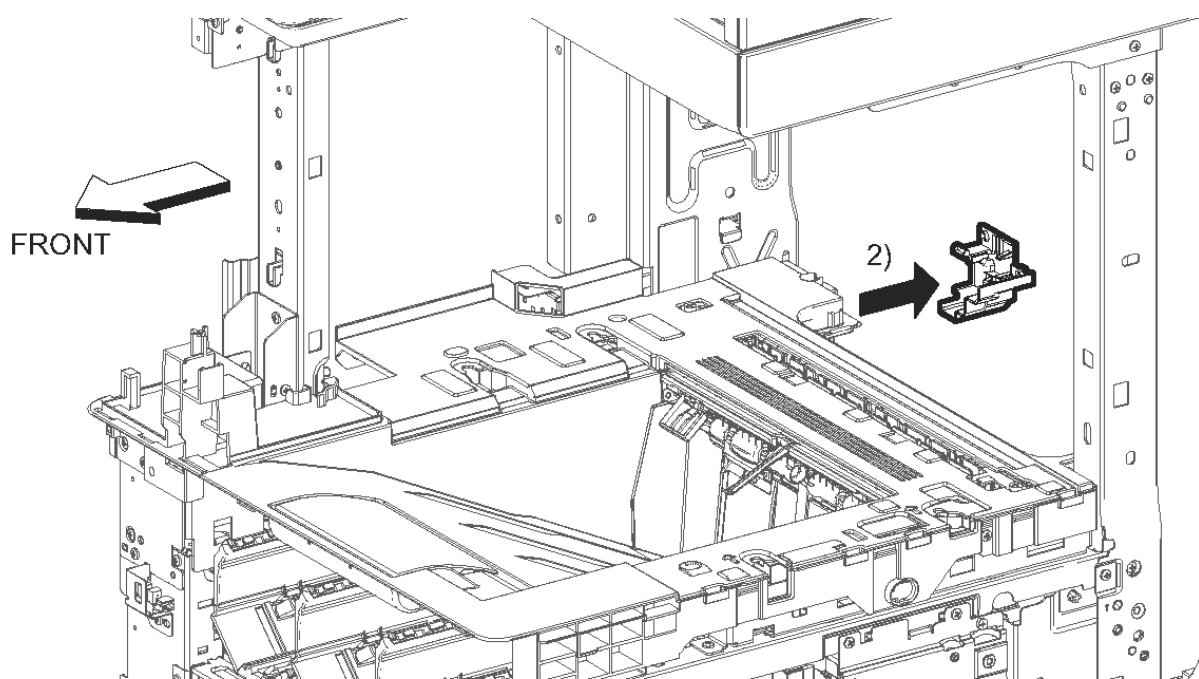
- Top Exit Cover (**Top Exit Cover**)
- Right Upper Cap (**Right Upper Cap**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Front Upper Cover (**Front Upper Cover**)
- Left Inner Cover (**Left Inner Cover**)
- Left Upper Cover (**Left Upper Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Upper Cover (**Rear Upper Cover**)
- Upper Inner Cover (**Upper Inner Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Frame (**Frame**)
- Right Upper Cover* (**Right Upper Cover**)
- Right Inner Cover* (**Right Inner Cover**)

Note

- Remove the Right Upper Cover and Right Inner Cover to improve the workability when installing the Top Cover.

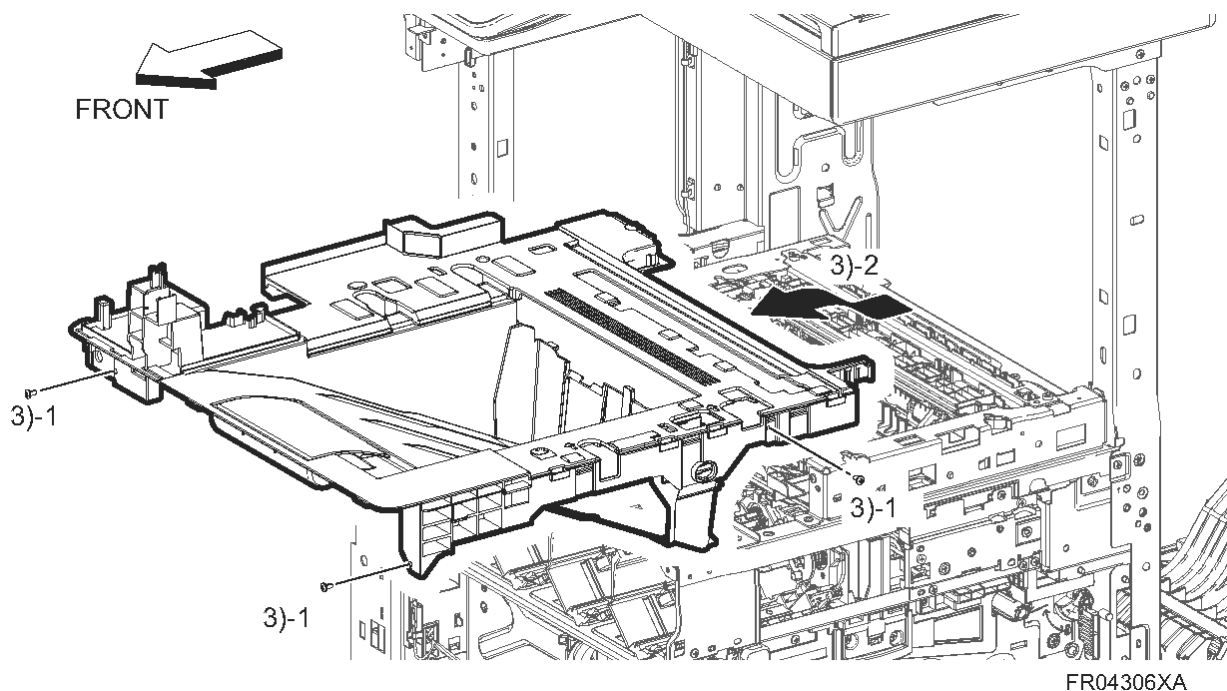
[Removal]

1. Open the Rear Cover.
2. Remove the Option Blind Cover.



FR04305XB

3. Remove three screws (Silver, M3X6mm), and remove the Top Cover in the direction of the arrow.



Note

- When installing the Top Cover, install it so that the feeler and come out from the paper exit of the Top Cover.

4.3.10 EXTERIOR COVERS (ONLY IM C530FB: SHORT MODEL)

IC Card Cover

1. Remove the IC Card Cover [A].



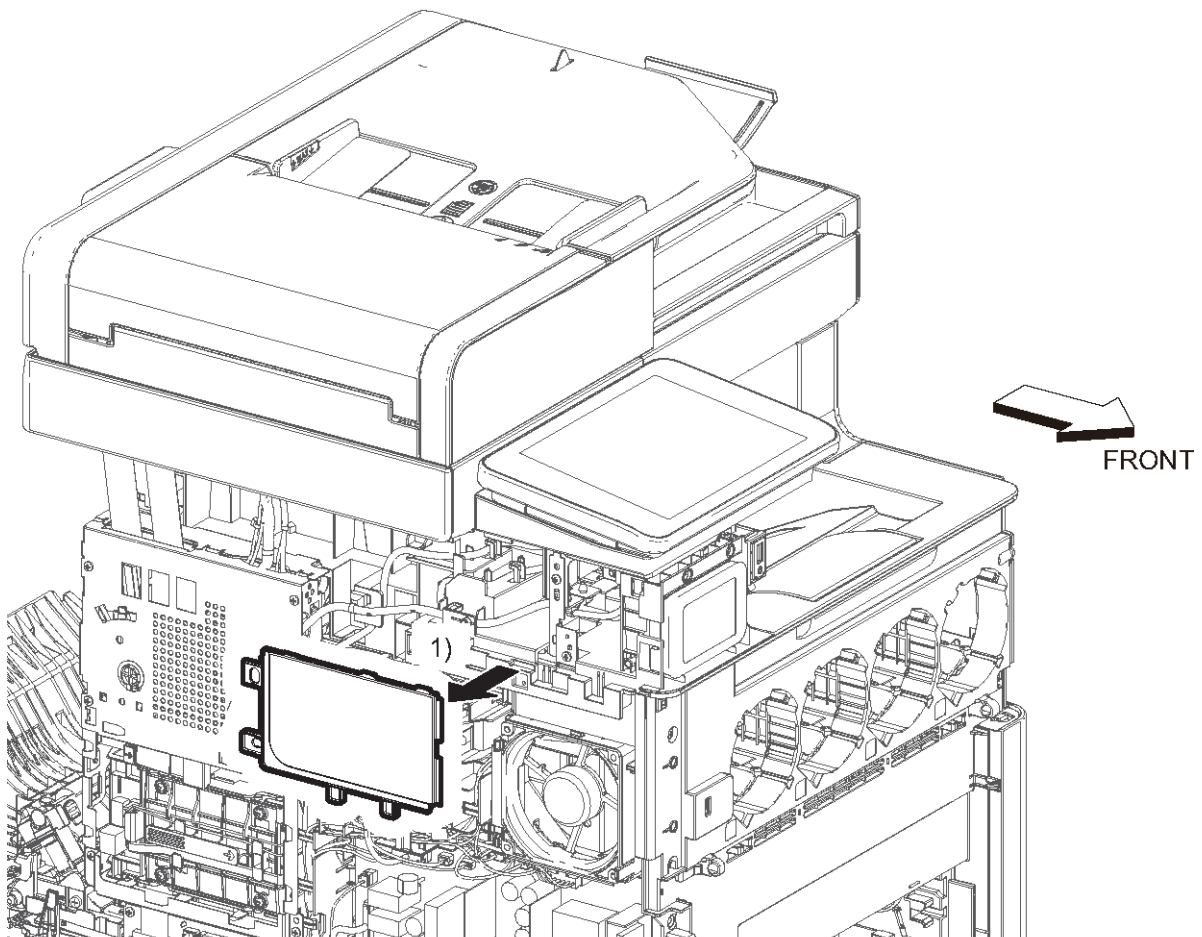
Left Sub Cover

[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- IC Card Cover (**IC Card Cover**)

[Removal]

1. Remove the Left Sub Cover.



FR04301XA

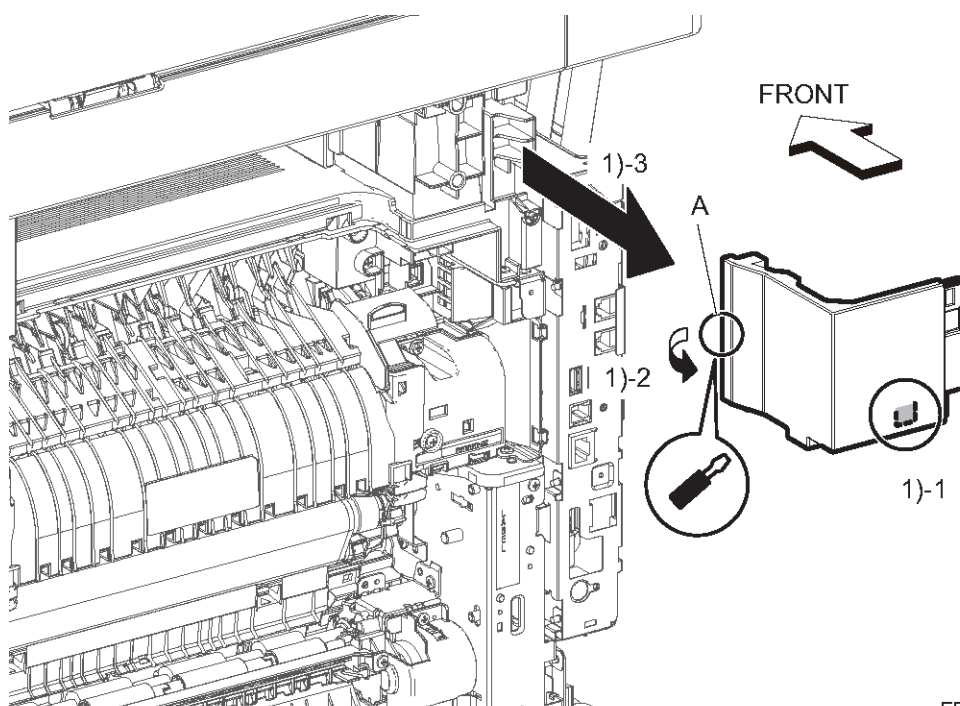
Rear Left Inner Cover

[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)

[Removal]

1. Insert the flathead screwdriver to slightly open the part [A], and remove the Rear Left Inner Cover.



FR04300XA

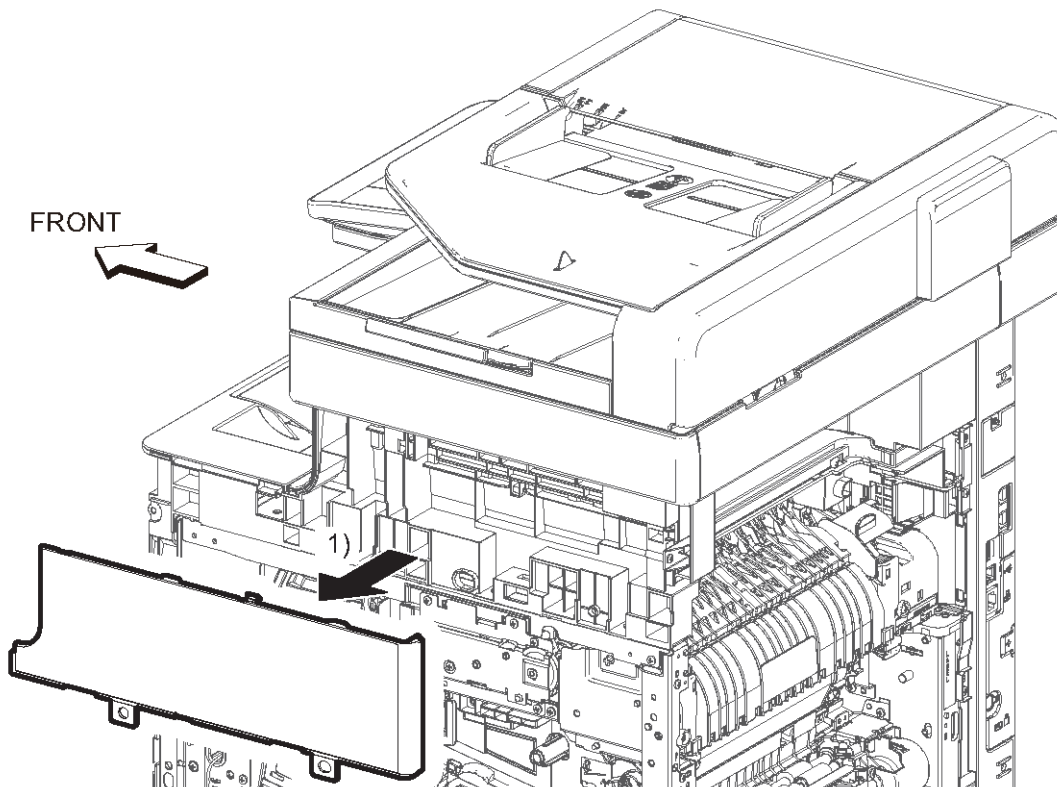
Right Upper Cover

[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)

[Removal]

1. Remove the Right Upper Cover.



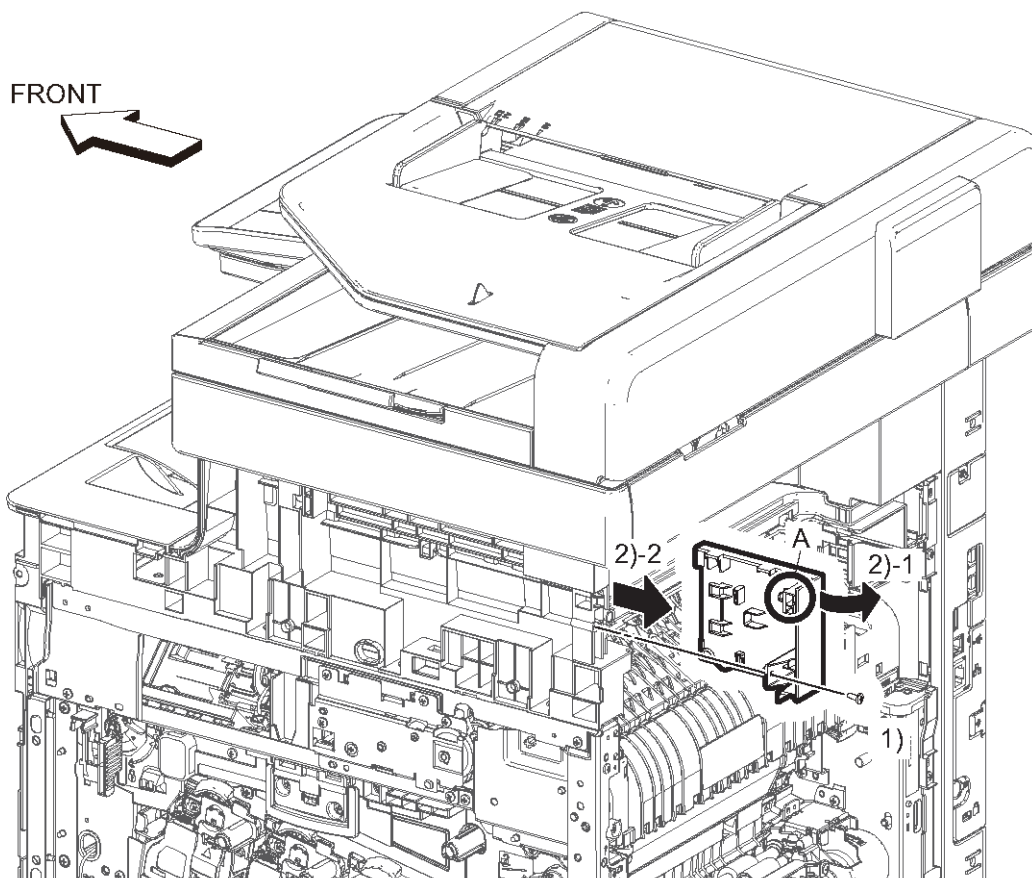
FR04298XA

Rear Right Inner Cover**[Before removal]**

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)
- Right Upper Cover (**Right Upper Cover**)

[Removal]

1. Remove one screw (Silver, tapping, M3X8mm).
2. Flex the Rear Right Inner Cover to release the boss [A], and then remove the Rear Right Inner Cover.



FR04297XA

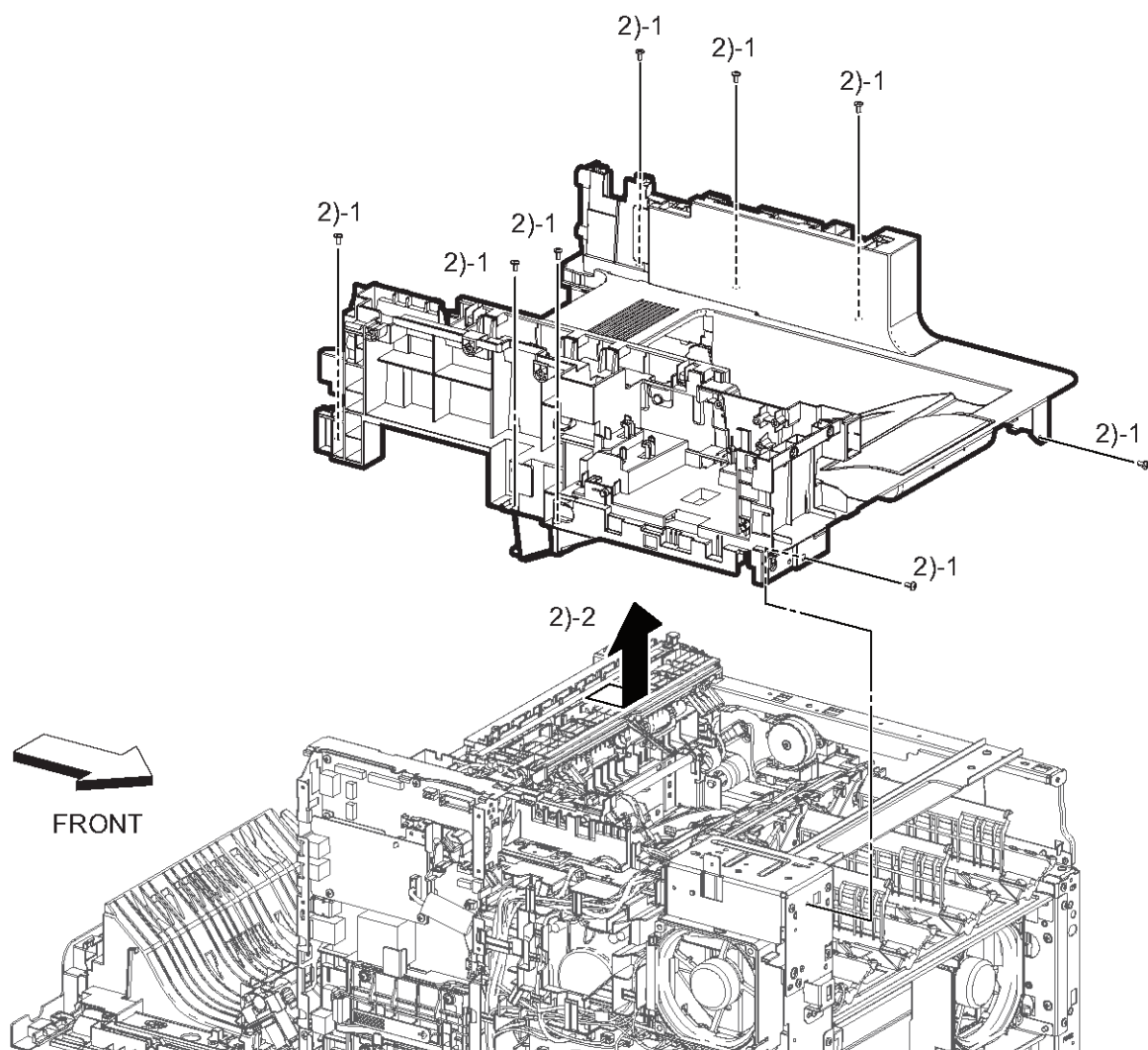
Top Cover**[Before removal]**

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- Left Sub Cover (**Left Sub Cover**)

- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Right Upper Cover (**Right Upper Cover**)
- Rear Right Inner Cover (**Rear Right Inner Cover**)
- Controller Box Cover (**Controller Box Cover**)
- SPDF Unit and Scanner Unit (**SPDF Unit and Scanner Unit (IM C530FB: Short Model)**)

[Removal]

1. Open the Rear Cover.
2. Remove the eight screws (Silver, M3X6mm), and lift up the Top Cover with the Right Inner Cover and the Left Inner Cover.



FR04286XA

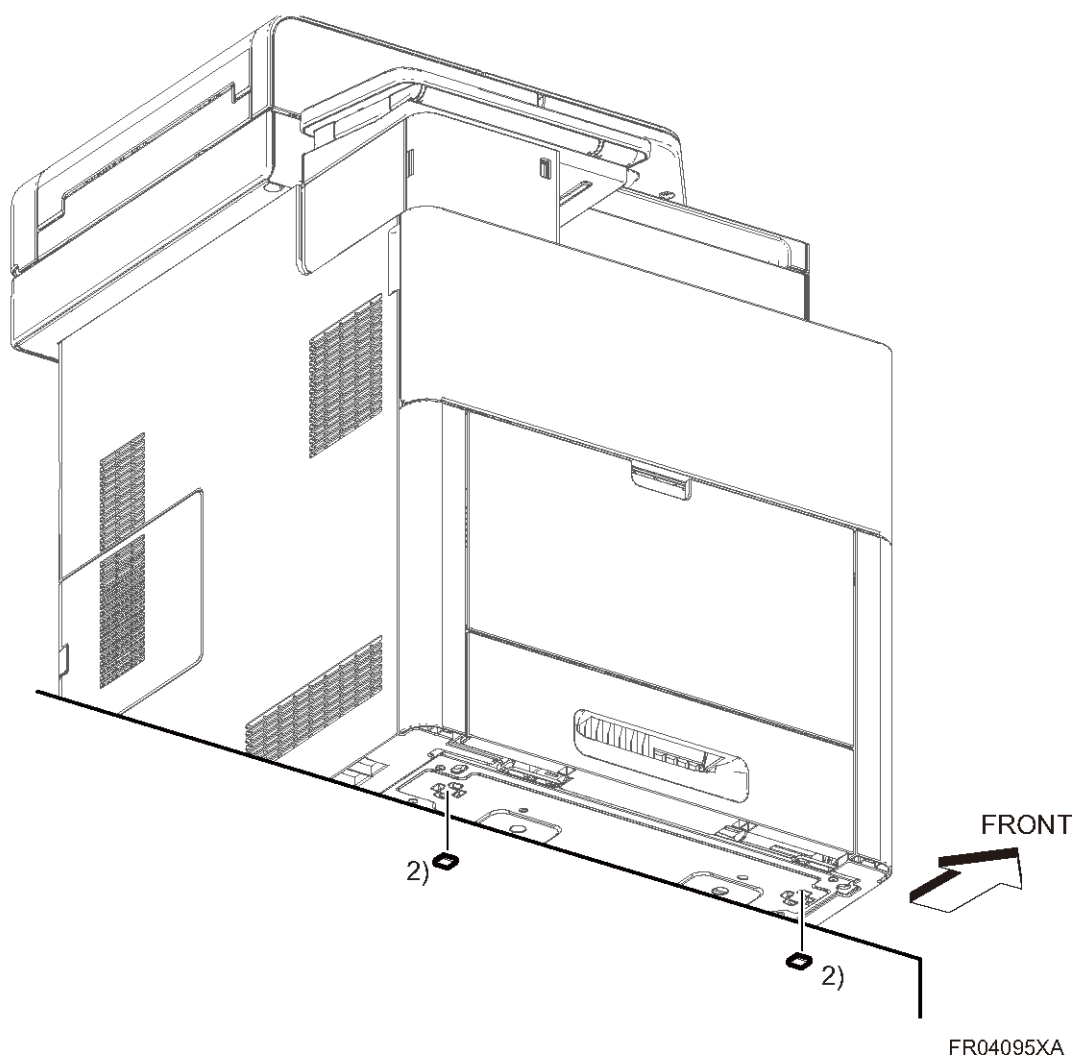
[Replacement]**Note**

- When installing the Top Cover, install it so that the feeler and flappers (right/left) come out from the paper exit of the Top Cover.

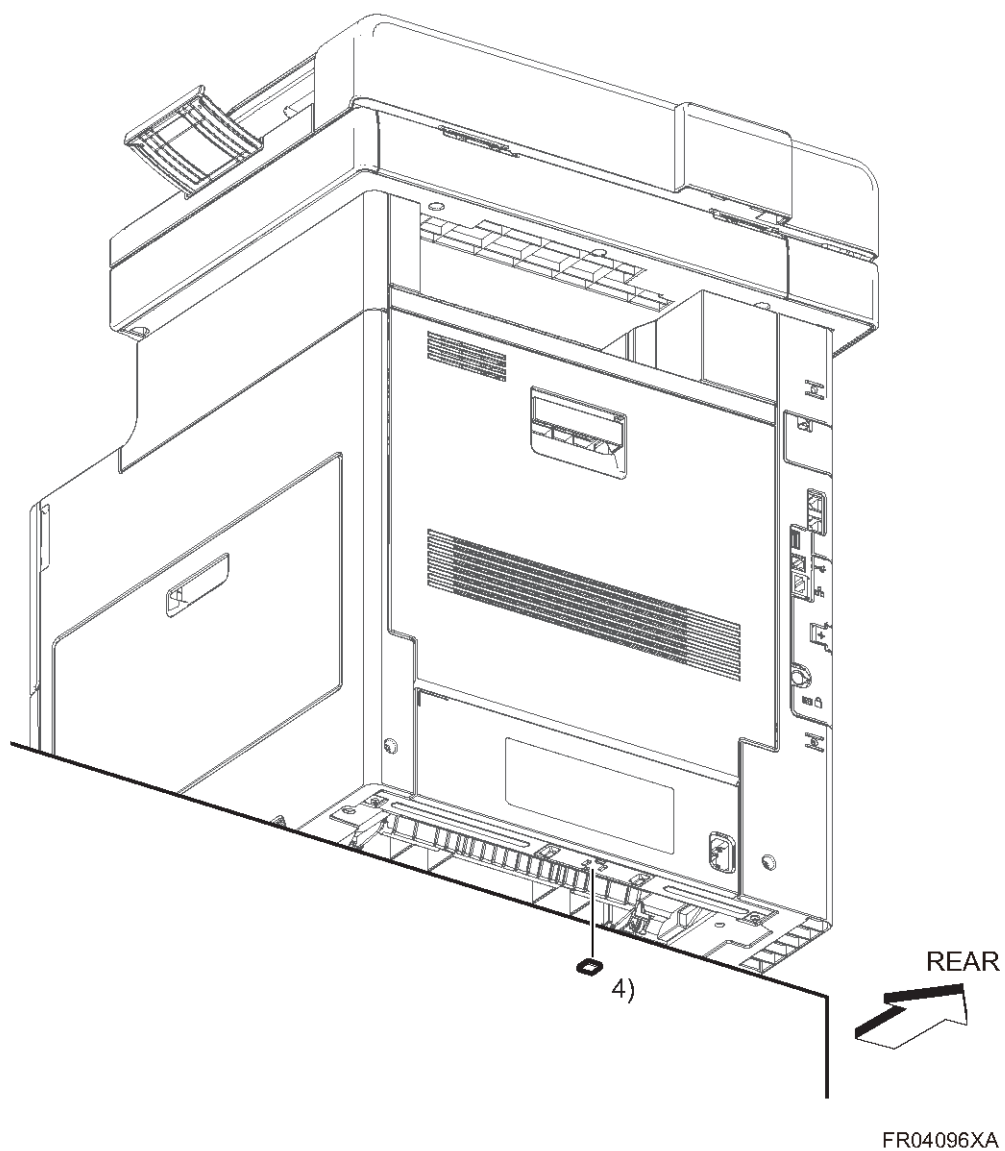
4.3.11 RUBBER FOOT**Note**

- When performing the following step to make the printer overhang from the workbench, make the overhang as small as possible to prevent the printer from falling off.

1. Make the front end of the printer overhang from the workbench.
2. Remove two Rubber Foot.



3. Make the rear end of the printer overhang from the workbench.
4. Remove one Rubber Foot.



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Adjustment

4.4 SCANNER AND SPDF

4.4.1 SPDF UNIT AND SCANNER UNIT (IM C530F: TALL MODEL)

[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**)
- Right Upper Cap (**Right Upper Cap**)
- Right Cover (**Right Cover**)
- IC Card Cover (**IC Card Cover**)
- Front Upper Cover (**Front Upper Cover**)
- Left Inner Cover (**Left Inner Cover**)
- Left Upper Cover (**Left Upper Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Upper Cover (**Rear Upper Cover**)
- Upper Inner Cover (**Upper Inner Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Right Upper Cover (**Right Upper Cover**)
- Controller Box Cover (**Controller Box Cover**)

[Removal]

1. Open the Rear Cover.
2. Remove two screws (Silver, M3X6mm) to release the ground harnesses.
3. Disengage two FFCs (P/J1370, P/J1371) and the connectors (P/J1372, P/J1373, P/J1374, P/J1377).

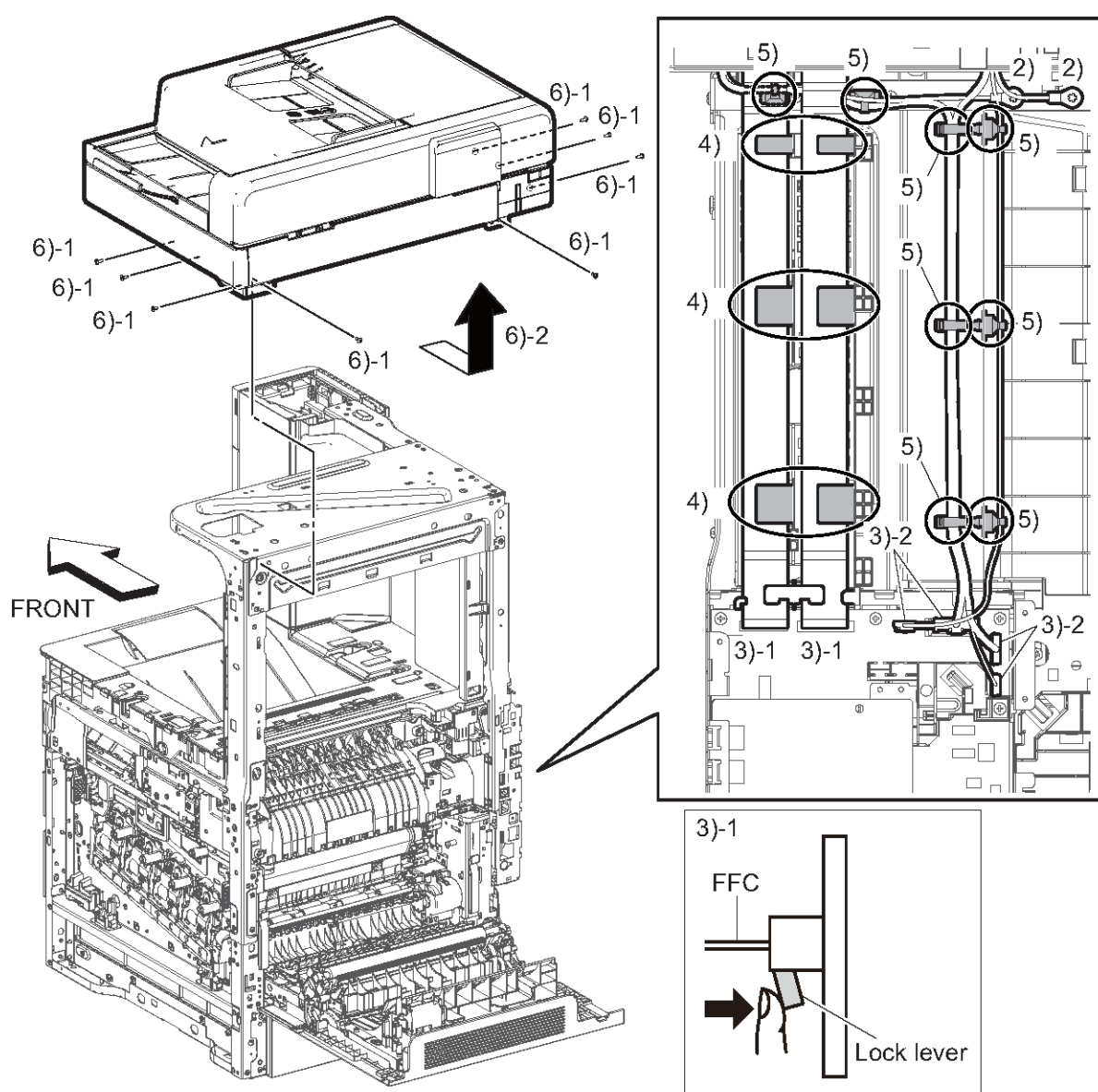
CAUTION

- Do not open the lock lever completely. Opening the lock lever completely may break the lock lever.

Note

- When release the lock lever on the connector, open the lock lever to 15 degrees until the lock lever contacts the FFC connector as shown in the figure. After releasing the lock lever, lightly pull the FFC to disengage the connector while holding the lock lever being released.

- Release the FFCs from the harness guide.
- Release three clamps and five push-ties.
- Remove eight screws (Silver, M3X6mm) to remove the Scanner Unit with SPDF Unit in the direction of the arrow.



FR04363XA

Adjustment after SPDF Unit Replacement

1. Enter the SP mode.
2. Execute the SP6-814-001 (ADF Factory Value: Save) to import the factory values held by the SPDF Unit into the machine.
3. Execute the SP4-719-001 (Back: WB Value: Conversion: Execution).
4. Scan with the SPDF and print out an image in Copy mode to check the image quality. (Refer to **SPDF Image Adjustment**)

4.4.2 SPDF UNIT AND SCANNER UNIT (IM C530FB: SHORT MODEL)

[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)
- IC Card Cover (**IC Card Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Right Upper Cover (**Right Upper Cover**)
- Rear Right Inner Cover (**Rear Right Inner Cover**)
- Controller Box Cover (**Controller Box Cover**)

[Removal]

1. Open the Rear Cover.
2. Remove two screws (Silver, M3X6mm) to release the ground harnesses.
3. Disengage two FFCs (P/J1370, P/J1371) and the connectors (P/J1372, P/J1373, P/J1374, P/J1377).

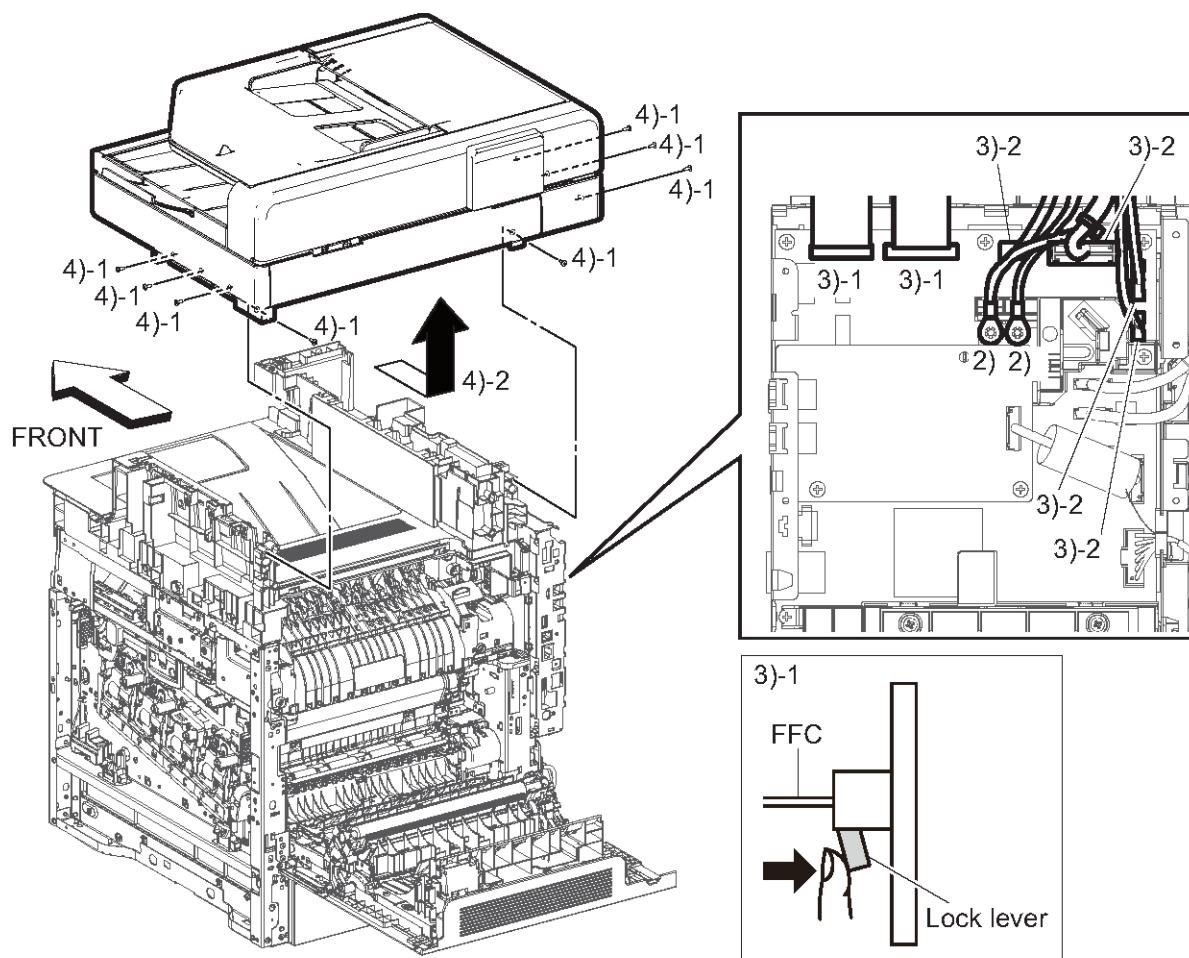
CAUTION

- Do not open the lock lever completely. Opening the lock lever completely may break the lock lever.

Note

- When release the lock lever on the connector, open the lock lever to 15 degrees until the lock lever contacts the FFC connector as shown in the figure. After releasing the lock lever, lightly pull the FFC to disengage the connector while holding the lock lever being released.

- Remove eight screws (Screw for plastic Silver, tapping, M3x8) to remove the Scanner Unit with SPDF Unit in the direction of the arrow.



FR04348XA

Adjustment after SPDF Unit Replacement

- Enter the SP mode.
- Execute the SP6-814-001 (ADF Factory Value: Save) to import the factory values held by the SPDF Unit into the machine.
- Execute the SP4-719-001 (Back: WB Value: Conversion: Execution).
- Scan with the SPDF and print out an image in Copy mode to check the image quality. (Refer to **SPDF Image Adjustment**)

4.4.3 SCANNER UNIT

[Before removal]

(IM C530F: Tall model)

- Paper Tray (***Paper Tray***)
- Bypass Tray Assy (***Bypass Tray Assy***)
- Toner Cover (***Toner Cover***)
- Front Left Cover (***Front Left Cover***)
- Left Cover (***Left Cover***)
- Front Right Cover (***Front Right Cover***)
- Top Exit Cover (***Top Exit Cover***)
- Right Upper Cap (***Right Upper Cap***)
- Right Cover (***Right Cover***)
- IC Card Cover (***IC Card Cover***)
- Front Upper Cover (***Front Upper Cover***)
- Left Inner Cover (***Left Inner Cover***)
- Left Upper Cover (***Left Upper Cover***)
- Left Sub Cover (***Left Sub Cover***)
- Rear Upper Cover (***Rear Upper Cover***)
- Upper Inner Cover (***Upper Inner Cover***)
- Rear Left Inner Cover (***Rear Left Inner Cover***)
- Right Upper Cover (***Right Upper Cover***)
- Controller Box Cover (***Controller Box Cover***)
- SPDF Unit and Scanner Unit (***SPDF Unit and Scanner Unit (IM C530F: Tall Model)***)

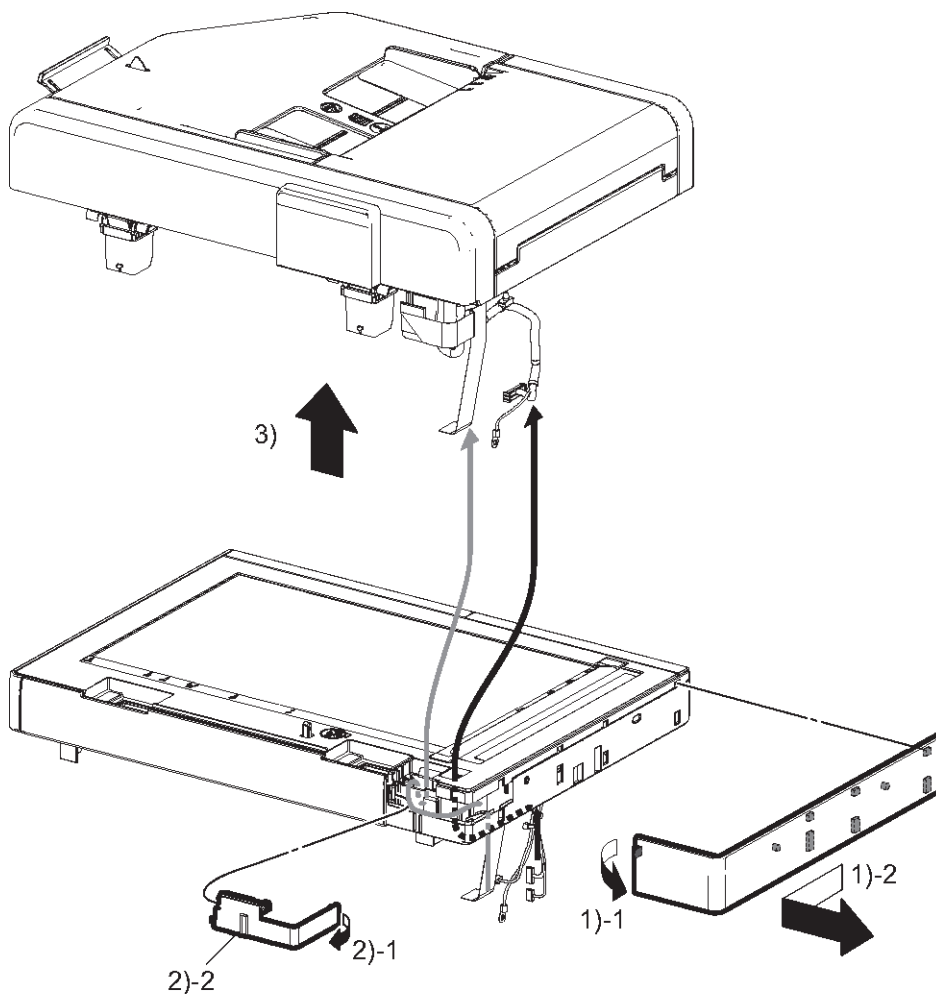
(IM C530FB: Short model)

- Paper Tray (***Paper Tray***)
- Bypass Tray Assy (***Bypass Tray Assy***)
- Toner Cover (***Toner Cover***)
- Front Left Cover (***Front Left Cover***)
- Left Cover (***Left Cover***)
- Front Right Cover (***Front Right Cover***)
- Right Cover (***Right Cover***)
- IC Card Cover (***IC Card Cover***)

- Left Sub Cover (**Left Sub Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Right Upper Cover (**Right Upper Cover**)
- Rear Right Inner Cover (**Rear Right Inner Cover**)
- Controller Box Cover (**Controller Box Cover**)

[Removal]

1. Release the hook on the rear side of the Scanner Left Cover, and remove it.
2. Release the hook and remove the Scanner Left Cap.
3. Remove the SPDF Unit in the direction of the arrow from the Scanner Unit.

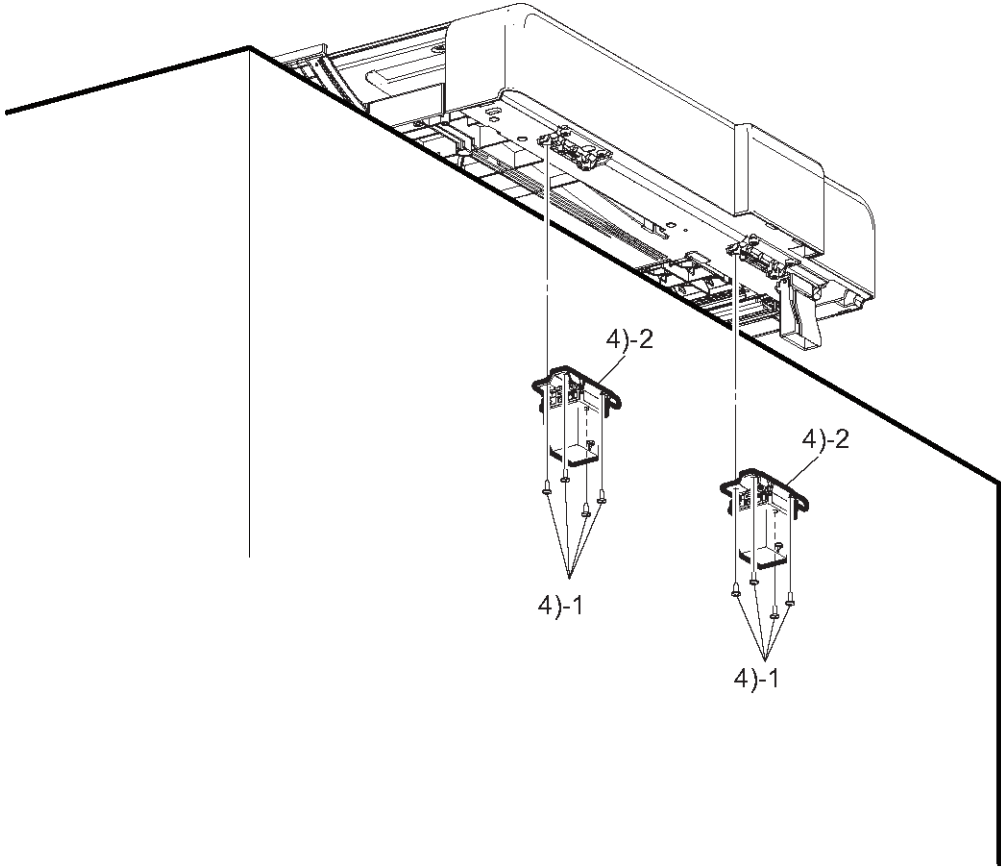


FR04364XA

Note

- Scanner Unit shipped as a service part includes the Scanner Left Cover and Scanner Left Cap.

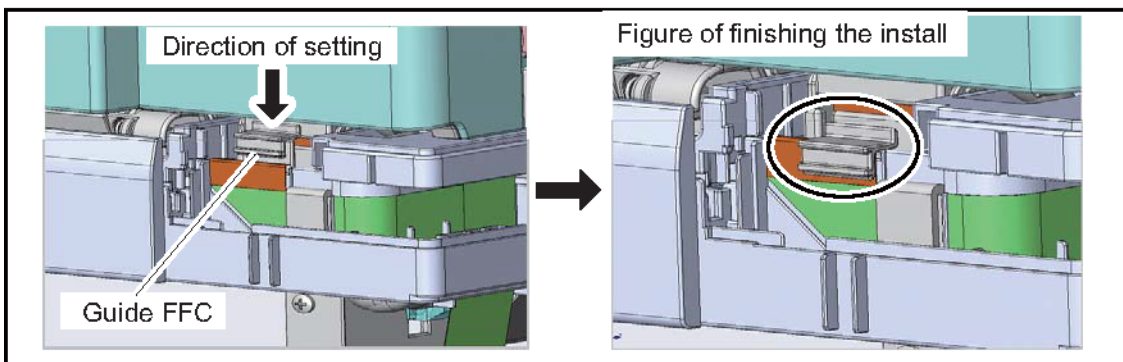
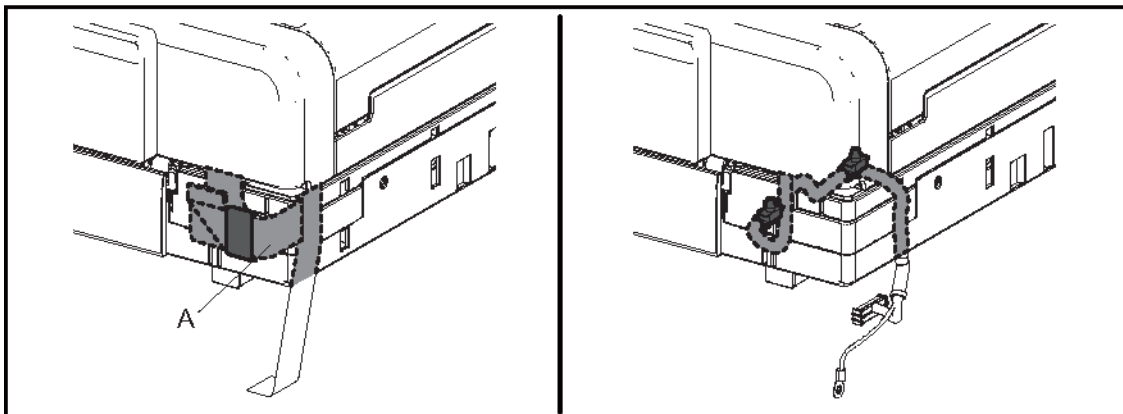
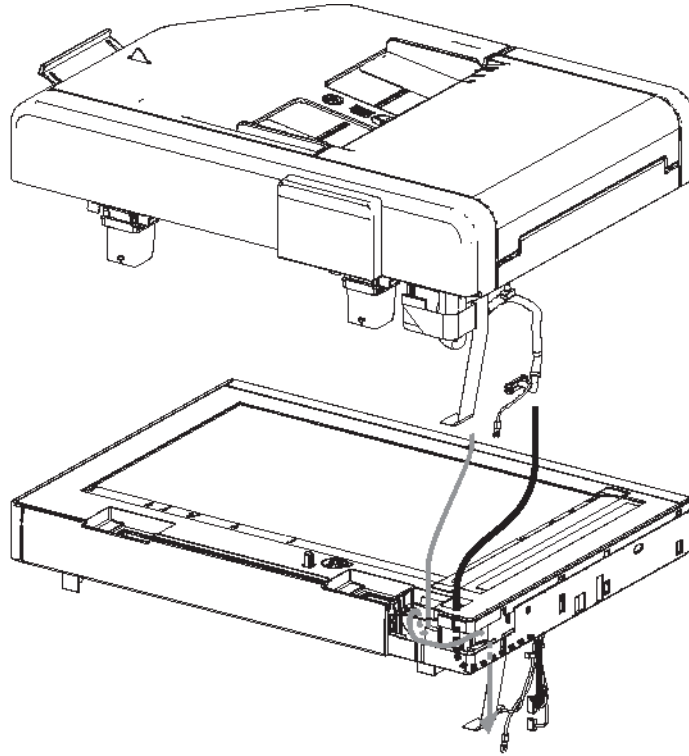
4. Remove eight screws (Screw for plastic Silver, tapping, M3x8) fixing the hinge (left) and hinge (right), and then remove them.



FR04365XA

[Replacement]**Note**

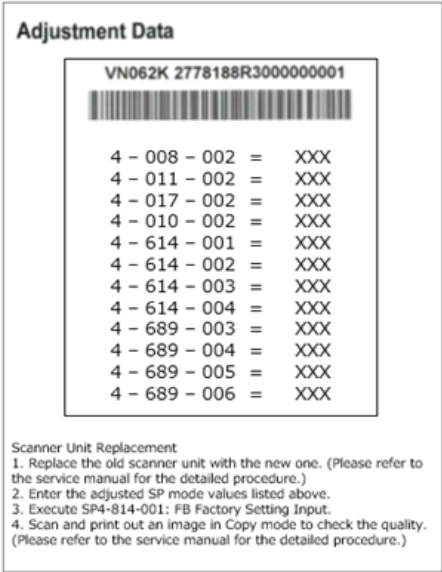
- When fixing the FFC and the cable, install it as shown in the following figure.
- The core is equipped on the portion [A] in the figure.
- Install the Guide FFC, as shown in the following figure.



FR04366XB

Adjustment after Scanner Unit Replacement

1. Prepare the adjustment sheet provided with the new Scanner Unit.



d0csc5005

- 2. Enter the SP mode.
- 3. Enter the factory values listed on the adjustment sheet.

SP No.	What Does It
SP4-008-002	Sub-scan magnification adjustment value
SP4-011-002	Side-to-side registration adjustment value
SP4-017-002	ADF scanning position adjustment value
SP4-010-002	Home position adjustment value
SP4-614-001	White correction coefficient (front): Red
SP4-614-002	White correction coefficient (front): Green
SP4-614-003	White correction coefficient (front): Blue
SP4-614-004	White correction coefficient (front): BW
SP4-689-003	CVT Scan Density Corr Coeff: Red
SP4-689-004	CVT Scan Density Corr Coeff: Green
SP4-689-005	CVT Scan Density Corr Coeff: Blue
SP4-689-006	CVT Scan Density Corr Coeff: Mono

- 4. Execute the SP4-814-001 (FB Factory Setting Input: Input) to import the values into the machine.
- 5. Scan and print out an image in Copy mode to check the image quality. (Refer to **Scanner Image Adjustment**)

4.4.4 SPDF FEED ASSY/ SPDF SEPARATION ROLLER

★ Important

- Replace the SPDF Feed Assy and SPDF Separation Roller at same time.

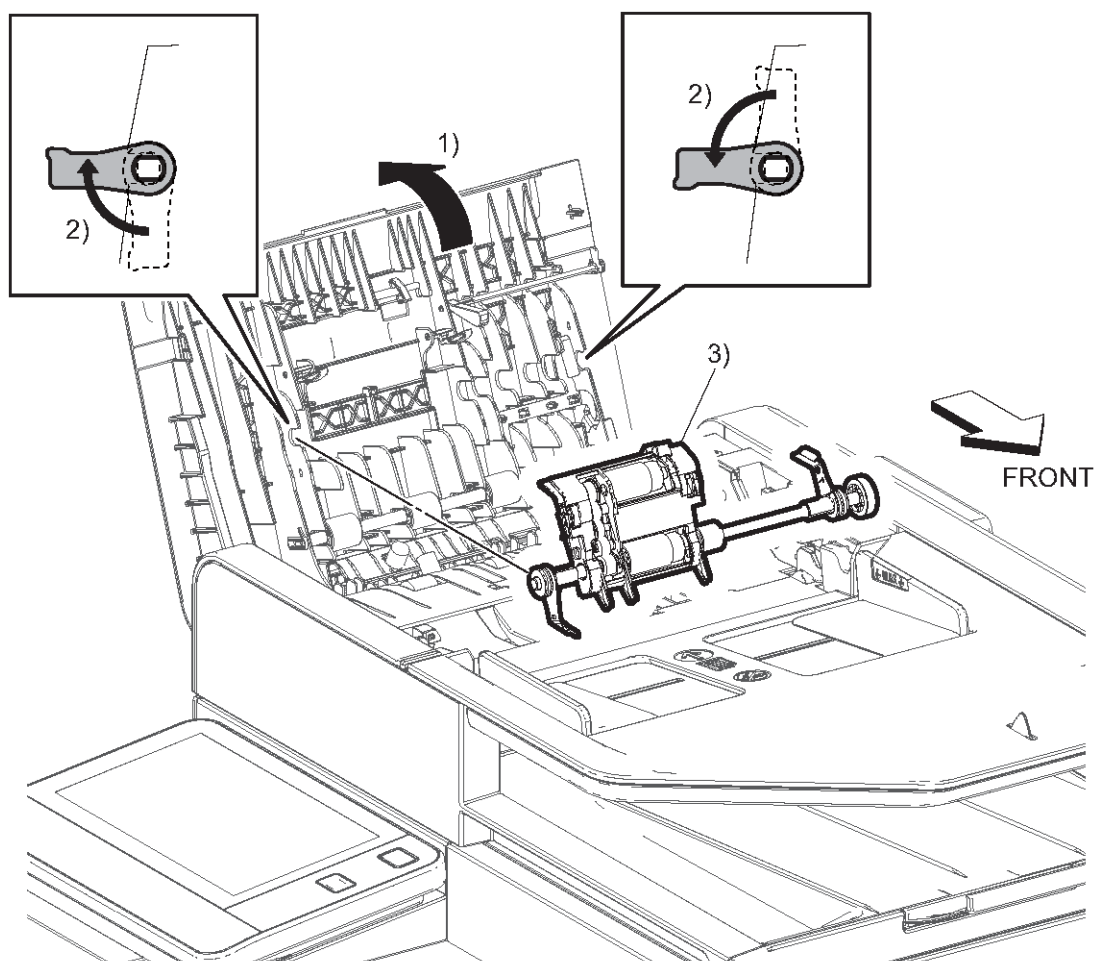
[Before replacing the SPDF Feed Assy and SPDF Separation Roller]

Before replacing the SPDF Feed Assy and SPDF Separation Roller, reset the PM counter.

1. Turn the power ON.
2. Reset the PM counter. (Refer to **Replacement Procedure of the PM/Yield Parts**)
3. Turn the power OFF.

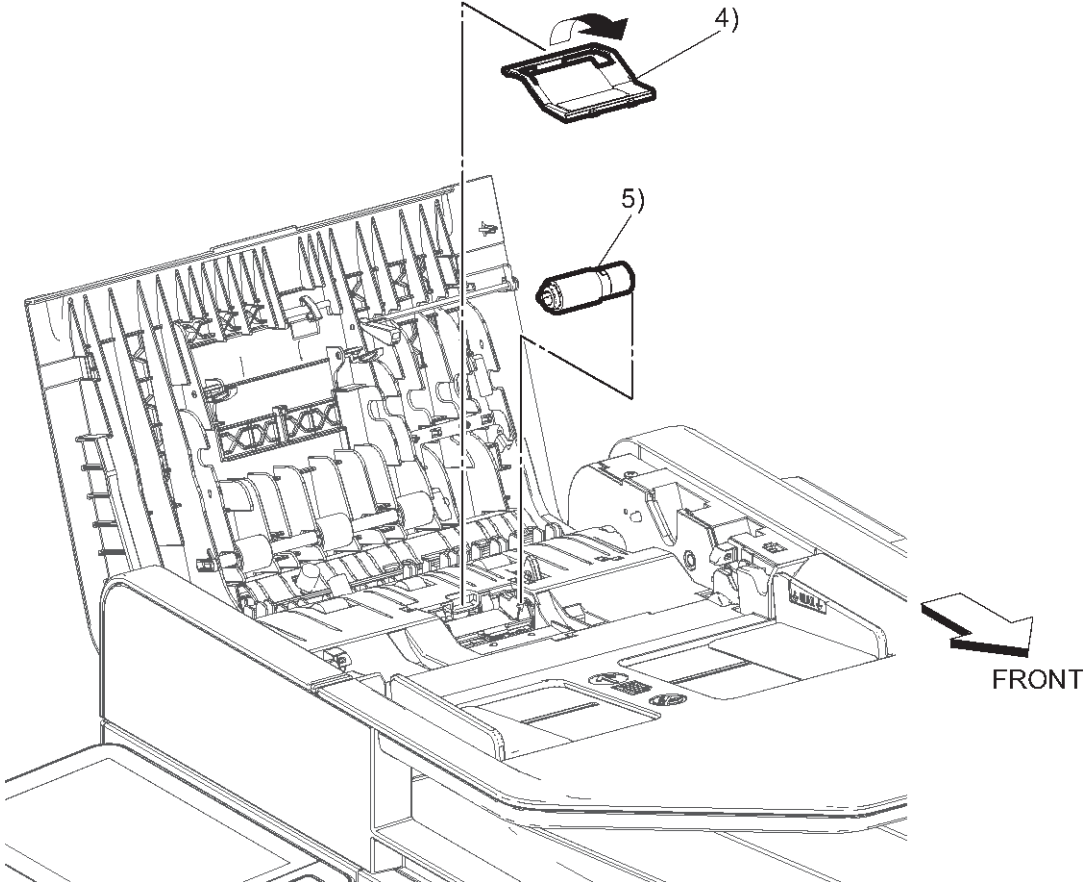
[Removal]

1. Open the SPDF Top Cover.
2. Rotate the hook of the SPDF Feed Assy as shown in the following figure and release the boss.
3. Remove the SPDF Feed Assy.



FR04367XA

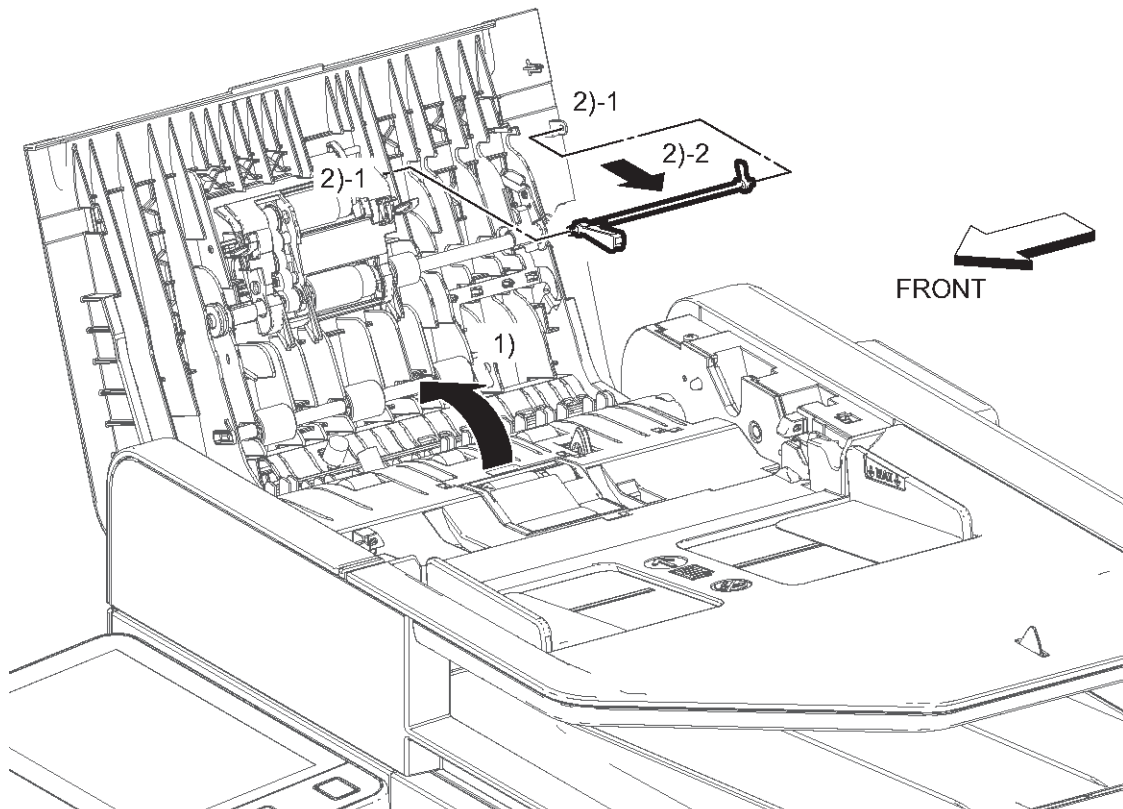
- 4. Remove the cover in the direction of the arrow.
- 5. Remove the SPDF Separation Roller.



FR04368XA

4.4.5 SPDF FEELER

1. Open the SPDF Top Cover.
2. Release the two bosses one by one while slightly bending the SPDF Feeler, and then remove it.



FR04375XA

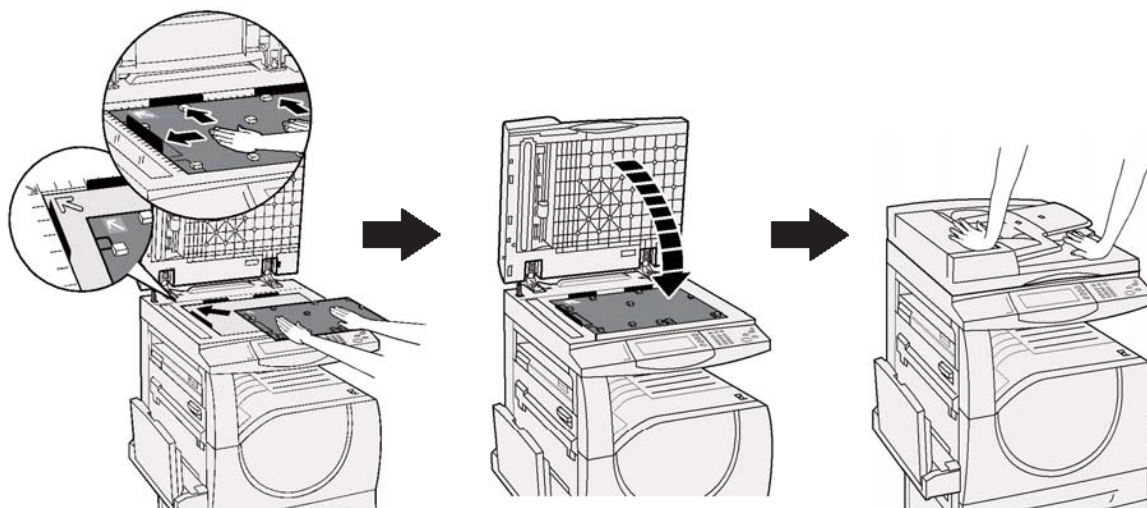
4.4.6 PLATEN CUSHION

[Removal]

1. Open the SPDF Unit.
2. Remove the Platen Cushion.

[Replacement]**Note**

- When installing the Platen Cushion, arrange the Platen Cushion as shown below.



FR04413XA

4.4.7 SPDF TRAY ASSY**[Before removal]****(IM C530F: Tall model)**

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**)
- Right Upper Cap (**Right Upper Cap**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Front Upper Cover (**Front Upper Cover**)
- Left Inner Cover (**Left Inner Cover**)
- Left Upper Cover (**Left Upper Cover**)



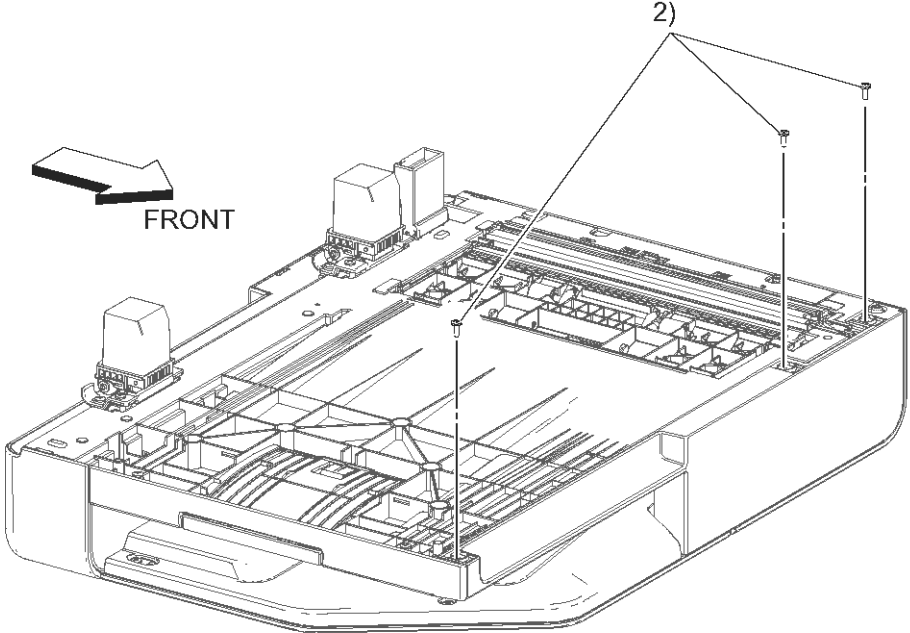
- Left Sub Cover (**Left Sub Cover**)
- Rear Upper Cover (**Rear Upper Cover**)
- Upper Inner Cover (**Upper Inner Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Right Upper Cover (**Right Upper Cover**)
- Controller Box Cover (**Controller Box Cover**)
- SPDF Unit and Scanner Unit (**SPDF Unit and Scanner Unit (IM C530F: Tall Model)**)

(IM C530FB: Short model)

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Right Upper Cover (**Right Upper Cover**)
- Rear Right Inner Cover (**Rear Right Inner Cover**)
- Controller Box Cover (**Controller Box Cover**)
- SPDF Unit and Scanner Unit (**SPDF Unit and Scanner Unit (IM C530FB: Short Model)**)

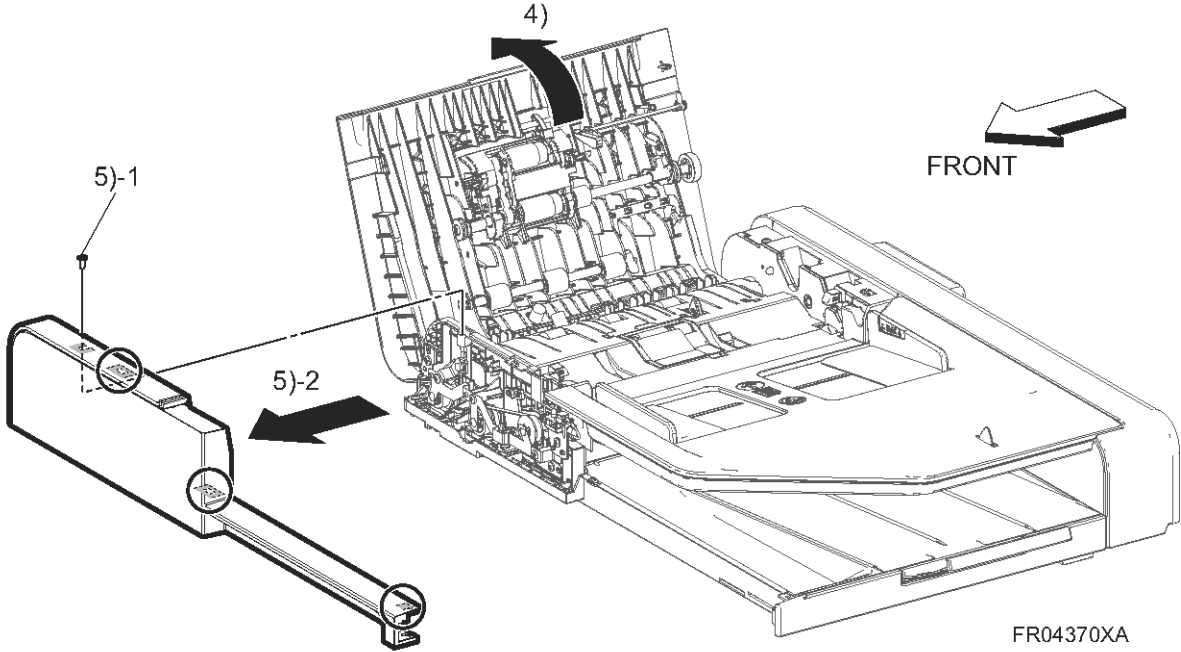
[Removal]

- 1. Reverse the SPDF Unit as shown in the illustration.
- 2. Remove three screws (Screw for plastic Silver, tapping, M3x8) fixing the SPDF Front Cover).



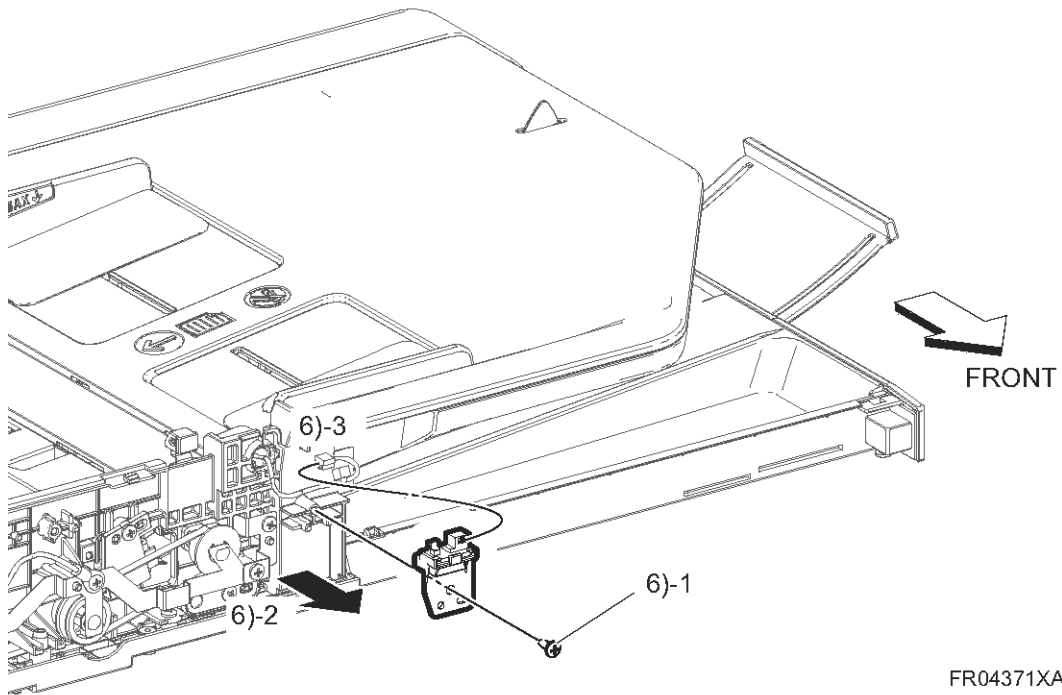
FR04369XA

- 3. Reverse the SPDF Unit again.
- 4. Open the SPDF Upper Cover.
- 5. Remove one screw (Screw for plastic Silver, tapping, M3x8) to remove the SPDF Front Cover).

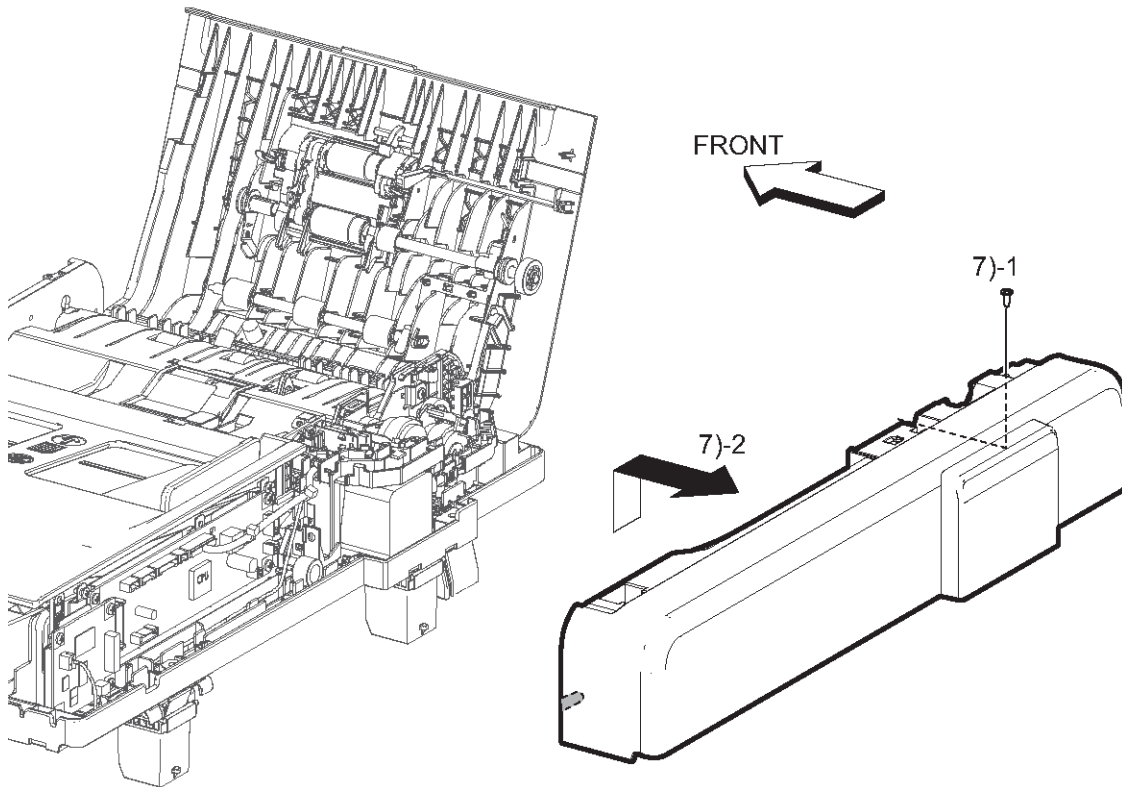


FR04370XA

6. Remove one screw (Screw for plastic Silver, tapping, M3x8) to remove the bracket and disengage the connector.

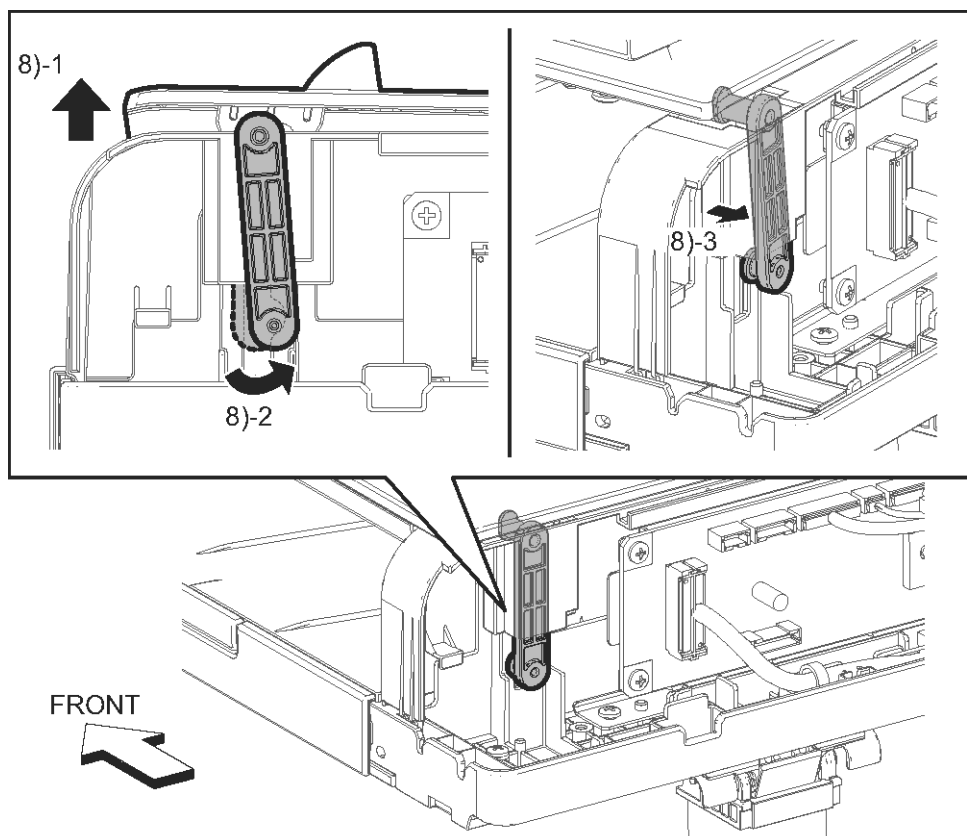


7. Release one boss and remove one screw (Screw for plastic Silver, tapping, M3x8), and then remove the SPDF Rear Cover by lifting it up.



FR04372XA

8. Lift the SPDF Tray Assy, and release the link in the direction of the arrow.



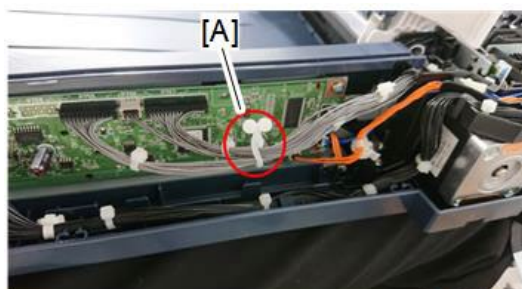
FR04405XA

9. Disengage the connector.

10. Release the harness from the harness guide.

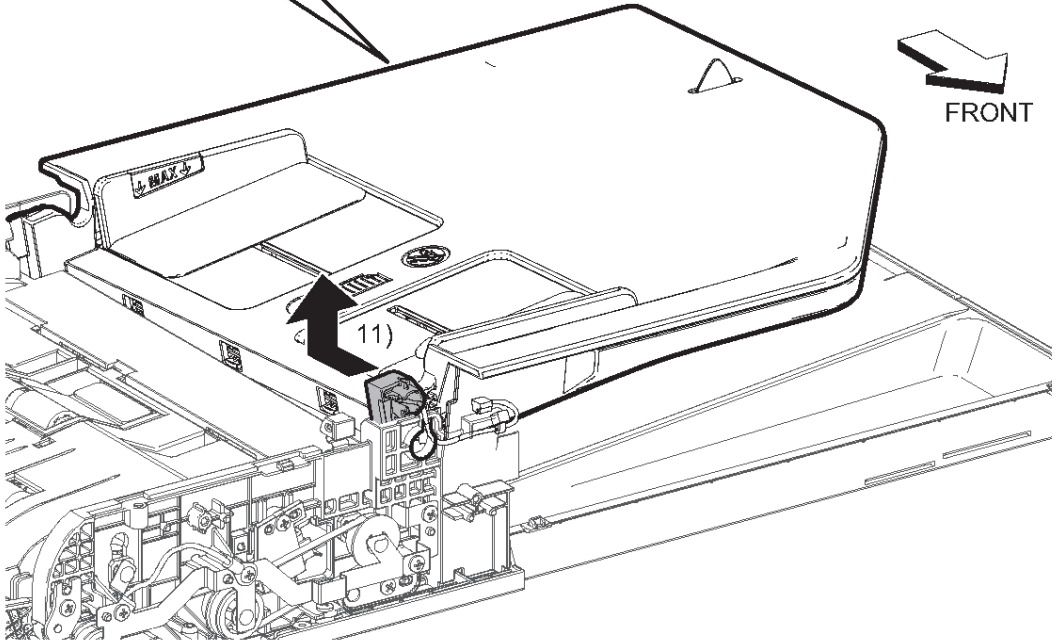
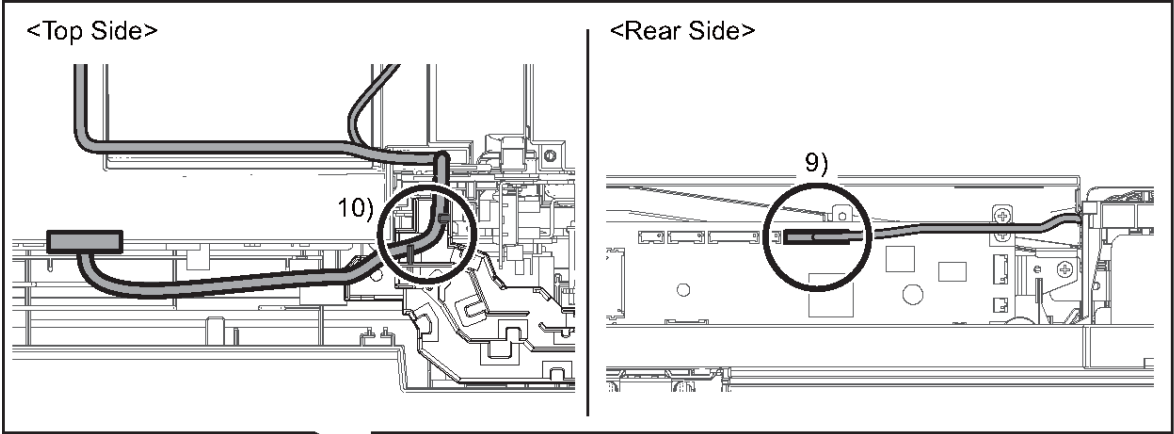
Note

- It is easier to remove if you release the band [A] bundling the harness.



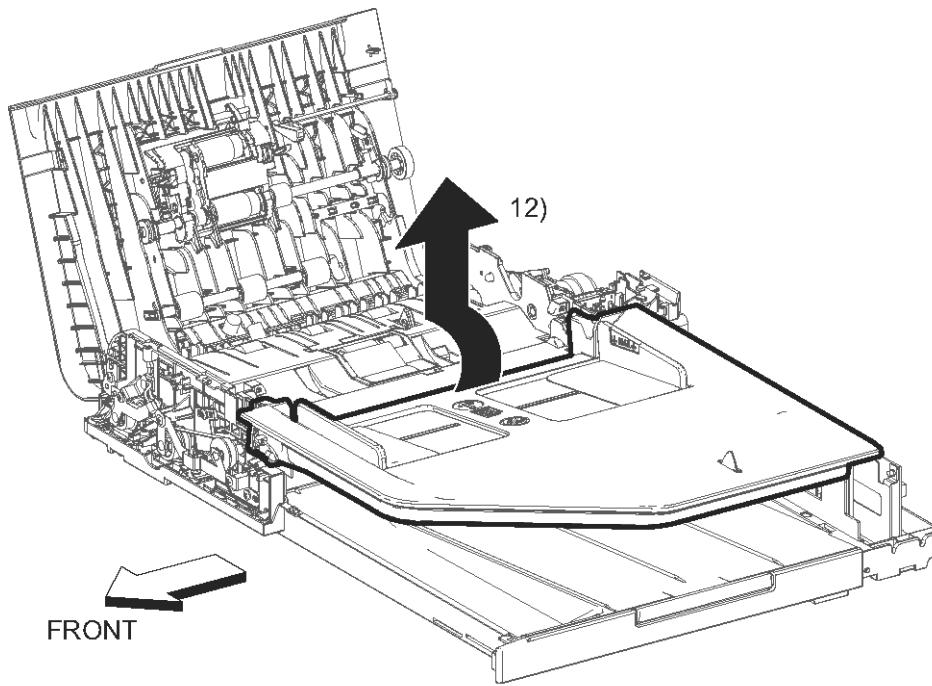
d0csc4033

11. Flex the SPDF Tray Assy to release the boss on front side.



FR04373XA

12. Rotate the SPDF Tray Assy in 90 degrees to remove it.



FR04374XA

Replacement
and
Adjustment

4.5 OPERATION PANEL

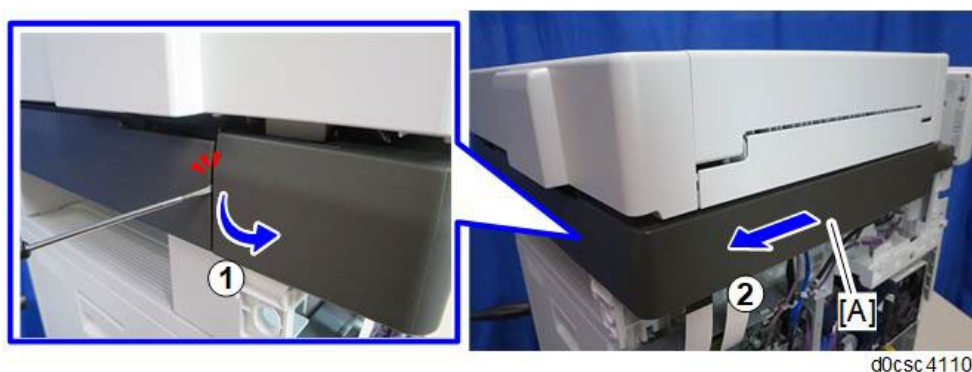
4.5.1 OPERATION PANEL (IM C530F: TALL MODEL)

[Before removal]

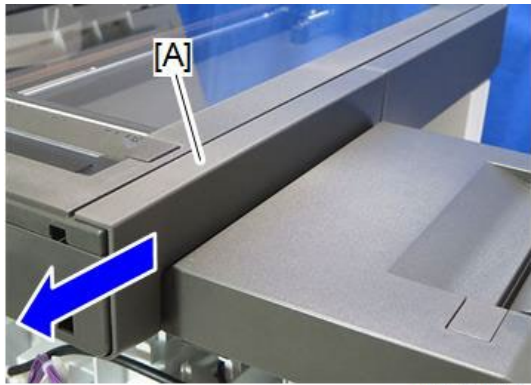
- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Controller Box Cover (**Controller Box Cover**)
- Top Exit Cover (**Top Exit Cover**)
- IC Card Cover (**IC Card Cover**)
- Front Upper Cover (**Front Upper Cover**)
- Left Inner Cover (**Left Inner Cover**)
- Left Upper Cover (**Left Upper Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Upper Cover (**Rear Upper Cover**)
- Upper Inner Cover (**Upper Inner Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)

[Before removal]

1. Release the hook on the rear side of the Scanner Left Cover [A], and then slide to right to remove the Scanner Left Cover.

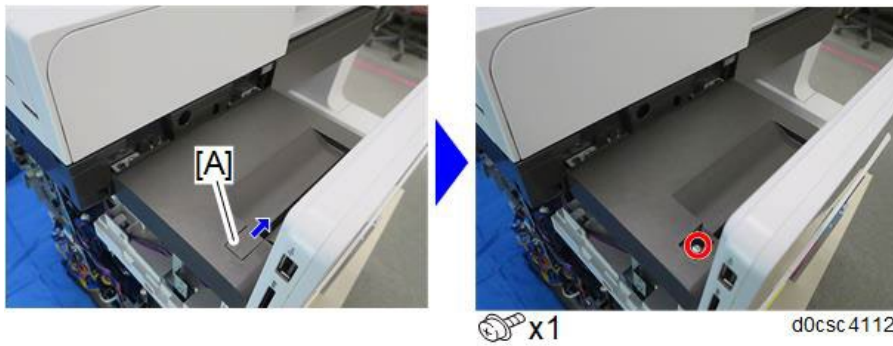


2. Slide to right to remove the Scanner Front Cover [A].

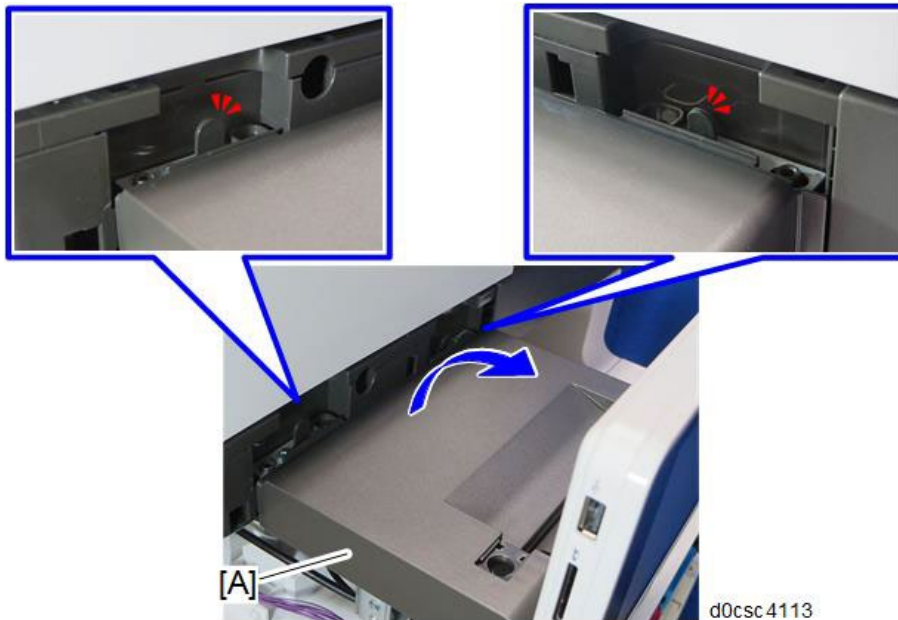


d0csc4110

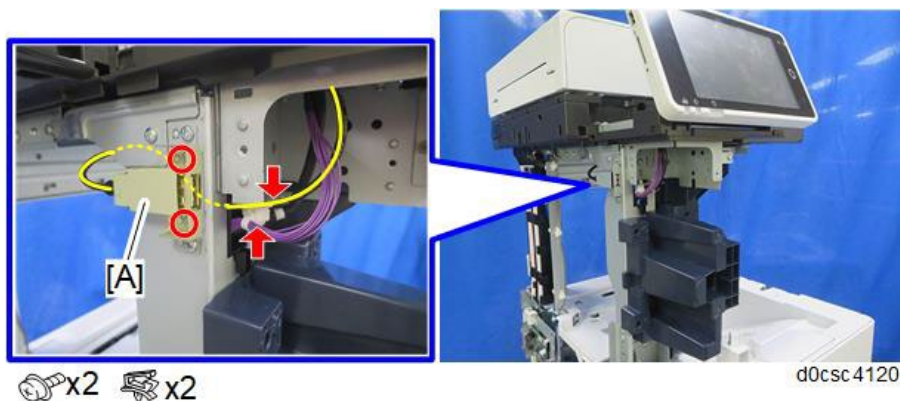
3. Slide the cap [A] and remove the screw (M3X6mm).



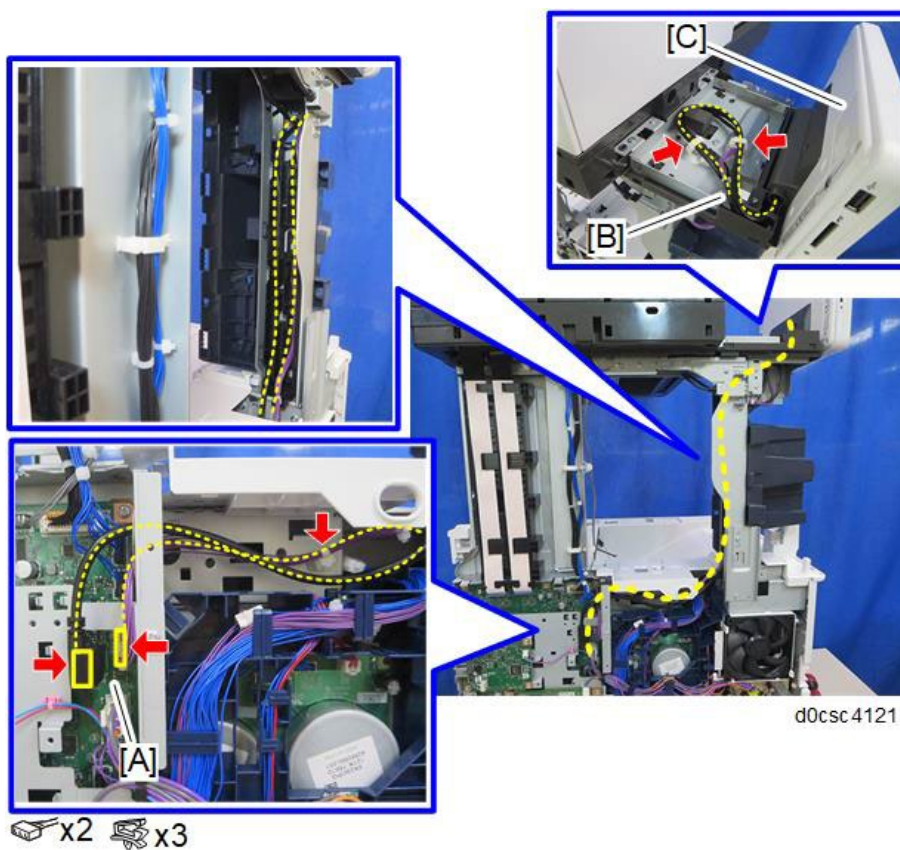
4. Release two hooks to remove the upper cover [A].



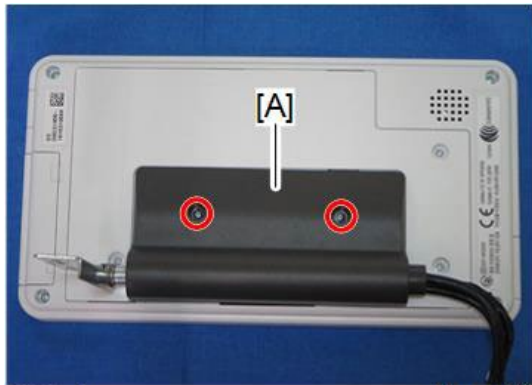
5. Release two clamps and remove the USB connector with the bracket [A] (M3X6mm).



6. Disconnect two connectors on the Controller Board (PCB1) [A].
7. Release the harness and USB cables, and then pull out them from hole [B].
8. Remove the Operation Panel [C] with the harness and USB cables.



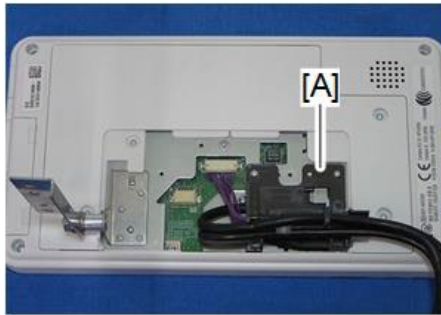
9. Remove the hinge cover [A] (M2X4mm).



 x2

d0csc 4116

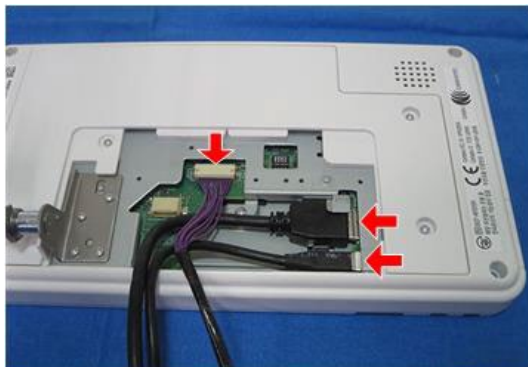
10. Release the harness and USB cables from the harness guide [A], and then remove the harness guide (M2X4mm).



 x2

d0csc 4117

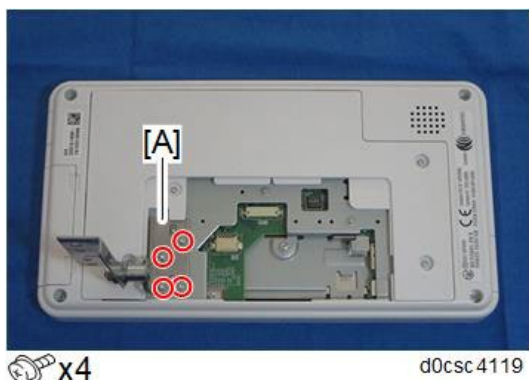
11. Disconnect the harness and USB cables.



 x3

d0csc 4118

12. Remove the hinge [A] (M2X5mm/Washer).



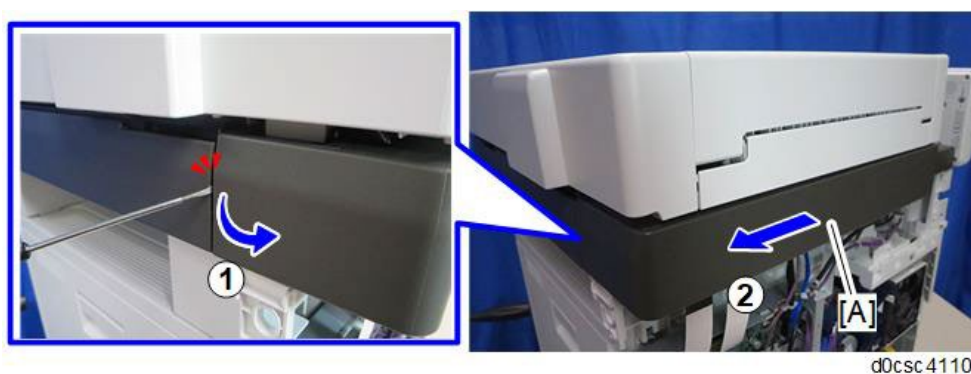
4.5.2 OPERATION PANEL (IM C530FB: SHORT MODEL)

[Before removal]

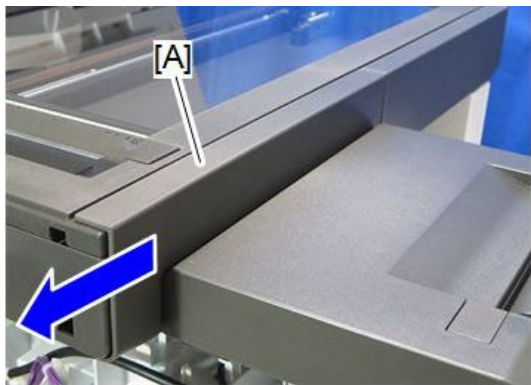
- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Controller Box Cover (**Controller Box Cover**)

[Before removal]

1. Release the hook on the rear side of the Scanner Left Cover [A], and then slide to right to remove the Scanner Left Cover.

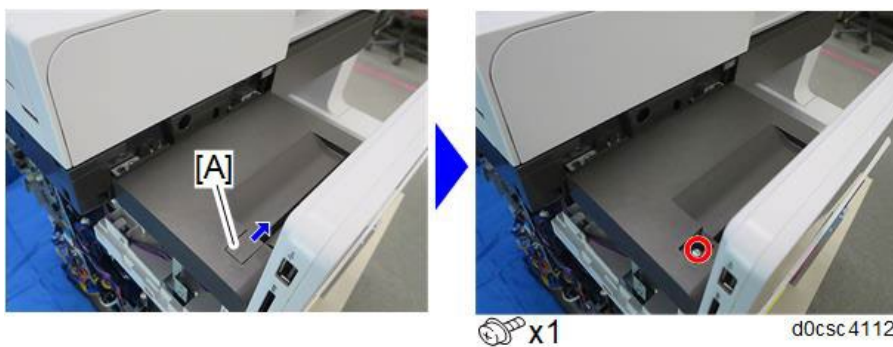


2. Slide to right to remove the Scanner Front Cover [A].

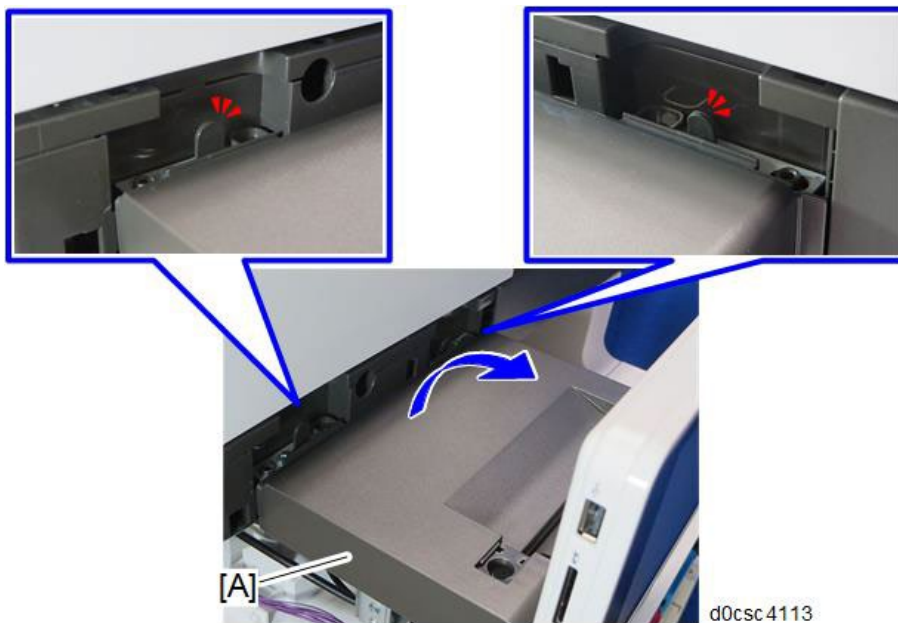


d0csc4110

3. Slide the cap [A] and remove the screw (M3X6mm).

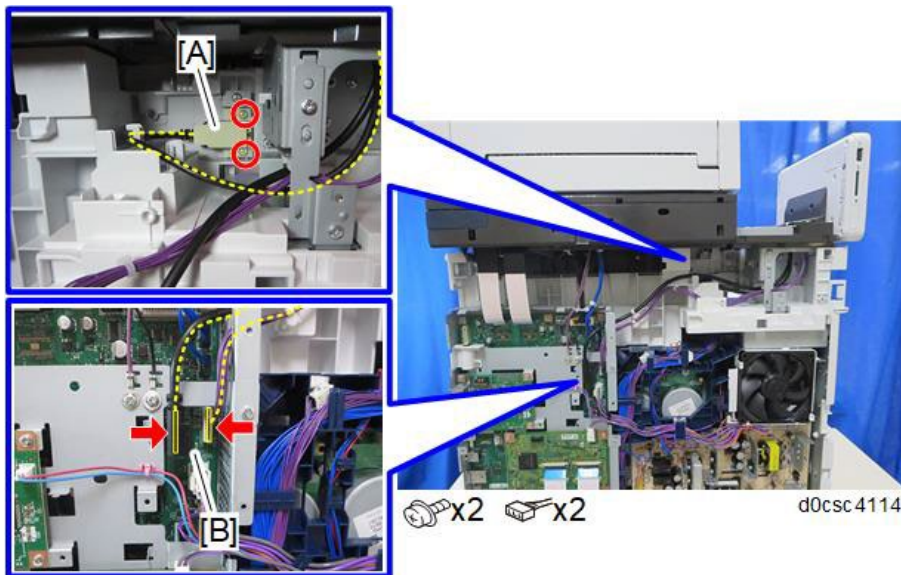


4. Release two hooks to remove the upper cover [A].



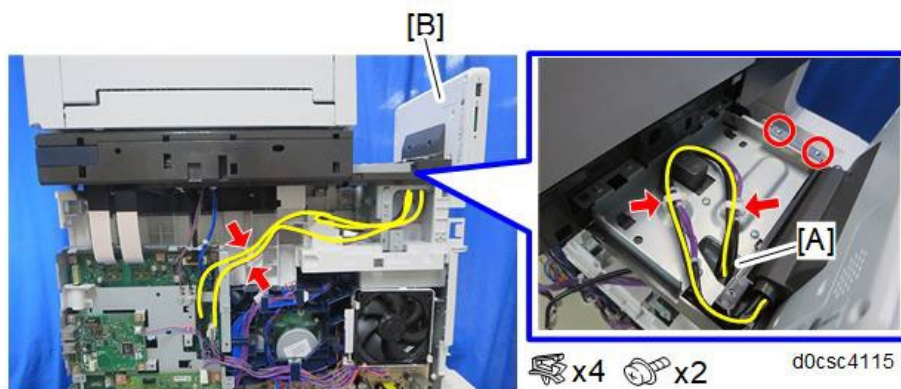
5. Remove the USB connector bracket [A].

6. Disconnect two connectors on the Controller Board (PCB1) [B].

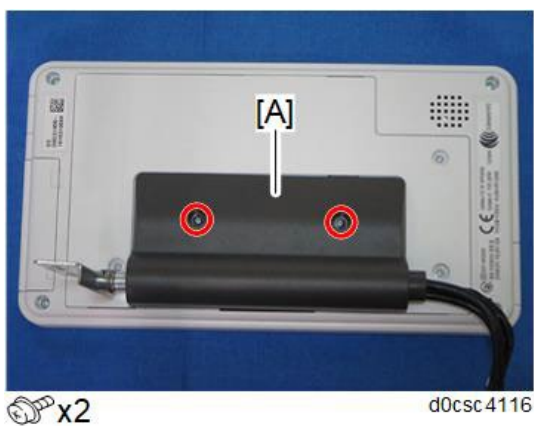


7. Release the harness and USB cables, and then pull out them from hole [A].

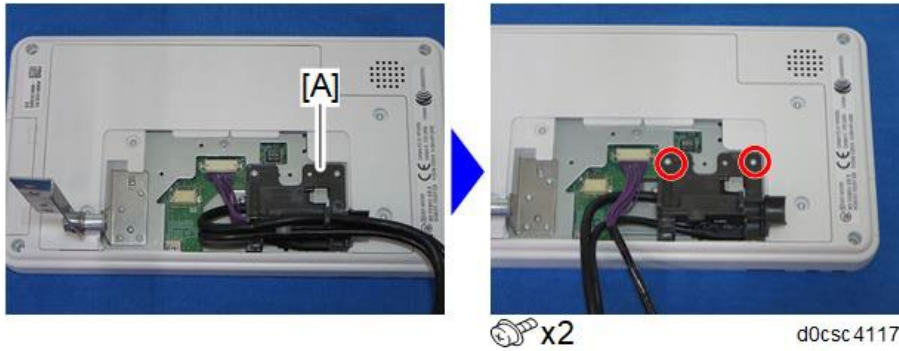
8. Remove the operation panel [B] with the harness and USB cables.



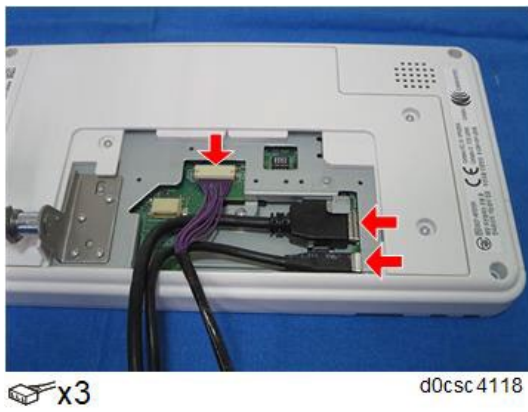
9. Remove the hinge cover [A] (M2X4mm).



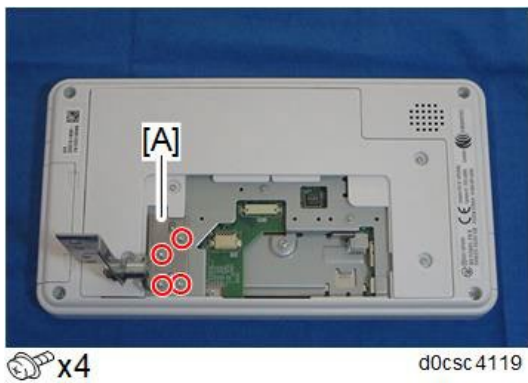
10. Release the harness and USB cables from the harness guide [A], and then remove the harness guide (M2X4mm).



11. Disconnect the harness and USB cables.



12. Remove the hinge [A] (M2X5mm/Washer).



4.6 EXPOSURE

4.6.1 LED HEAD ASSY

 Note

- When performing the following steps, cover the drum with paper or the like to protect it from deterioration due to exposure to direct sunlight or room light.

[Before removal]

- PCDUs, PCDU Guide Cover (*PCDU, PCDU Cover Guide*)
- ITB unit (*ITB Unit (Image Transfer Belt Unit)*)

[Removal]

1. Open the Rear Cover.
2. Remove four screws (Silver, M3X6mm).
3. Pull out the LED Head Assy from the GUIDE CRU and remove the four FFCs

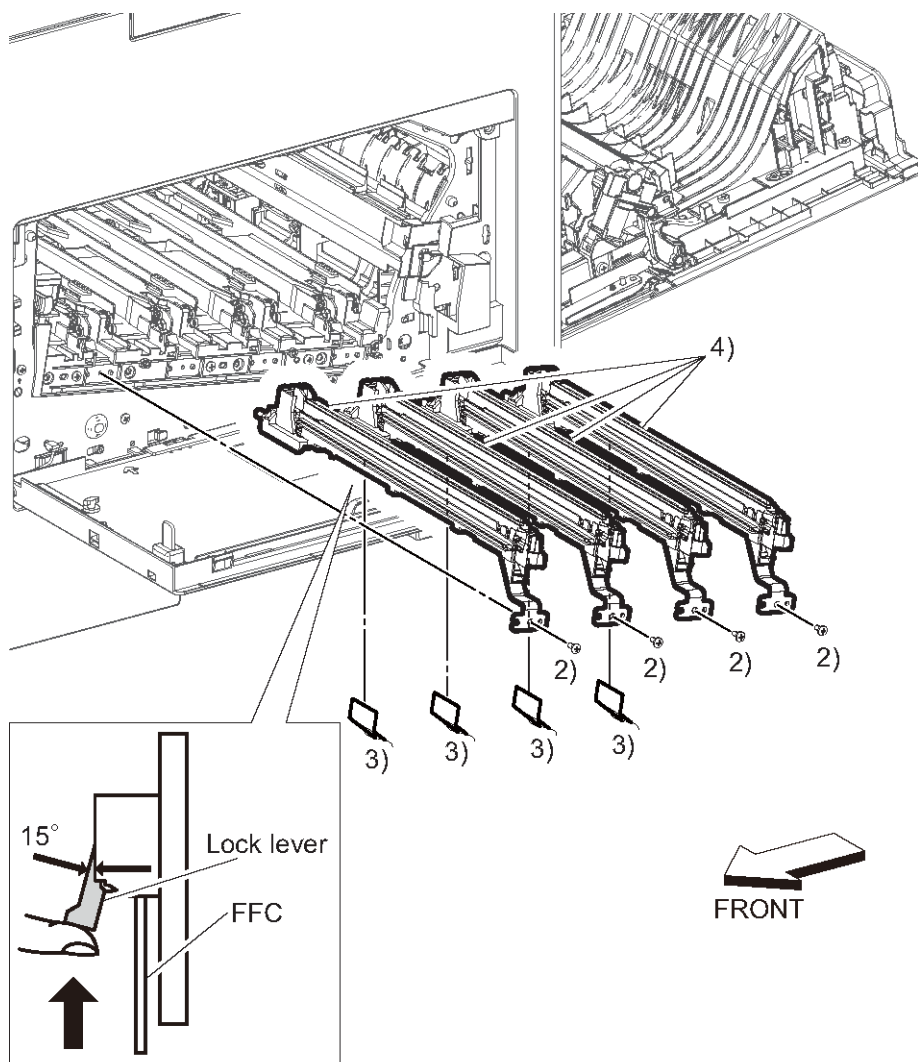
 **CAUTION**

- Do not open the lock lever completely. Opening the lock lever completely may break the lock lever.

 Note

- When release the lock lever on the connector, open the lock lever to 15 degrees until the lock lever contacts the FFC connector as shown in the figure. After releasing the lock lever, lightly pull the FFC to disengage the connector while holding the lock lever being released.

4. Remove the LED Head Assy.

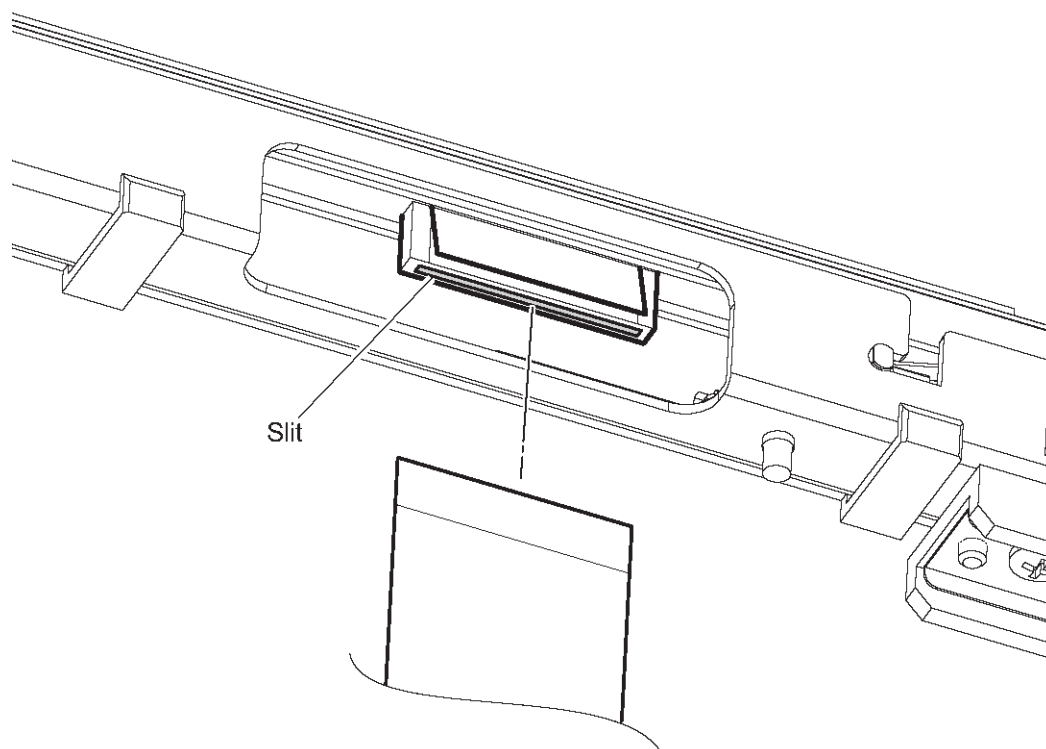


LED Replacement
and
Adjustment

FR04072XA

[Replacement]**Note**

- After installing the LED Head Assy, clean the LED head by the cleaning rod.
(Troubleshooting Procedure 1.2)
- When engaging the FFC, insert the FFC to the correct slit. When inserting the FFC, do not release the lock lever, and insert the FFC vertically to the slit until obtaining a click touch.



FR04073XA

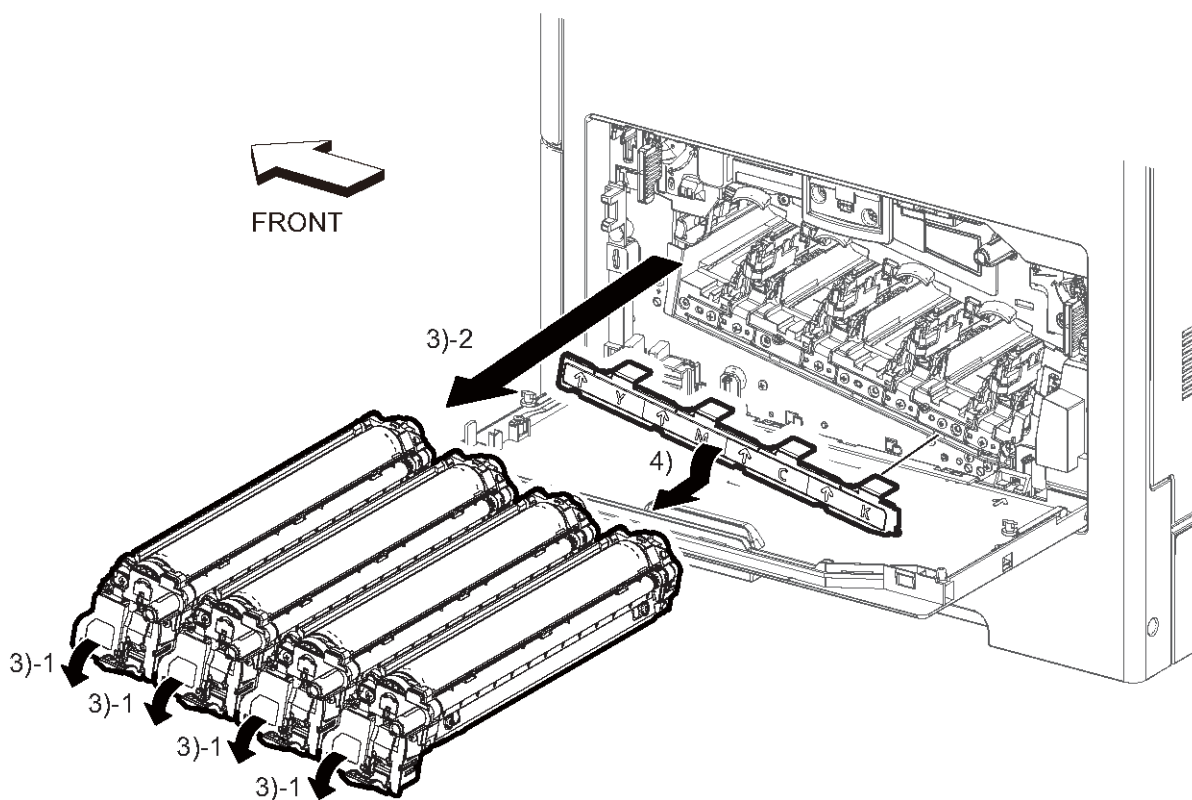
4.7 PCDU

4.7.1 PCDU, PCDU COVER GUIDE

Note

- When performing the following steps, cover the drum with paper or the like to protect it from deterioration due to exposure to direct sunlight or room light.

1. Open the Waste Toner Bottle Cover.
2. Remove the Waste Toner Bottle.
3. Release the lever and remove all PCDUs.
4. Remove the PCDU Cover Guide.



4.7.2 LED HEAD BASE

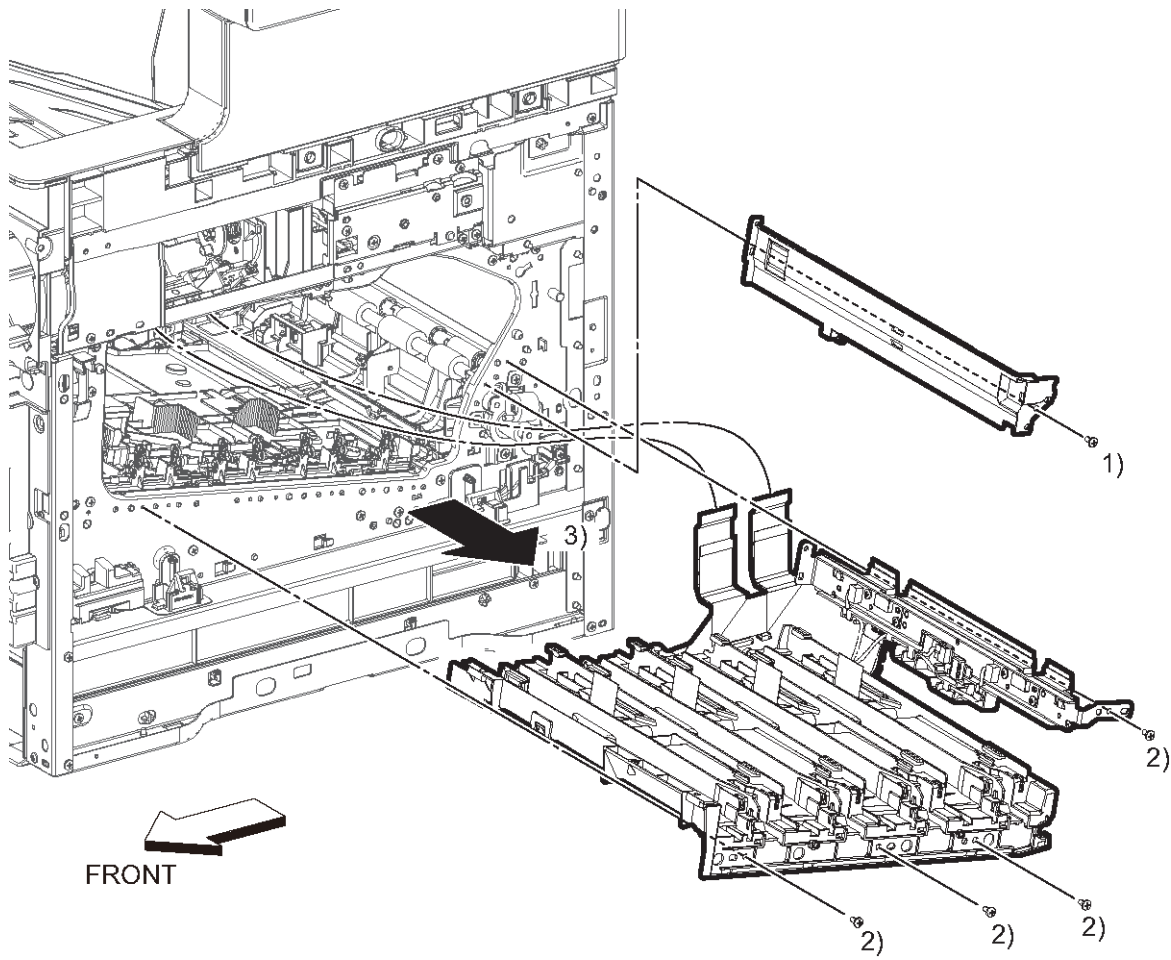
[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**) (Only IM C530F: Tall model)
- Right Upper Cap (**Right Upper Cap**) (Only IM C530F: Tall model)
- Right Cover (**Right Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Controller Box Cover (**Controller Box Cover**)
- FFC Guide Bracket (**FFC Guide Bracket**)
- MCU (**MCU (PCB2)**)
- MCU Bracket (**MCU Bracket**)
- PCDUs, PCDU Guide Cover (**PCDU, PCDU Cover Guide**)
- ITB Unit (**ITB Unit (Image Transfer Belt Unit)**)
- LED Head Assy (**LED Head Assy**)

[Removal]

1. Remove one screw (Silver, M3X6mm) fixing the bracket, and then remove it.
2. Remove four screws (Silver, M3X6mm) fixing the ID/MUSIC Sensor Assy and the LED Head Base.

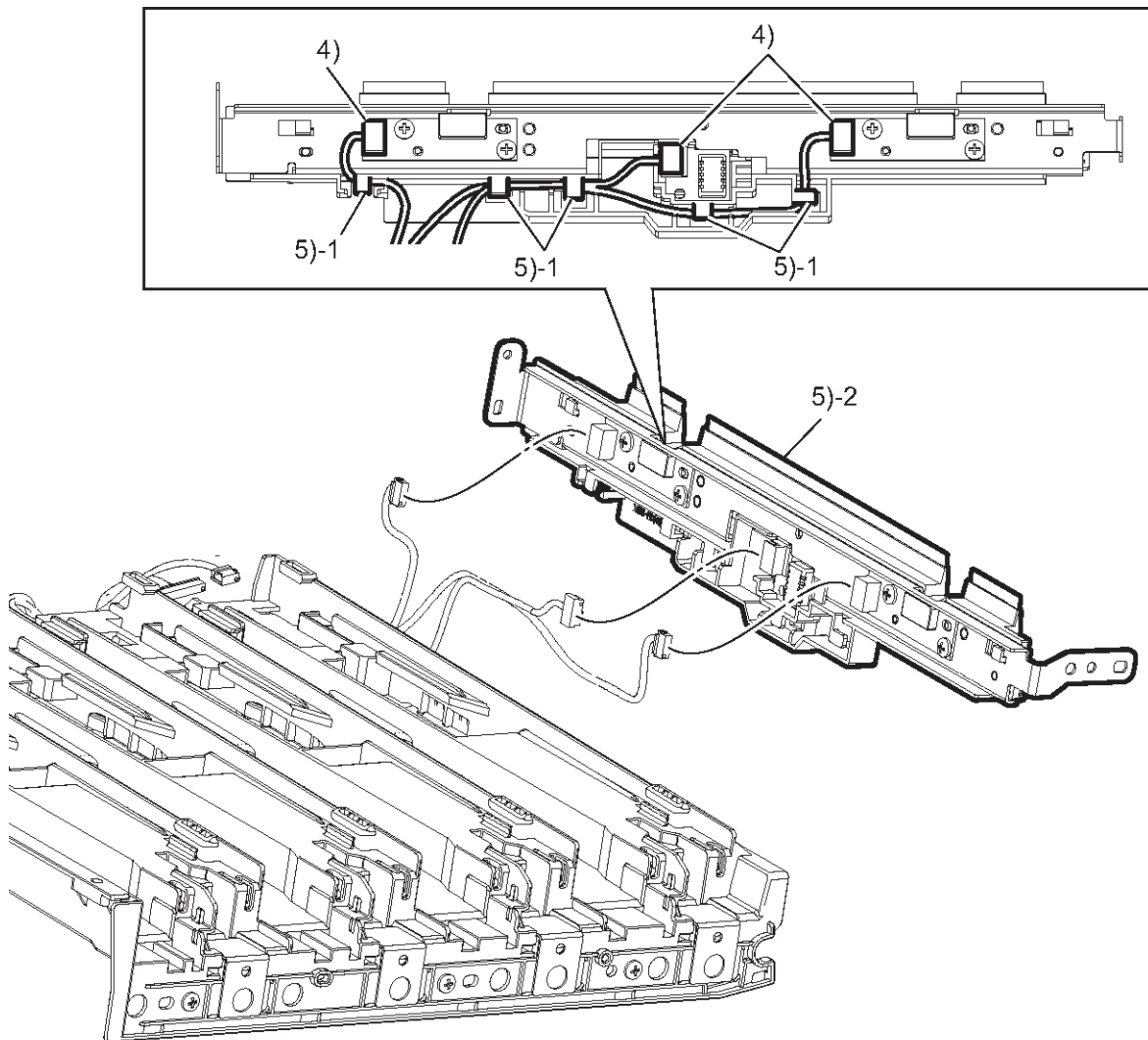
3. Remove the ID/MUSIC Sensor Assy and the LED Head Base.



FR04136XA

4. Disengage three connectors (P/J142, P/J143, P/J145).

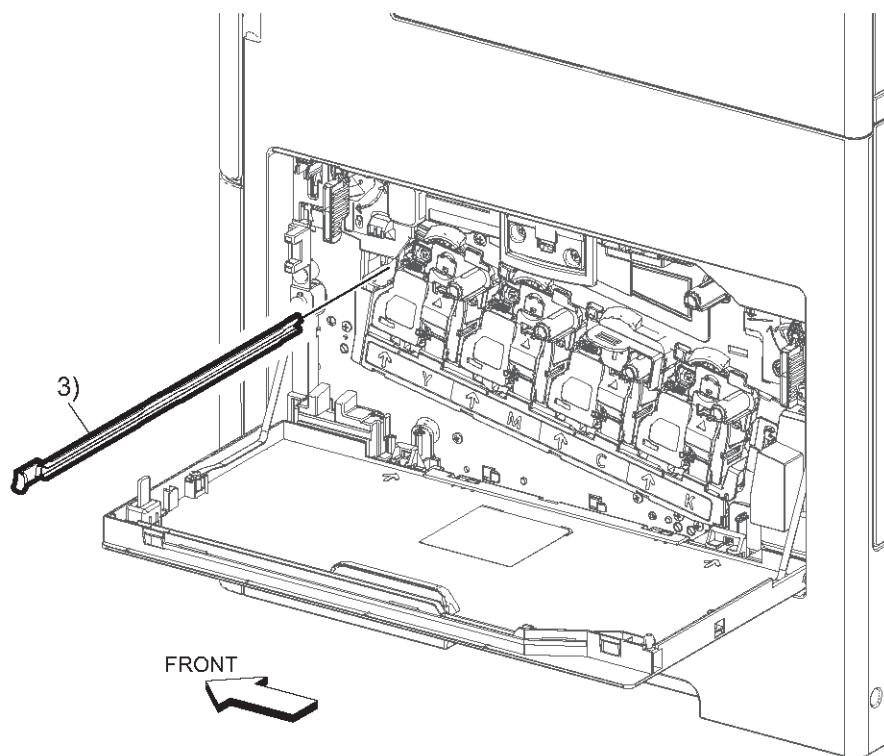
5. Release the cables from the harness guide and remove the ID/MUSIC Sensor Assy from the LED Head Base.



FR04137XA

4.7.3 CLEANING ROD

1. Open the Waste Toner Bottle Cover.
2. Remove the Waste Toner Bottle.
3. Remove the Cleaning Rod.



FR04138XA

4.7.4 PCDDU HOLDER

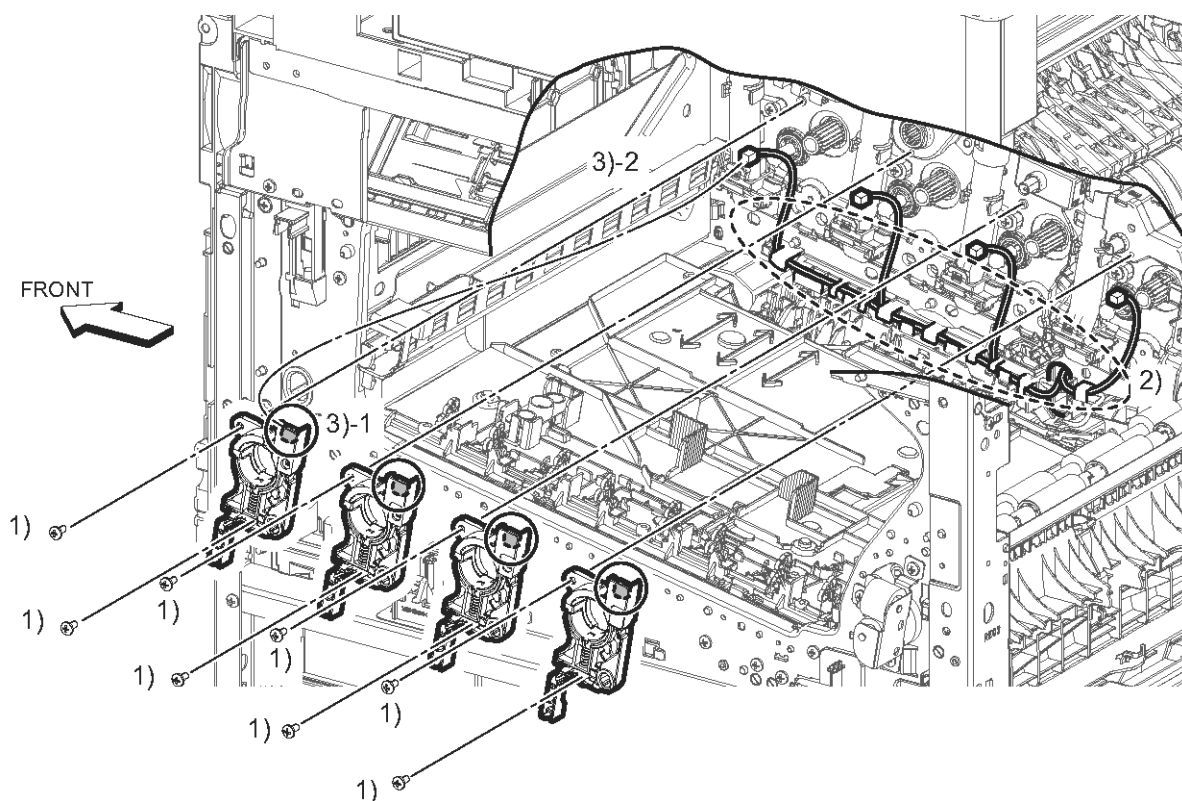
[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**) (Only IM C530F: Tall model)
- Right Upper Cap (**Right Upper Cap**) (Only IM C530F: Tall model)
- Right Cover (**Right Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Controller Box Cover (**Controller Box Cover**)
- FFC Guide Bracket (**FFC Guide Bracket**)

- MCU (**MCU (PCB2)**)
- MCU Bracket (**MCU Bracket**)
- PCDUs, PCDU Guide Cover (**PCDU, PCDU Cover Guide**)
- ITB Unit (**ITB Unit (Image Transfer Belt Unit)**)
- LED Head Assy (**LED Head Assy**)
- LED Head Base (**LED Head Base**)

[Removal]

1. Remove two screws (Silver, M3X6mm) of each PCDU holder.
2. Release the harness from the PCDU holder.
3. Disengage the connector (P/J201, 202, 203, 204) to remove each PCDU holder.



FR04139XB

[Replacement]

↓ Note

- When the PCDU holder is supplied as a service part, the seal is applied for each C/M/Y/K. If you replace the PCDU holder C/M/Y except for K, remove the seal and replace it.

4.8 TONER SUPPLY

4.8.1 TONER SUPPLY ASSY

[Before removal]

(IM C530F: Tall model)

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**)
- Right Upper Cap (**Right Upper Cap**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Front Upper Cover (**Front Upper Cover**)
- Left Inner Cover (**Left Inner Cover**)
- Left Upper Cover (**Left Upper Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Upper Cover (**Rear Upper Cover**)
- Upper Inner Cover (**Upper Inner Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Frame (**Frame**)
- Right Upper Cover (**Right Upper Cover**)
- Right Inner Cover (**Right Inner Cover**)
- Top Cover (**Top Cover/ Option Blind Cover**)
- MCU (**MCU (PCB2)**)
- MCU Bracket (**MCU Bracket**)
- Paper Exit Drive Assy (**Paper Exit Drive Assy**)
- Toner Supply Drive Assy (**Toner Supply Drive Assy**)
- Main Fan (**Main Fan (FAN1)**)
- Main Fan Duct (**Main Fan Duct**)

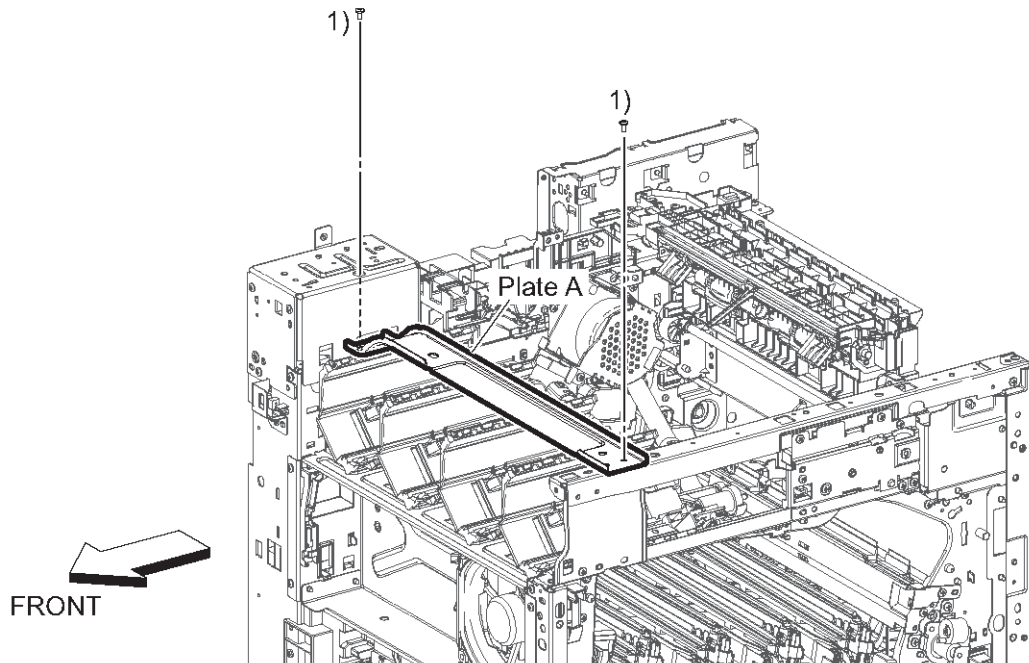
- PCDUs, PCDU Guide Cover (***PCDU, PCDU Cover Guide***)
- ITB Unit (***ITB Unit (Image Transfer Belt Unit)***)

(IM C530FB: Short model)

- Paper Tray (***Paper Tray***)
- Bypass Tray Assy (***Bypass Tray Assy***)
- Toner Cover (***Toner Cover***)
- Front Left Cover (***Front Left Cover***)
- Left Cover (***Left Cover***)
- Front Right Cover (***Front Right Cover***)
- Right Cover (***Right Cover***)
- Front Inner Cover (***Front Inner Cover***)
- IC Card Cover (***IC Card Cover***)
- Left Sub Cover (***Left Sub Cover***)
- Rear Left Inner Cover (***Rear Left Inner Cover***)
- Right Upper Cover (***Right Upper Cover***)
- Rear Right Inner Cover (***Rear Right Inner Cover***)
- Controller Box Cover (***Controller Box Cover***)
- SPDF Unit and Scanner Unit (***SPDF Unit and Scanner Unit (IM C530FB: Short Model)***)
- Top Cover (***Top Cover***)
- MCU (***MCU (PCB2)***)
- MCU Bracket (***MCU Bracket***)
- Paper Exit Drive Assy (***Paper Exit Drive Assy***)
- Toner Supply Drive Assy (***Toner Supply Drive Assy***)
- Main Fan (***Main Fan (FAN1)***)
- DUCT Main Fan (***Main Fan Duct***)
- PCDUs, PCDU Guide Cover (***PCDU, PCDU Cover Guide***)
- ITB Unit (***ITB Unit (Image Transfer Belt Unit)***)

[Removal]

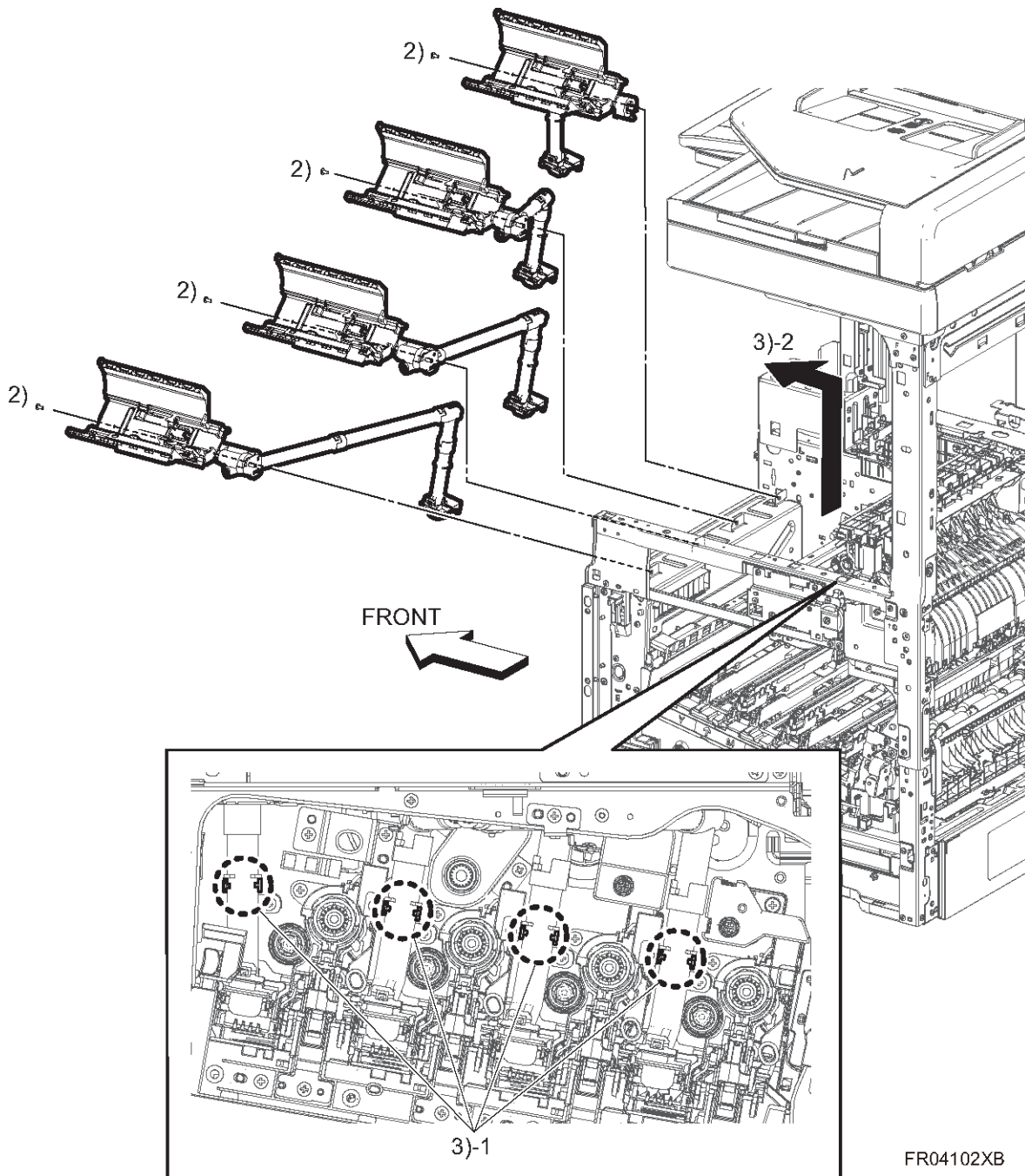
1. Remove two screws (Silver, M3X6mm) to remove the plate A.



FR04098XB

2. Remove four screws (Silver, M3X6mm).

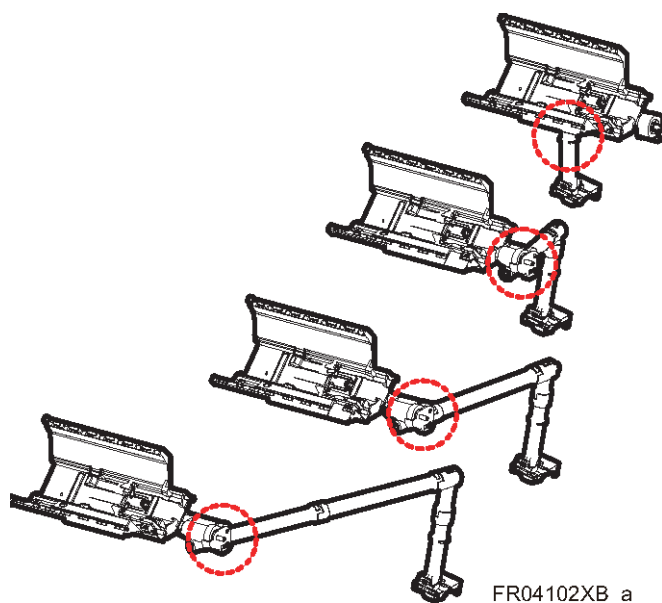
3. Release the hook fixing the Toner Supply Assy (Y/M/C/K) and remove the Toner Supply Assy (Y/M/C/K).



FR04102XB

★ Important

- Be careful not to spill toner from the connector of the Toner Supply Pipe.



FR04102XB_a

- After removing the Toner Supply Assy, the toner will spill out, so place it on a work mat or paper.

4.8.2 TONER ID CHIP CONNECTOR

[Before removal]

(IM C530F: Tall model)

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**)
- Right Upper Cap (**Right Upper Cap**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Front Upper Cover (**Front Upper Cover**)
- Left Inner Cover (**Left Inner Cover**)
- Left Upper Cover (**Left Upper Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Upper Cover (**Rear Upper Cover**)
- Upper Inner Cover (**Upper Inner Cover**)

- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Frame (**Frame**)
- Right Upper Cover (**Right Upper Cover**)
- Right Inner Cover (**Right Inner Cover**)
- Top Cover (**Top Cover/ Option Blind Cover**)
- Controller Box Cover (**Controller Box Cover**)
- MCU (**MCU (PCB2)**)
- MCU Bracket (**MCU Bracket**)
- Paper Exit Drive Assy (**Paper Exit Drive Assy**)
- Toner Supply Drive Assy (**Toner Supply Drive Assy**)
- Main Fan (**Main Fan (FAN1)**)
- DUCT Main Fan (**Main Fan Duct**)
- PCDUs, PCDU Guide Cover (**PCDU, PCDU Cover Guide**)
- ITB Unit (**ITB Unit (Image Transfer Belt Unit)**)
- Toner Supply Assy (**Toner Supply Assy**)

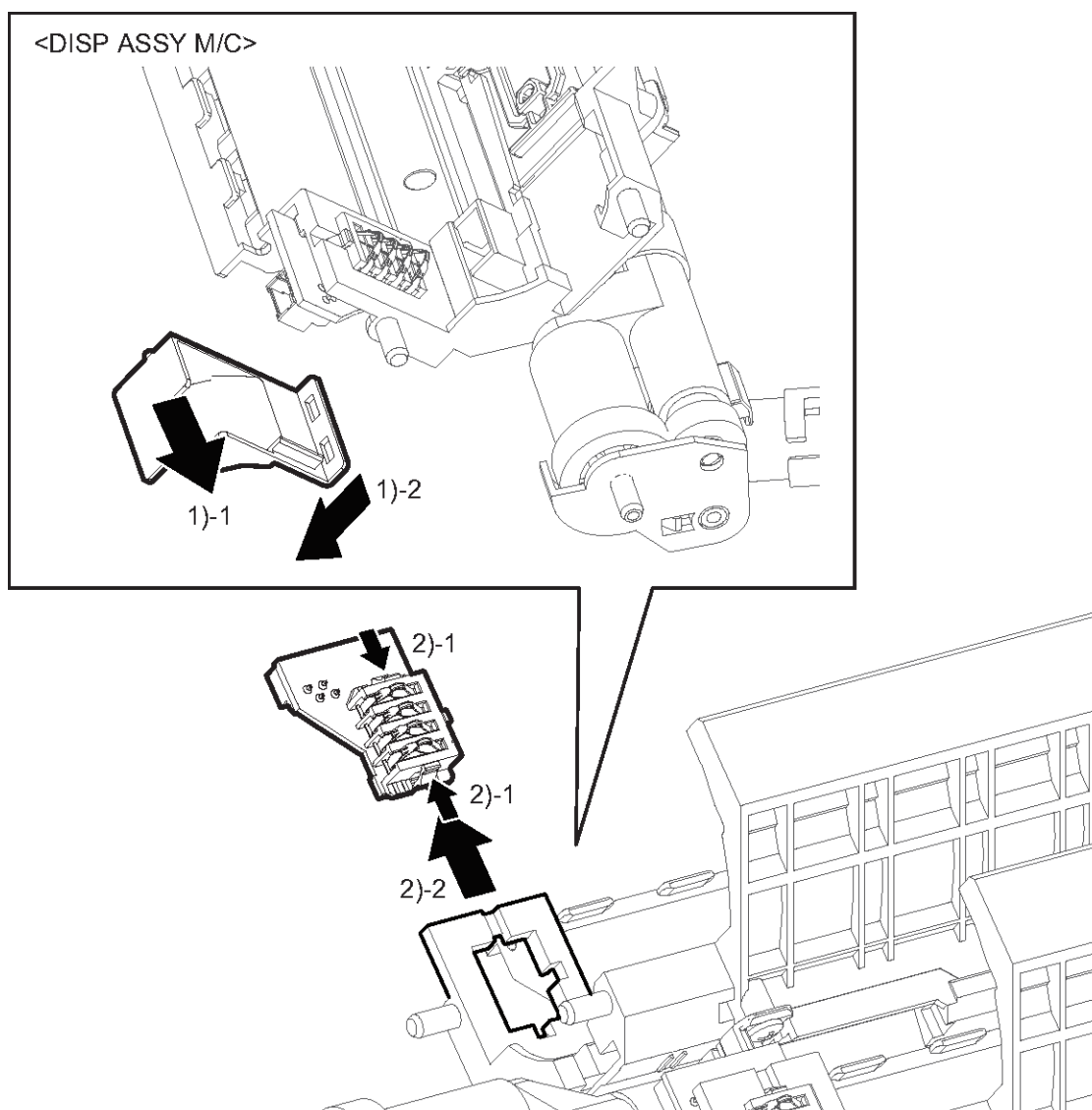
(Short model)

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Right Upper Cover (**Right Upper Cover**)
- Rear Right Inner Cover (**Rear Right Inner Cover**)
- Controller Box Cover (**Controller Box Cover**)
- SPDF Unit and Scanner Unit (**SPDF Unit and Scanner Unit (IM C530FB: Short Model)**)
- Top Cover (**Top Cover**)
- MCU (**MCU (PCB2)**)

- MCU Bracket (**MCU Bracket**)
- Paper Exit Drive Assy (**Paper Exit Drive Assy**)
- Toner Supply Drive Assy (**Toner Supply Drive Assy**)
- Main Fan (**Main Fan (FAN1)**)
- Main Fan Duct (**Main Fan Duct**)
- PCDUs, PCDU Guide Cover (**PCDU, PCDU Cover Guide**)
- ITB Unit (**ITB Unit (Image Transfer Belt Unit)**)
- Toner Supply Assy (**Toner Supply Assy**)

[Removal]

1. Release one boss and remove the cover only for the Toner Supply Assy M/C.
2. Release two hooks and remove the Toner ID Chip Connector.



FR04105XC

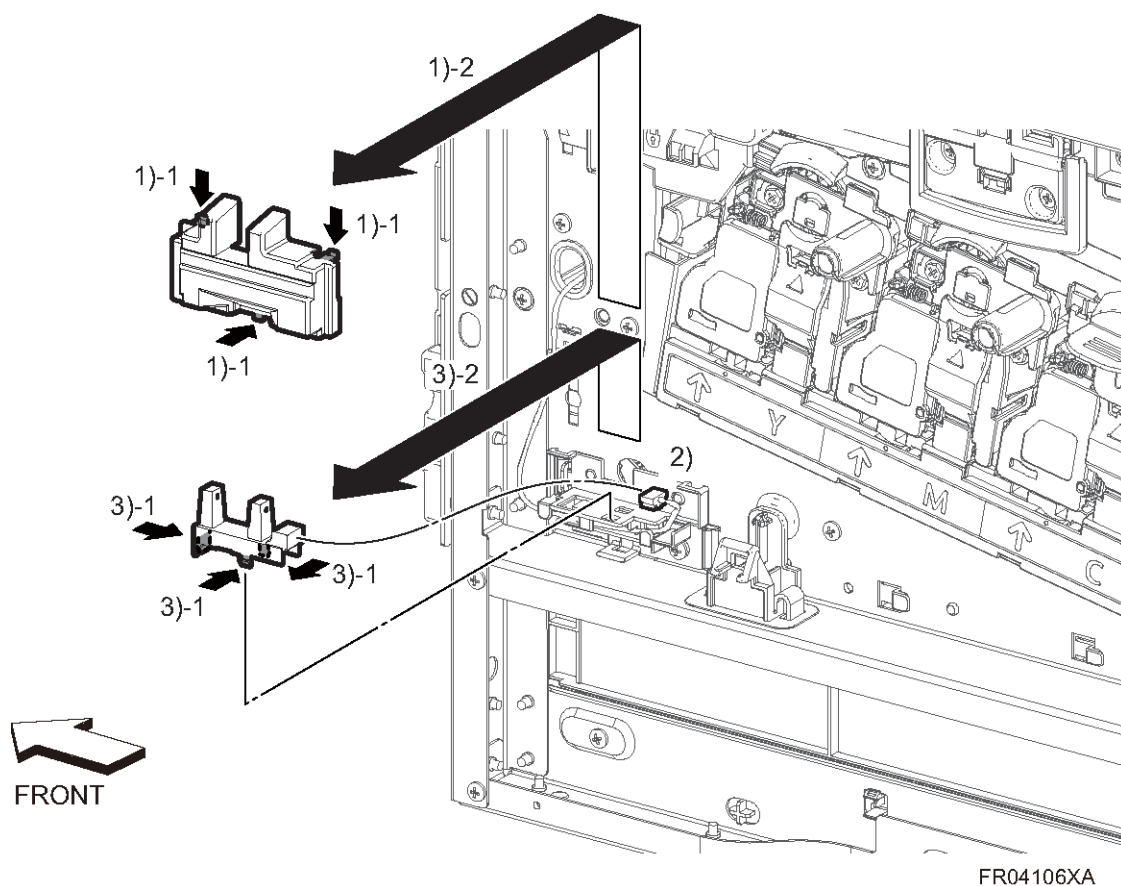
4.8.3 TONER FULL SENSOR (S7)

[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**) (Only IM D530F: Tall model)
- Right Upper Cap (**Right Upper Cap**) (Only IM D530F: Tall model)
- Right Cover (**Right Cover**)

[Removal]

1. Release three hooks and remove the cover.
2. Disengage the connector (P/J485).
3. Release three hooks and remove the Toner Full Sensor (S7).



4.8.4 TONER SUPPLY DRIVE ASSY

[Before removal]

(IM C530F: Tall model)

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**)
- Right Upper Cap (**Right Upper Cap**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Front Upper Cover (**Front Upper Cover**)
- Left Inner Cover (**Left Inner Cover**)
- Left Upper Cover (**Left Upper Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Upper Cover (**Rear Upper Cover**)
- Upper Inner Cover (**Upper Inner Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Frame (**Frame**)
- Right Upper Cover (**Right Upper Cover**)
- Right Inner Cover (**Right Inner Cover**)
- Top Cover (**Top Cover/ Option Blind Cover**)
- Nip Retract Drive Assy (**Nip Retract Drive Assy**)
- Paper Exit Drive Assy (**Paper Exit Drive Assy**)

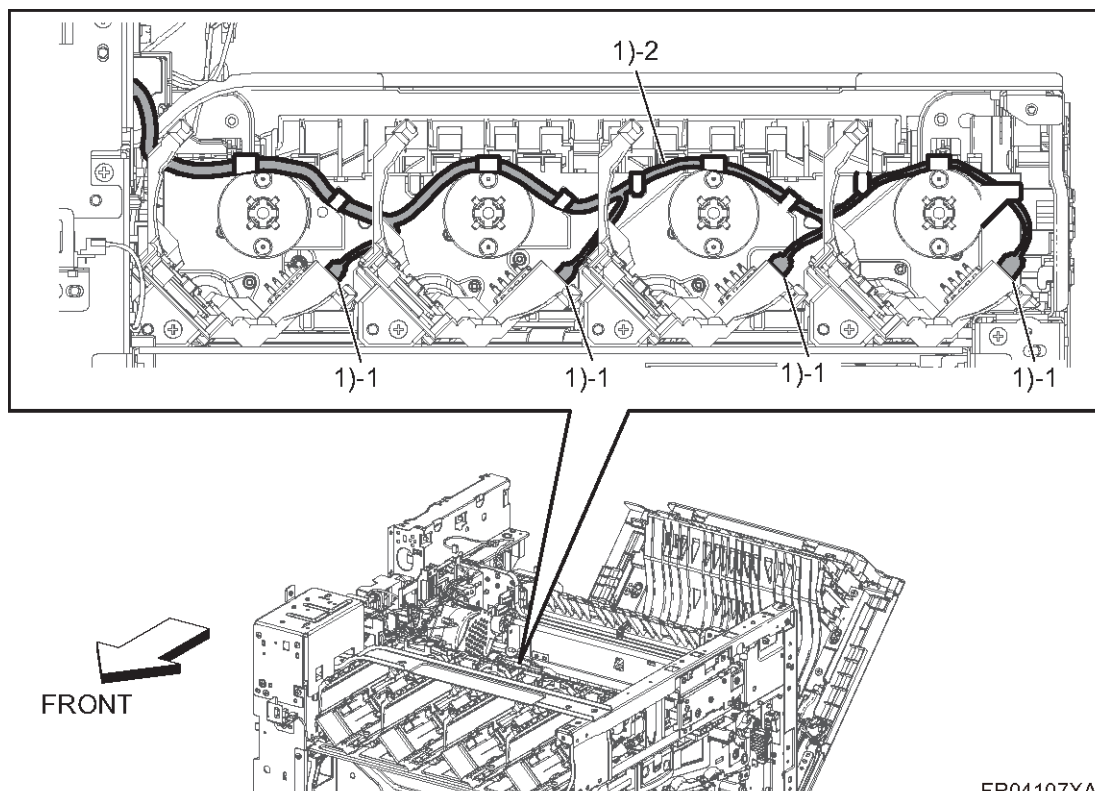
(IM C530FB: Short model)

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)

- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Right Upper Cover (**Right Upper Cover**)
- Rear Right Inner Cover (**Rear Right Inner Cover**)
- Controller Box Cover (**Controller Box Cover**)
- SPDF Unit and Scanner Unit (**SPDF Unit and Scanner Unit (IM C530FB: Short Model)**)
- Top Cover (**Top Cover**)
- Nip Retract Drive Assy (**Nip Retract Drive Assy**)
- Paper Exit Drive Assy (**Paper Exit Drive Assy**)

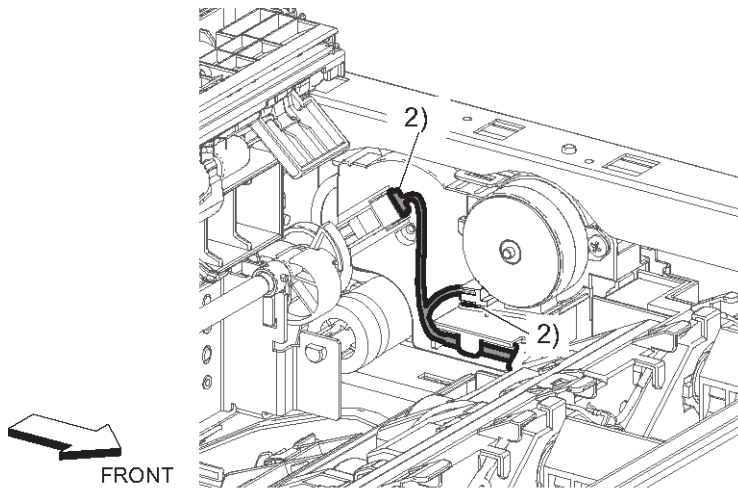
[Removal]

1. Disengage four connectors (P/J111, P/J112, P/J113, P/J114).



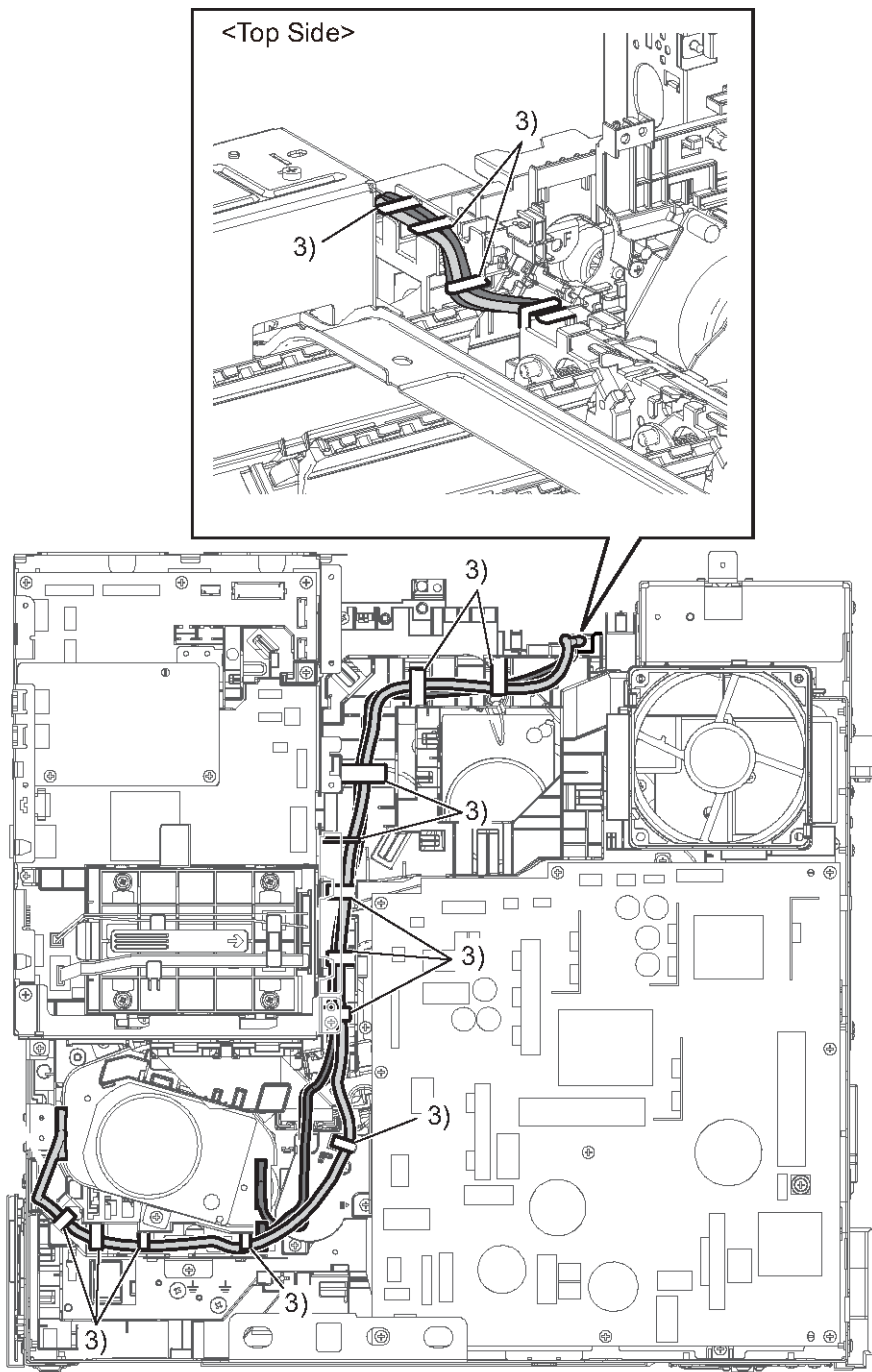
FR04107XA

2. Disengage two connectors (P/J171, P/J172) and release the harness from the harness guide.



FR04108XA

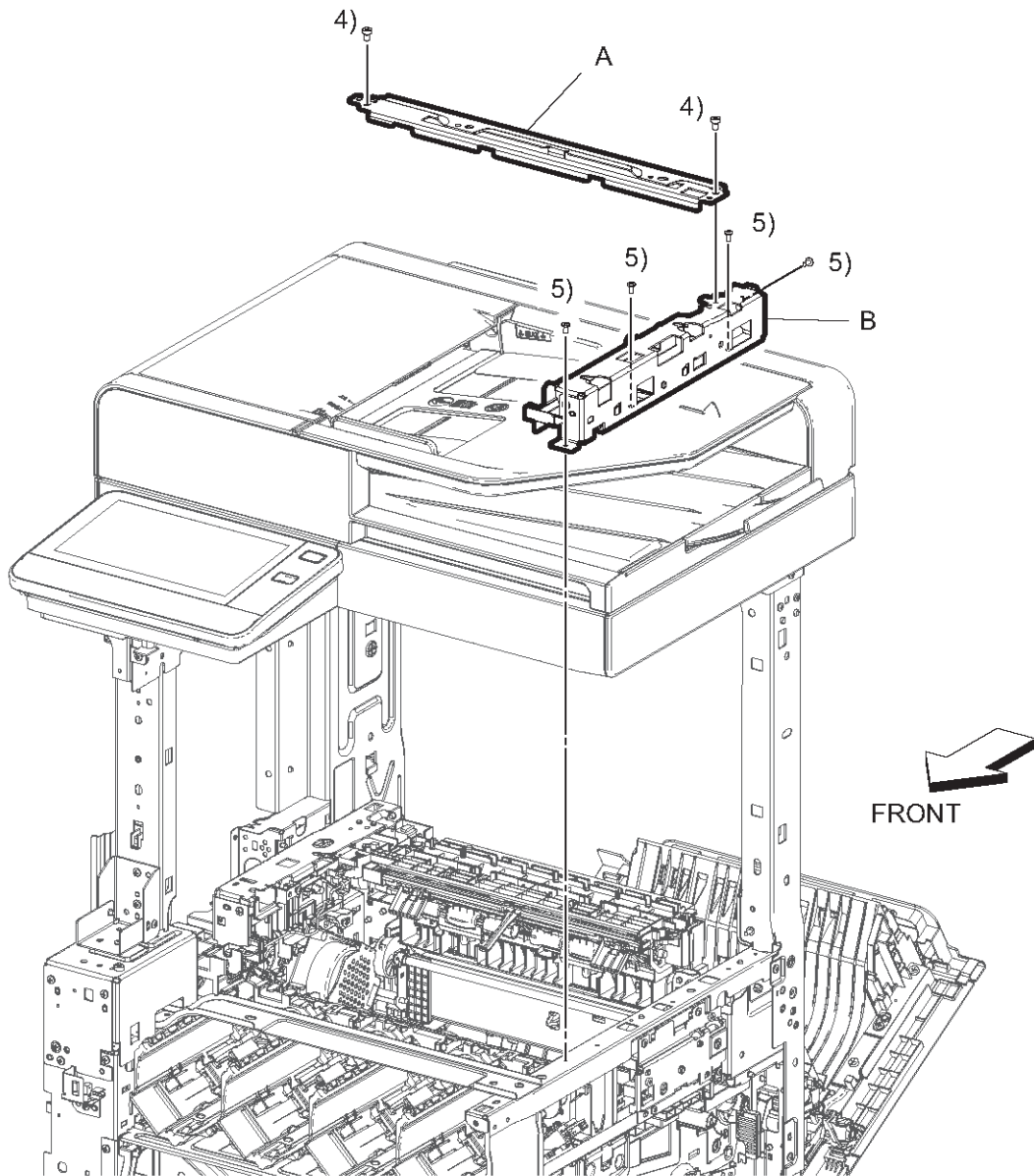
3. Release the harnesses from the harness guide.



FR04109XB

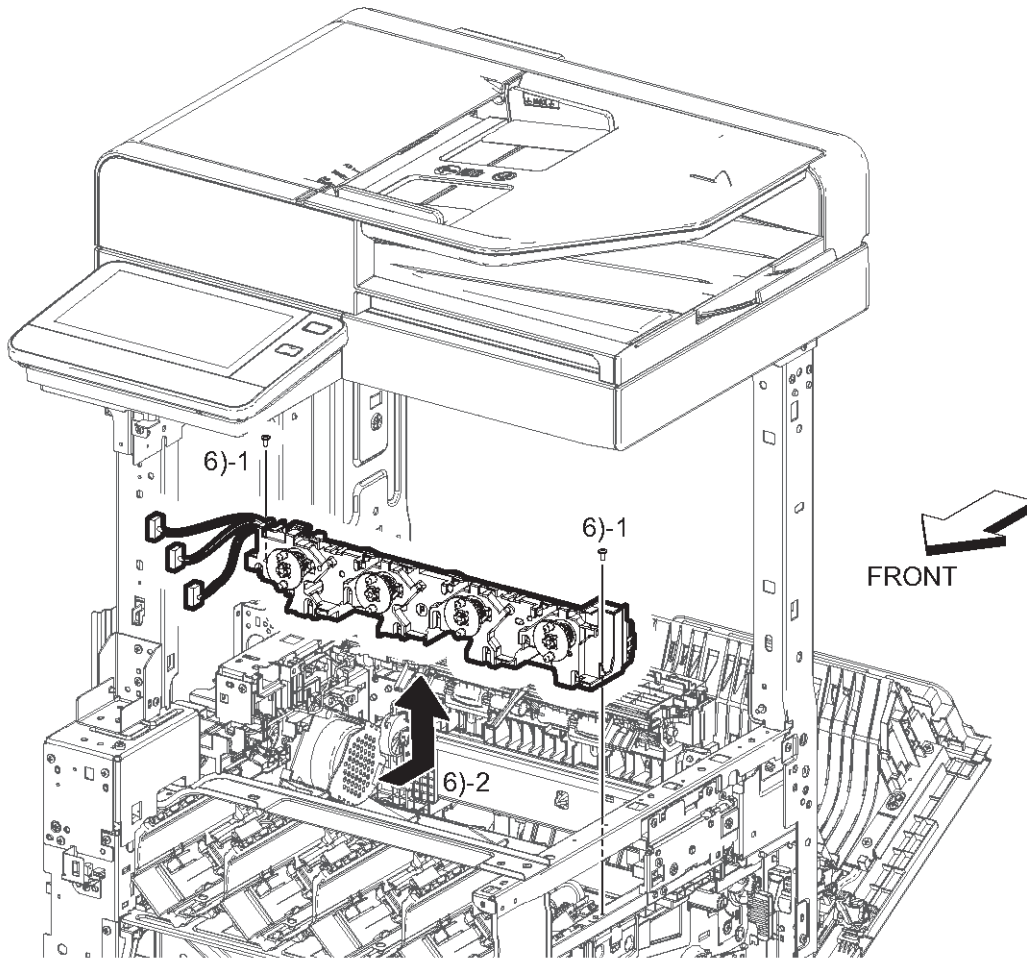
4. Only for IM C530F, remove two screws (SM3, Silver, M4X6mm) to remove the plate A.

5. Only for IM C530F, remove four screws (SM18, Silver, M3X6mm) to remove the plate B.



FR04111XA

6. Remove two screws (SM18, Silver, M3X6mm) to remove the Toner Supply Drive Assy.



FR04112XA

4.9 TRANSFER

4.9.1 ITB UNIT (IMAGE TRANSFER BELT UNIT)

[Before replacing the ITB Unit]

Before replacing the ITB Unit, reset the PM counter.

1. Turn the power ON.
2. Reset the PM counter. (Refer to **Replacement Procedure of the PM/Yield Parts**)
3. Turn the power OFF.

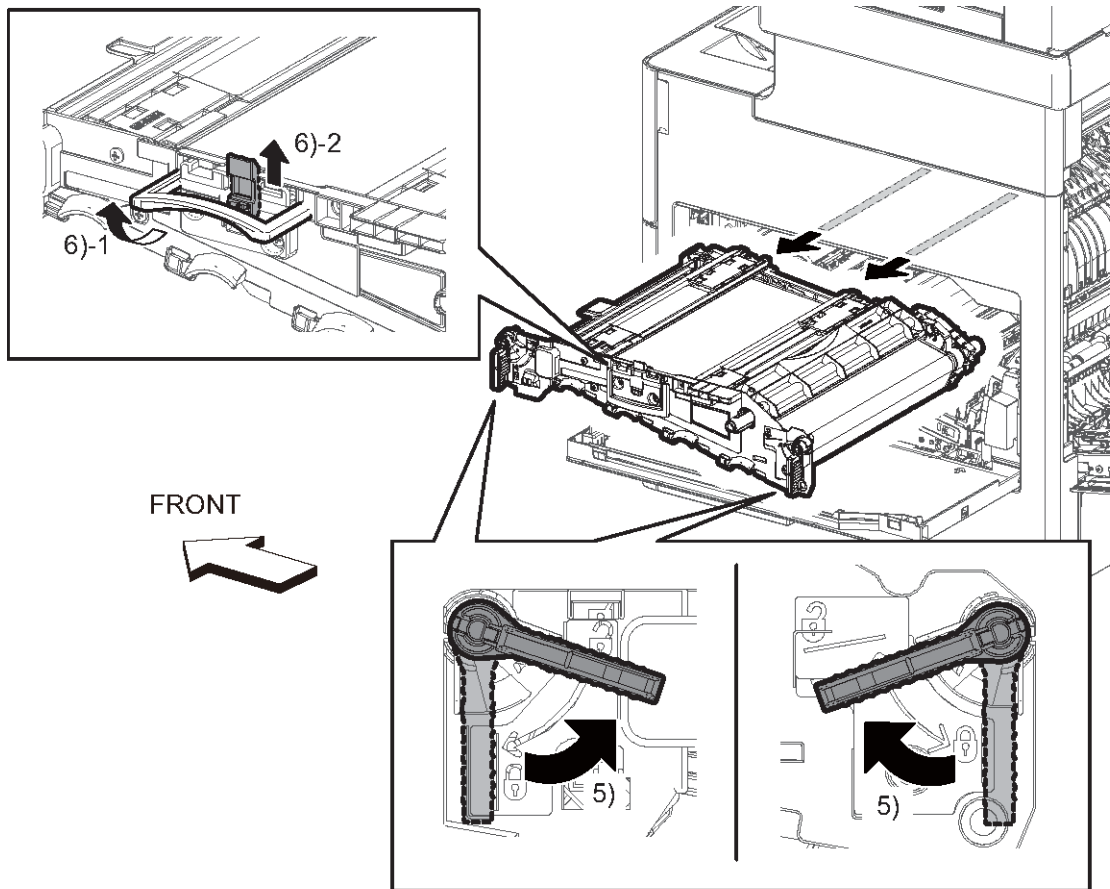
[Removal]

Note

- When performing the following steps, cover the ITB Unit with paper or the like to protect it from deterioration due to exposure to direct sunlight or room light.

1. Open the Waste Toner Bottle Cover.
2. Remove the Waste Toner Bottle.
3. Open the Rear Cover.
4. Release the lever of the PCDUs.
5. Release the two levers of the ITB Unit.

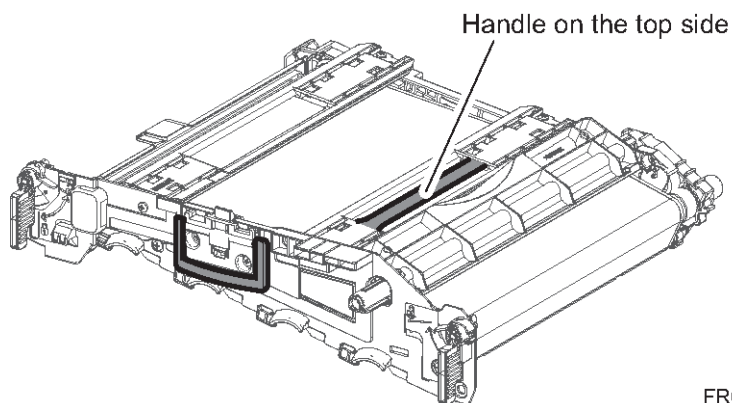
6. Raise the lever to release the latch, and remove the ITB Unit.



FR04127XA

Note

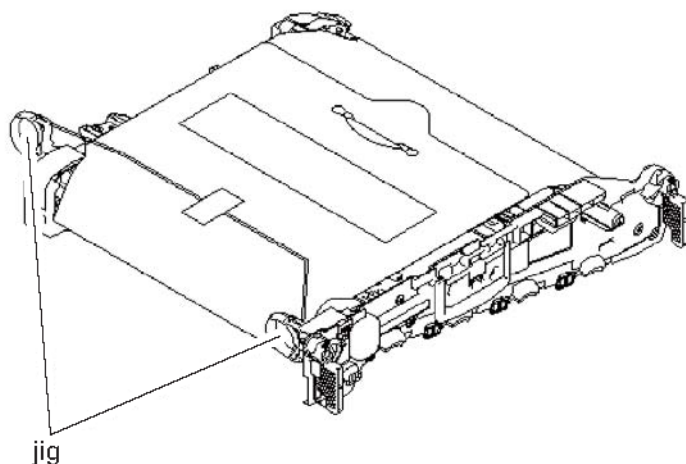
- When carrying the ITB Unit, grasp the handle on the top side.



FR04128XA

[Replacement]**Note**

- Remove two jigs from ITB Unit when installing.



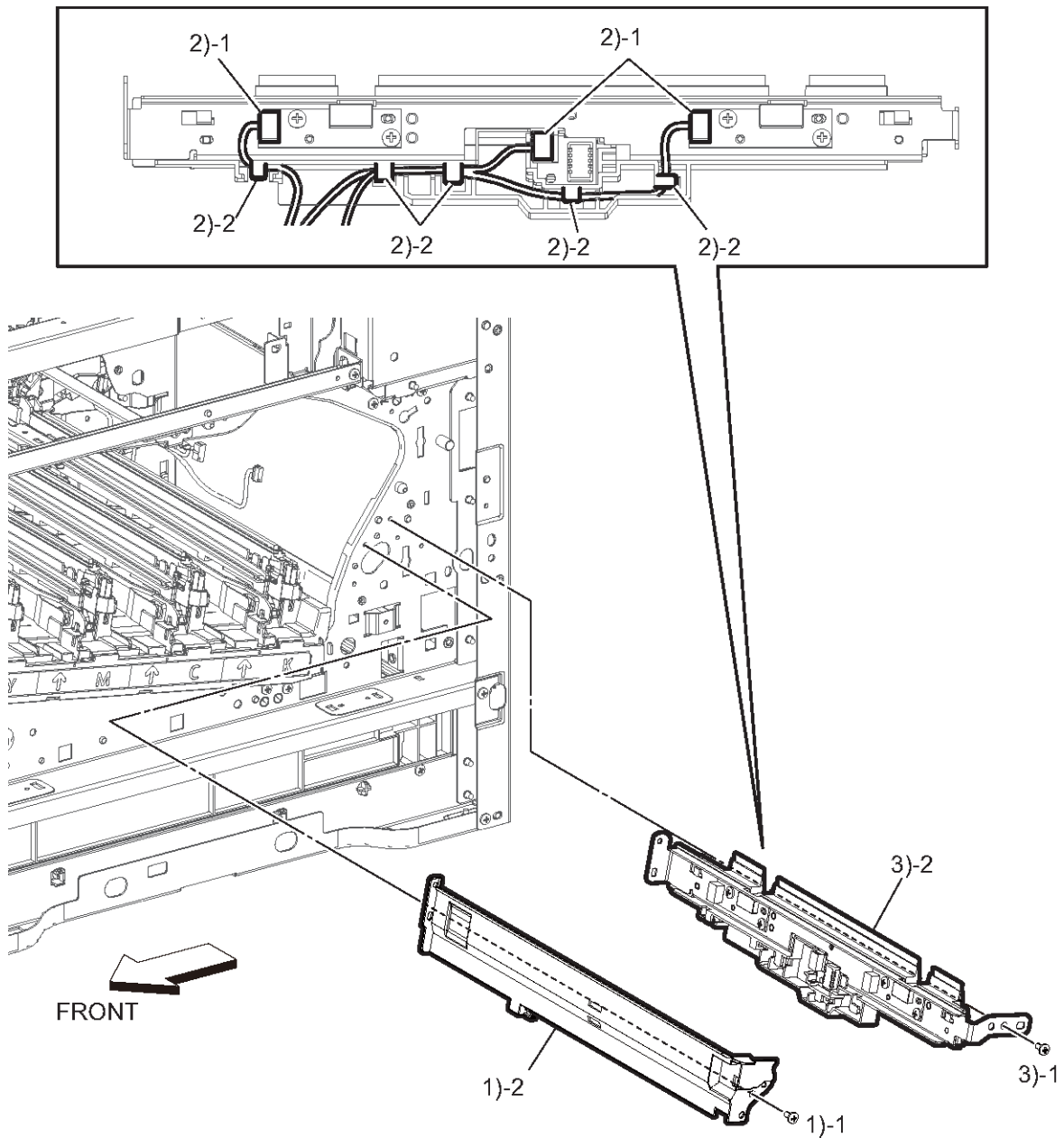
FR04407XB

4.9.2 ID/MUSIC SENSOR ASSY**[Before removal]**

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**) (Only IM C530F: Tall model)
- Right Upper Cap (**Right Upper Cap**) (Only IM C530F: Tall model)
- Right Cover (**Right Cover**)
- Rear Cover (**Rear Cover**)
- PTR Housing (**PTR Housing**)
- Registration Feeder Assy (**Option Paper Feed Guide Plate/ Duplex Upper Guide Plate/ Registration Feeder Assy**)
- PCDUs, PCDU Guide Cover (**PCDU, PCDU Cover Guide**)
- ITB Unit (**ITB Unit (Image Transfer Belt Unit)**)

[Removal]

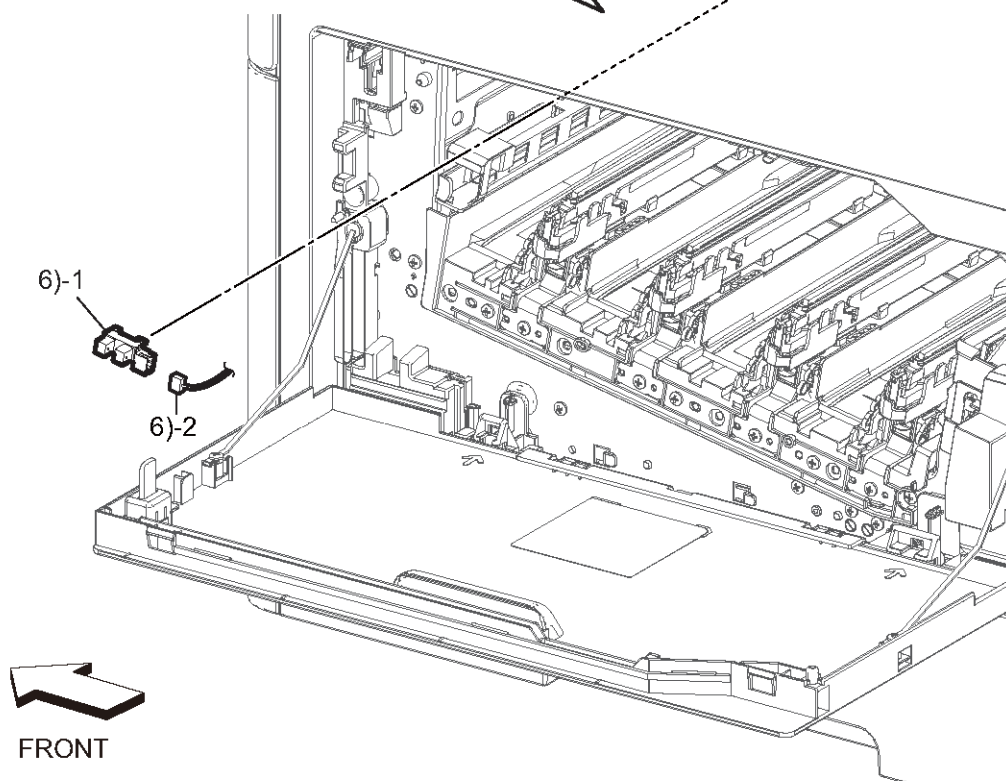
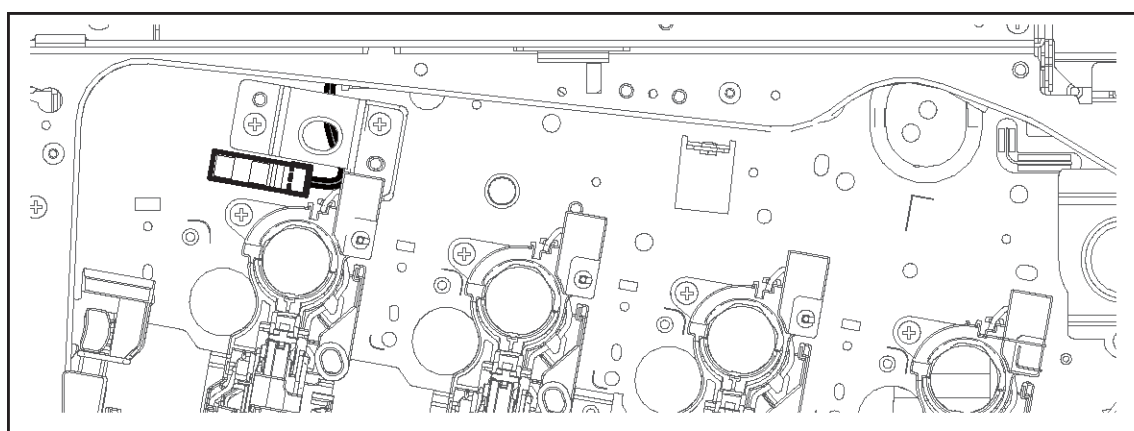
1. Remove one screw (Silver, M3X6mm) to remove the cover.
2. Disengage the connectors (P/J142, P/J143, P/J145) and release the cable.
3. Remove one screw (Silver, M3X6mm) to remove the ID/MUSIC Sensor Assy.



FR04129XA

4.9.3 K MODE SENSOR (S3)

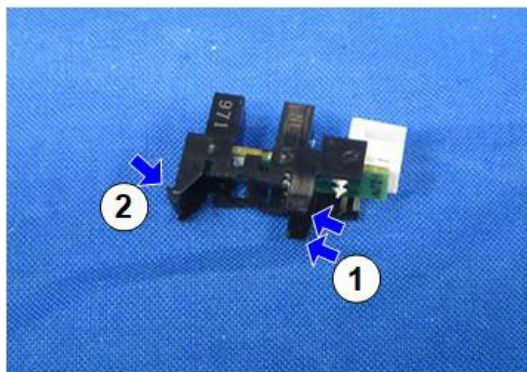
1. Open the Waste Toner Bottle Cover.
2. Remove the Waste Toner Bottle.
3. Open the Rear Cover.
4. Remove the ITB Unit. (*ITB Unit (Image Transfer Belt Unit)*)
5. Remove the PCDUs and PCDU Guide Cover. (*PCDU, PCDU Cover Guide*)
6. Release the K Mode Sensor (S3) from the inner frame, and disengage the connector (P/J470) to remove the K Mode Sensor (S3).



FR04130XA

Note

- When removing the K Mode Sensor (S3), lift the sensor with the connector side to release the hooks (1), and then slide the sensor to remove the hook on the opposite side (2).



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4.9.4 PAPER TRANSFER ROLLER UNIT

[Before replacing the Paper Transfer Roller Unit]

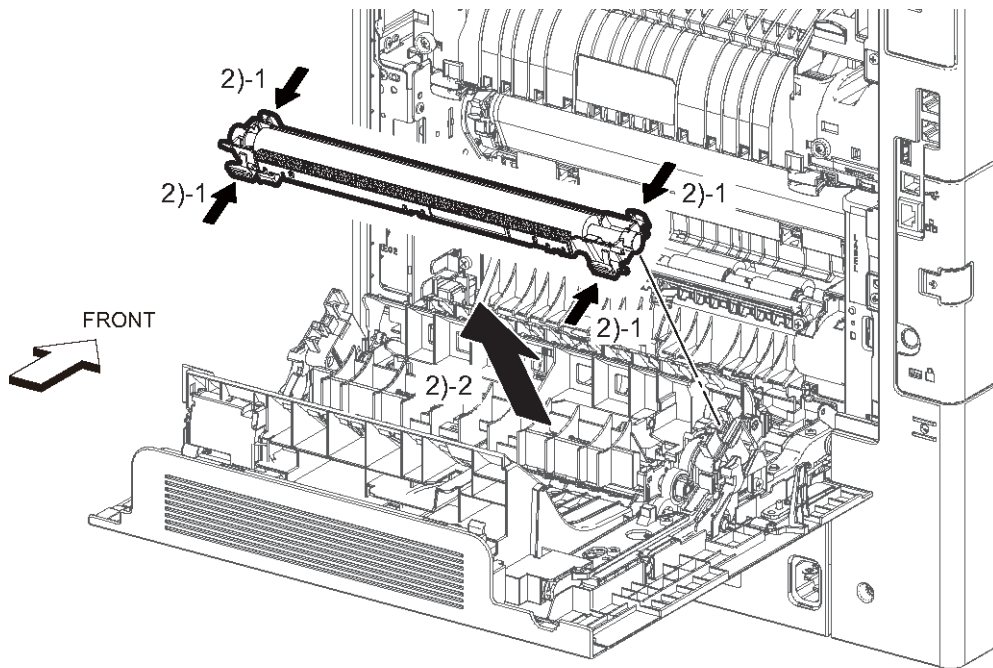
Before replacing the Paper Transfer Roller Unit, reset the PM counter.

1. Turn the power ON.
2. Reset the PM counter. (Refer to ***Replacement Procedure of the PM/Yield Parts***)
3. Turn the power OFF.

[Removal]

1. Open the Rear Cover.

2. Push four latches and remove the Paper Transfer Roller Unit.



FR04292XA

of B Replacement
t and
Adjustment

4.10 REGISTRATION

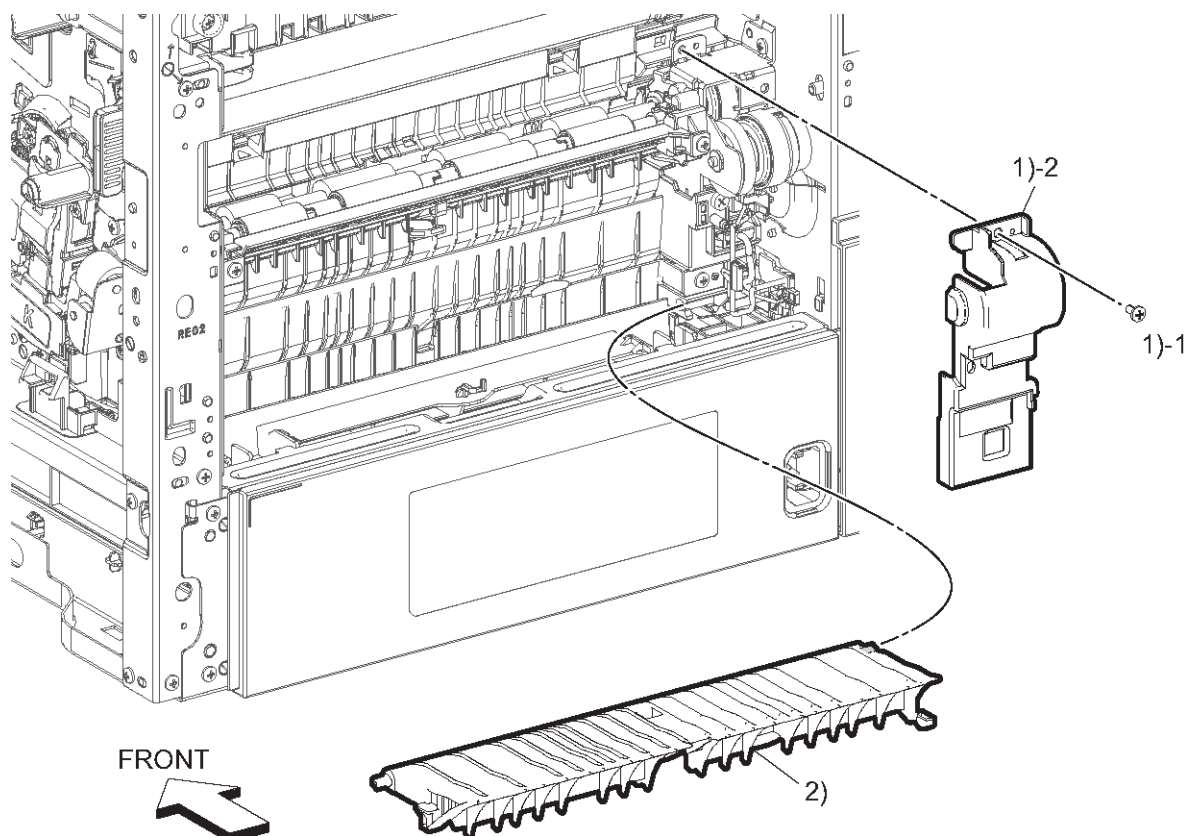
4.10.1 OPTION PAPER FEED GUIDE PLATE/ DUPLEX UPPER GUIDE PLATE/ REGISTRATION FEEDER ASSY

[Before removal]

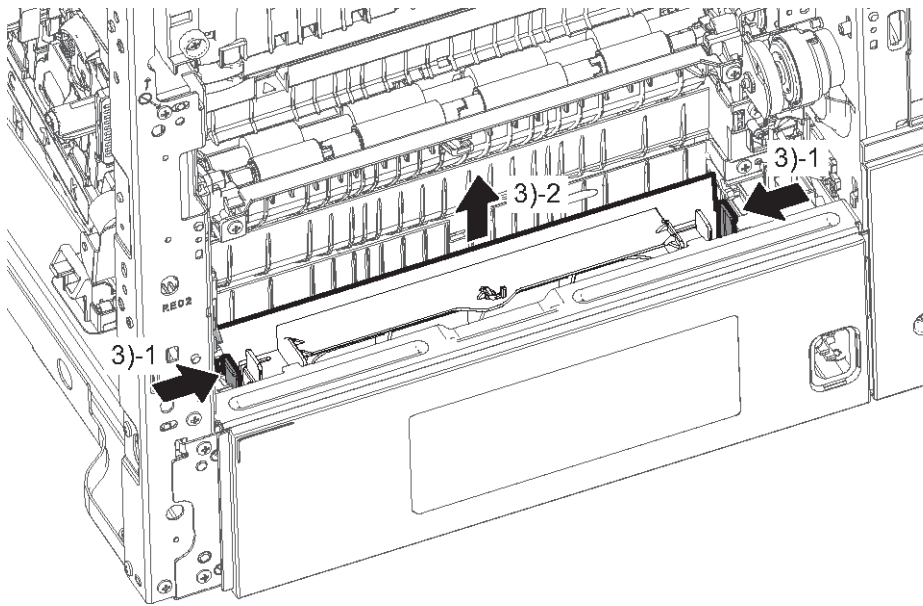
- Paper Tray (*Paper Tray*)
- Bypass Tray Assy (*Bypass Tray Assy*)
- Toner Cover (*Toner Cover*)
- Top Exit Cover (*Top Exit Cover*) (Only IM C530F: Tall model)
- Right Upper Cap (*Right Upper Cap*) (Only IM C530F: Tall model)
- Front Right Cover (*Front Right Cover*)
- Right Cover (*Right Cover*)
- Rear Cover (*Rear Cover*)
- PTR Housing (*PTR Housing*)

[Removal]

1. Remove one screw (Silver, M3X6mm) fixing the gear cover to remove it.
2. Rotate the lower guide rearward at 90 degrees to remove it.

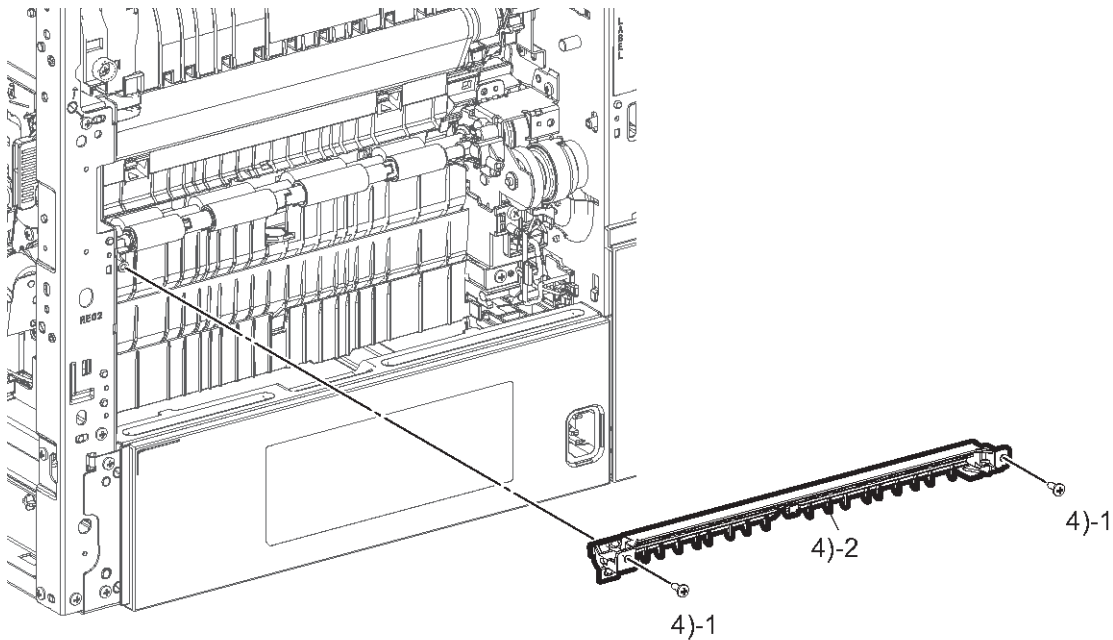


3. Release two hooks and remove the Option Paper Feed Guide Plate.



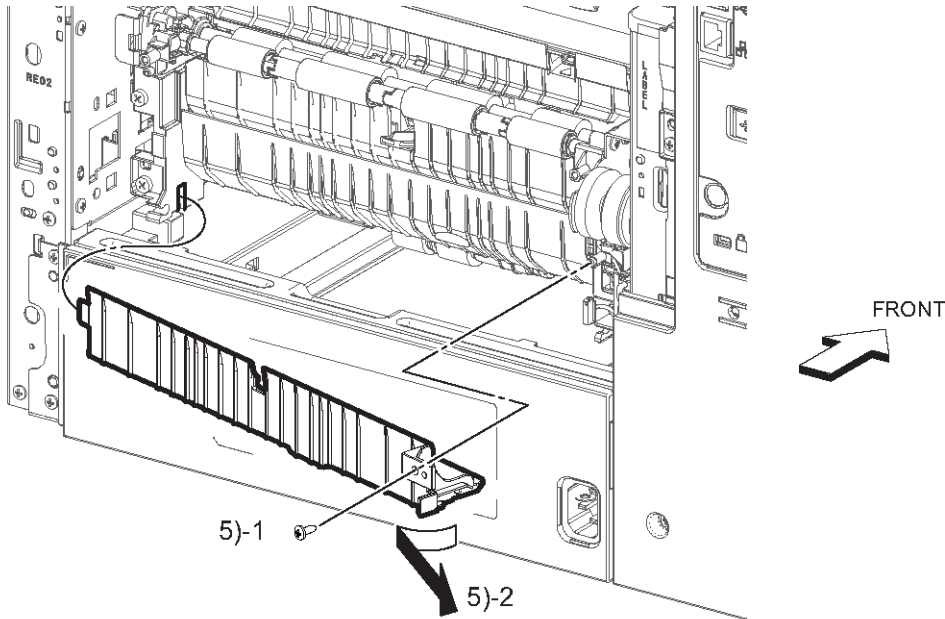
FR04177XA

4. Remove two screws (Screw for plastic Silver, tapping, M3x8) to remove the Duplex Upper Guide plate.



FR04178XA

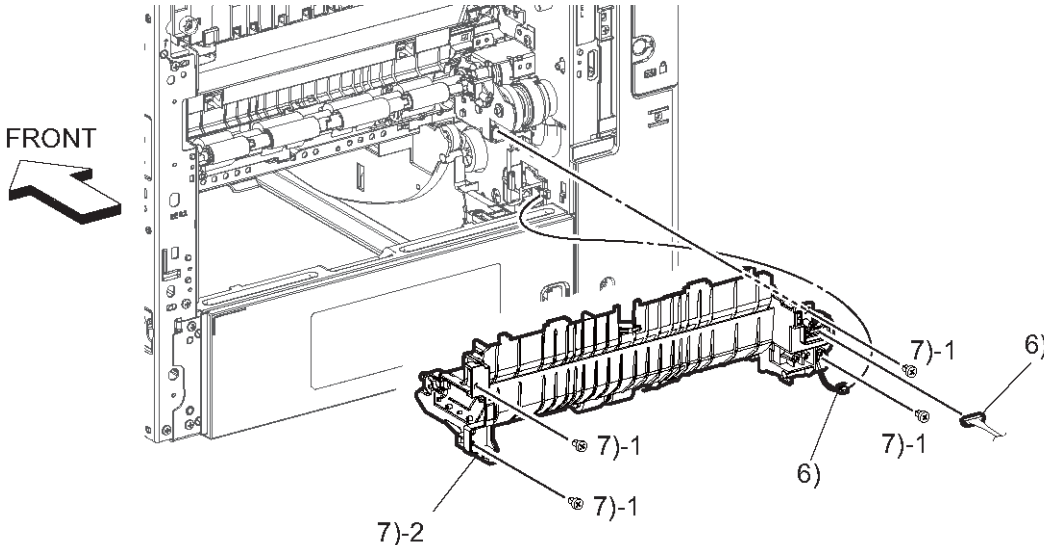
5. Remove one screw (Screw for plastic Silver, tapping, M3x8) to pull out the guide plate in the direction of the arrow.



FR04179XA

6. Disengage two connectors (P/J544, P/J545).

7. Remove four screws (Silver, M4X6mm) to remove the Registration Feeder Assy.

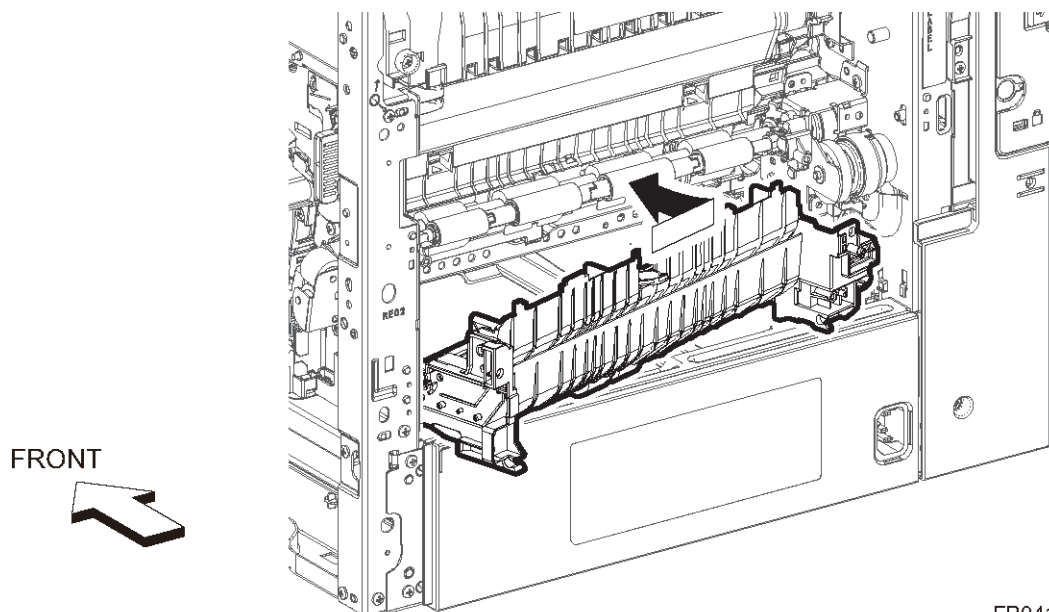


FR04180XA

[Removal]

↓ Note

- When installing the Registration Feeder Assy, install it at the angle such as the figure.



FR04181XA

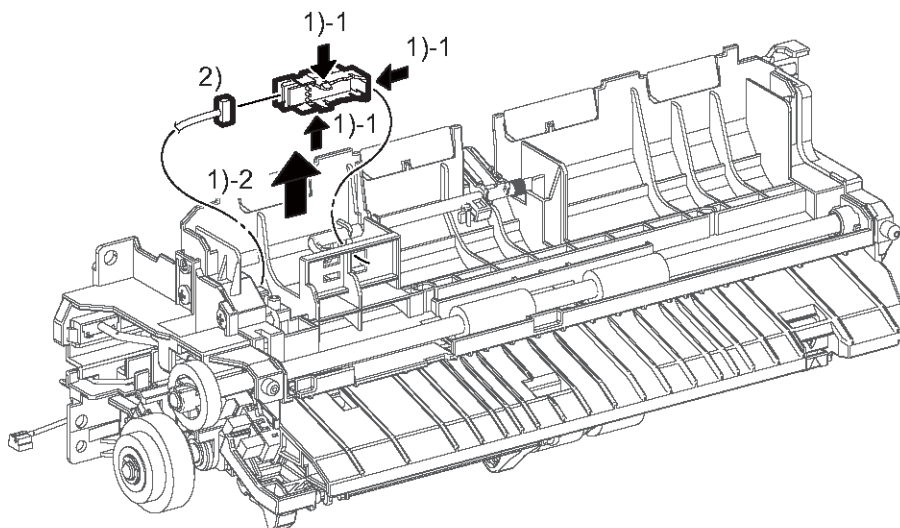
4.10.2 REGISTRATION SENSOR (S1)

[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Top Exit Cover (**Top Exit Cover**) (Only IM C530F: Tall model)
- Right Upper Cap (**Right Upper Cap**) (Only IM C530F: Tall model)
- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)
- Rear Cover (**Rear Cover**)
- PTR Housing (**PTR Housing**)
- Registration Feeder Assy (**Option Paper Feed Guide Plate/ Duplex Upper Guide Plate/ Registration Feeder Assy**)

[Removal]

1. Release three hooks and lift up the Registration Sensor (S1) from the Registration Feeder Assy.
2. Disengage the connector (P/J546) to remove the Registration Sensor (S1).



FR04182XA

4.10.3 PAPER FEED ROLLER ASSY/ UPPER GUIDE PLATE

★ Important

- Replace the Separation Roller Assy and Paper Feed Roller Assy at same time. (**Separation Roller Assy**)

[Before replacing the paper Feed Roller Assy and Separation Roller Assy]

Before replacing the Separation Roller Assy and Paper Feed Roller Assy, reset the PM counter.

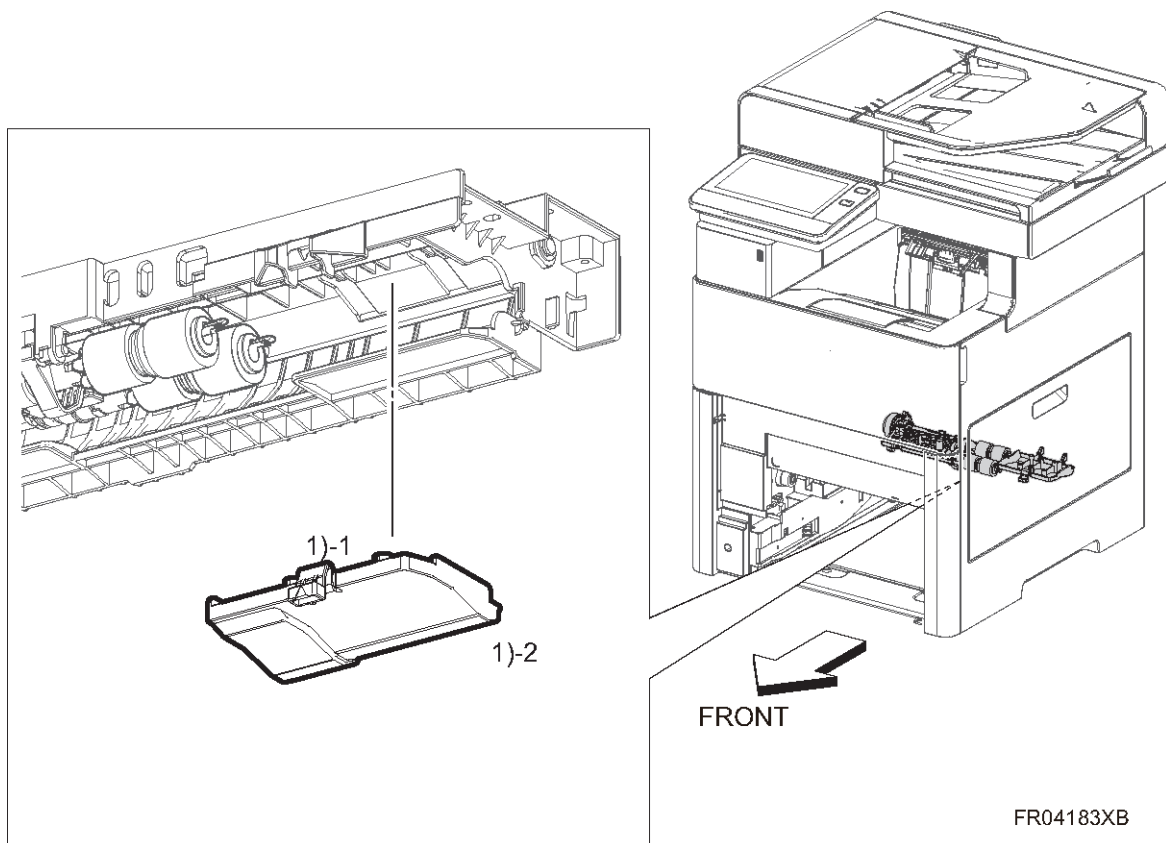
1. Turn the power ON.
2. Reset the PM counter. (Refer to **Replacement Procedure of the PM/Yield Partss**)
3. Turn the power OFF.

[Before removal]

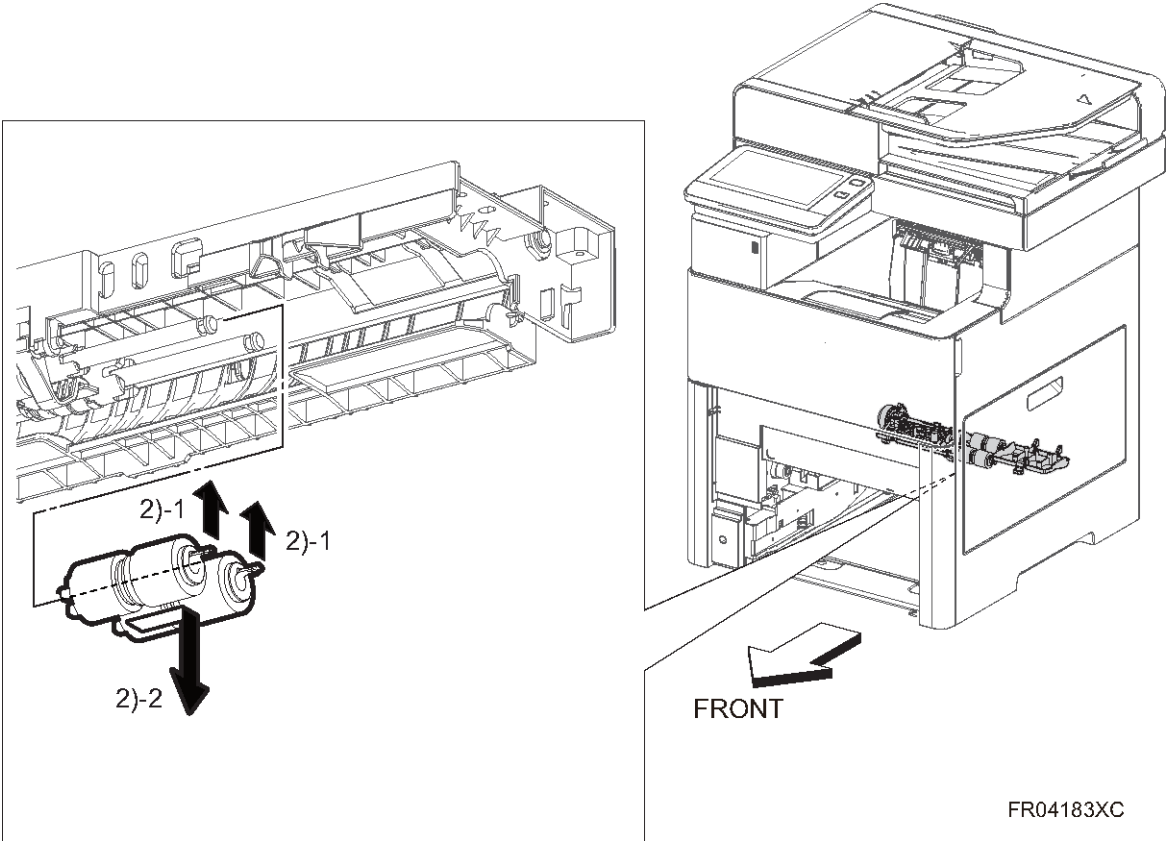
- Paper Tray (*Paper Tray*)
- Bypass Tray Assy (*Bypass Tray Assy*)

[Removal]

1. Remove the Upper Guide Plate.



2. Release the hooks to remove the Paper Feed Roller Assy.



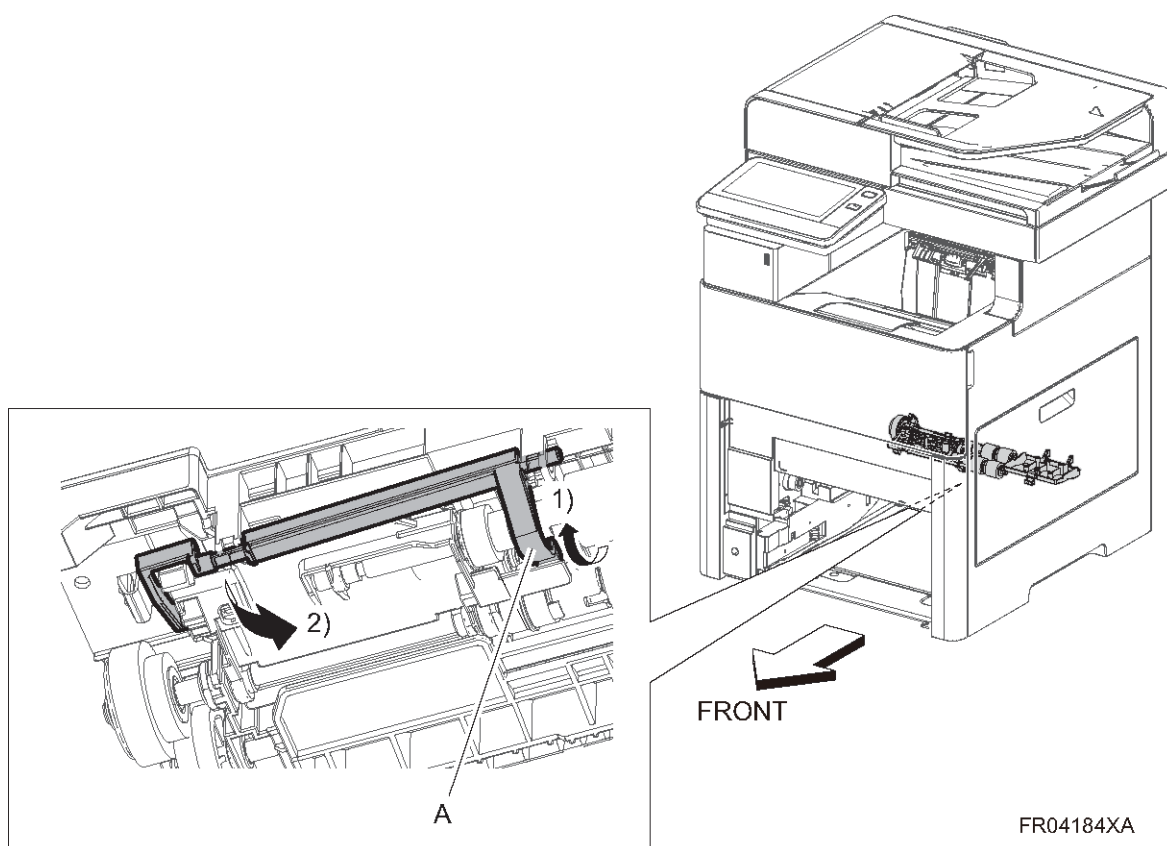
4.10.4 PAPER END FEELER

[Before removal]

- Paper Tray (*Paper Tray*)
- Bypass Tray Assy (*Bypass Tray Assy*)

[Removal]

1. Release the portion A of the Paper End Feeler in the direction of the arrow.
2. Remove the Paper End Feeler.



4.10.5 DUPLEX REGISTRATION ROLLER ASSY

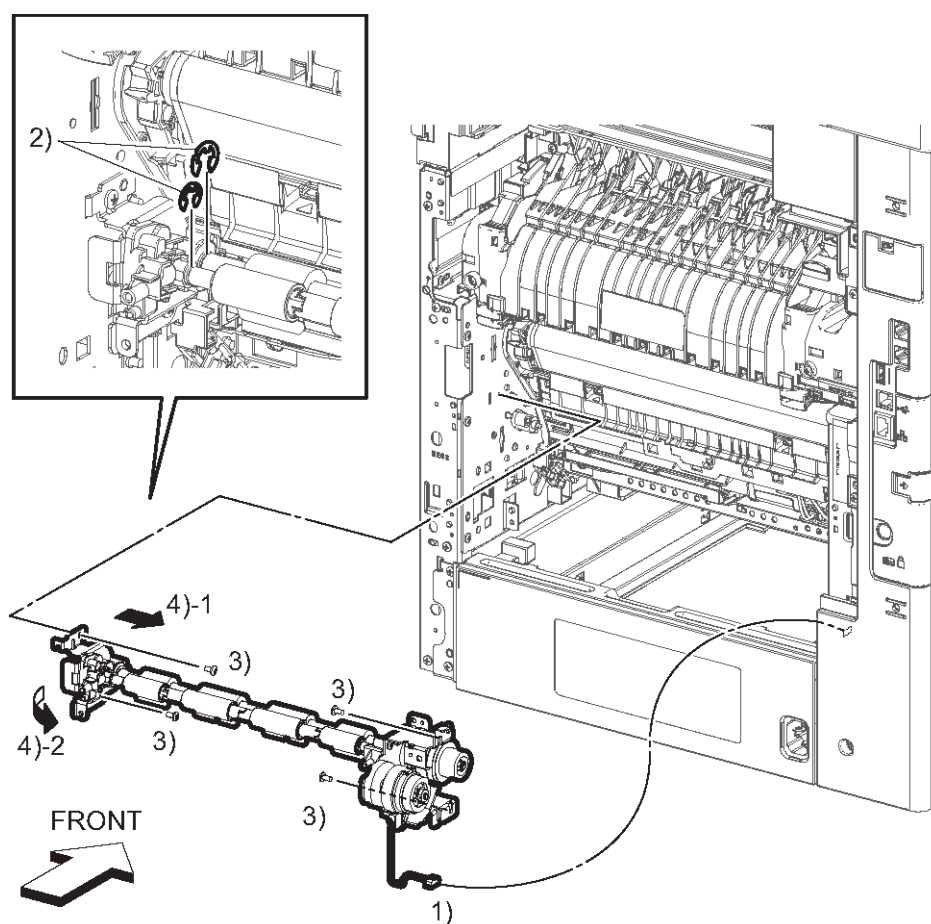
[Before removal]

- Paper Tray (*Paper Tray*)
- Bypass Tray Assy (*Bypass Tray Assy*)
- Toner Cover (*Toner Cover*)
- Top Exit Cover (*Top Exit Cover*) (Only IM C530F: Tall model)
- Right Upper Cap (*Right Upper Cap*) (Only IM C530F: Tall model)

- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)
- Rear Cover (**Rear Cover**)
- PTR Housing (**PTR Housing**)
- Registration Feeder Assy (**Option Paper Feed Guide Plate/ Duplex Upper Guide Plate/ Registration Feeder Assy**)

[Removal]

1. Disengage the connector (P/J541).
2. Remove two E-rings of the Duplex Registration Roller Assy.
3. Remove four screws (Silver, M3X6mm).
4. Slide the Duplex Registration Roller Assy to remove it in the direction of the arrow.



FR04185XA

4.10.6 REGISTRATION FEELER

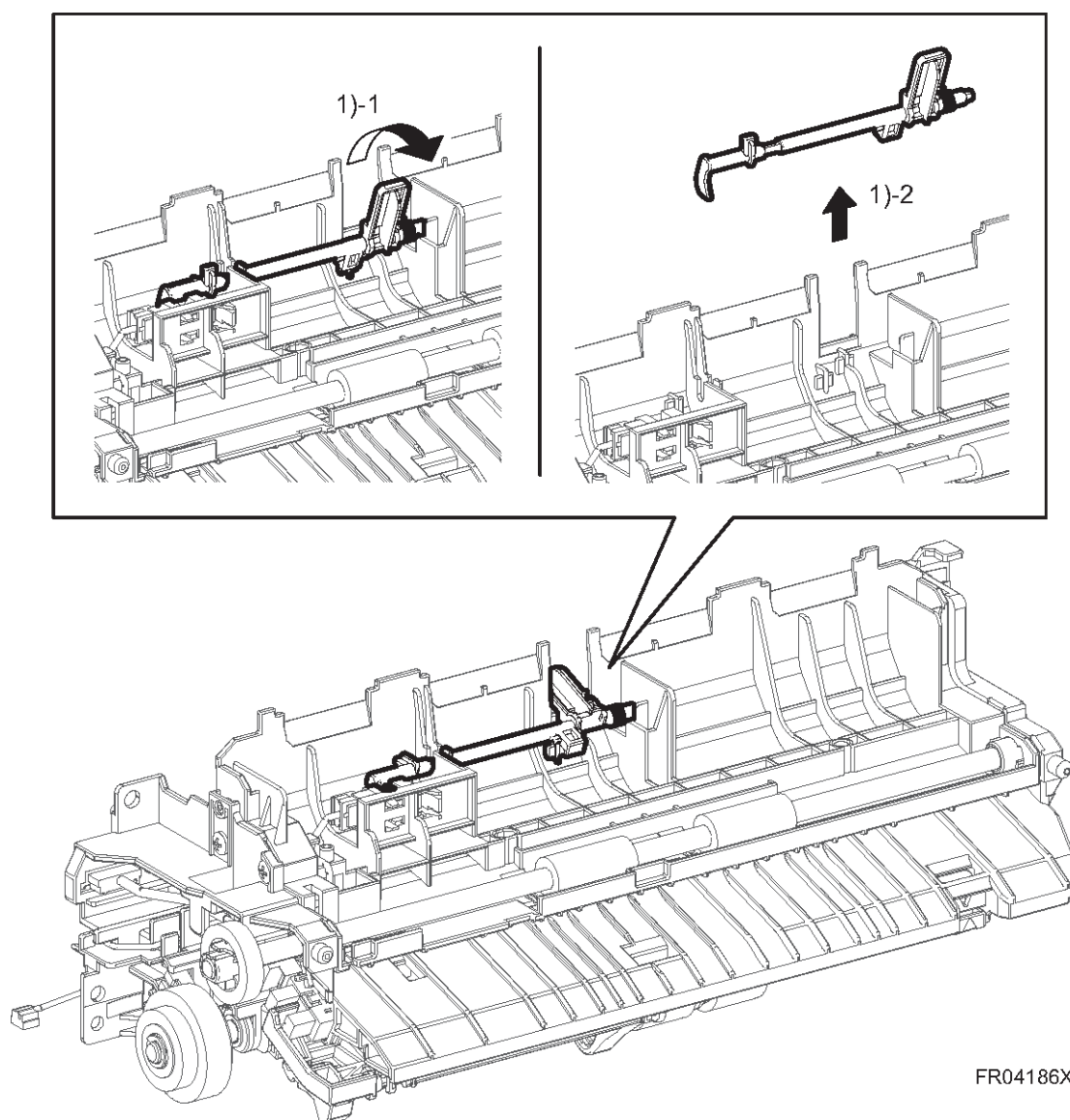
[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)

- Top Exit Cover (**Top Exit Cover**) (Only IM C530F: Tall model)
- Right Upper Cap (**Right Upper Cap**) (Only IM C530F: Tall model)
- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)
- Rear Cover (**Rear Cover**)
- PTR Housing (**PTR Housing**)
- Registration Feeder Assy (**Option Paper Feed Guide Plate/ Duplex Upper Guide Plate/ Registration Feeder Assy**)

[Removal]

1. Rotate the Registration Feeler to remove it.

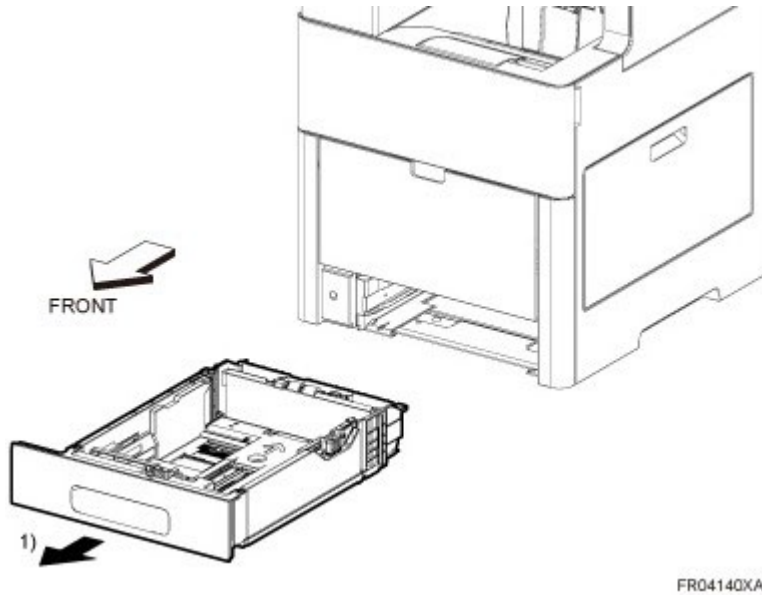


FR04186XA

4.11 TRAY

4.11.1 PAPER TRAY

1. Pull out the Paper Tray.

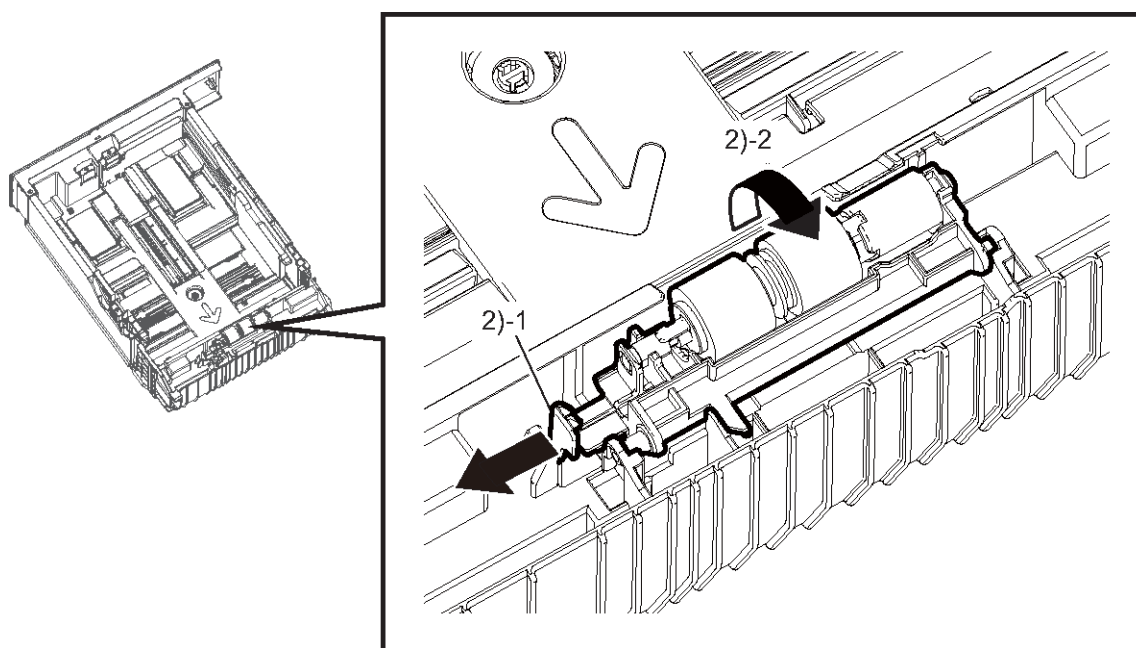


4.11.2 SEPARATION ROLLER ASSY

★ Important

- Replace the Separation Roller Assy and Paper Feed unit at same time. (**Paper Feed Roller Assy/ Upper Guide Plate**)

1. Pull out the Paper Tray.
2. Release the hook and turn up the Separation Roller Assy.



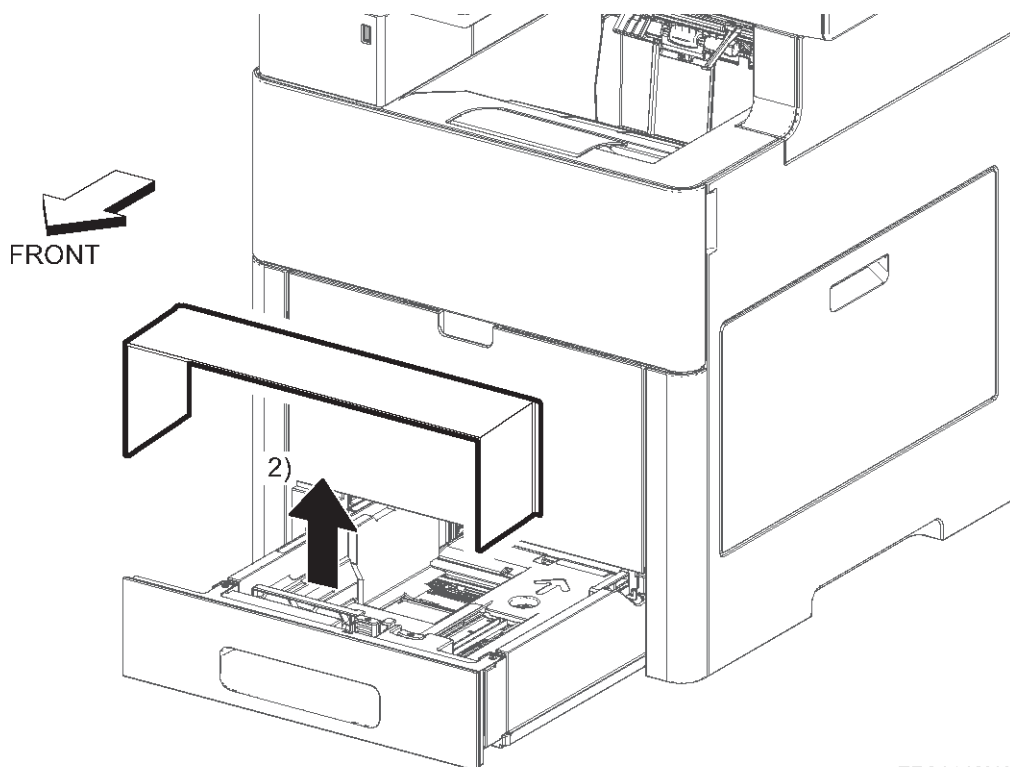
FR04141XA

4.11.3 DUST COVER

Note

- Only when using LG size paper.

1. Pull out the Paper Tray.
2. Remove the Dust Cover.

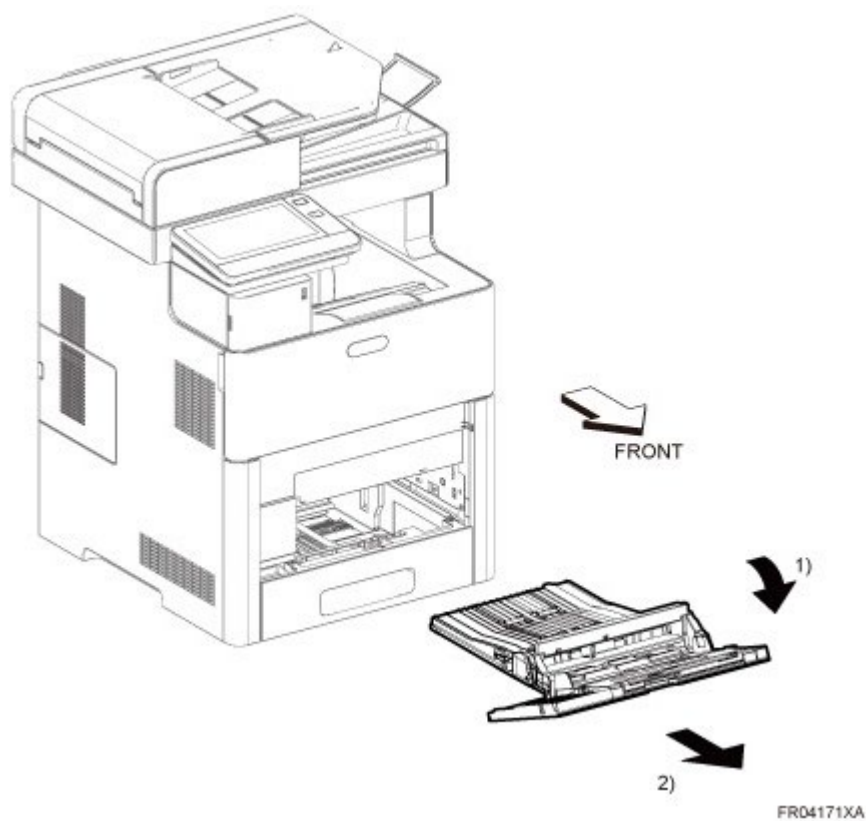


FR04143XA

4.12 BYPASS FEED

4.12.1 BYPASS TRAY ASSY

1. Open the Bypass Tray Assy.
2. Pull out the Bypass Tray Assy.



4.12.2 BYPASS FEED ROLLER

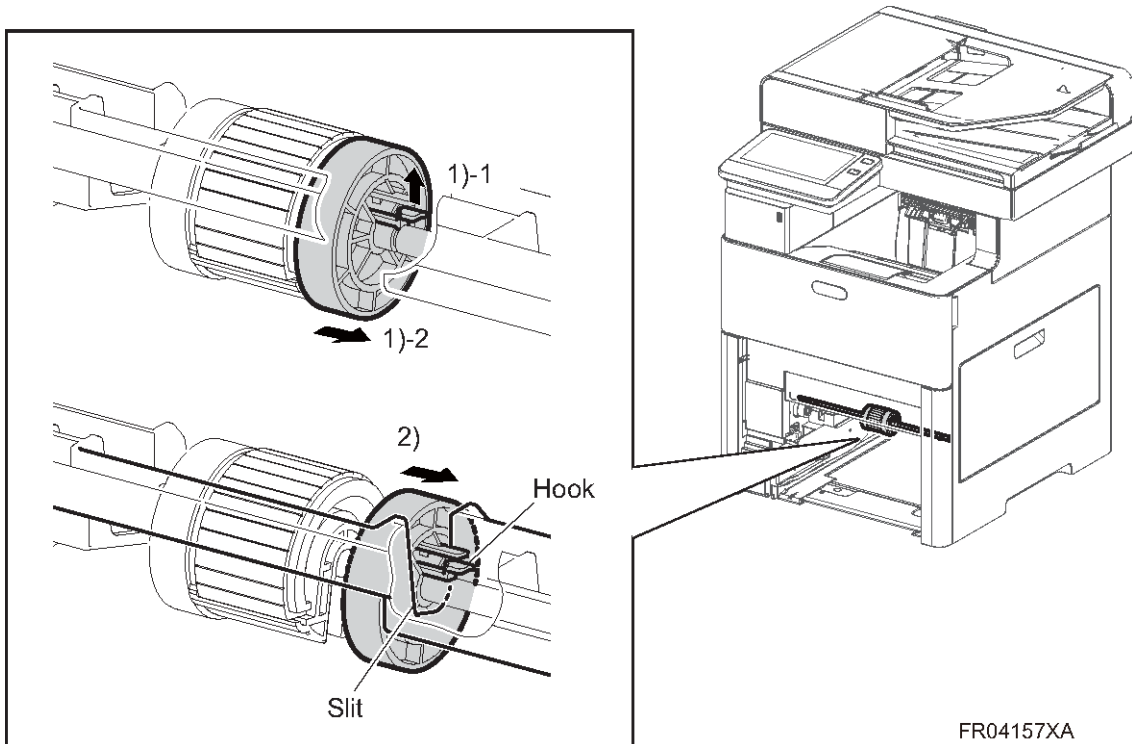
[Before Removal]

- Bypass Tray Assy (*Bypass Tray Assy*)

[Removal]

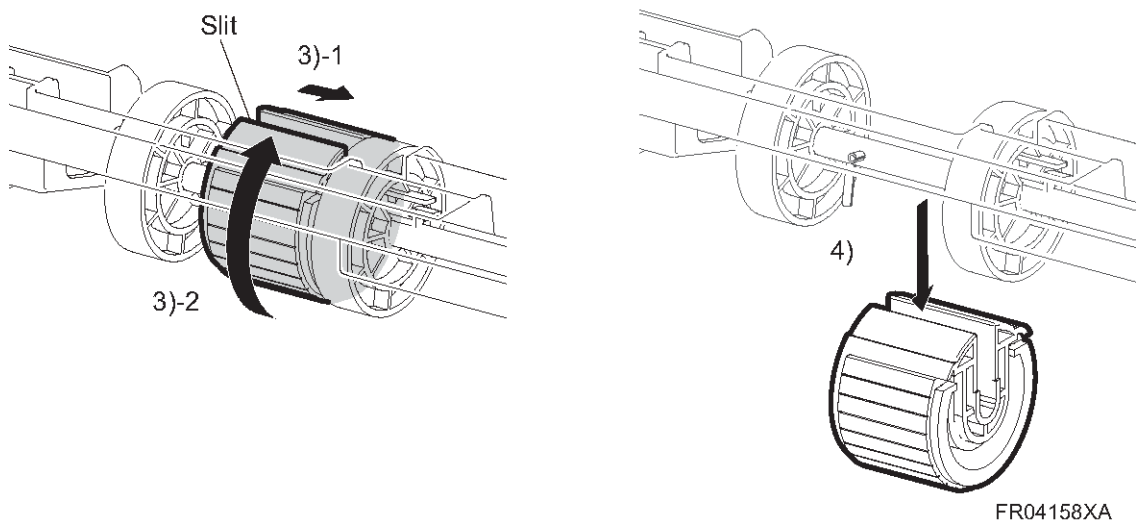
1. Release the hook of the Bypass Feed Roller and slide the Bypass Feed Roller in the direction of the arrow.

2. Fit the hook with the slit and slide the Bypass Feed Roller in the direction of the arrow.



3. Slide the Bypass Feed Roller and rotate the Bypass Feed Roller in the direction of the arrow.

4. Remove the Bypass Feed Roller.



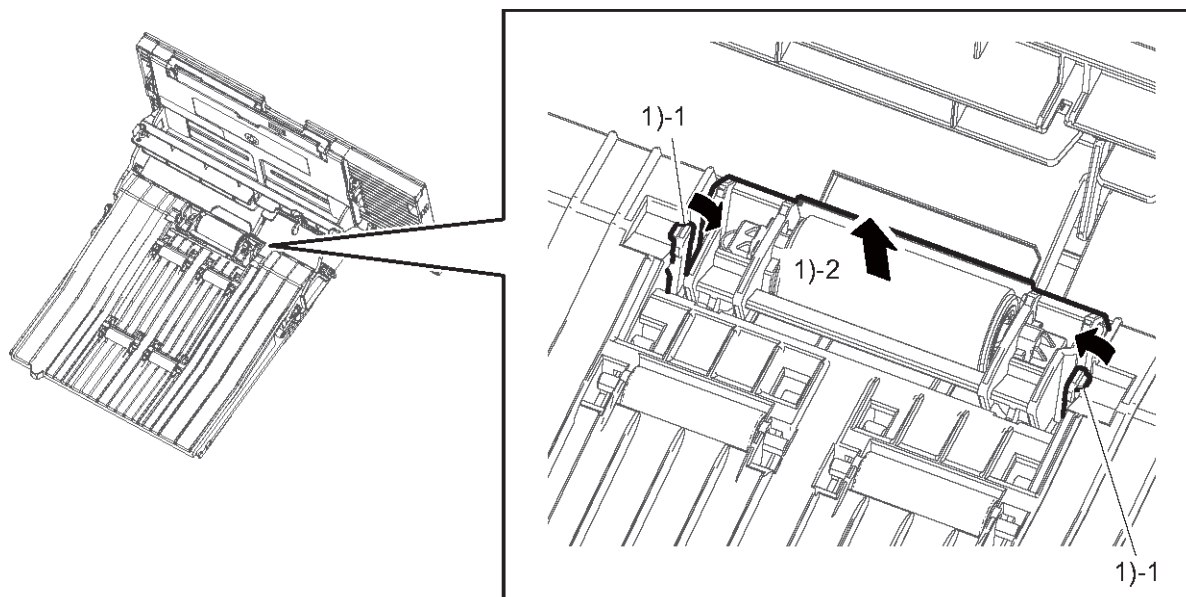
4.12.3 BYPASS SEPARATION ROLLER ASSY

[Before Removal]

- Bypass Tray Assy (*Bypass Tray Assy*)

[Removal]

1. Release the hooks and remove the Bypass Separation Roller Assy from the Bypass Tray Assy.



FR04172XA

4.12.4 BYPASS TRAY COVER

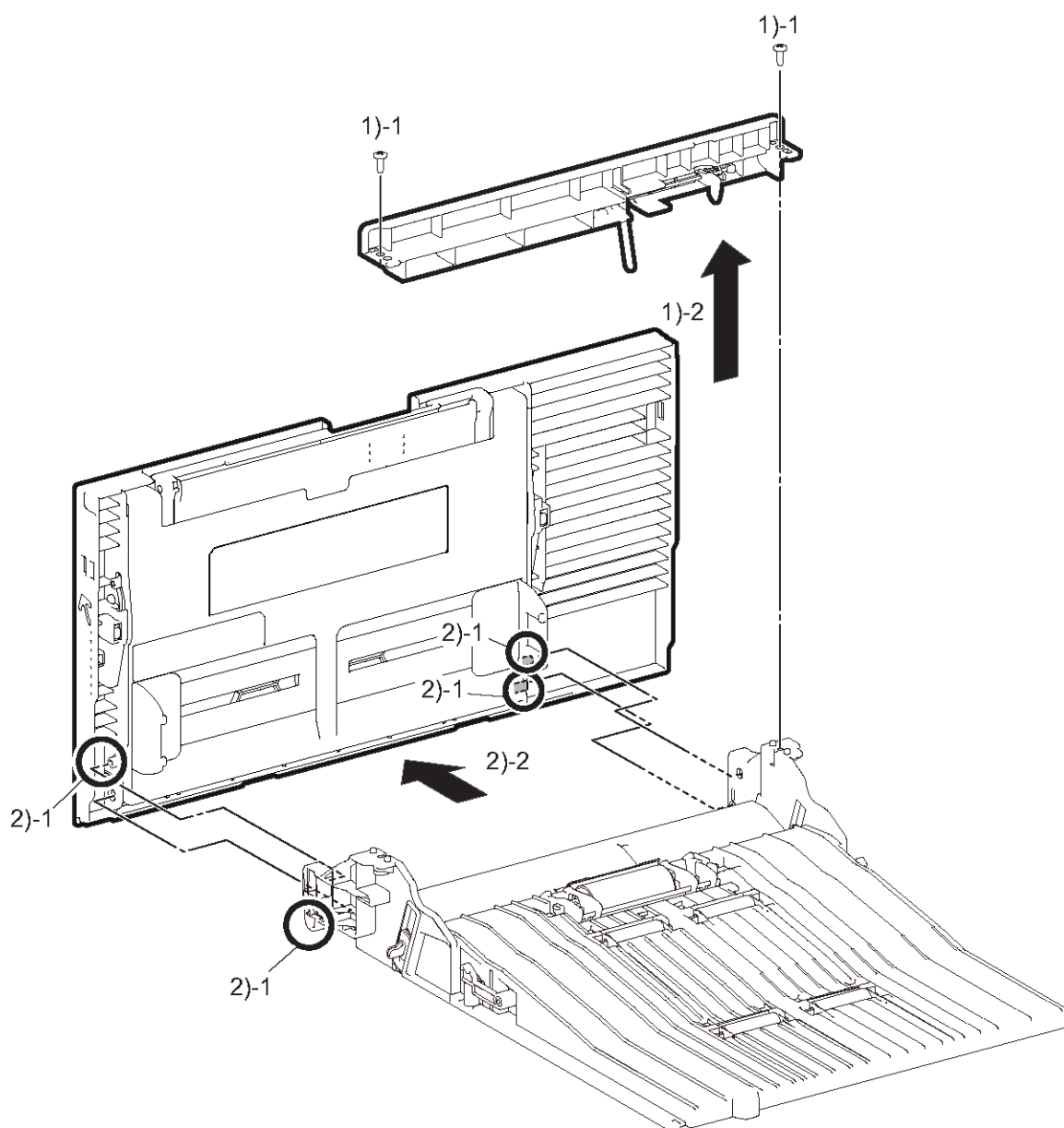
[Before Removal]

- Bypass Tray Assy (*Bypass Tray Assy*)

[Removal]

1. Remove two screws (Silver, tapping, M3x8) to remove the feeler cover.

2. Release four bosses to remove the Bypass Tray Cover.



FR04173XA

4.12.5 BYPASS FEED ASSY

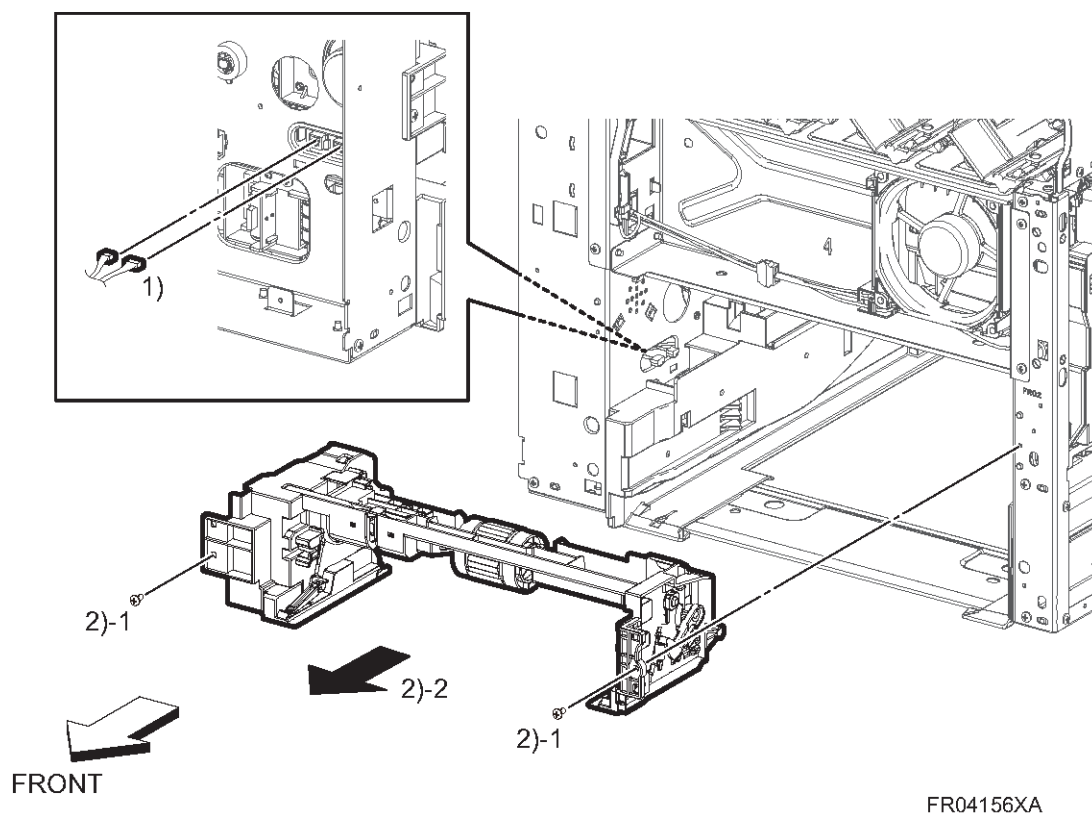
[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)

- Top Exit Cover (**Top Exit Cover**) (Only IM C530F: Tall model)
- Right Upper Cap (**Right Upper Cap**) (Only IM C530F: Tall model)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)

[Removal]

1. Disengage two connectors (P/J482, P/J483).
2. Remove two screws (Silver, M3X6mm) to remove the Bypass Feed Assy.



4.12.6 BYPASS PAPER END SENSOR (S6)

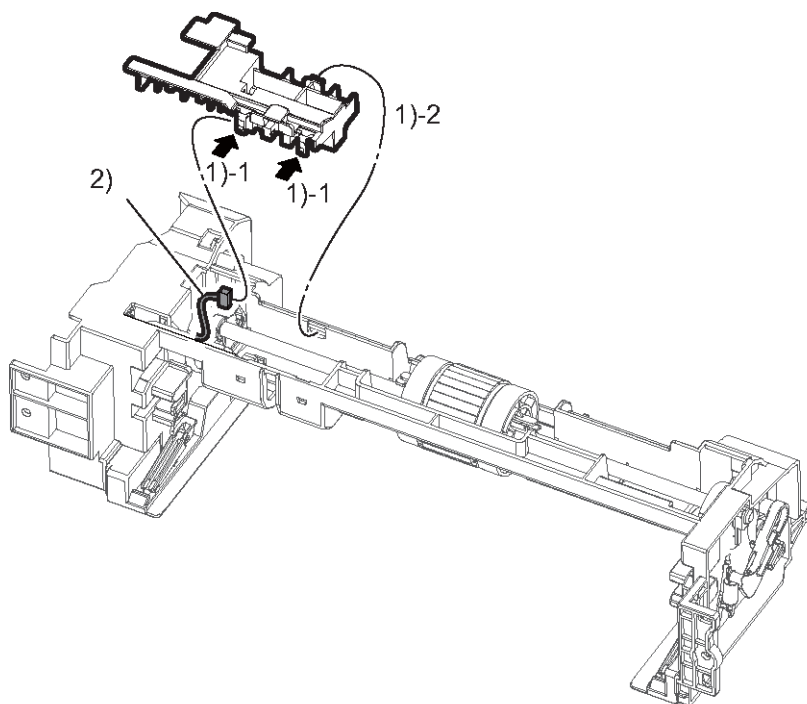
[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**) (Only IM C530F: Tall model)
- Right Upper Cap (**Right Upper Cap**) (Only IM C530F: Tall model)
- Right Cover (**Right Cover**)

- Front Inner Cover (*Front Inner Cover*)
- Bypass Feed Assy (*Bypass Feed Assy*)

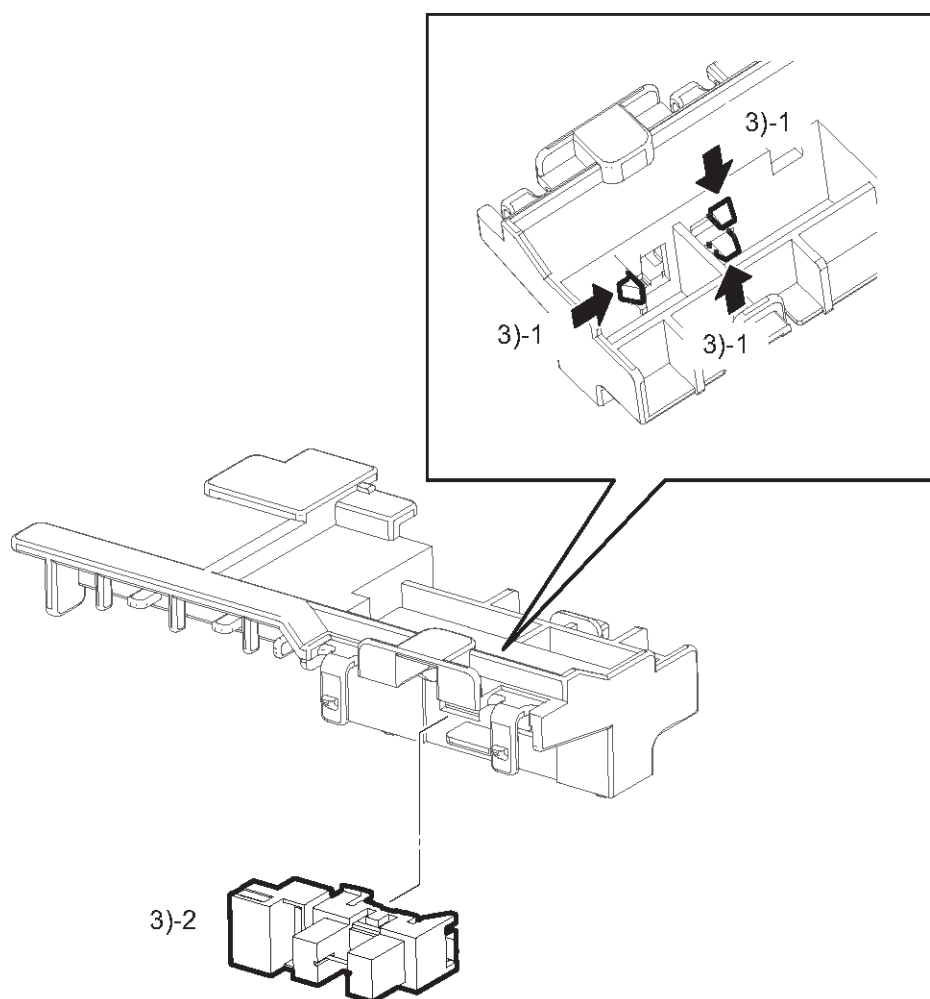
[Removal]

1. Release two hooks and the boss, and lift up the bracket with the sensor from the Bypass Feed Assy.
2. Disengage the connector (P/J484) and release the harness.



FR04159XA

3. Release three hooks to remove the Bypass Paper End Sensor (S6).



FR04160XA

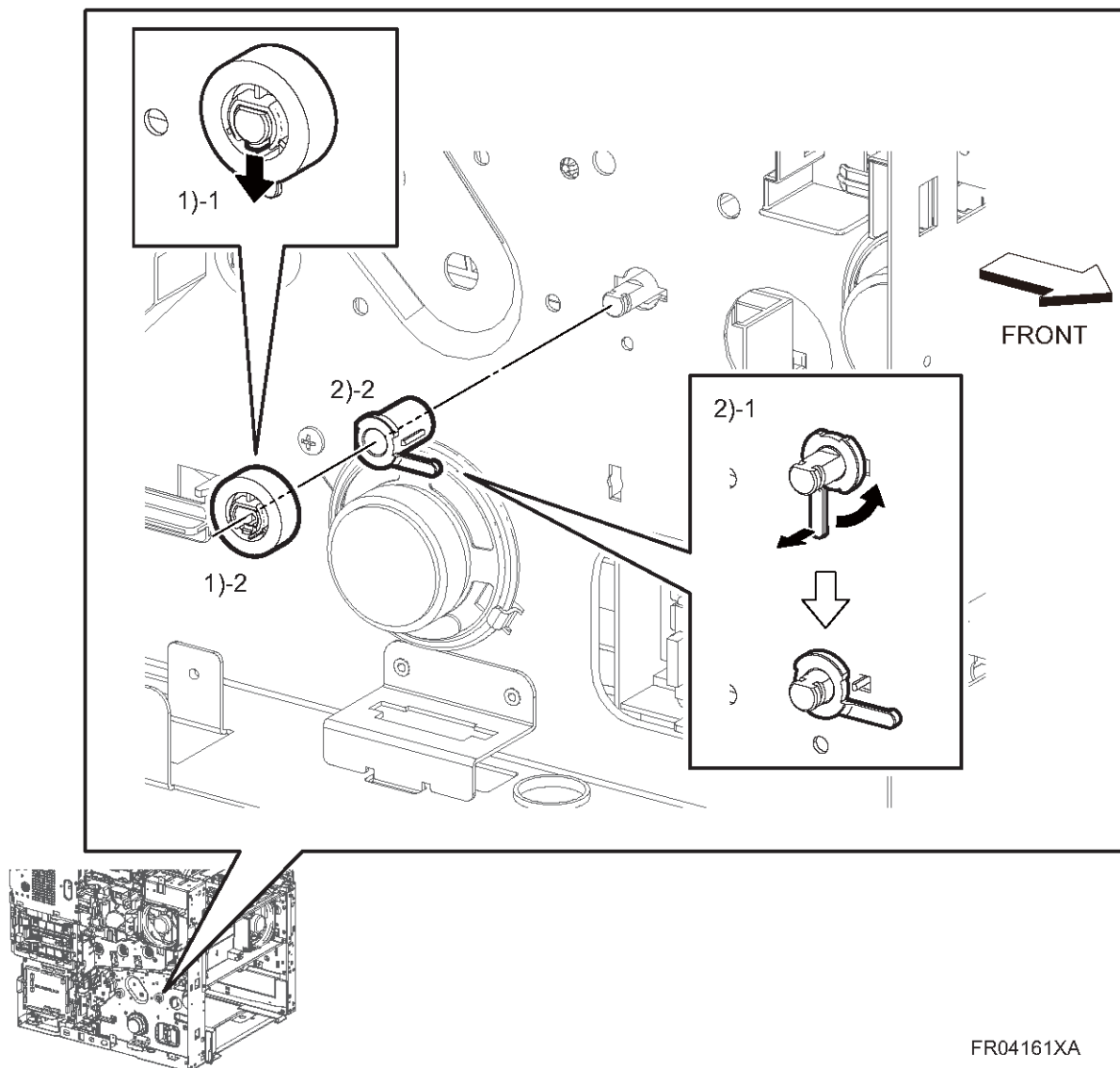
4.12.7 BYPASS ROLLER ASSY 1

[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**) (Only IM C530F: Tall model)
- Right Upper Cap (**Right Upper Cap**) (Only IM C530F: Tall model)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- Bypass Feed Assy (**Bypass Feed Assy**)

[Removal]

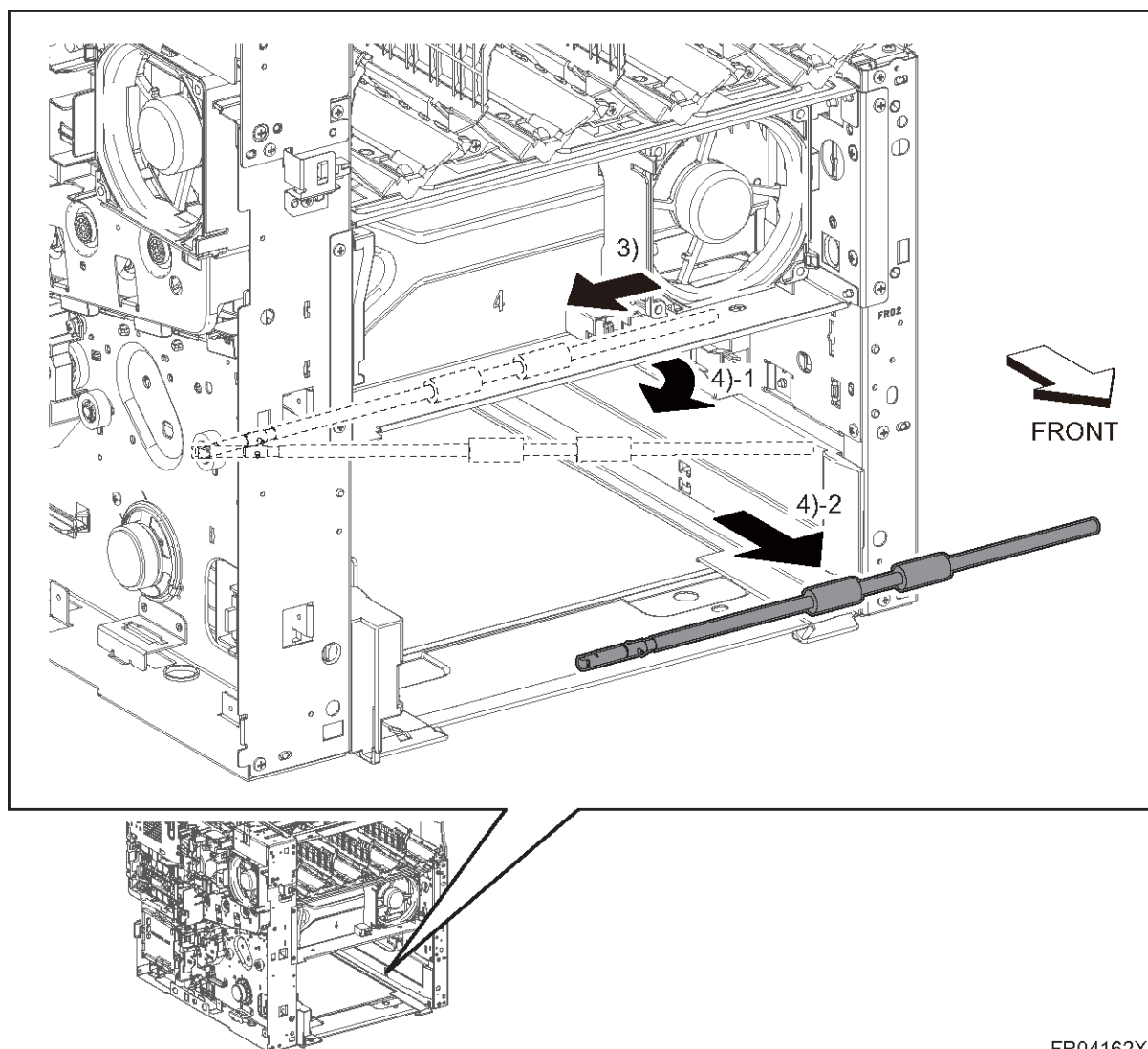
1. Release the hook to remove the gear.
2. Release the hook to remove the bearing (left).



3. Slide the Bypass Roller Assy 1 in the direction of the arrow.

FR04161XA

4. Remove the Bypass Roller Assy 1 in the direction of the arrow.



FR04162XA

4.12.8 BYPASS ROLLER ASSY 2

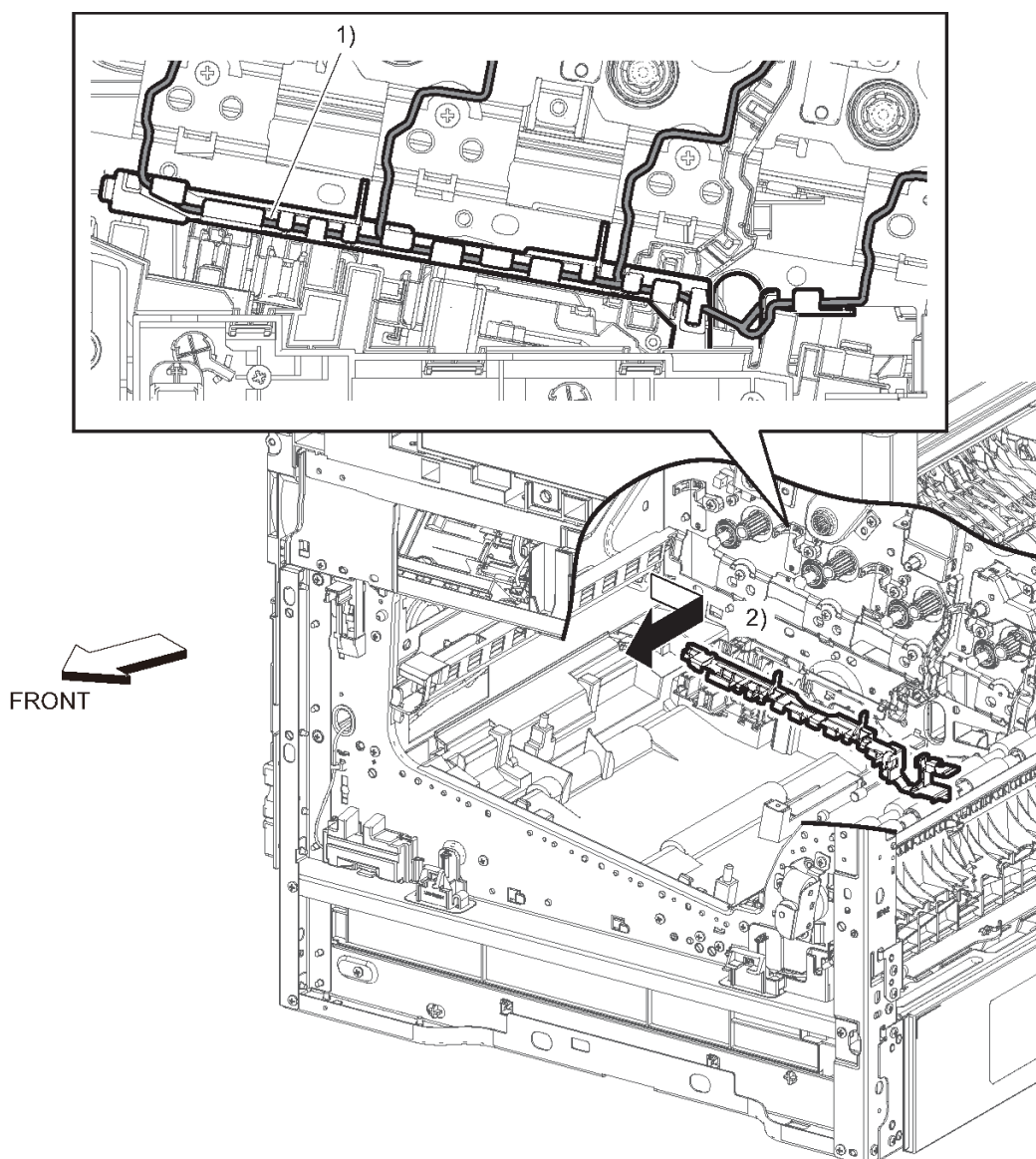
[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Controller Box Cover (**Controller Box Cover**)
- FFC Guide Bracket (**FFC Guide Bracket**)
- MCU (**MCU (PCB2)**)
- MCU Bracket (**MCU Bracket**)
- PCDUs, PCDU Guide Cover (**PCDU, PCDU Cover Guide**)

- ITB Unit (*ITB Unit (Image Transfer Belt Unit)*)
- LED Head Assy (*LED Head Assy*)
- LED Head Base (*LED Head Base*)
- PCDU Holder (*PCDU Holder*)
- HVPS Guide (*HVPS Assy (PCB5)*)
- LVPS (*LVPS (PCB4)*)
- LVPS Bracket (*LVPS Bracket*)
- Bypass Drive Assy (*Bypass Drive Assy*)
- Main Drive Assy 3 (*Main Drive Assy 3*)

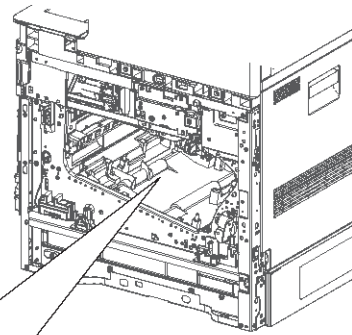
[Removal]

1. Release the harness from the harness guide.
2. Slide to remove the harness guide in the direction of the arrow.

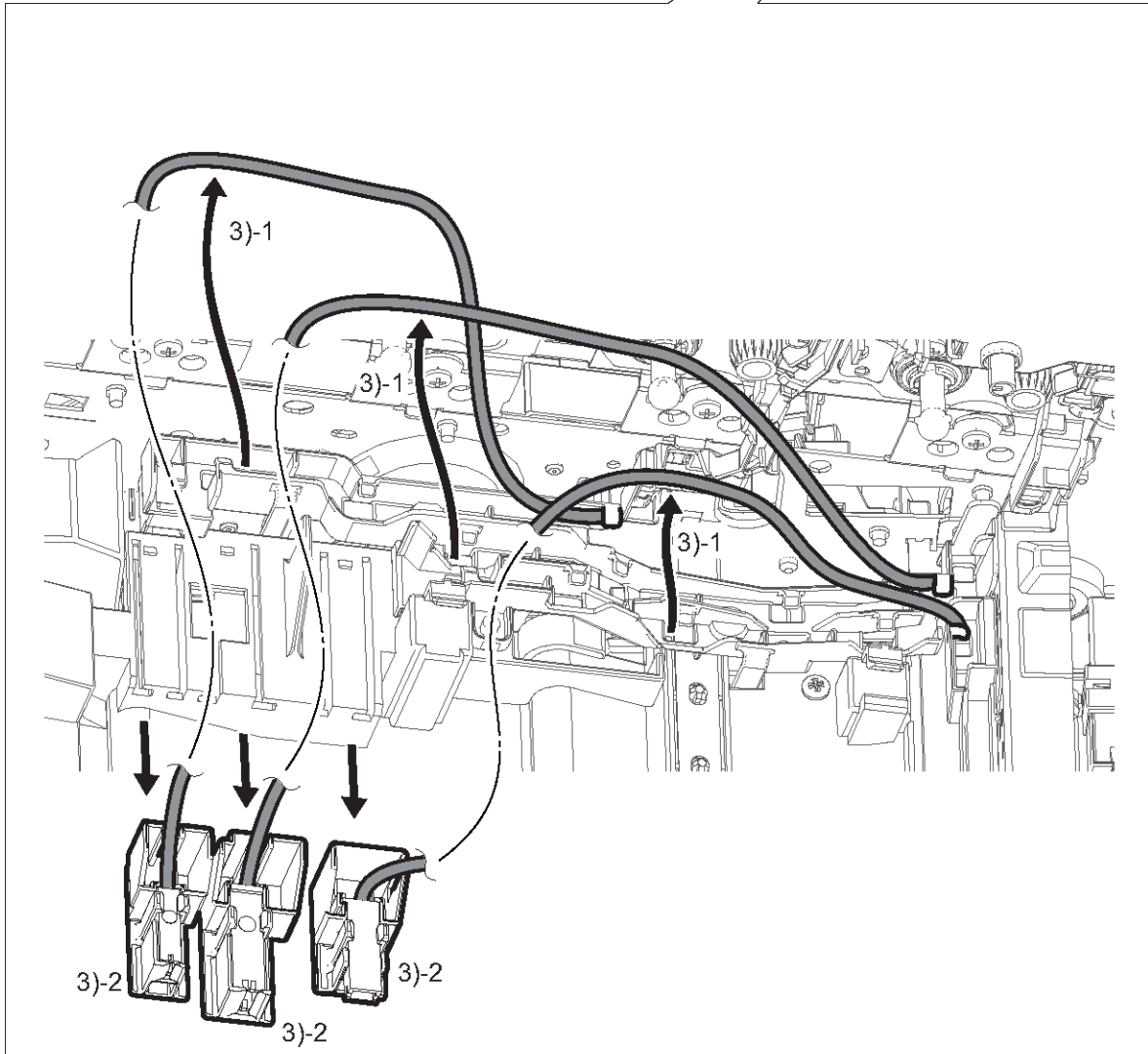


FR04163XA

3. Release three harnesses from the harness guide and remove the Holder Assy.

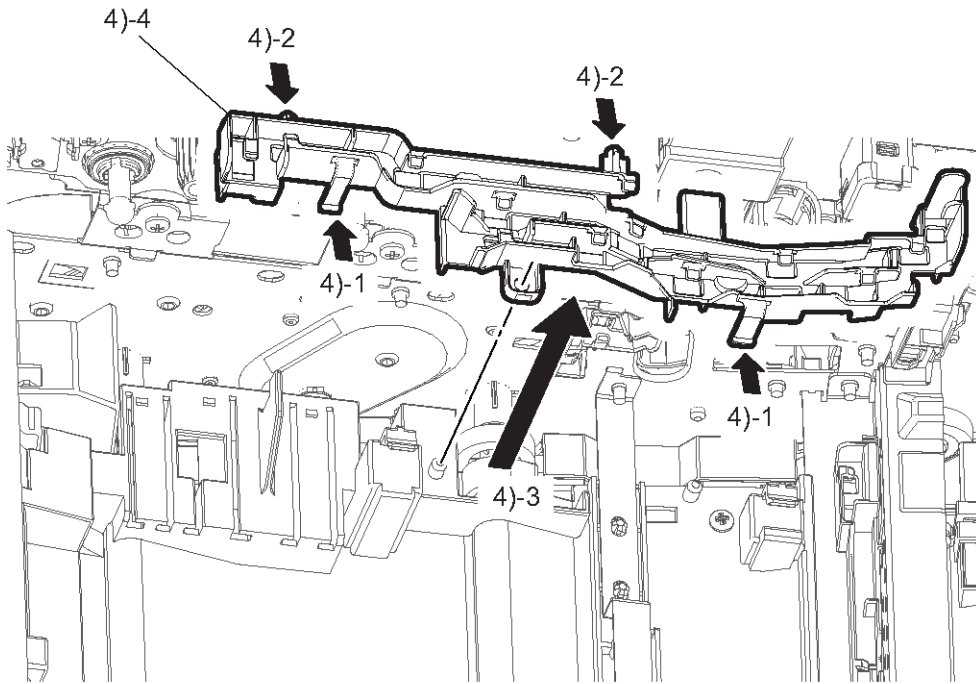


Replacement and Adjustment



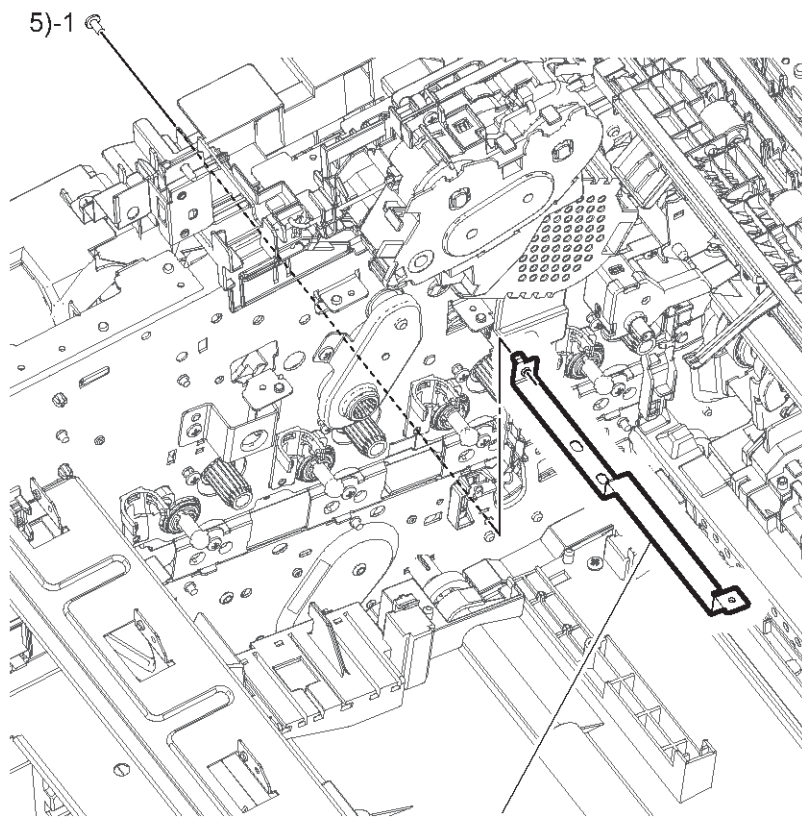
FR04164XA

4. Release two hooks and two bosses and remove the harness guide.



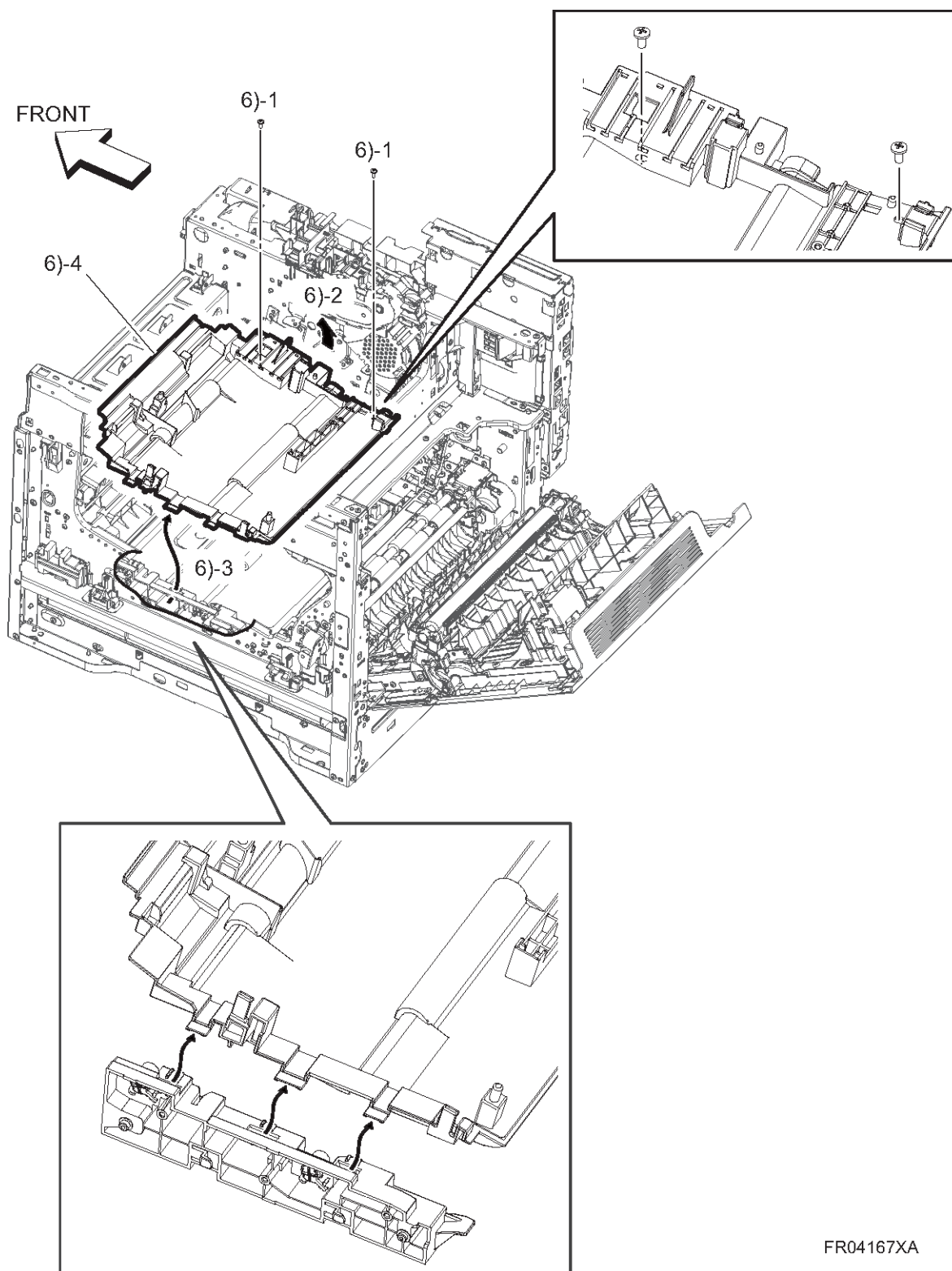
FR04165XA

5. Remove the screw (Silver, M3X6mm) fixing the plate and the remove the plate.



FR04166XA

- Remove two screws (Screw for plastic Silver, tapping, M3x8) fixing the Bypass Upper Guide Plate, and then lift up the Bypass Upper Guide Plate.

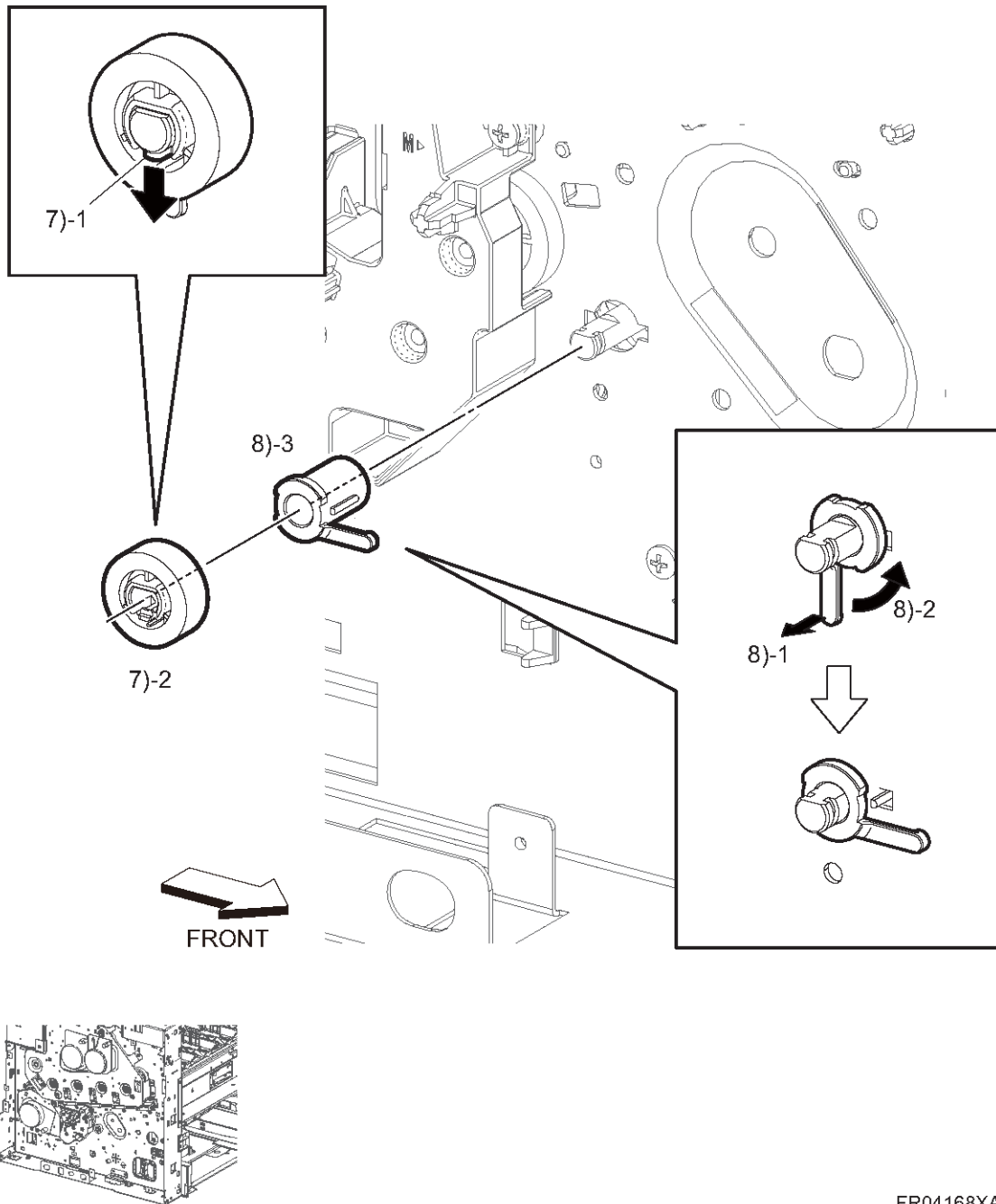


Replacement and Adjustment

FR04167XA

- Release the hook and remove the gear.

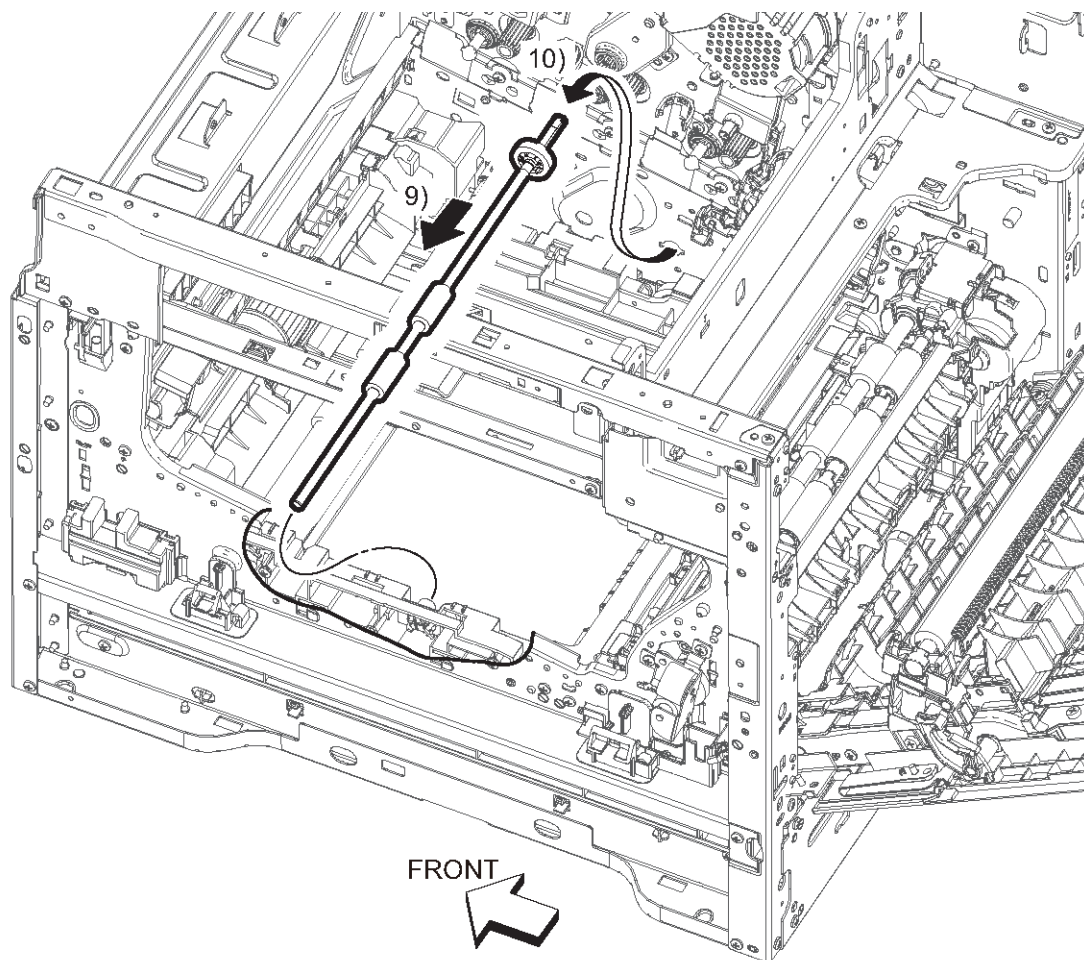
8. Release the hook and remove the bearing.



FR04168XA

9. Slide the Bypass Roller Assy 2 in the direction of the arrow.

10. Remove the Bypass Roller Assy 2 in the direction of the arrow.

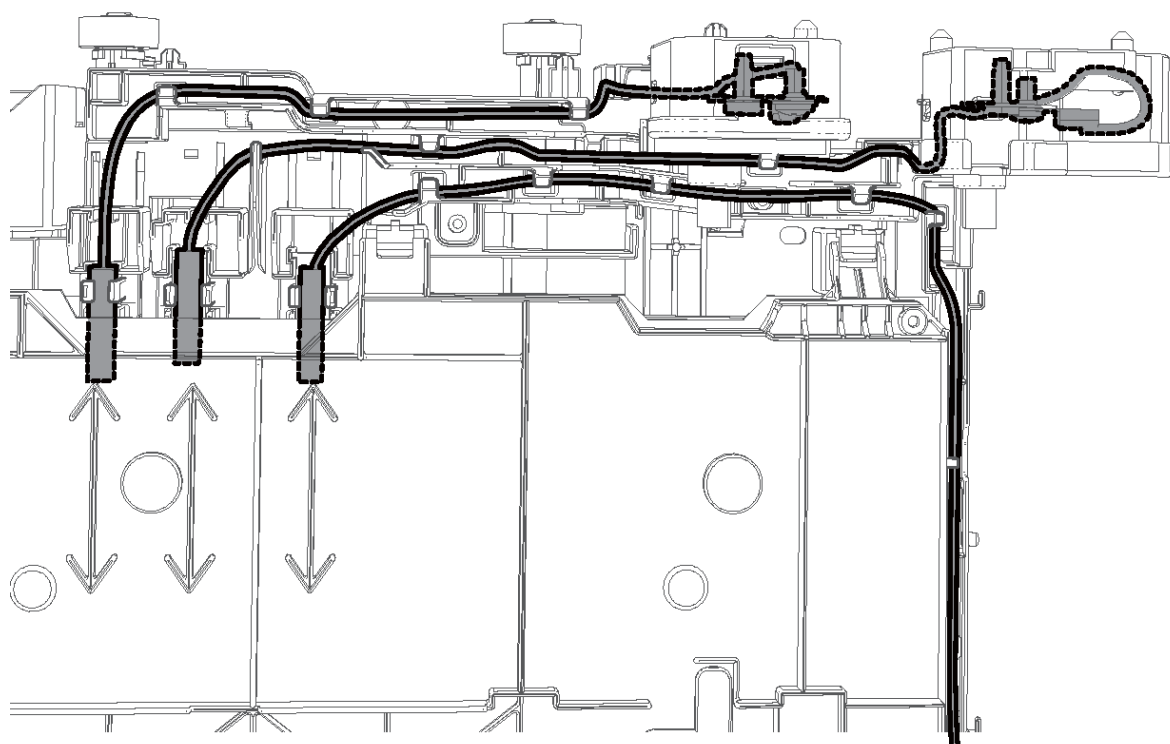


FR04169XA

Replacement and Adjustment

[Replacement]**Note**

- When installing the harnesses, make sure that the harnesses are fixed at the initial position as shown in the figure below.



FR04170XA

4.13 FUSING

4.13.1 FUSING UNIT

CAUTION

- The Fusing Unit part is very hot. Take added care not to get burned when performing the following service operation.

Important

- If the machine loses power while printing envelopes in the envelope mode, the fusing unit will remain in envelope mode. If the fusing unit is removed while it is locked in envelope mode after a power outage, the cam that adjusts fusing pressure inside the fusing unit will spring out of position and block re-insertion of the fusing unit.
- If the fusing unit has been locked in envelope mode due to loss of power to the machine, cycle the machine OFF/ON to initialize and restore the normal printing mode before you try to remove and re-install the fusing unit.

[Before replacing the Fusing Unit]

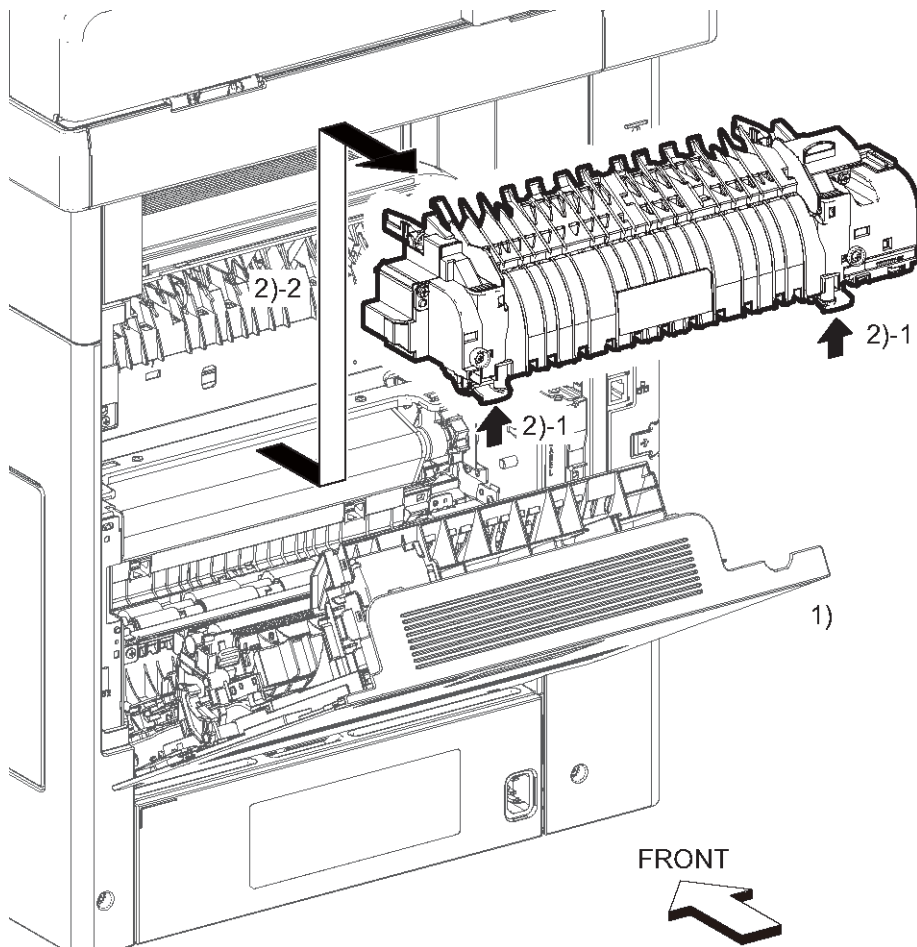
Before replacing the Fusing Unit, reset the PM counter.

1. Turn the power ON.
2. Reset the PM counter. (Refer to **Replacement Procedure of the PM/Yield Parts**)
3. Turn the power OFF.

[Removal]

1. Open the Rear Cover.

2. Remove the Fusing Unit by pushing the two levers.



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4.13.2 NIP RETRACT DRIVE ASSY

[Before removal]

(IM C530F: Tall model)

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**)
- Right Upper Cap (**Right Upper Cap**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)



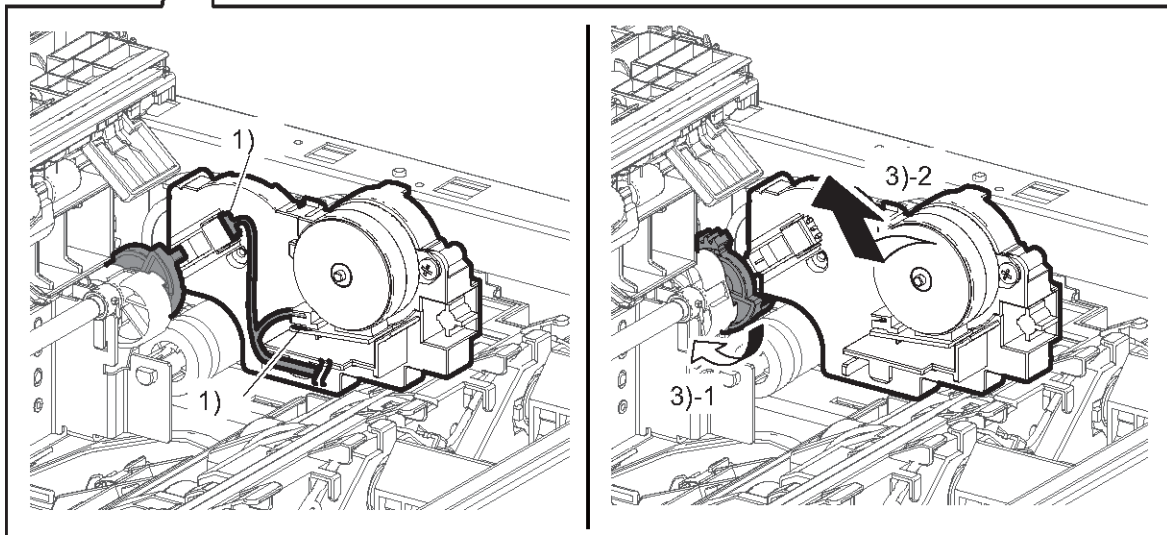
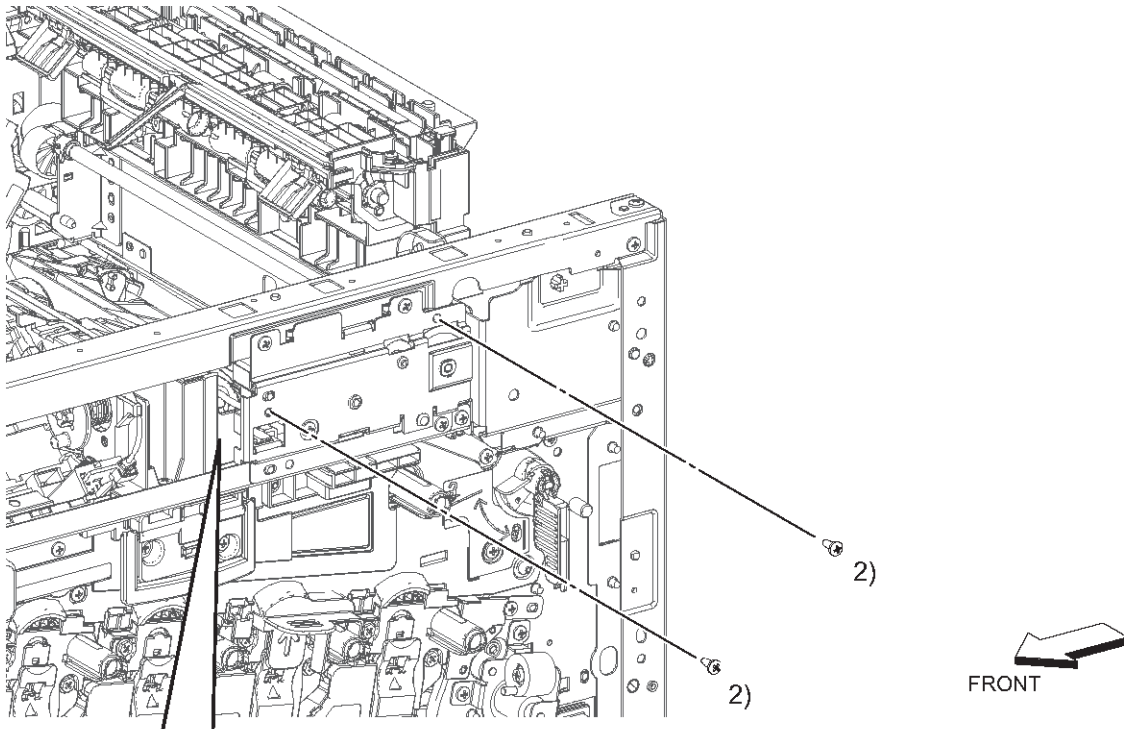
- IC Card Cover (**IC Card Cover**)
- Front Upper Cover (**Front Upper Cover**)
- Left Inner Cover (**Left Inner Cover**)
- Left Upper Cover (**Left Upper Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Upper Cover (**Rear Upper Cover**)
- Upper Inner Cover (**Upper Inner Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Frame (**Frame**)
- Right Upper Cover (**Right Upper Cover**)
- Right Inner Cover (**Right Inner Cover**)
- Top Cover (**Top Cover/ Option Blind Cover**)
- Fusing Unit (**Fusing Unit**)

(IM C530FB: Short model)

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Right Upper Cover (**Right Upper Cover**)
- Rear Right Inner Cover (**Rear Right Inner Cover**)
- Controller Box Cover (**Controller Box Cover**)
- SPDF Unit and Scanner Unit (**SPDF Unit and Scanner Unit (IM C530FB: Short Model)**)
- Top Cover (**Top Cover**)
- Fusing Unit (**Fusing Unit**)

[Removal]

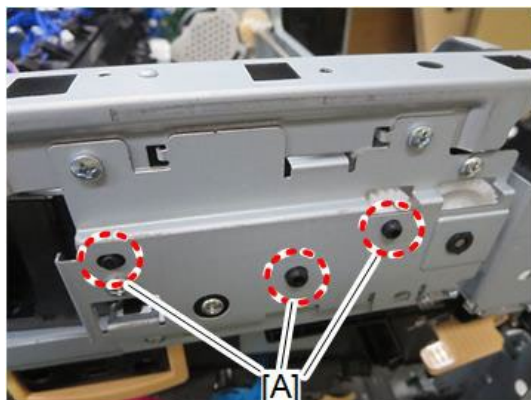
1. Disengage two connectors (P/J171, P/J172).
2. Remove two screws (Silver, tapping, M3X8mm).
3. Rotate the shaft to release the projection of the cam from the envelope mode sensor, and remove the Nip Retract Drive Assy.



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Note

- To remove the Nip Retract Drive Assy, first press on the three posts [A].



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4.13.3 NIP RETRACT SHAFT ASSY

[Before removal]

(IM C530F: Tall model)

- Paper Tray (*Paper Tray*)
- Bypass Tray Assy (*Bypass Tray Assy*)
- Toner Cover (*Toner Cover*)
- Front Left Cover (*Front Left Cover*)
- Left Cover (*Left Cover*)
- Front Right Cover (*Front Right Cover*)
- Top Exit Cover (*Top Exit Cover*)
- Right Upper Cap (*Right Upper Cap*)
- Right Cover (*Right Cover*)
- Front Inner Cover (*Front Inner Cover*)
- IC Card Cover (*IC Card Cover*)
- Front Upper Cover (*Front Upper Cover*)
- Left Inner Cover (*Left Inner Cover*)
- Left Upper Cover (*Left Upper Cover*)
- Left Sub Cover (*Left Sub Cover*)
- Rear Upper Cover (*Rear Upper Cover*)
- Upper Inner Cover (*Upper Inner Cover*)
- Rear Left Inner Cover (*Rear Left Inner Cover*)
- Frame (*Frame*)

- Right Upper Cover (***Right Upper Cover***)
- Right Inner Cover (***Right Inner Cover***)
- Top Cover (***Top Cover/ Option Blind Cover***)
- Nip Retract Drive Assy (***Nip Retract Drive Assy***)
- Paper Exit Drive Assy (***Paper Exit Drive Assy***)
- Fusing Unit (***Fusing Unit***)
- Paper Exit Assy (***Paper Exit Assy***)

(IM C530FB: Short model)

- Paper Tray (***Paper Tray***)
- Bypass Tray Assy (***Bypass Tray Assy***)
- Toner Cover (***Toner Cover***)
- Front Left Cover (***Front Left Cover***)
- Left Cover (***Left Cover***)
- Front Right Cover (***Front Right Cover***)
- Right Cover (***Right Cover***)
- Front Inner Cover (***Front Inner Cover***)
- IC Card Cover (***IC Card Cover***)
- Left Sub Cover (***Left Sub Cover***)
- Rear Left Inner Cover (***Rear Left Inner Cover***)
- Right Upper Cover (***Right Upper Cover***)
- Rear Right Inner Cover (***Rear Right Inner Cover***)
- Controller Box Cover (***Controller Box Cover***)
- SPDF Unit and Scanner Unit (***SPDF Unit and Scanner Unit (IM C530FB: Short Model)***)
- Top Cover (***Top Cover***)
- Nip Retract Drive Assy (***Nip Retract Drive Assy***)
- Paper Exit Drive Assy (***Paper Exit Drive Assy***)
- Fusing Unit (***Fusing Unit***)
- Paper Exit Assy (***Paper Exit Assy***)

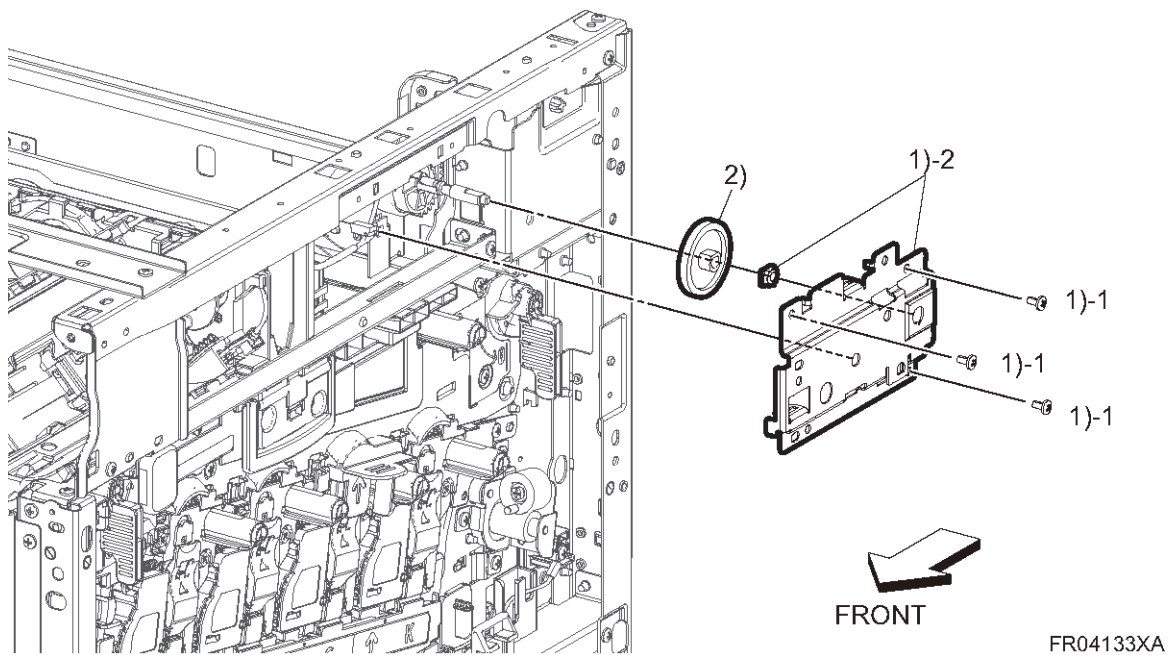
[Removal]

1. Remove three screws (Silver, M3X6mm) and remove the bracket and bearing.

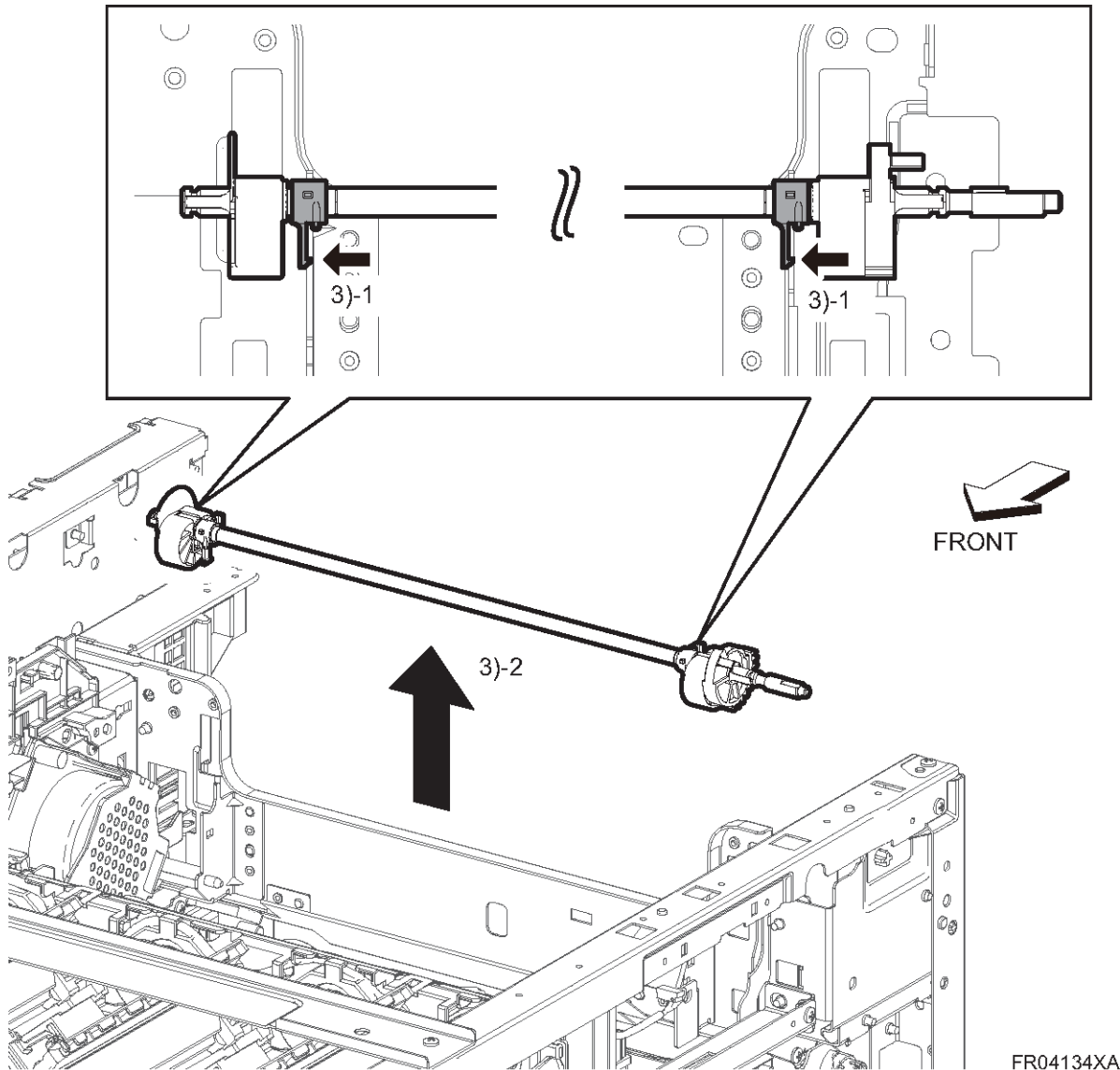
Note

- When removing the bracket, be careful not to lose the bearing.

2. Pull out the gear from the shaft.



3. Release the levers to remove the Nip Retract Shaft Assy.



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4.14 DUPLEX

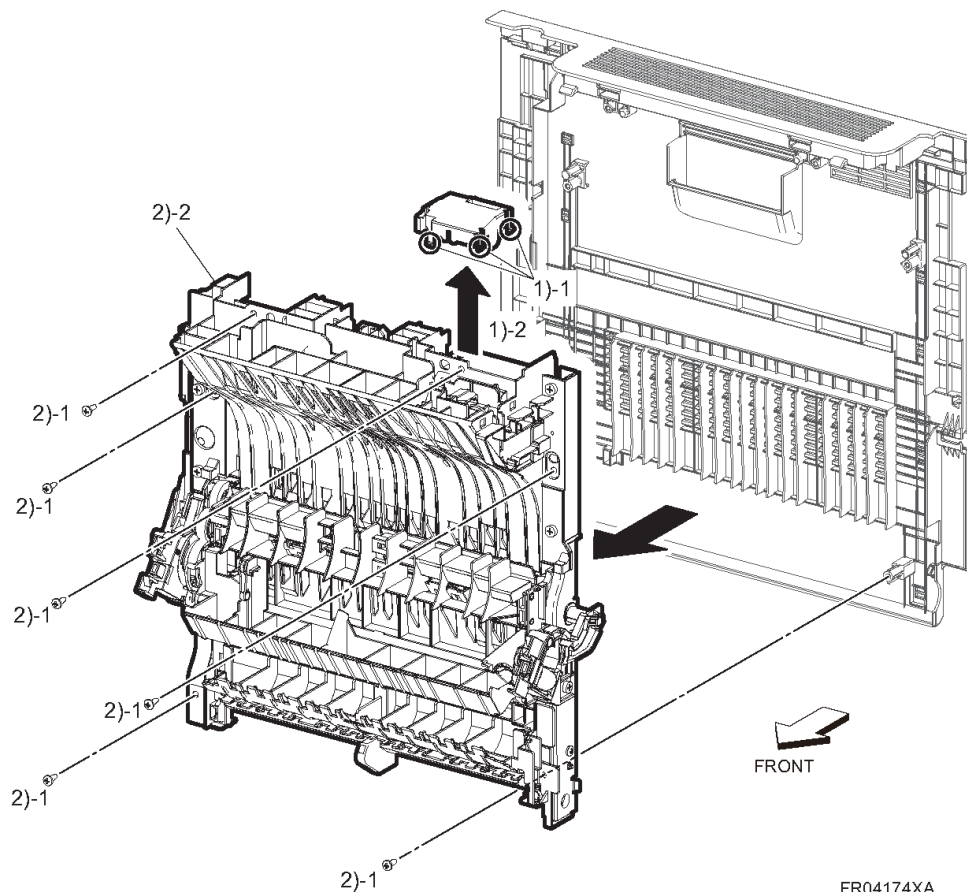
4.14.1 DUPLEX UNIT/ REAR FAN (FAN3)

[Before removal]

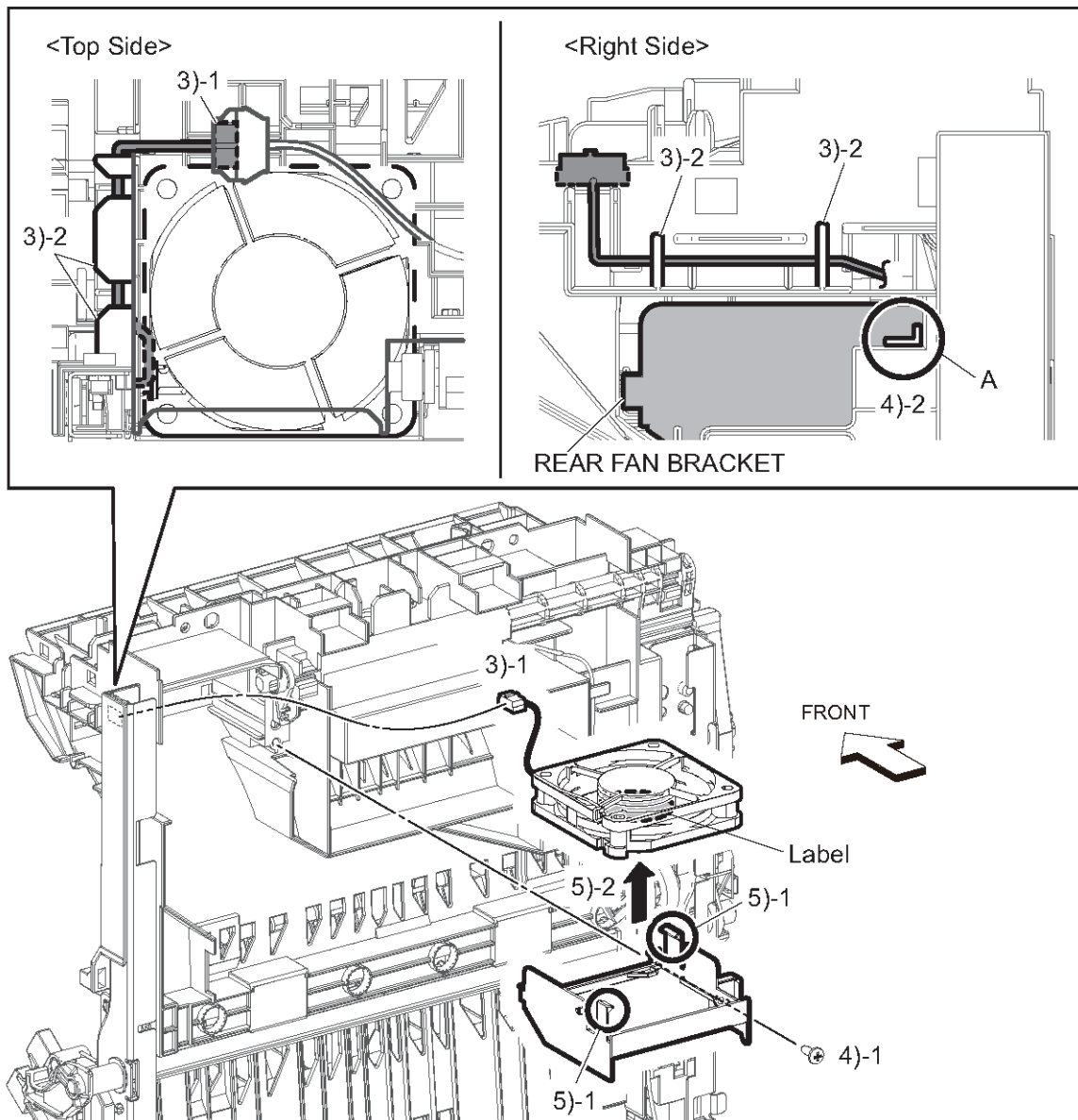
- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Top Exit Cover (**Top Exit Cover**) (Only IM C530F: Tall model)
- Right Upper Cap (**Right Upper Cap**) (Only IM C530F: Tall model)
- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)
- Rear Cover (**Rear Cover**)
- Paper Transfer Roller Unit (**Paper Transfer Roller Unit**)

[Removal]

1. Release three hooks to remove the cover.
2. Remove six screws (Screw for plastic Silver, tapping, M3x8) to remove the Duplex Unit.



3. Disengage the connector (P/J298) and release the harness of the Rear Fan from the harness guide.
4. Remove one screw (Screw for plastic Silver, tapping, M3x8) and push the part [A] to remove the bracket with the Rear Fan, while pulling out the harness of the Rear Fan.
5. Release two hooks to remove the Rear Fan (FAN3) from the bracket.



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4.15 EXIT

4.15.1 PAPER EXIT DRIVE ASSY

[Before removal]

(IM C530F: Tall model)

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**)
- Right Upper Cap (**Right Upper Cap**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Front Upper Cover (**Front Upper Cover**)
- Left Inner Cover (**Left Inner Cover**)
- Left Upper Cover (**Left Upper Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Upper Cover (**Rear Upper Cover**)
- Upper Inner Cover (**Upper Inner Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Frame (**Frame**)
- Right Upper Cover (**Right Upper Cover**)
- Right Inner Cover (**Right Inner Cover**)
- Top Cover (**Top Cover/ Option Blind Cover**)

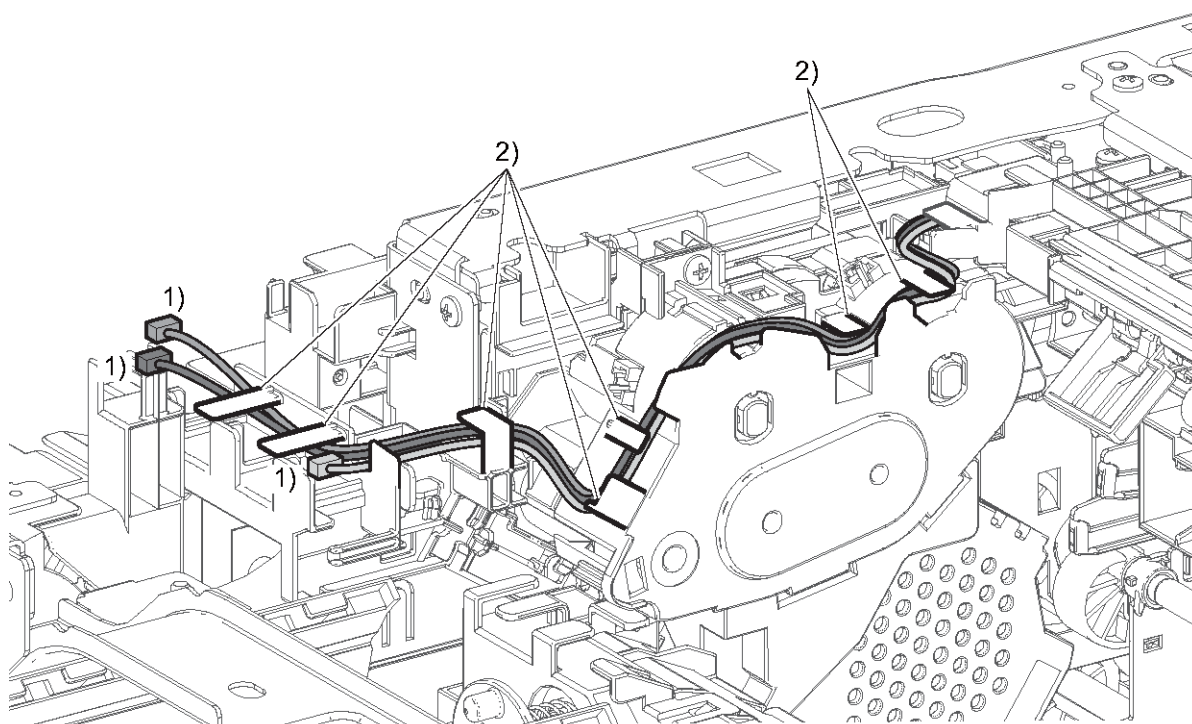
(IM C530FB: Short model)

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)

- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Right Upper Cover (**Right Upper Cover**)
- Rear Right Inner Cover (**Rear Right Inner Cover**)
- Controller Box Cover (**Controller Box Cover**)
- SPDF Unit and Scanner Unit (**SPDF Unit and Scanner Unit (IM C530FB: Short Model)**)
- Top Cover (**Top Cover**)

[Removal]

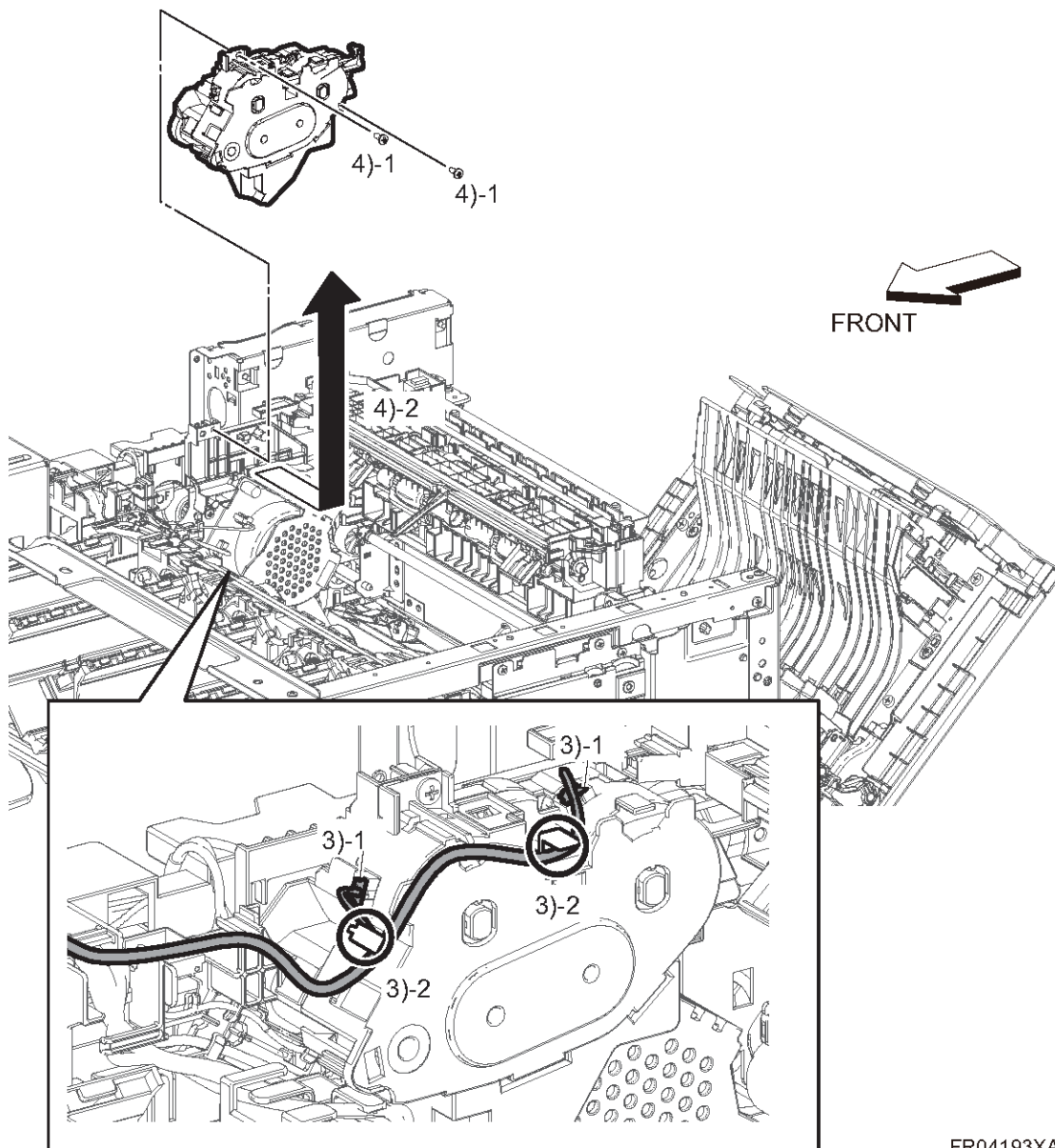
1. Disengage the connectors (P/J222, P/J466, P/J501).
2. Release the harnesses from the harness guide.



FR04192XA

3. Disengage the connectors (P/J461, P/J462) and release the harness from the harness guide of the Paper Exit Drive Assy.

4. Remove two screws (Screw for plastic Silver, tapping, M3x8) to remove the Paper Exit Drive Assy.



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4.15.2 PAPER EXIT ASSY

[Before removal]

(IM C530F: Tall model)

- Paper Tray (*Paper Tray*)
- Bypass Tray Assy (*Bypass Tray Assy*)
- Toner Cover (*Toner Cover*)
- Front Left Cover (*Front Left Cover*)
- Left Cover (*Left Cover*)

- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**)
- Right Upper Cap (**Right Upper Cap**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Front Upper Cover (**Front Upper Cover**)
- Left Inner Cover (**Left Inner Cover**)
- Left Upper Cover (**Left Upper Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Upper Cover (**Rear Upper Cover**)
- Upper Inner Cover (**Upper Inner Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Frame (**Frame**)
- Right Upper Cover (**Right Upper Cover**)
- Right Inner Cover (**Right Inner Cover**)
- Top Cover (**Top Cover/ Option Blind Cover**)
- Paper Exit Drive Assy (**Paper Exit Drive Assy**)
- Fusing Unit (**Fusing Unit**)

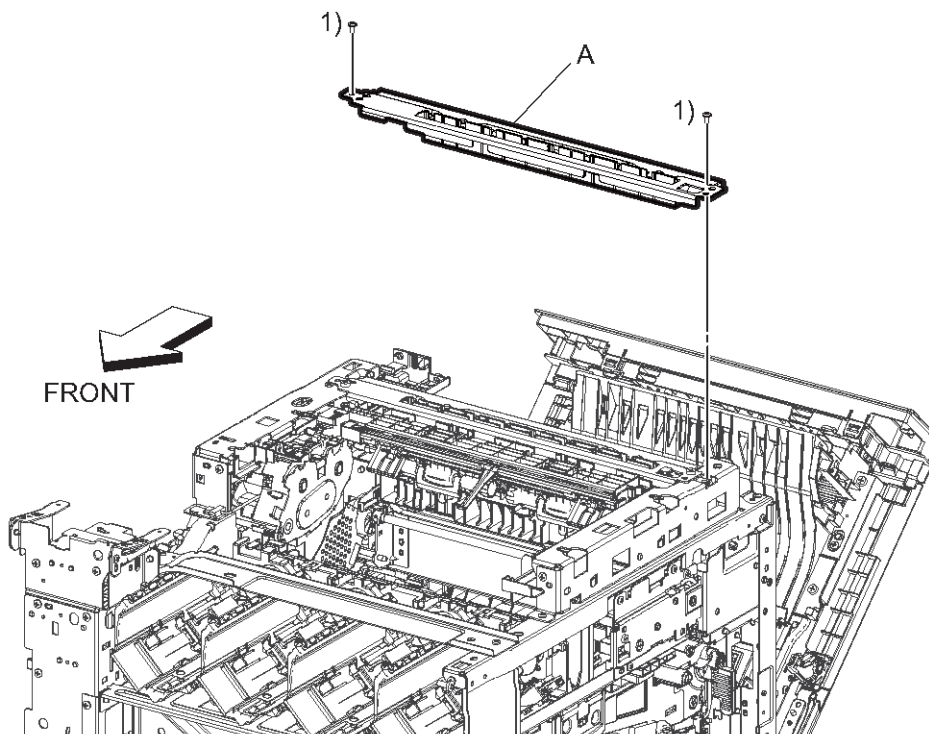
(IM C530FB: Short model)

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Right Upper Cover (**Right Upper Cover**)
- Rear Right Inner Cover (**Rear Right Inner Cover**)

- Controller Box Cover (**Controller Box Cover**)
- SPDF Unit and Scanner Unit (**SPDF Unit and Scanner Unit (IM C530FB: Short Model)**)
- Top Cover (**Top Cover**)
- Paper Exit Drive Assy (**Paper Exit Drive Assy**)
- Fusing Unit (**Fusing Unit**)

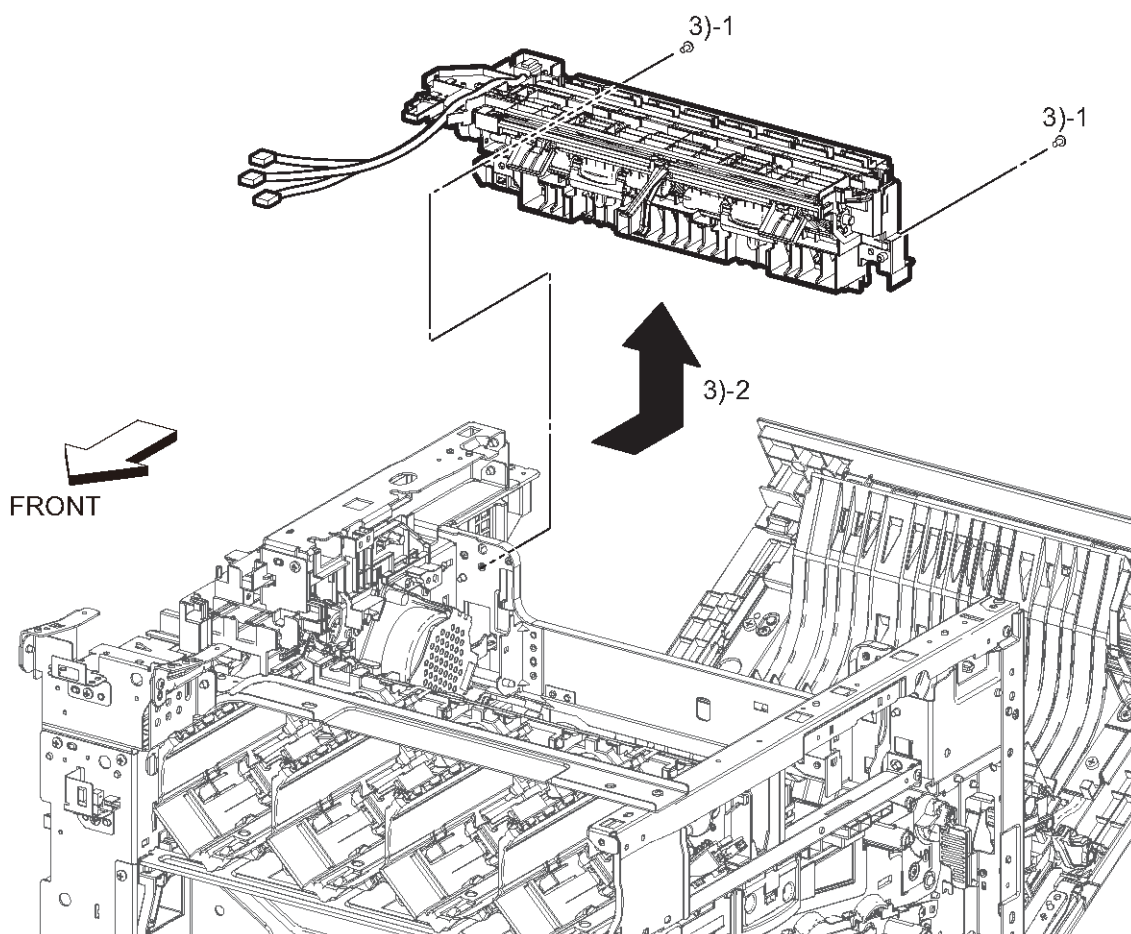
[Removal]

1. Remove two screws (Silver, M3X6mm) to remove the plate A.



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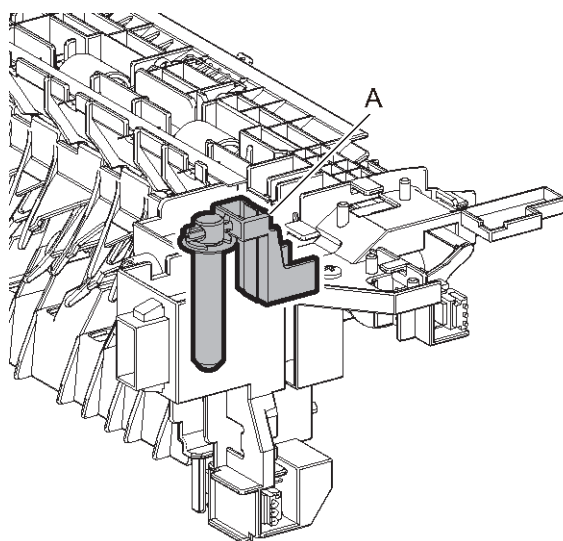
2. Remove two screws (Silver, M3X6mm) to remove the Paper Exit Assy.



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Note

- Be careful not to reverse the Paper Exit Assy, or the part [A] may fall off.



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4.15.3 FULL STACK SENSOR (S4)

[Before removal]

(IM C530F: Tall model)

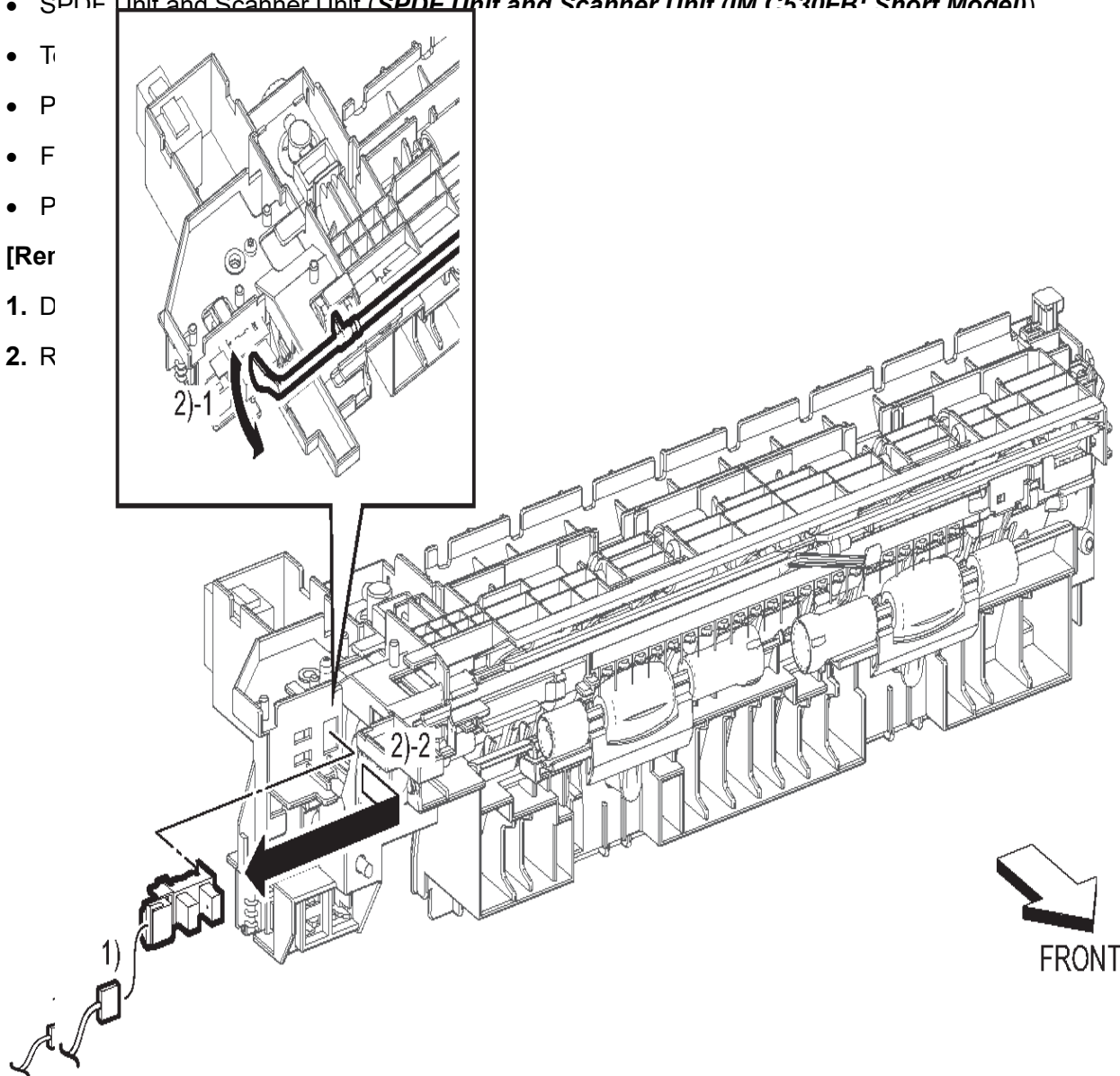
- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**)
- Right Upper Cap (**Right Upper Cap**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Front Upper Cover (**Front Upper Cover**)
- Left Inner Cover (**Left Inner Cover**)
- Left Upper Cover (**Left Upper Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Upper Cover (**Rear Upper Cover**)
- Upper Inner Cover (**Upper Inner Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Frame (**Frame**)
- Right Upper Cover (**Right Upper Cover**)
- Right Inner Cover (**Right Inner Cover**)
- Top Cover (**Top Cover/ Option Blind Cover**)
- Paper Exit Drive Assy (**Paper Exit Drive Assy**)
- Fusing Unit (**Fusing Unit**)
- Paper Exit Assy (**Paper Exit Assy**)

(IM C530FB: Short model)

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)

- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Right Upper Cover (**Right Upper Cover**)
- Rear Right Inner Cover (**Rear Right Inner Cover**)
- Controller Box Cover (**Controller Box Cover**)
- SPDF Unit and Scanner Unit (**SPDF Unit and Scanner Unit (IM C530ER: Short Model)**)

- T1
 - P
 - F
 - P
- [Rear
1. D
 2. R



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4.15.4 EXIT LOWER COVER/ EXIT GUIDE PLATE/ FULL STACK FEELER

[Before removal]

(IM C530F: Tall model)

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**)
- Right Upper Cap (**Right Upper Cap**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Front Upper Cover (**Front Upper Cover**)
- Left Inner Cover (**Left Inner Cover**)
- Left Upper Cover (**Left Upper Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Upper Cover (**Rear Upper Cover**)
- Upper Inner Cover (**Upper Inner Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Frame (**Frame**)
- Right Upper Cover (**Right Upper Cover**)
- Right Inner Cover (**Right Inner Cover**)
- Top Cover (**Top Cover/ Option Blind Cover**)
- Paper Exit Drive Assy (**Paper Exit Drive Assy**)
- Fusing Unit (**Fusing Unit**)
- Paper Exit Assy (**Paper Exit Assy**)

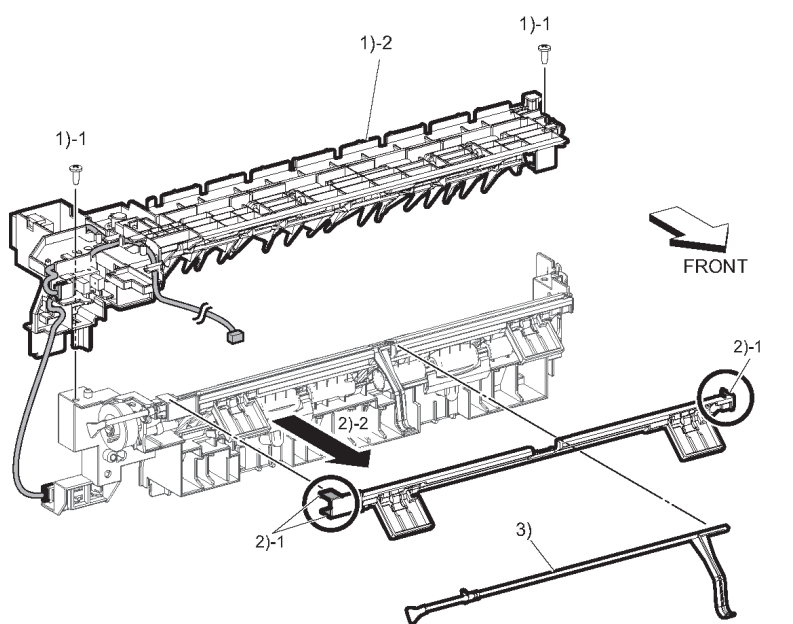
(IM C530FB: Short model)

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)

- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Right Upper Cover (**Right Upper Cover**)
- Rear Right Inner Cover (**Rear Right Inner Cover**)
- Controller Box Cover (**Controller Box Cover**)
- SPDF Unit and Scanner Unit (**SPDF Unit and Scanner Unit (IM C530FB: Short Model)**)
- Top Cover (**Top Cover**)
- Paper Exit Drive Assy (**Paper Exit Drive Assy**)
- Fusing Unit (**Fusing Unit**)
- Paper Exit Assy (**Paper Exit Assy**)

[Removal]

1. Remove two screw (Screw for plastic Silver, tapping, M3x8), and release the upper side of the Paper Exit Assy.
2. Release three hooks to remove the Exit Lower Cover with the flappers (right/left).
3. Remove the Full Stack Feeler.



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4.15.5 EXIT SENSOR (S5)

[Before removal]

(IM C530F: Tall model)

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**)
- Right Upper Cap (**Right Upper Cap**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Front Upper Cover (**Front Upper Cover**)
- Left Inner Cover (**Left Inner Cover**)
- Left Upper Cover (**Left Upper Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Upper Cover (**Rear Upper Cover**)
- Upper Inner Cover (**Upper Inner Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Frame (**Frame**)
- Right Upper Cover (**Right Upper Cover**)
- Right Inner Cover (**Right Inner Cover**)
- Top Cover (**Top Cover/ Option Blind Cover**)
- Paper Exit Drive Assy (**Paper Exit Drive Assy**)
- Fusing Unit (**Fusing Unit**)
- Paper Exit Assy (**Paper Exit Assy**)

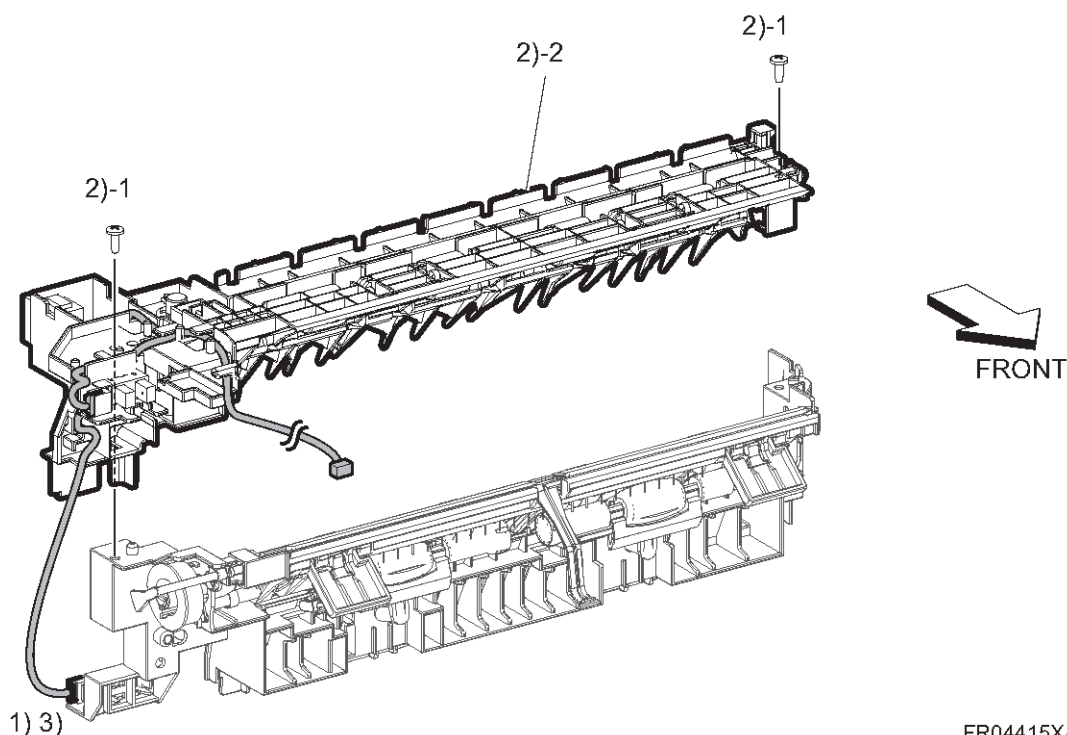
(IM C530FB: Short model)

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)

- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Right Upper Cover (**Right Upper Cover**)
- Rear Right Inner Cover (**Rear Right Inner Cover**)
- Controller Box Cover (**Controller Box Cover**)
- SPDF Unit and Scanner Unit (**SPDF Unit and Scanner Unit (IM C530FB: Short Model)**)
- Top Cover (**Top Cover**)
- Paper Exit Drive Assy (**Paper Exit Drive Assy**)
- Fusing Unit (**Fusing Unit**)
- Paper Exit Assy (**Paper Exit Assy**)

[Removal]

1. Disengage the connector (P/J469).
2. Remove two screw (Screw for plastic Silver, tapping, M3x8), and release the upper side of the Paper Exit Assy.
3. Remove the Exit Sensor (S5).



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4.16 DRIVE

4.16.1 MAIN DRIVE ASSY

[Before removal]

(IM C530F: Tall model)

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**)
- Right Upper Cap (**Right Upper Cap**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Front Upper Cover (**Front Upper Cover**)
- Left Inner Cover (**Left Inner Cover**)
- Left Upper Cover (**Left Upper Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Upper Cover (**Rear Upper Cover**)
- Upper Inner Cover (**Upper Inner Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Frame (**Frame**)
- Right Upper Cover (**Right Upper Cover**)
- Right Inner Cover (**Right Inner Cover**)
- Top Cover (**Top Cover/ Option Blind Cover**)
- Controller Box Cover (**Controller Box Cover**)
- FCU (**FCU (PCB6)**)
- IPU (**IPU (PCB3)**)
- FFC Guide Bracket (**FFC Guide Bracket**)
- Controller Board (**Controller Board (PCB1)**)
- Controller Box (**Controller Box**)

- MCU (**MCU (PCB2)**)
- MCU Bracket (**MCU Bracket**)
- LVPS (PCB4) (**LVPS (PCB4)**)
- LVPS Bracket (**LVPS Bracket**)
- Main Fan (**Main Fan (FAN1)**)
- Main Fan Duct (**Main Fan Duct**)
- Fusing Unit (**Fusing Unit**)

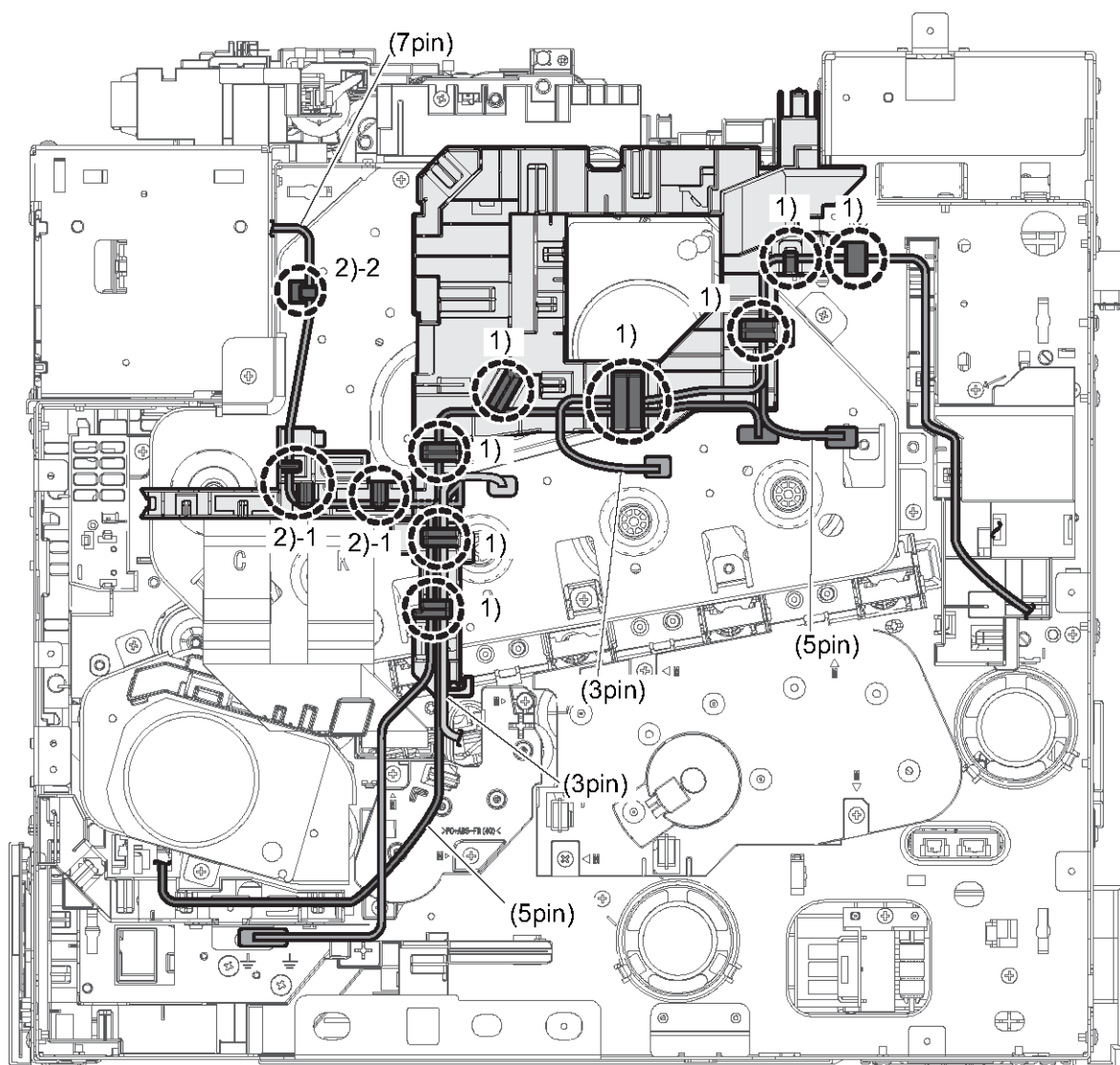
(IM C530FB: Short model)

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Right Upper Cover (**Right Upper Cover**)
- Rear Right Inner Cover (**Rear Right Inner Cover**)
- Controller Box Cover (**Controller Box Cover**)
- SPDF Unit and Scanner Unit (**SPDF Unit and Scanner Unit (IM C530FB: Short Model)**)
- Top Cover (**Top Cover**)
- FCU (**FCU (PCB6)**)
- IPU (**IPU (PCB3)**)
- FFC Guide Bracket (**FFC Guide Bracket**)
- Controller Board (**Controller Board (PCB1)**)
- Controller Box (**Controller Box**)
- MCU (**MCU (PCB2)**)
- MCU Bracket (**MCU Bracket**)
- LVPS (**LVPS (PCB4)**)

- LVPS Bracket (**LVPS Bracket**)
- Main Fan (**Main Fan (FAN1)**)
- Main Fan Duct (**Main Fan Duct**)
- Fusing Unit (**Fusing Unit**)

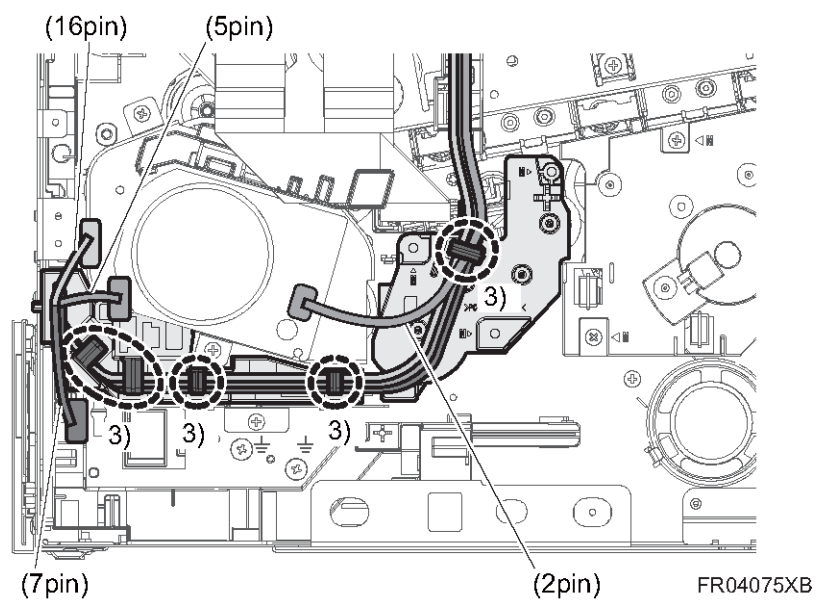
[Removal]

1. Release the following harnesses from the upper harness guide.
2. Release the following harness from the small harness guide, and then release one push-tie from the Main Drive Assy.



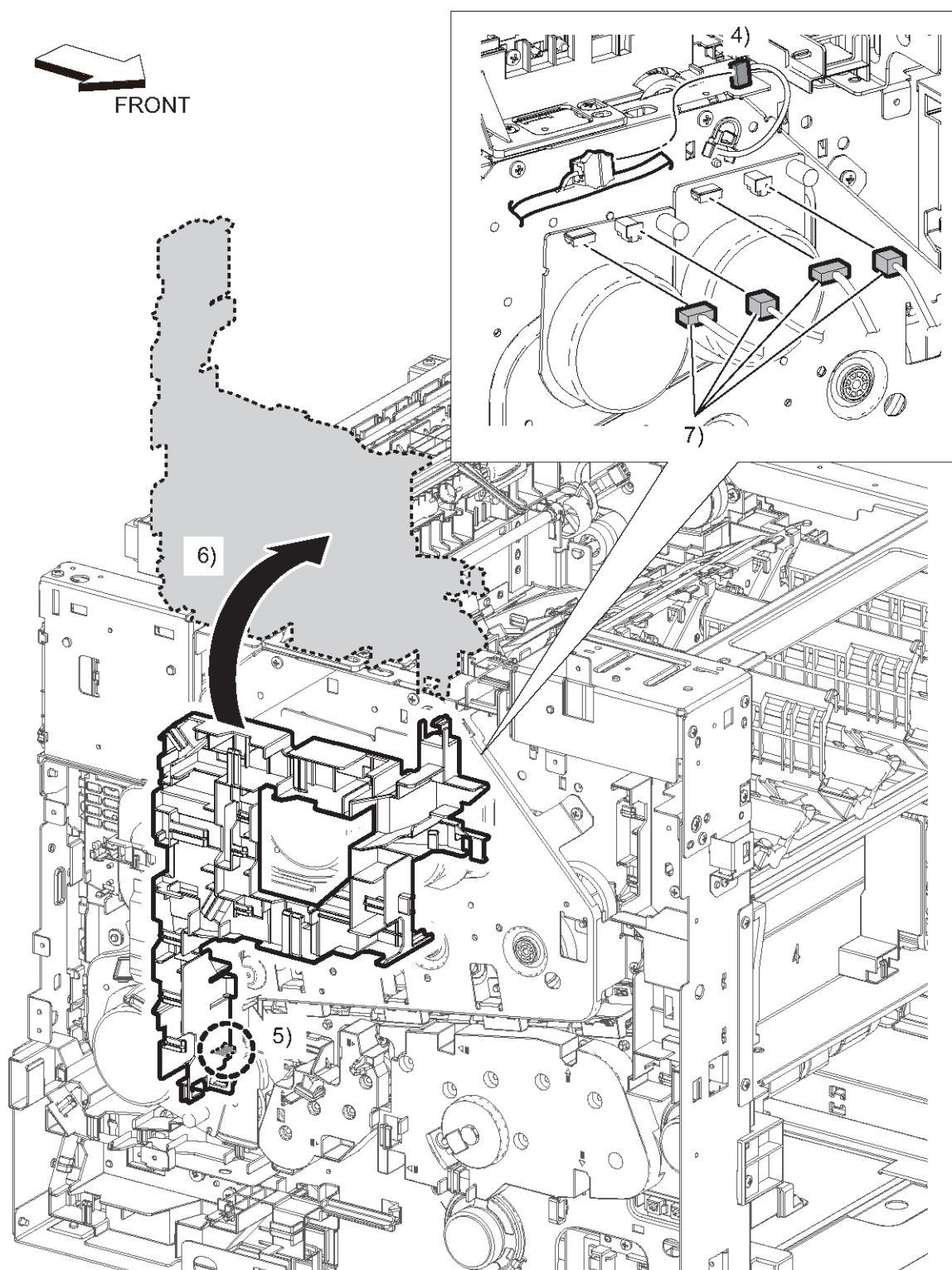
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3. Release the following harnesses from the lower harness guide and Main Drive Assy 3.



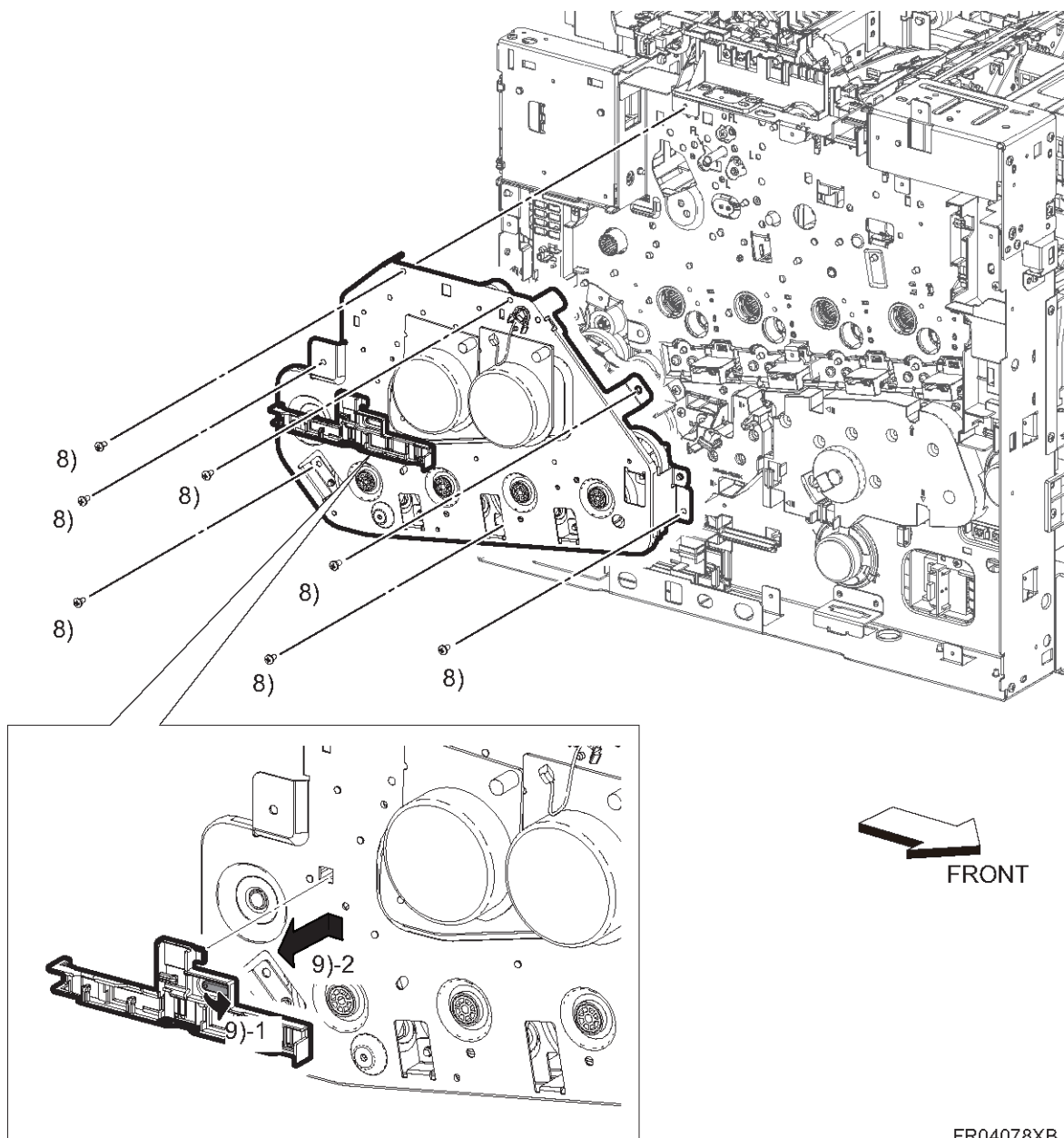
4. Disengage the connector (P/J464).
5. Release one hook of the harness guide to remove it.
6. Avoid the harness guide with cables in the direction of the arrow.

7. Disengage the connectors (P/J551, P/J552, P/J561, P/J574).



8. Remove seven screws (Silver, M3X6mm) to remove Main Drive Assy with the small harness guide.

9. Release the hook to remove the small harness guide from the Main Drive Assy.



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4.16.2 MAIN DRIVE ASSY 2

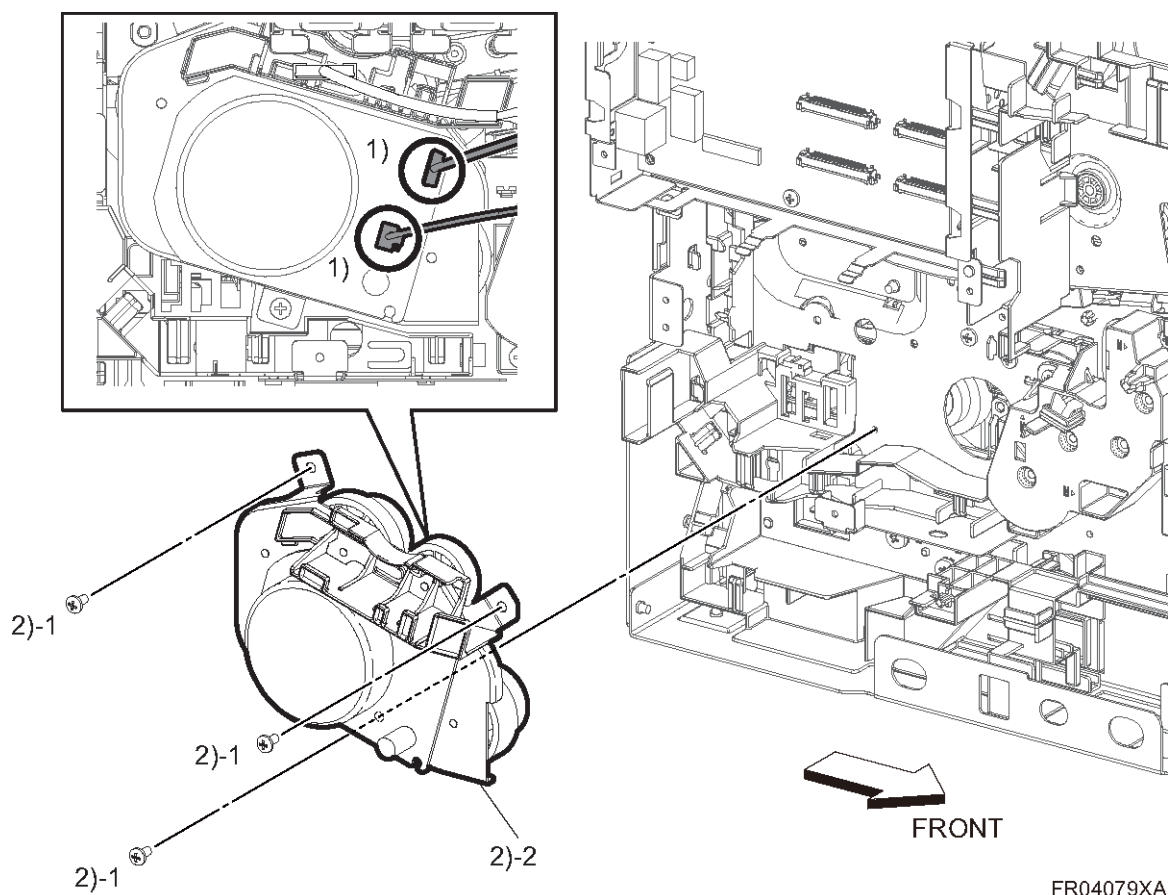
[Before removal]

- Paper Tray (*Paper Tray*)
- Bypass Tray Assy (*Bypass Tray Assy*)
- Toner Cover (*Toner Cover*)
- Front Left Cover (*Front Left Cover*)
- Left Cover (*Left Cover*)
- Controller Box Cover (*Controller Box Cover*)

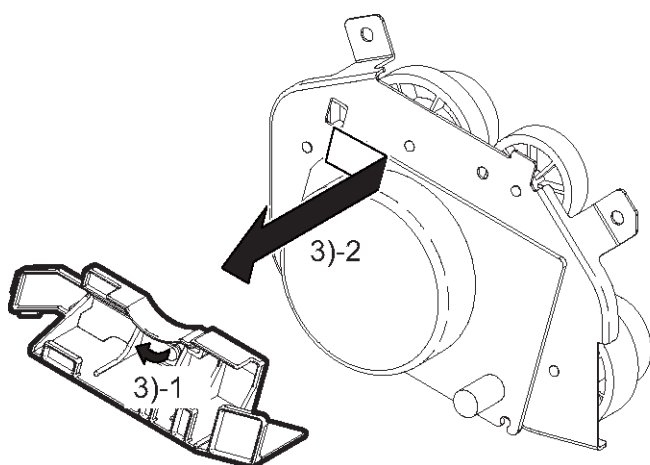
- MCU (**MCU (PCB2)**)
- MCU Bracket (**MCU Bracket**)
- LVPS (**LVPS (PCB4)**)
- LVPS Bracket (**LVPS Bracket**)

[Removal]

1. Disengage two connectors (P/J573, P/J562).
2. Remove three screws (Silver, M3X6mm) and remove the Main Drive Assy 2 with the FFC lower guide bracket.



3. Release the hook to remove the FFC lower guide bracket.



FR04080XA

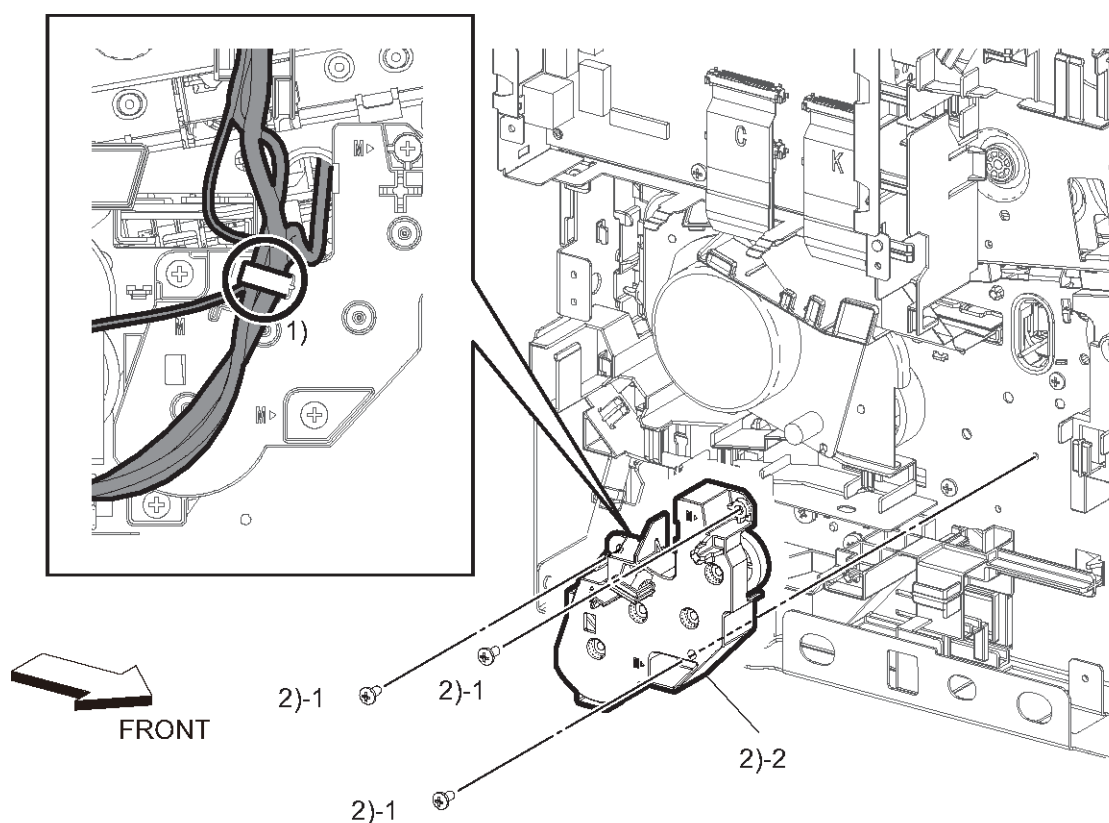
4.16.3 MAIN DRIVE ASSY 3

[Before removal]

- Paper Tray (*Paper Tray*)
- Bypass Tray Assy (*Bypass Tray Assy*)
- Toner Cover (*Toner Cover*)
- Front Left Cover (*Front Left Cover*)
- Left Cover (*Left Cover*)
- Controller Box Cover (*Controller Box Cover*)
- MCU (*MCU (PCB2)*)
- MCU Bracket (*MCU Bracket*)
- LVPS (*LVPS (PCB4)*)
- LVPS Bracket (*LVPS Bracket*)

[Removal]

1. Release the harnesses from the harness guide of the Main Drive Assy 3.
2. Remove three screws (Silver, M3X6mm) and remove the Main Drive Assy 3.



FR04081XA

4.16.4 BYPASS DRIVE ASSY

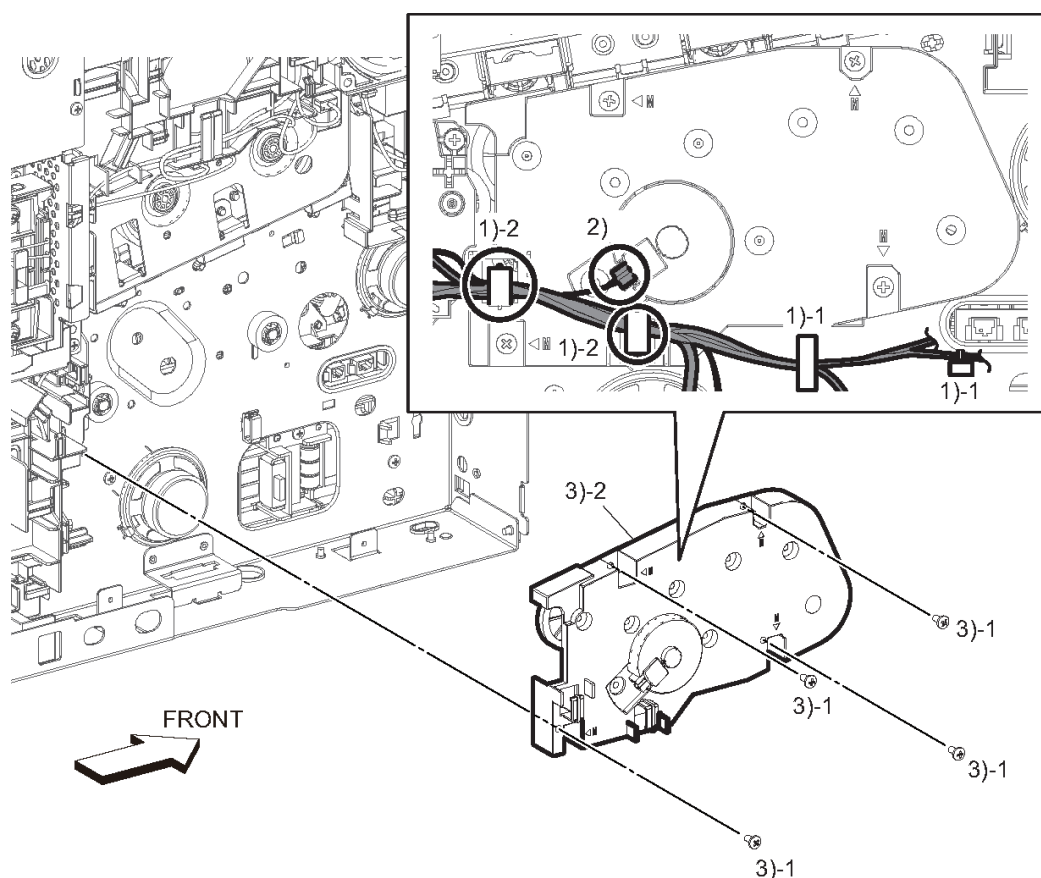
[Before removal]

- Paper Tray (*Paper Tray*)
- Bypass Tray Assy (*Bypass Tray Assy*)
- Toner Cover (*Toner Cover*)
- Front Left Cover (*Front Left Cover*)
- Left Cover (*Left Cover*)
- Controller Box Cover (*Controller Box Cover*)
- MCU (*MCU (PCB2)*)
- MCU Bracket (*MCU Bracket*)
- LVPS (*LVPS (PCB4)*)
- LVPS Bracket (*LVPS Bracket*)

[Removal]

1. Release the harnesses from the harness guide of the Bypass Drive Assy.
2. Disengage the connector (P/J481).

3. Remove four screws (Silver, M3X6mm) and remove the Bypass Drive Assy



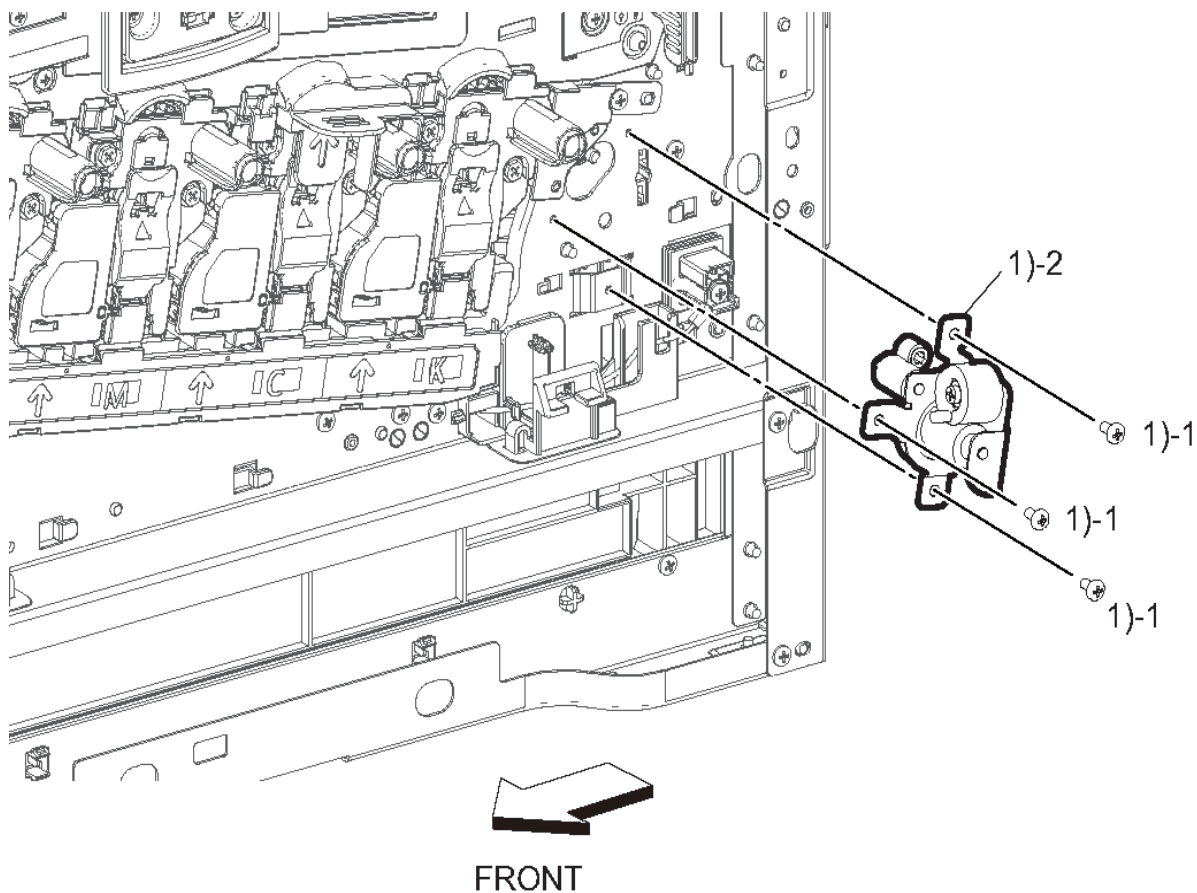
4.16.5 TONER COLLECTION DRIVE ASSY

[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**) (Only IM C530F: Tall model)
- Right Upper Cap (**Right Upper Cap**) (Only IM C530F: Tall model)
- Right Cover (**Right Cover**)

[Removal]

1. Remove three screws (Silver, M3X6mm), and remove the Toner Collection Drive Assy



FR04082XA

4.16.6 MOTOR DRIVE ASSY

[Before removal]

(IM C530F: Tall model)

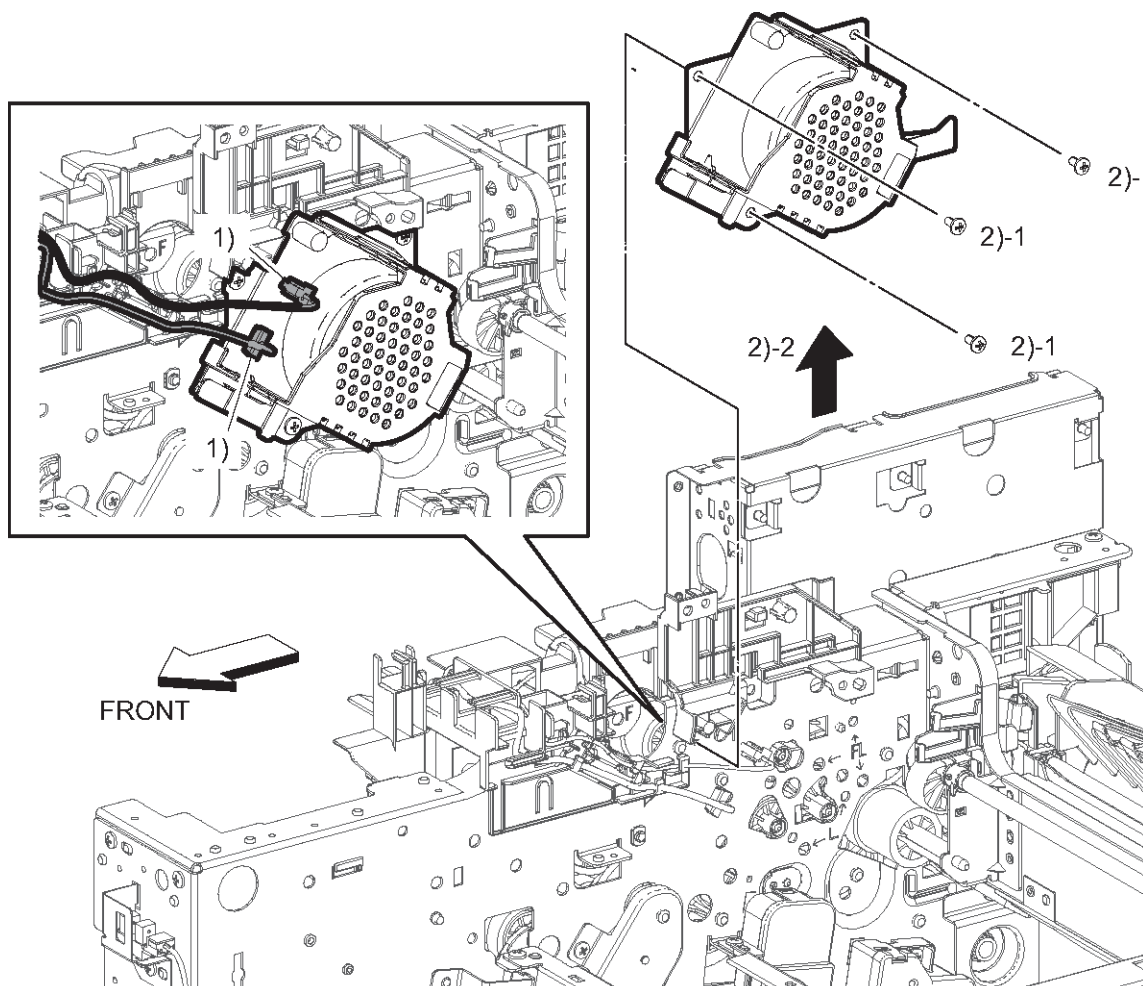
- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**)
- Right Upper Cap (**Right Upper Cap**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Front Upper Cover (**Front Upper Cover**)
- Left Inner Cover (**Left Inner Cover**)
- Left Upper Cover (**Left Upper Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Upper Cover (**Rear Upper Cover**)
- Upper Inner Cover (**Upper Inner Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Frame (**Frame**)
- Right Upper Cover (**Right Upper Cover**)
- Right Inner Cover (**Right Inner Cover**)
- Top Cover (**Top Cover/ Option Blind Cover**)
- Paper Exit Drive Assy (**Paper Exit Drive Assy**)
- Toner Supply Drive Assy (**Toner Supply Assy**)
- Main Fan (**Main Fan (FAN1)**)
- Main Fan Duct (**Main Fan Duct**)
- PCDUs, PCDU Guide Cover (**PCDU, PCDU Cover Guide**)
- ITB Unit (**ITB Unit (Image Transfer Belt Unit)**)
- Toner Supply Assy (**Toner Supply Assy**)

(IM C530FB: Short model)

- Paper Tray (***Paper Tray***)
- Bypass Tray Assy (***Bypass Tray Assy***)
- Toner Cover (***Toner Cover***)
- Front Left Cover (***Front Left Cover***)
- Left Cover (***Left Cover***)
- Front Right Cover (***Front Right Cover***)
- Right Cover (***Right Cover***)
- Front Inner Cover (***Front Inner Cover***)
- IC Card Cover (***IC Card Cover***)
- Left Sub Cover (***Left Sub Cover***)
- Rear Left Inner Cover (***Rear Left Inner Cover***)
- Right Upper Cover (***Right Upper Cover***)
- Rear Right Inner Cover (***Rear Right Inner Cover***)
- Controller Box Cover (***Controller Box Cover***)
- SPDF Unit and Scanner Unit (***SPDF Unit and Scanner Unit (IM C530FB: Short Model)***)
- Top Cover (***Top Cover***)
- Paper Exit Drive Assy (***Paper Exit Drive Assy***)
- Toner Supply Drive Assy (***Toner Supply Assy***)
- Main Fan (***Main Fan (FAN1)***)
- Main Fan Duct (***Main Fan Duct***)
- PCDUs, PCDU Guide Cover (***PCDU, PCDU Cover Guide***)
- ITB Unit (***ITB Unit (Image Transfer Belt Unit)***)
- Toner Supply Assy (***Toner Supply Assy***)

[Removal]

1. Disengage two connectors (P/J571, P/J572).
2. Remove three screws (Silver, M3X6mm) and remove the Motor Drive Assy.



FR04084XA

4.17 ELECTRICAL

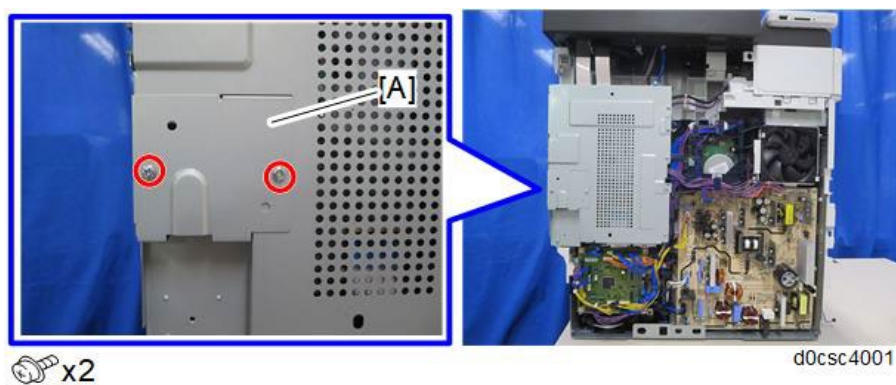
4.17.1 CONTROLLER BOX COVER

[Before removal]

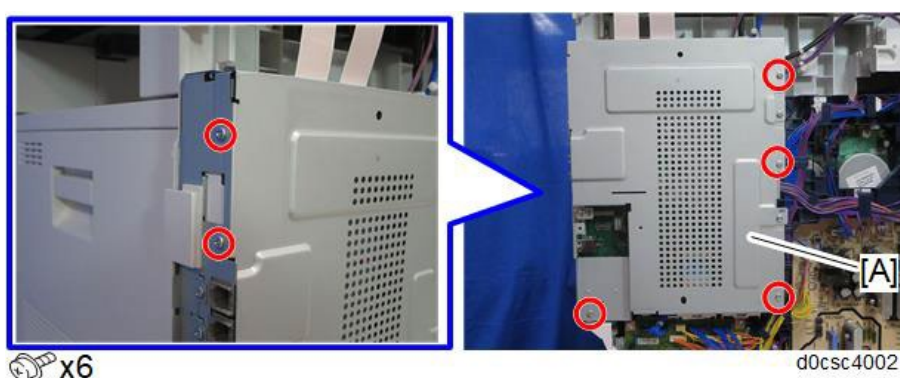
- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)

[Removal]

1. Remove the two screws (M3X6mm) to remove the WIFI Cover [A].



2. Remove the screws (M3X6mm) to remove the Controller Box Cover [A].



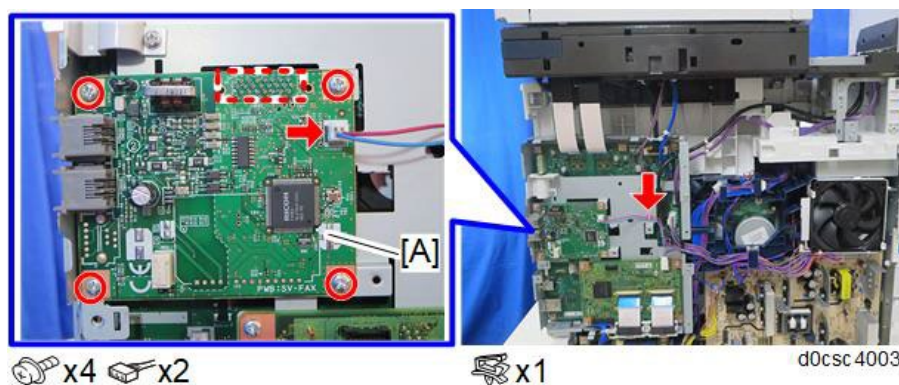
4.17.2 FCU (PCB6)

[Before removal]

- Paper Tray (*Paper Tray*)
- Bypass Tray Assy (*Bypass Tray Assy*)
- Toner Cover (*Toner Cover*)
- Front Left Cover (*Front Left Cover*)
- Left Cover (*Left Cover*)
- Controller Box Cover (*Controller Box Cover*)

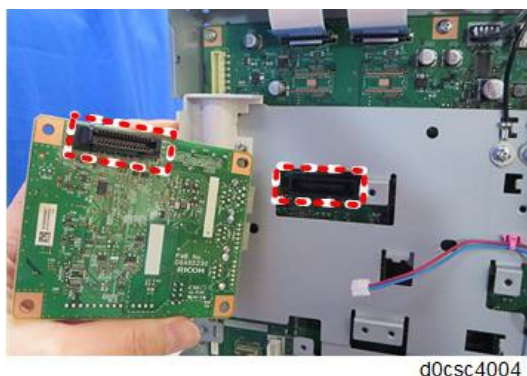
[Before removal]

1. Remove the four screws (M3X6mm) and disconnect the two connectors and the clamp to remove the FCU (PCB6) [A].



Note

- When installing the FCU, work carefully to avoid damaging the connection to the FCU behind it.



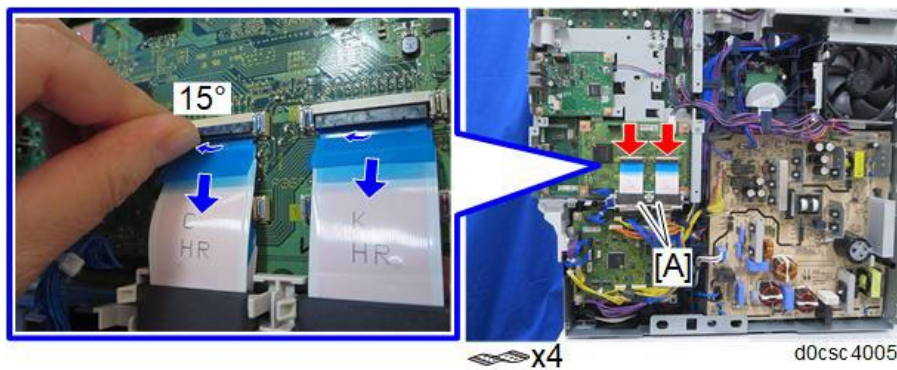
4.17.3 IPU (PCB3)

[Before removal]

- Paper Tray (*Paper Tray*)
- Bypass Tray Assy (*Bypass Tray Assy*)
- Toner Cover (*Toner Cover*)
- Front Left Cover (*Front Left Cover*)
- Left Cover (*Left Cover*)
- Controller Box Cover (*Controller Box Cover*)

[Removal]

1. Release the two FFC connectors, and then release the hooks of the two ferrite cores [A].

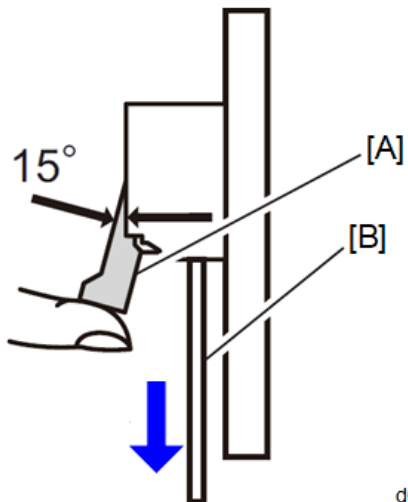


⚠ CAUTION

- Do not force the lock lever open completely. Opening the lock lever completely may break it.

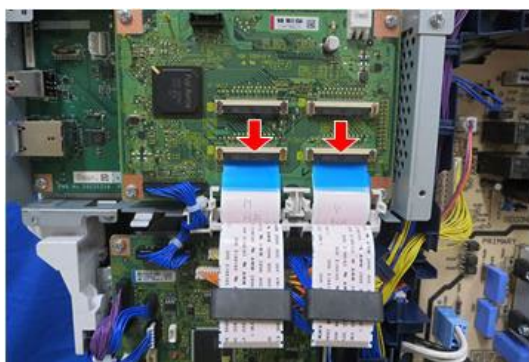
Note

- To release the lock lever [A] on the connector, raise the lock lever 15 degrees until the lock lever contacts the FFC connector as shown below. After releasing the lock lever, lightly pull the FFC [B] to disengage the connector while holding the released lock lever.



d0csc 4006

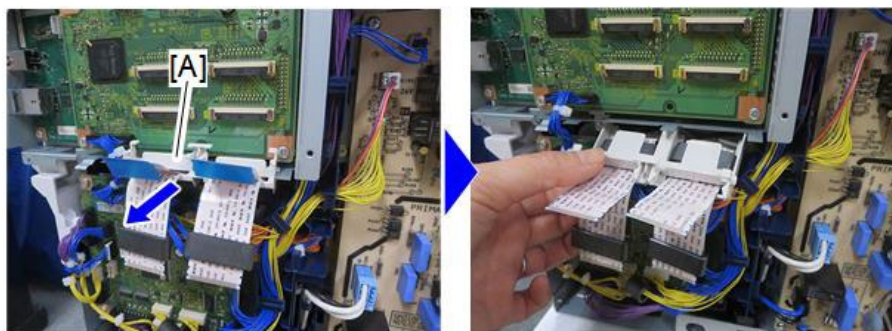
2. Release the two FFC connectors as in Step 1.



x2

d0csc 4007

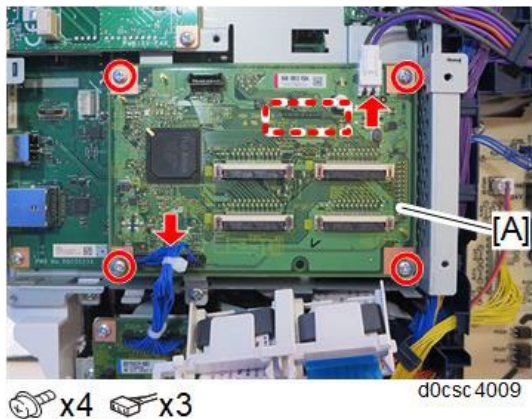
3. Pull out the GUIDE FFC COLOR LPH [A] slightly.



d0csc 4008

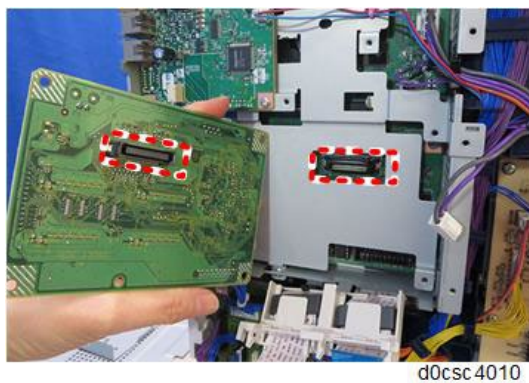
Replacement and Adjustment

- Remove the four screws (M3X6mm) and disconnect the two connectors to remove the IPU (PCB3) [A].



Note

- When installing the IPU (PCB3), work carefully to avoid damaging the connection to the IPU (PCB3) behind it.



[Replacement]

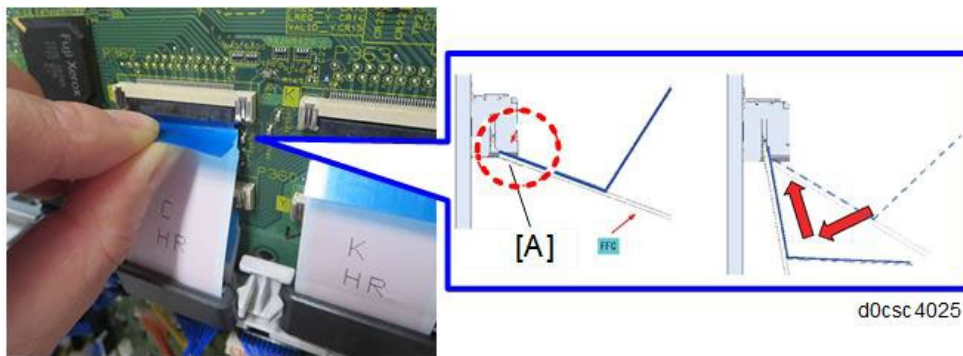
When installing the FFCs, arrange the FFCs as shown below.

- After passing the FFC through the core, bend the knob of the FFC to about 90 degrees.



- Place the reinforcing sheet (blue) on the end of the FFC at the connector insertion slot, and then

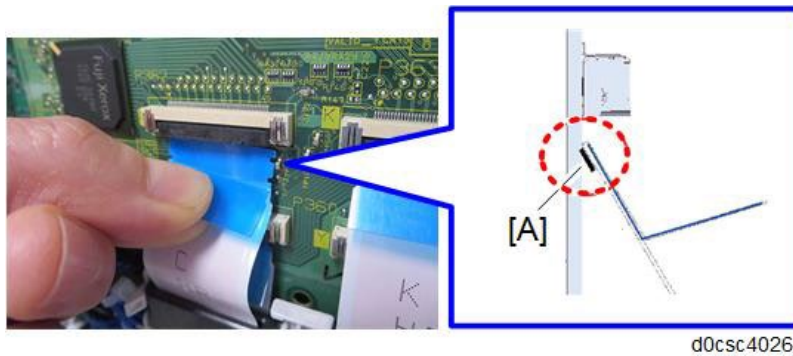
insert the FFC into the connector.



3. Push the FFC until the connector latches with a click.

★ Important

- Never push the FFC into the connector by pressing the end terminal [A]. This places stress on the end terminal and could damage the edge connector.



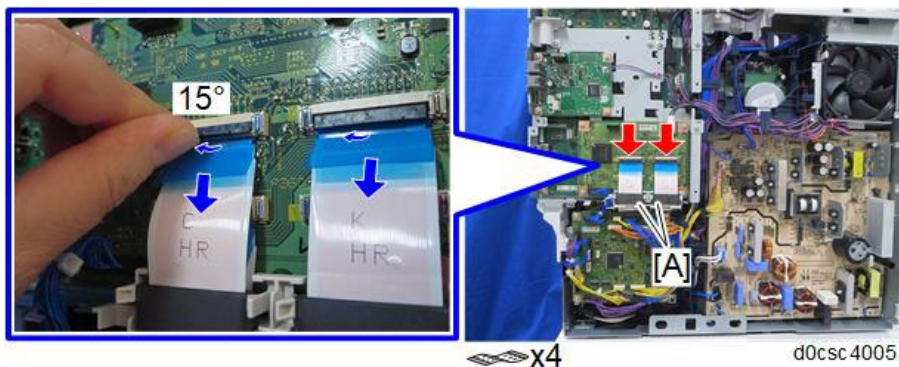
4.17.4 FFC GUIDE BRACKET

[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Controller Box Cover (**Controller Box Cover**)

[Removal]

1. Release the two FFC connectors, and then release the hooks of the two ferrite cores [A].

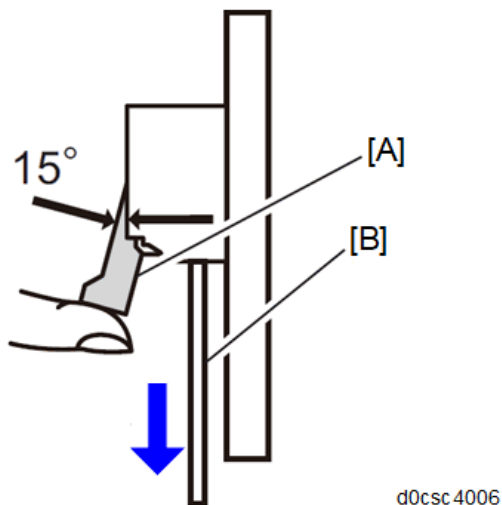


⚠ CAUTION

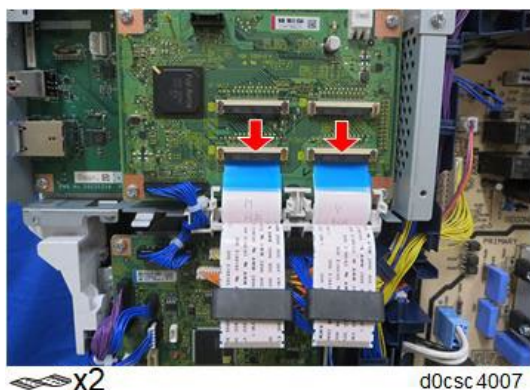
- Do not force the lock lever open completely. Opening the lock lever completely may break it.

Note

- To release the lock lever [A] on the connector, raise the lock lever 15 degrees until the lock lever contacts the FFC connector as shown below. After releasing the lock lever, lightly pull the FFC [B] to disengage the connector while holding the released lock lever.



2. Release the two FFC connectors as in Step 1.

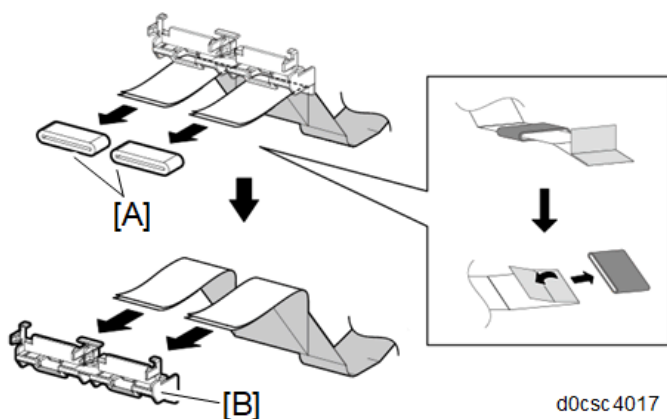


3. Remove two ferrite cores [A] from the lower side of the FFC guide bracket.

Note

- When removing the ferrite cores from the FFC, return the reinforcing sheet straight from a curved state. Or, the FFC connector can be scraped by the inside surface of the ferrite cores so that the connector terminal peels off, resulting in a break in the circuit.

4. Remove the FFC guide bracket [B].



[Replacement]

When connecting the FFCs, arrange the FFCs as shown below.

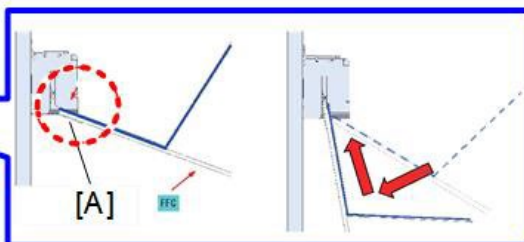
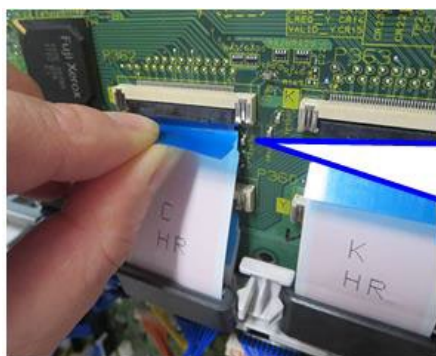
Replacement and Adjustment

1. After passing the FFC through the core, bend the knob of the FFC to about 90 degrees.



d0csc4024

2. Place the reinforcing sheet (blue) on the end of the FFC at the connector insertion slot, and then insert the FFC into the connector.

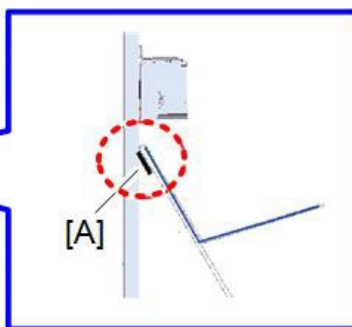
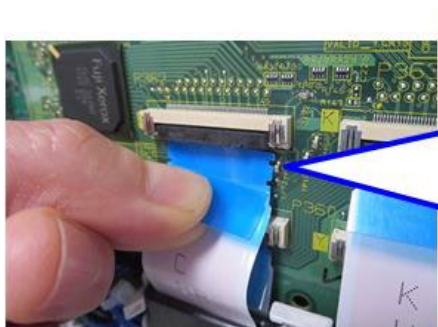


d0csc4025

3. Push the FFC until the connector latches with a click.

★ Important

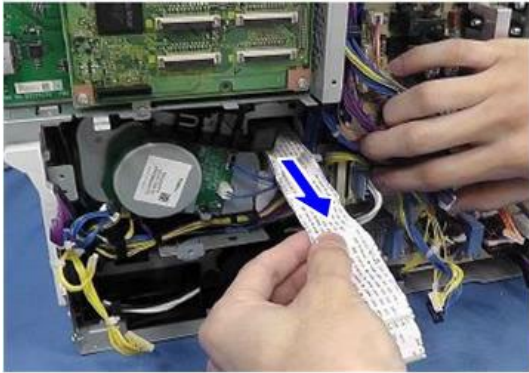
- Never push the FFC into the connector by pressing the end terminal [A]. This places stress on the end terminal and could damage the edge connector.



d0csc4026

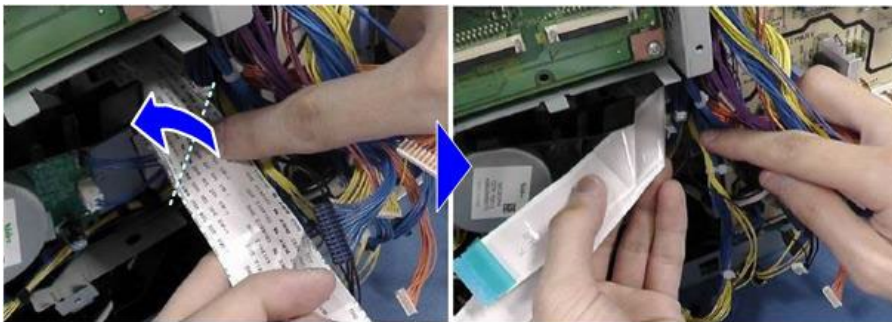
Follow this procedure to connect the four FFCs (KCMY) to the IPU. To route the FFCs correctly, remove the MCU and MCU Bracket beforehand. (**MCU (PCB2)**, **MCU Bracket**)

1. Slowly, pull the FFCs out together.



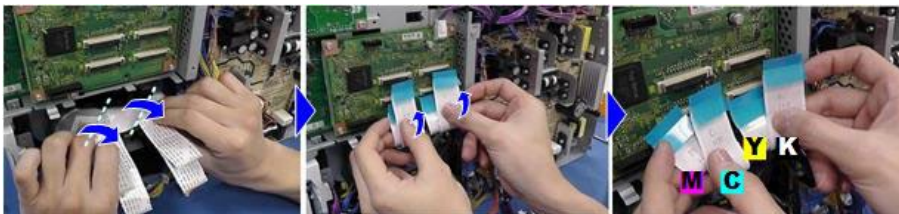
d0csc 4036

2. Locate the crease (fold position) at the back of the bundle of the four color FFCs, and then slowly bend the FFCs aligned with the crease.



d0csc 4037

3. Fold C/M and Y/K, aligned with the front creases as shown below to make two pairs.

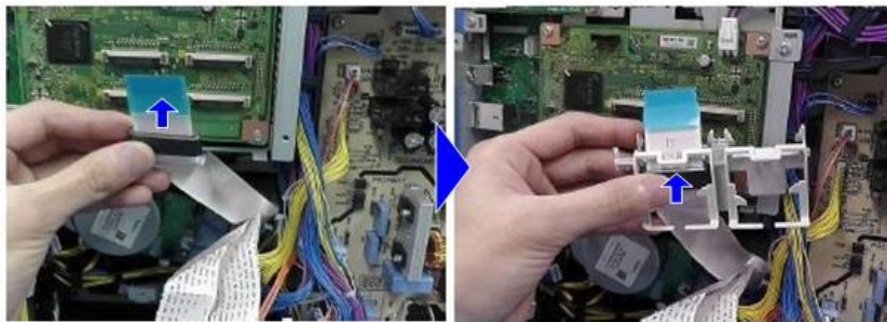


d0csc 4038

Note

- Push the M_FFC through the ferrite core, and then insert the FFC and core in the FFC guide bracket.

4. Push the M_FFC through the ferrite core, and then insert the FFC and core in the FFC guide bracket.

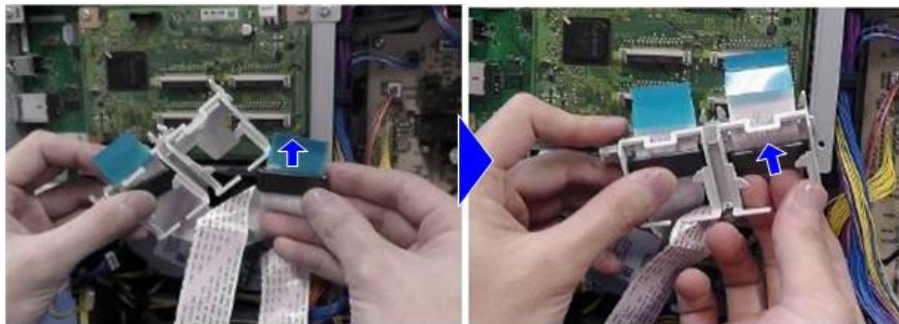


FFC

C	K
M	Y

d0csc 4039

5. Push Y_FFC through the ferrite core, and then insert the FFC and core in the FFC guide bracket.

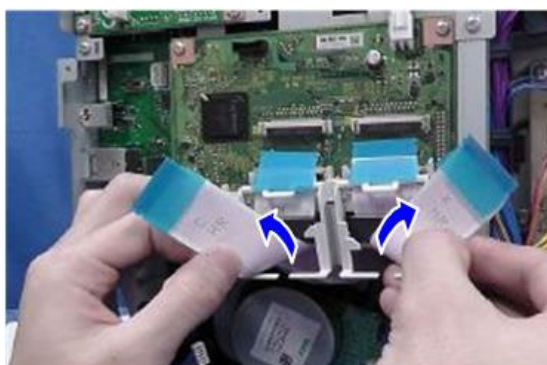


FFC

C	K
M	Y

d0csc 4040

6. Push the remaining FFCs (C and K) through the FFC guide bracket.



FFC

C	K
M	Y

d0csc 4041

Note

- C and K are not inserted through ferrite cores at this time.

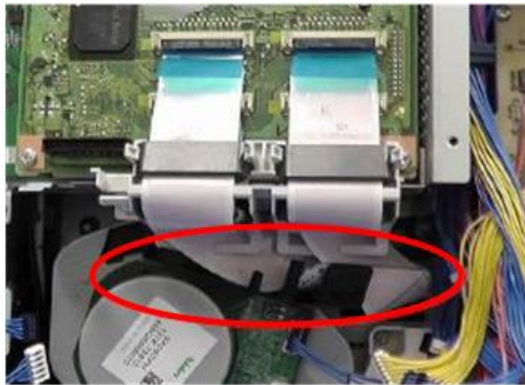
7. Insert the FFC guide bracket into the bottom of the controller box.



d0csc 4042

Note

- Make sure all excess FFC is placed correctly inside the FFC guide bracket.
 -> Correct installation of the FFC guide bracket (Check that the FFC is inside the bracket).



d0csc4043

8. Connect M_FFC to the IPU.

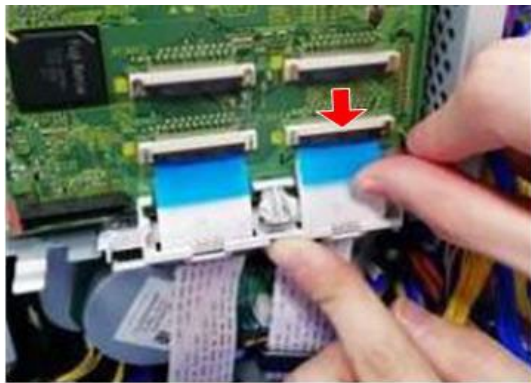


d0csc 4044

FFC

C	K
M	Y

9. Connect Y_FFC to the IPU.



10. Slide the C_FFC through the ferrite core, and then connect the FFC to the IPU.



11. Slide the K_FFC through the ferrite core, and then connect the FFC to the IPU.



4.17.5 CONTROLLER BOARD (PCB1)

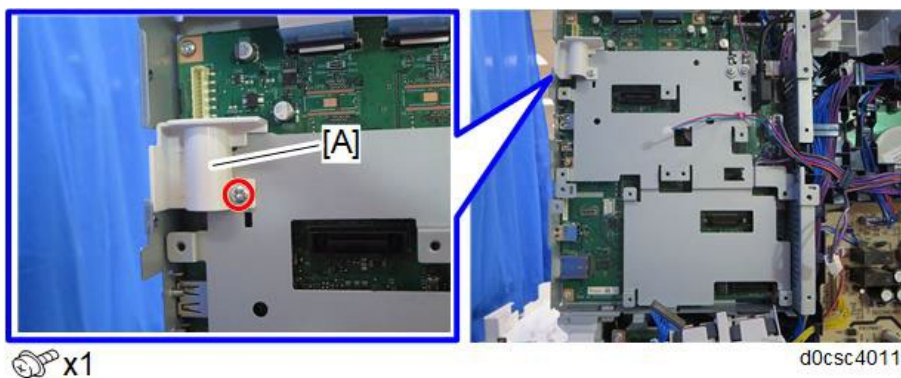
[Before removal]

- Paper Tray (*Paper Tray*)

- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Controller Box Cover (**Controller Box Cover**)
- FCU (**FCU (PCB6)**)
- IPU (**IPU (PCB3)**)

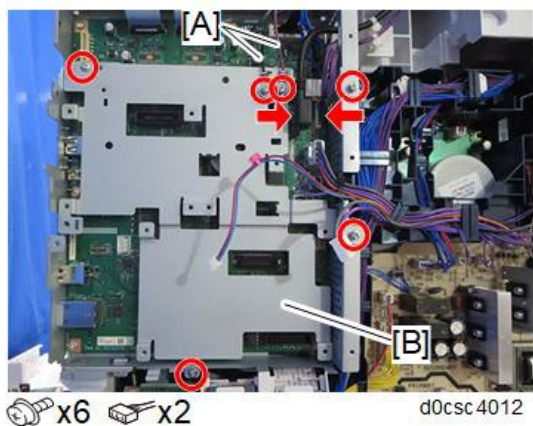
[Removal]

1. Remove the cover [A].



2. Remove the two screws (M3X6mm) holding the grounding wires [A].

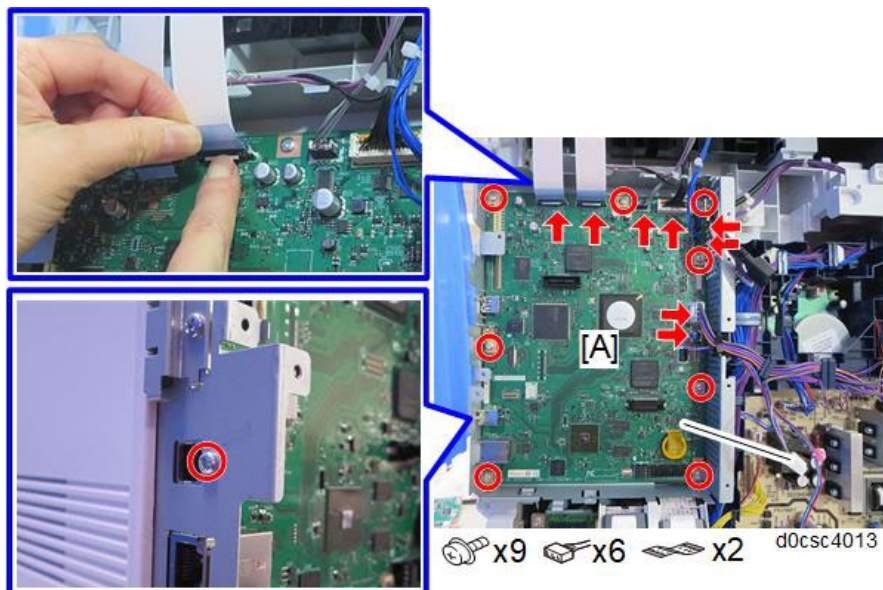
- Remove the four screws (M3X6mm) and disconnect the two connectors, and then remove the FCU Bracket [B].



- Remove the nine screws (M3X6mm x8, M3X4mm x1) and disconnect the six connectors and two FFCs, and then remove the Controller Board (PCB1) [A].

Note

- When you disconnect the FFC connectors, press the unlock button then disconnect it.

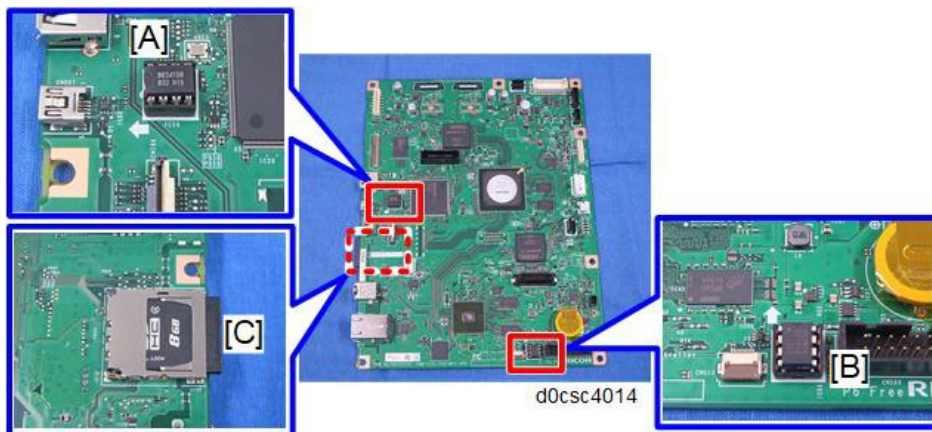


Note

- To prevent the protrusion on the left side from damaging the PCB, first lift the right side of the PCB and slide it to the right to remove it.



5. Remove the EEPROM [A], the NVRAM [B], and the SD card [C] for capturing logs from the old Controller Board, and then install them on the new Controller Board.

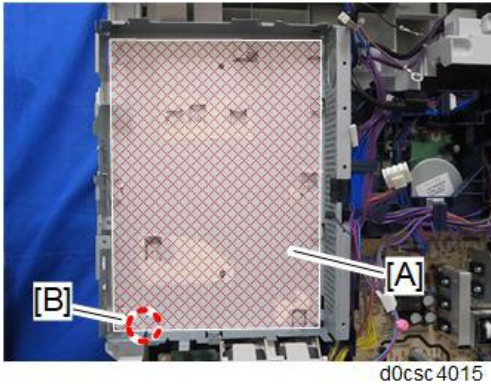


Note

- Install the EEPROM and the NVRAM so the indentation on them, face the arrow marks on the Controller Board. If they are not installed correctly with the indentations aligned, the Controller Board may be damaged.

[Replacement]

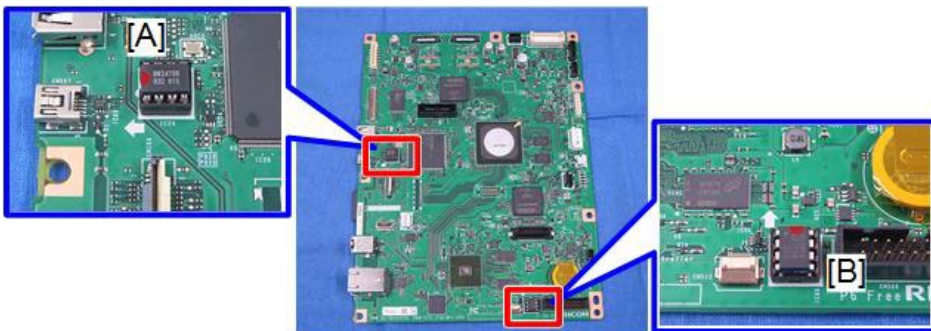
First attach the protective sheet [A] behind the Controller Board where the catch hook [B] is provided for the sheet.



d0csc4015

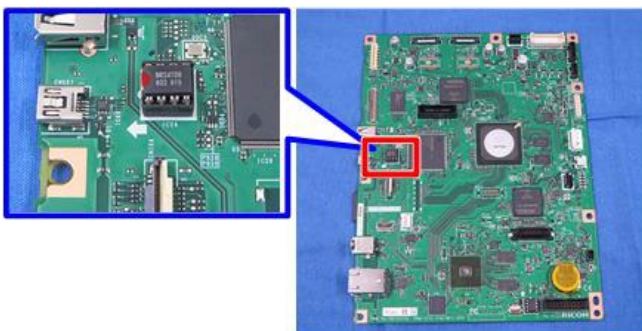
EEPROM and NVRAM on the Controller Board

There are the EEPROM [A] for engine and the NVRAM [B] for controller on the Controller Board (PCB1).



d0csc4014a

Engine EEPROM Replacement



d0csc4014b

The following shows the procedure for replacing the engine EEPROM on the Controller Board (PCB1) with a new EEPROM.

1. Output the SMC data using one of the following methods:

To print SMC data, execute SP5-990-001.

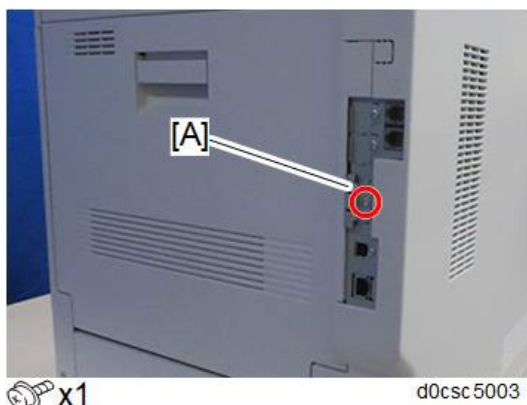
To save SMC data to an SD card, execute SP5-992-001.

2. Write down the values of the following SPs for later use.

SP No.	SP Name
SP4-008-002	Sub Scan Mag.Adjustment: Fact
SP4-010-002	Home Position Adjustment: Fact
SP4-011-002	HS-to-S Regist Adjustment: Fact
SP4-017-002	ADF ScanPojsion Adjustment: Fact
SP4-614-001	Front: Fact Setting: WB Value: R
SP4-614-002	Front: Fact Setting: WB Value: G
SP4-614-003	Front: Fact Setting: WB Value: B
SP4-614-004	Front: Fact Setting: WB Value: BW
SP4-689-003	CVT Scan Density Corr Coeff: Red
SP4-689-004	CVT Scan Density Corr Coeff: Green
SP4-689-005	CVT Scan Density Corr Coeff: Blue
SP4-689-006	CVT Scan Density Corr Coeff: Mono

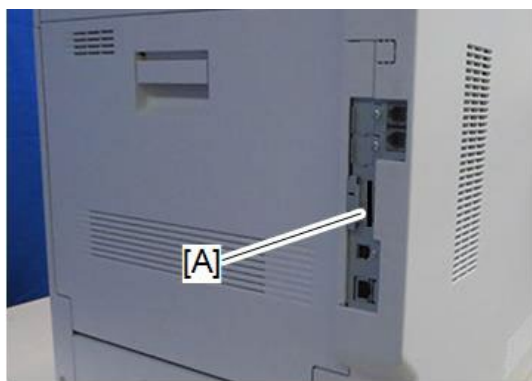
3. Turn OFF the main power switch.

4. Remove the SD card slot cover [A].



5. Remove the pre-installed SD card for logging.

6. Insert a blank SD card into the SD card slot (service slot) [A] and then turn ON the main power.



7. Use SP5-824-001 to upload the EEPROM data from the Controller Board.
8. Turn OFF the main power and unplug the power cord.
9. Replace the engine EEPROM on the Controller Board with a new one.

Note

- Install a new engine EEPROM so the indentation on the EEPROM, face the arrow mark on the Controller Board. Incorrect installation will be damage both the Controller Board and EEPROM.

10. Plug in, and then turn ON the main power.
11. Enter the SP mode.
12. Set the machine serial number (SP5-811-001), Area selection (SP5-996-001: 2:NA, 3:EU), and CPM setting (SP5-882-001).

Note

- For information on how to configure the above SPs, contact the supervisor in your branch office.

13. Cycle the main power OFF/ON.
14. Use SP5-801-002 “Memory Clear Engine”.

Important

- After changing the EEPROM, some SPs may not have the correct values.
- Make sure that Step 12 must be done after Area selection (SP5-996-001: 2:NA, 3:EU) and CPM setting (SP5-882-001).

15. Cycle the main power OFF/ON.
16. From the SD card where you saved the EEPROM data in Step 7, download them with SP5-825-001.
17. Turn OFF the main power, and then remove the SD card from the SD card slot.
18. Insert the SD card (for logging) removed in Step 5, and then install the SD card slot cover.

- 19.** Turn ON the main power.
- 20.** Check the SMC data printout in Step 1, and set the user tool and SP settings so they are the same as before.

- 21.** Set the values of the following SPs written in Step 2.

- SP4-008-002
- SP4-010-002
- SP4-011-002
- SP4-017-002
- SP4-614-001
- SP4-614-002
- SP4-614-003
- SP4-614-004
- SP4-689-003
- SP4-689-004
- SP4-689-005
- SP4-689-006

- 22.** Execute the followings to import the factory values.

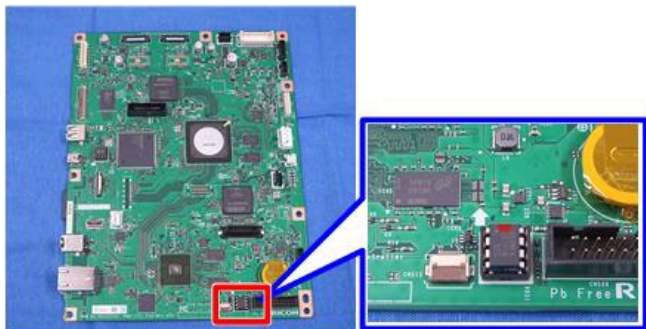
- SP4-814-001 (FB Factory Setting Input: Input)
- SP6-814-001 (ADF Factory Value: Save)
- SP4-719-001 (Back: WB Value: Conversion: Execution)
- SP4-615-001 (Front: WB Value: Conversion: Execution)

- 23.** Execute ACC (Copier mode and Printer mode). Refer to **ACC (Automatic Color Calibration)**.

- 24.** Cycle the main power OFF/ON.



Controller NVRAM (FRAM) Replacement



d0csc4014c

The following shows the procedure for replacing the controller NVRAM on the Controller Board (PCB1) with a new NVRAM.

⚠ CAUTION

- SC195 (Machine serial number error) will be displayed if you forget to attach the NVRAM.
- Passwords for the Supervisor and Administrator 1 will be discarded later in this procedure.
- 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.
- Installing a new NVRAM initializes SPs and issues an SC. Reset the SC with the procedure below.

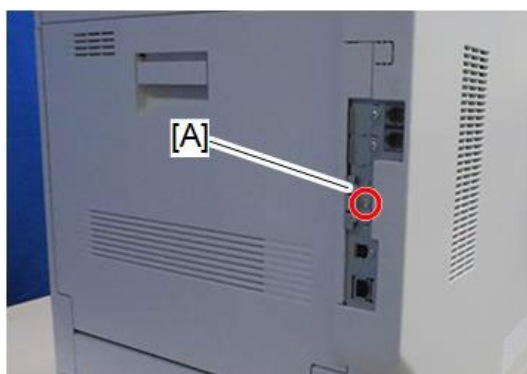
1. Output the SMC data using one of the following methods:

To print SMC data, execute SP5-990-001.

To save SMC data to an SD card, execute SP5-992-001.

2. Turn OFF the main power.

3. Remove the SD card slot cover [A].

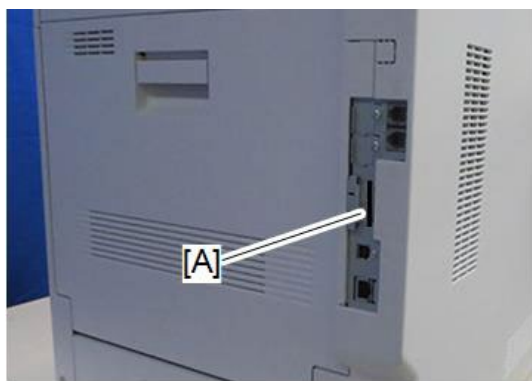


 x1

d0csc5003

4. Remove the pre-installed SD card for logging.

5. Insert a blank SD card into the SD card slot (service slot) [A] and then turn ON the main power.



d0csc5004

6. Use SP5-824-001 to upload the NVRAM data from the Controller Board.
7. Make sure your customer has a backup of their address book data. If not, obtain the backup with Web Image Monitor. (For the backup procedure, refer to the user's manual.)

★ Important

- The address data stored in the machine will be discarded later during this procedure. So be sure to obtain a backup of your 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.

8. Do the following steps if your customer use the fax. If not, skip this step:

1. Write down the following fax settings.
 - [Receiver] in [Fax Setting] - [Reception Settings] - [Reception File Settings] - [Action on Receiving File] - [Forwarding].
 - 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.

2. Make sure that there is no transmission standby file. If any standby file exists, ask the customer to delete it or complete the transmission.

9. Turn OFF the main power and unplug the power supply cord.
10. Push the main power switch again to discharge the residual charge.
11. Remove the SD card containing the NVRAM data from SD card slot.
12. Replace the controller NVRAM on the Controller Board with a new one.

13. Turn ON the main power.**★ Important**

- Program/Change Administrator will be displayed in Japanese, but this is normal.
- After turning ON the main power, SC870 will occur and the address book data will be cleared.
- 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.

14. Cycle the main power OFF/ON.**★ Important**

- The model information is written on the NVRAM, so SC995-02 does not occur.
- Program/Change Administrator will be displayed in Japanese, but this is normal.

15. Turn OFF the main power and then insert the SD card to which the NVRAM data has been uploaded in the SD card slot (service slot).**16.** Turn ON the main power.**17.** Download the NVRAM data stored in the SD card to the brand-new NVRAM using SP5-825-001 (NV-RAM Data Download).**↓ Note**

- The download will take a couple of minutes.

18. Turn OFF the main power and remove the SD card from SD card slot.**19.** Insert the SD card (for logging) removed in Step 4, and then install the SD card slot cover.**20.** Turn ON the main power.**21.** If the security functions (Data Encryption) were applied, set the functions again. (**Security Settings (Data Encryption)**)**22.** Ask your customer to restore their address book. Or restore the address book data with Web Image Monitor, and ask your customer to ensure the address book data has been restored properly.**★ Important**

- If you have obtained the backup of your customer's address book data, delete the backup immediately after the NVRAM replacement to avoid accidentally taking out your customer's data.

23. 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 1.**↓ Note**

- Check that the counters are reset.

24. Make sure that the list output in Step 8-1 matches the destination information in Step 8-2. If not, set it to the setting before replacement.

25. Execute the process control using SP3-011-001 (Manual ProCon:Exe: Normal ProCon).

★ 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 1 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. SP5-302-002 (Set Time: Time Difference)
- Because the PM counters have been reset during NVRAM replacement, it is necessary to replace all the PM parts for proper PM management.

↓ Note

- If a message tells you need an SD card to restore displays after the NVRAM replacement, create an "SD card for restoration" and restore with the SD card. Refer to "**Encryption Key Restoration**".

26. Execute ACC (Copier mode and Printer mode). Refer to "**ACC (Automatic Color Calibration)**".

27. Cycle the main power OFF/ON.

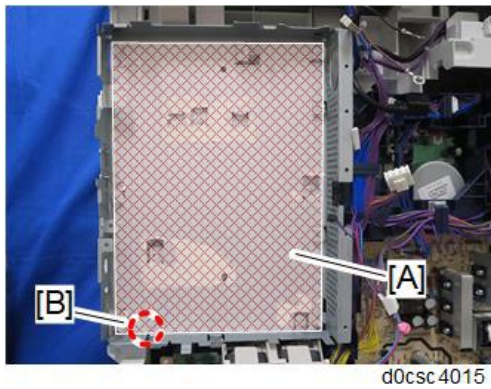
4.17.6 CONTROLLER BOX

[Before removal]

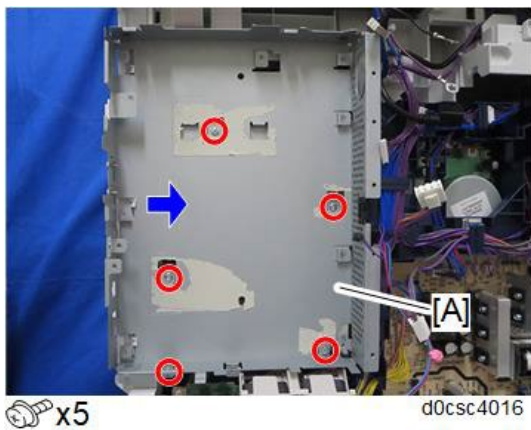
- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Controller Box Cover (**Controller Box Cover**)
- FCU (**FCU (PCB6)**)
- IPU (PCB3) (**IPU (PCB3)**)
- Controller Board (PCB1) (**Controller Board (PCB1)**)

[Removal]

1. Remove the protective sheet [A]. There are the catch hook [B] is provided for the sheet.



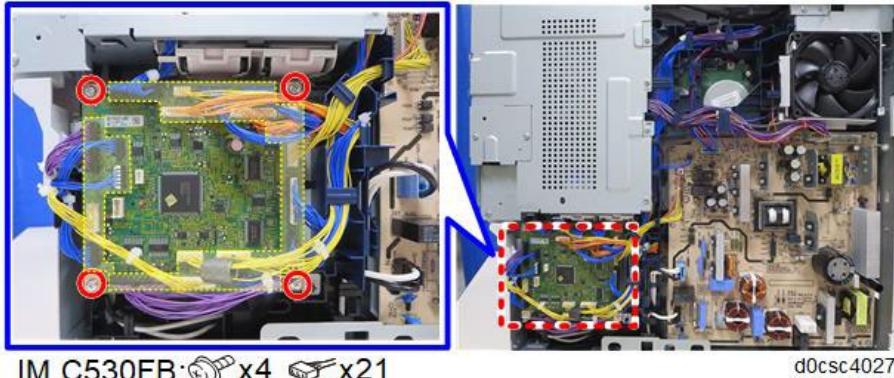
2. Remove the five screws (M3X8mm) and slide to right to remove the Controller Box [A].

**4.17.7 MCU (PCB2)****[Before removal]**

- Paper Tray (***Paper Tray***)
- Bypass Tray Assy (***Bypass Tray Assy***)
- Toner Cover (***Toner Cover***)
- Front Left Cover (***Front Left Cover***)
- Left Cover (***Left Cover***)

[Removal]

1. Disconnect the connectors and remove four screws (Silver, M3X6mm), and remove the MCU (PCB2).



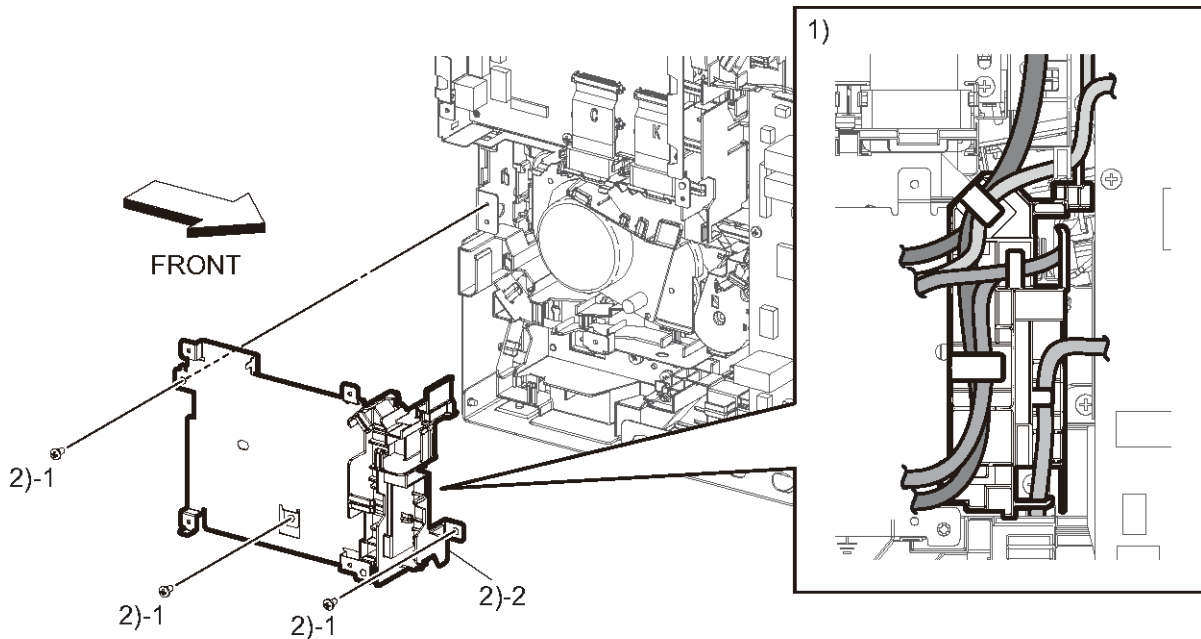
IM C530FB:  x4  x21
 IM C530F:  x4  x22

4.17.8 MCU BRACKET**[Before removal]**

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)

[Removal]

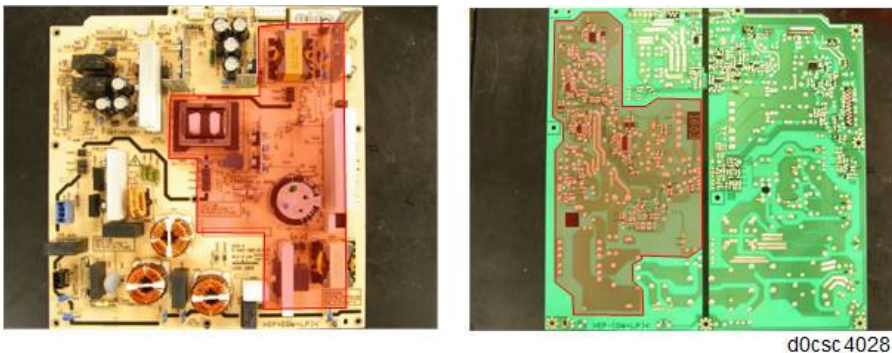
1. Release the harnesses from the harness guide.
2. Remove three screws (Silver, M3X6mm) to remove the MCU Bracket.



FR04251XA

4.17.9 LVPS (PCB4)**⚠ CAUTION**

- Do not touch the areas outlined in red in the following diagrams when replacing the LVPS (PCB4). Residual charge on the PCB may cause electric shock.

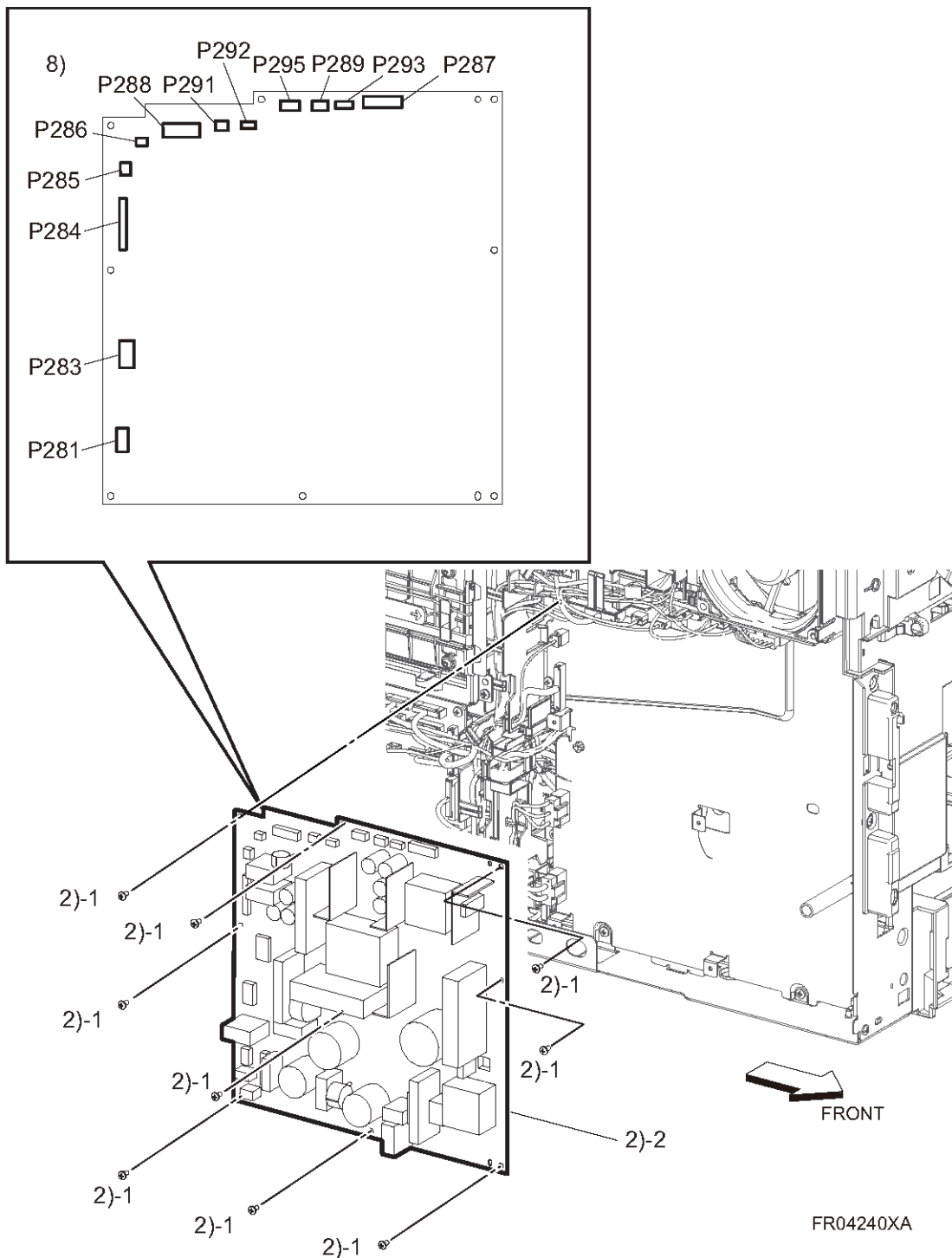
**[Before removal]**

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)

• Left Cover (**Left Cover**)

[Removal]

1. Disengage the connectors (P/J281, P/J283, P/J284, P/J285, P/J286, P/J287, P/J288, P/J289, P/J291, P/J292, P/J293, P/J295).
2. Remove nine screws (Silver, M3X6mm) and remove the LVPS (PCB4).



Replacement
 and
 Adjustment

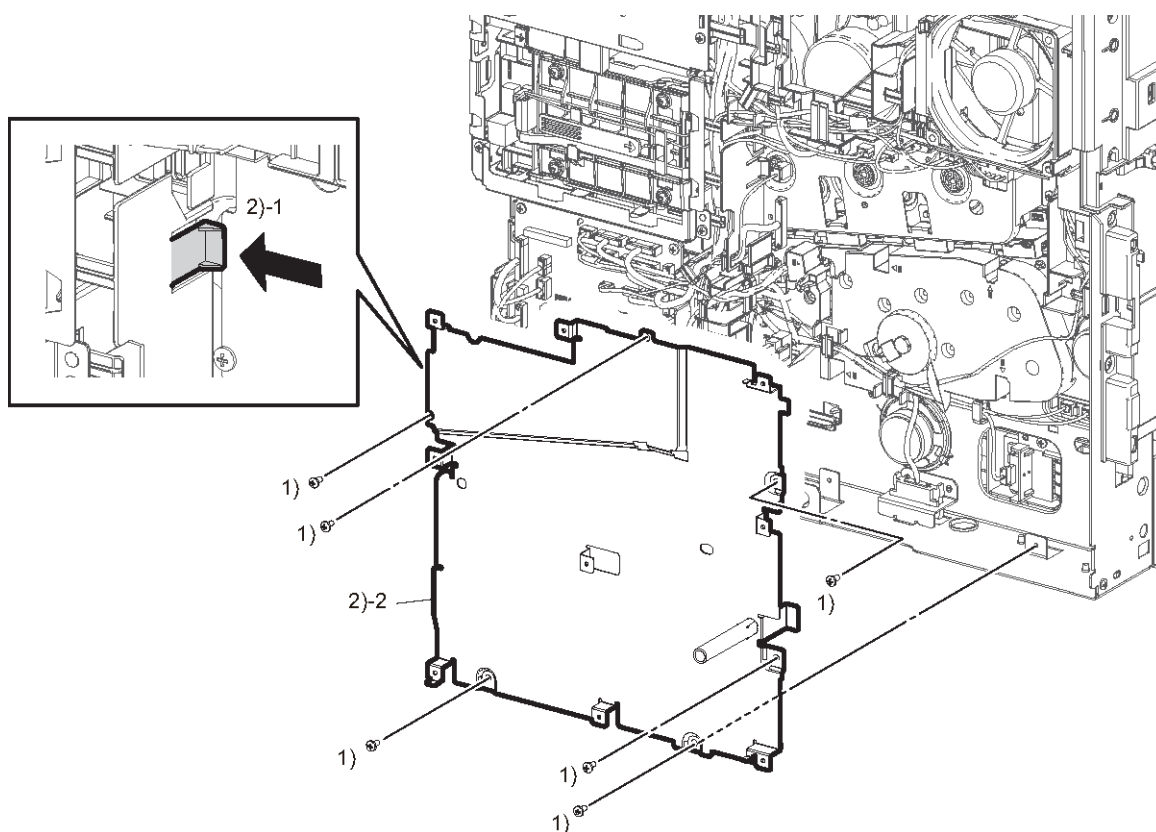
4.17.10 LVPS BRACKET

[Before removal]

- Paper Tray (*Paper Tray*)
- Bypass Tray Assy (*Bypass Tray Assy*)
- Toner Cover (*Toner Cover*)
- Front Left Cover (*Front Left Cover*)
- Left Cover (*Left Cover*)
- LVPS (*LVPS (PCB4)*)

[Removal]

1. Remove six screws (Silver, M3X6mm).
2. Release the lever to remove the LVPS Bracket.



FR04250XA

4.17.11 HVPS ASSY (PCB5)

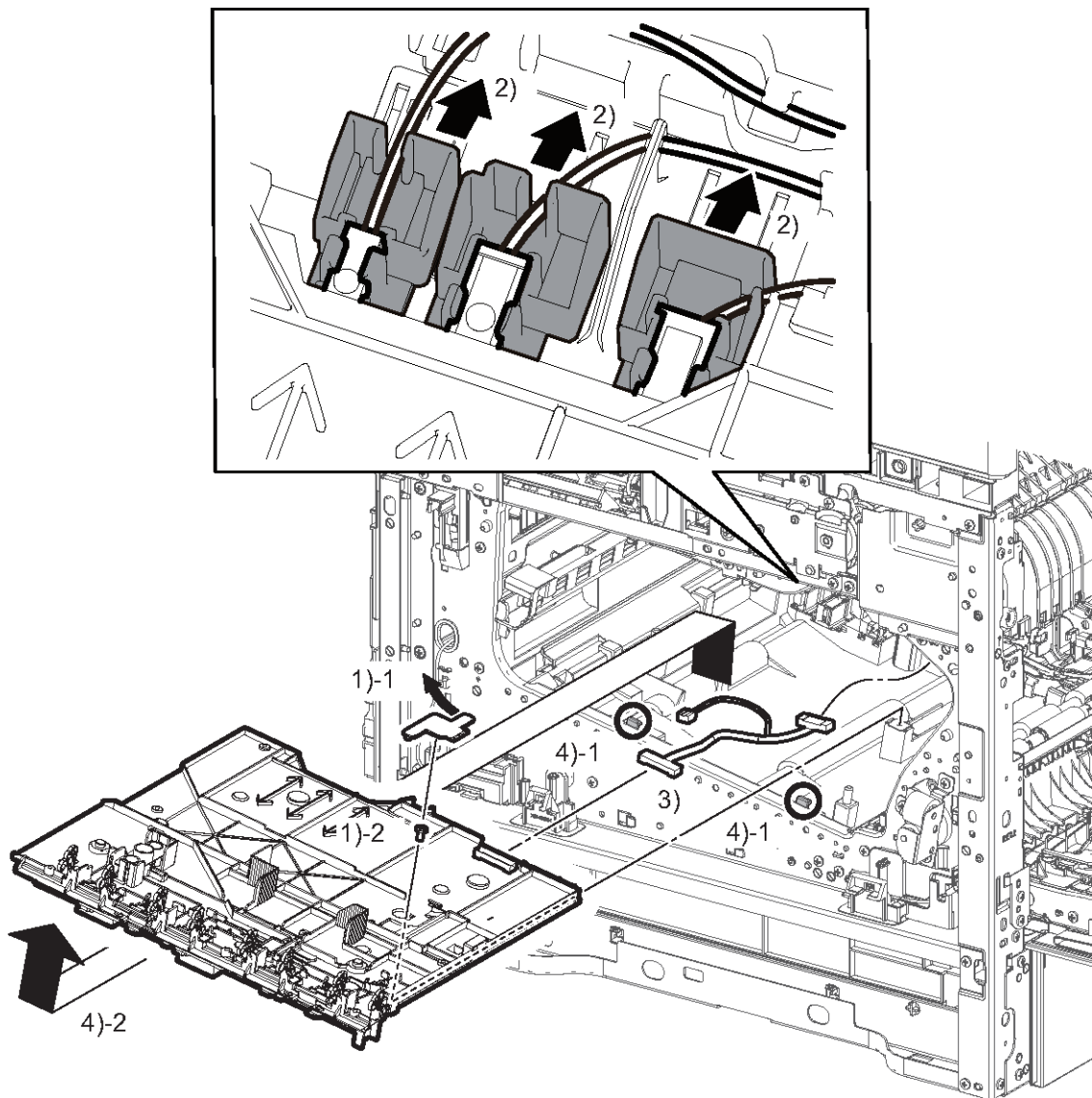
[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**) (Only IM C530F: Tall model)
- Right Upper Cap (**Right Upper Cap**) (Only IM C530F: Tall model)
- Right Cover (**Right Cover**)
- Controller Box Cover (**Controller Box Cover**)
- GUIDE FFC COLOR LPH (**FFC Guide Bracket**)
- MCU (**MCU (PCB2)**)
- MCU Bracket (**MCU Bracket**)
- PCDUs, PCDU Guide Cover (**PCDU, PCDU Cover Guide**)
- ITB Unit (**ITB Unit (Image Transfer Belt Unit)**)
- LED Head Assy (**LED Head Assy**)
- LED Head Base (**LED Head Base**)

[Removal]

1. Remove the cover and remove the screw (Silver, M3X6mm).
2. Push the holders in the direction of the arrow to remove the fastened terminals (P/J501, P/J502, T601).
3. Disengage the connector (P/J100).

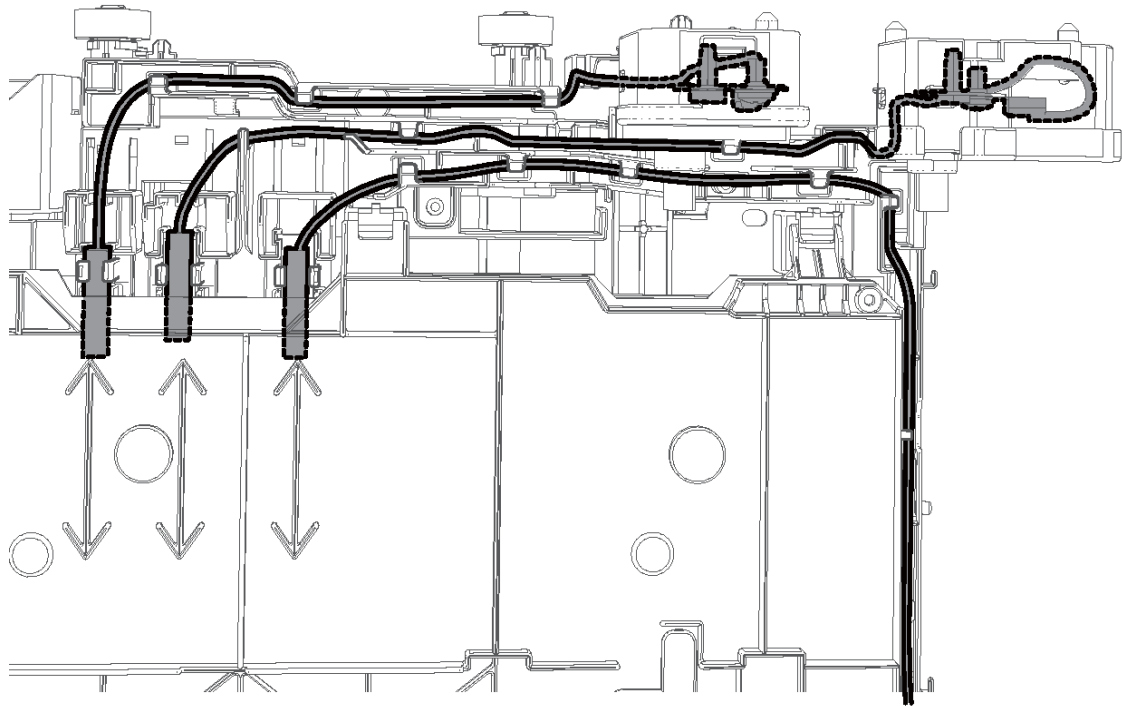
4. Release the two hooks and remove the HVPS (PCB5) Assy in the direction of the arrow.



FR04241XA

Note

- After installing the HVPS Assy, make sure that the harnesses are fixed at the initial position as shown below.



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Replacement
and
Adjustment

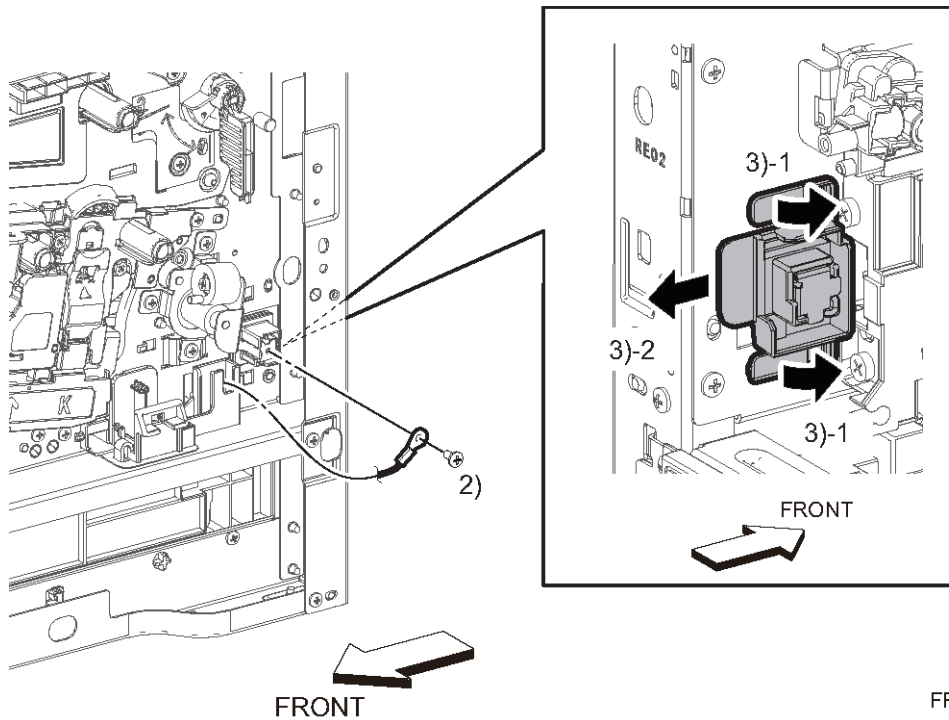
4.17.12 PTR HOUSING

Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**) (Only IM C530F: Tall model)
- Right Upper Cap (**Right Upper Cap**) (Only IM C530F: Tall model)
- Right Cover (**Right Cover**)

[Removal]

1. Open the Rear Cover.
2. Remove one screw (Silver, M3X6mm) fixing the high voltage harness.
3. Release the two hooks and remove the PTR Housing.



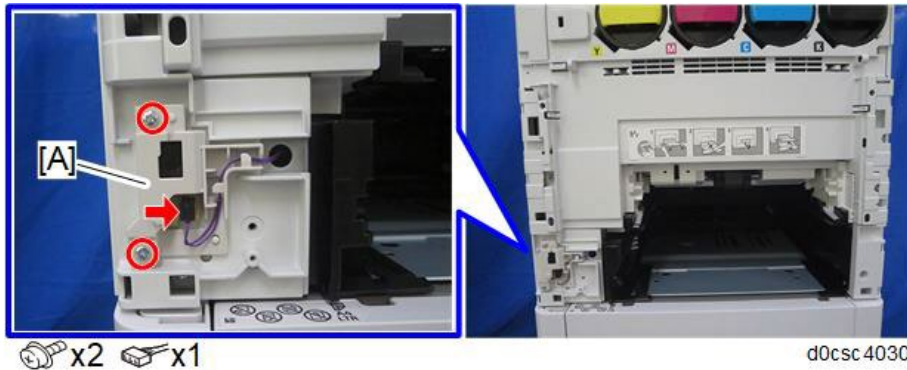
FR04243XA

4.17.13 DC-SW (PCB7)**[Before removal]**

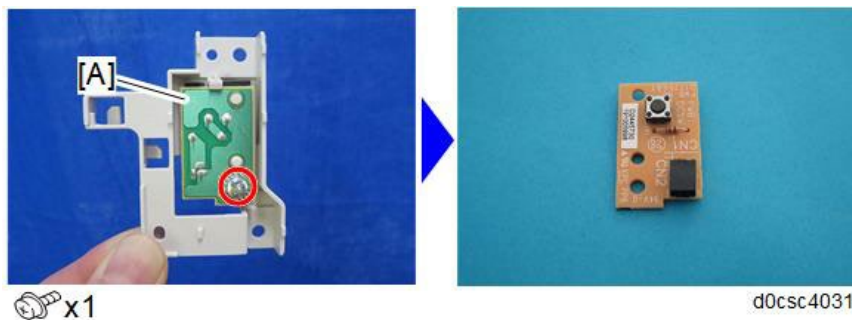
- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)

[Removal]

1. Remove the harness guide [A] from the Left Cover.



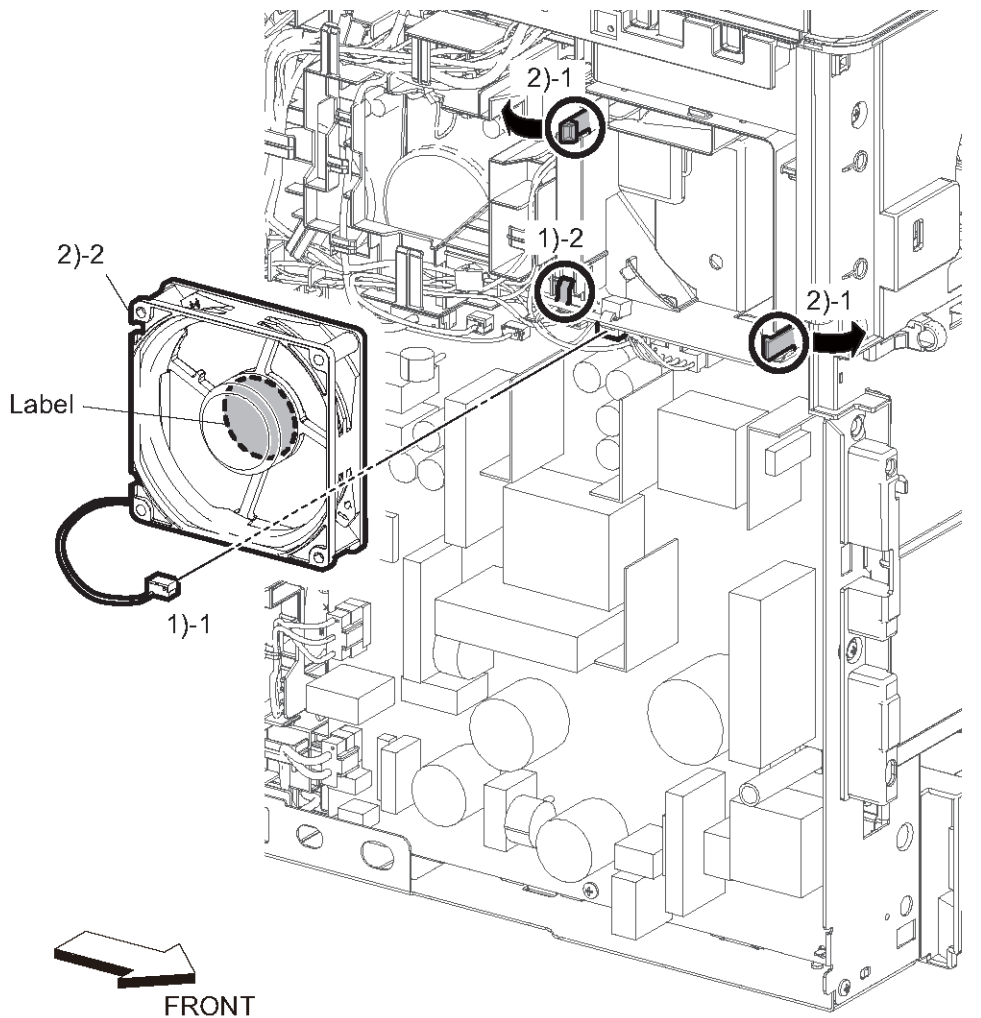
2. Remove the DC-SW (PCB7) [A].

**4.17.14 MAIN FAN (FAN1)****[Before removal]**

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)

[Removal]

1. Disengage the connector (P/J289) and release the harness from the harness guide.
2. Release two hooks and remove the Main Fan (FAN1).



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[Replacement]**Note**

- When replacing the Main Fan (FAN1), install it so that the label side faces inward.

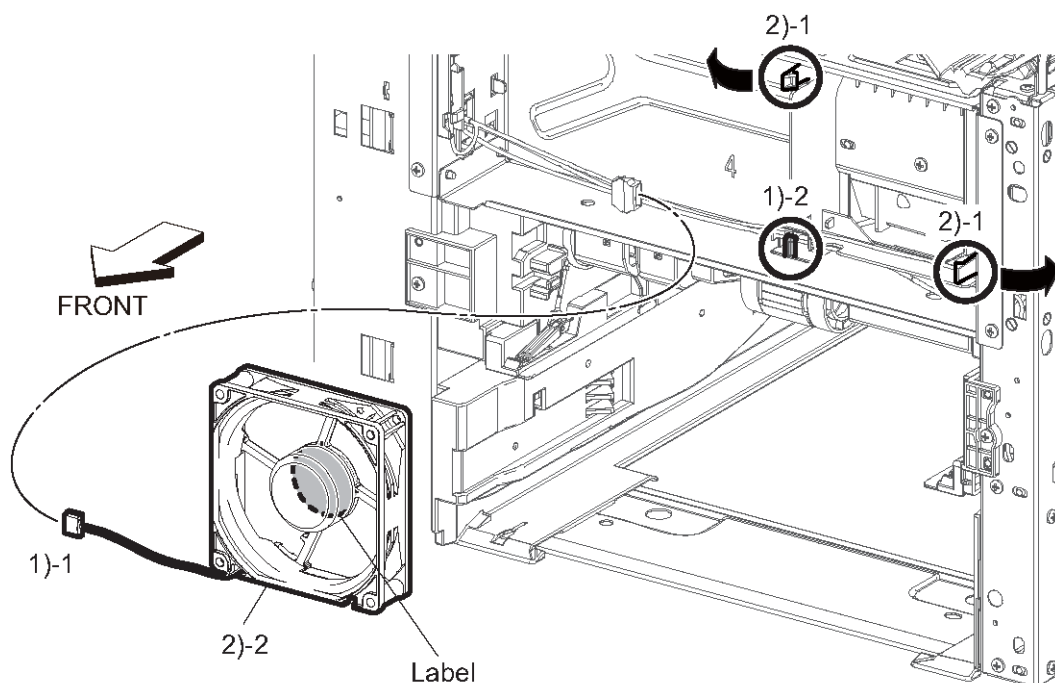
4.17.15 SUB FAN (FAN2)

[Before removal]

- Paper Tray (*Paper Tray*)
- Bypass Tray Assy (*Bypass Tray Assy*)
- Toner Cover (*Toner Cover*)
- Front Left Cover (*Front Left Cover*)
- Left Cover (*Left Cover*)
- Front Right Cover (*Front Right Cover*)
- Top Exit Cover (*Top Exit Cover*) (Only IM C530F: Tall model)
- Right Upper Cap (*Right Upper Cap*) (Only IM C530F: Tall model)
- Right Cover (*Right Cover*)
- Front Inner Cover (*Front Inner Cover*)

[Removal]

1. Disengage the connector (P/J294) and release the harness from the harness guide.
2. Release two hooks and remove the Sub Fan (FAN2).



FR04094XA

4.17.16 MAIN FAN DUCT

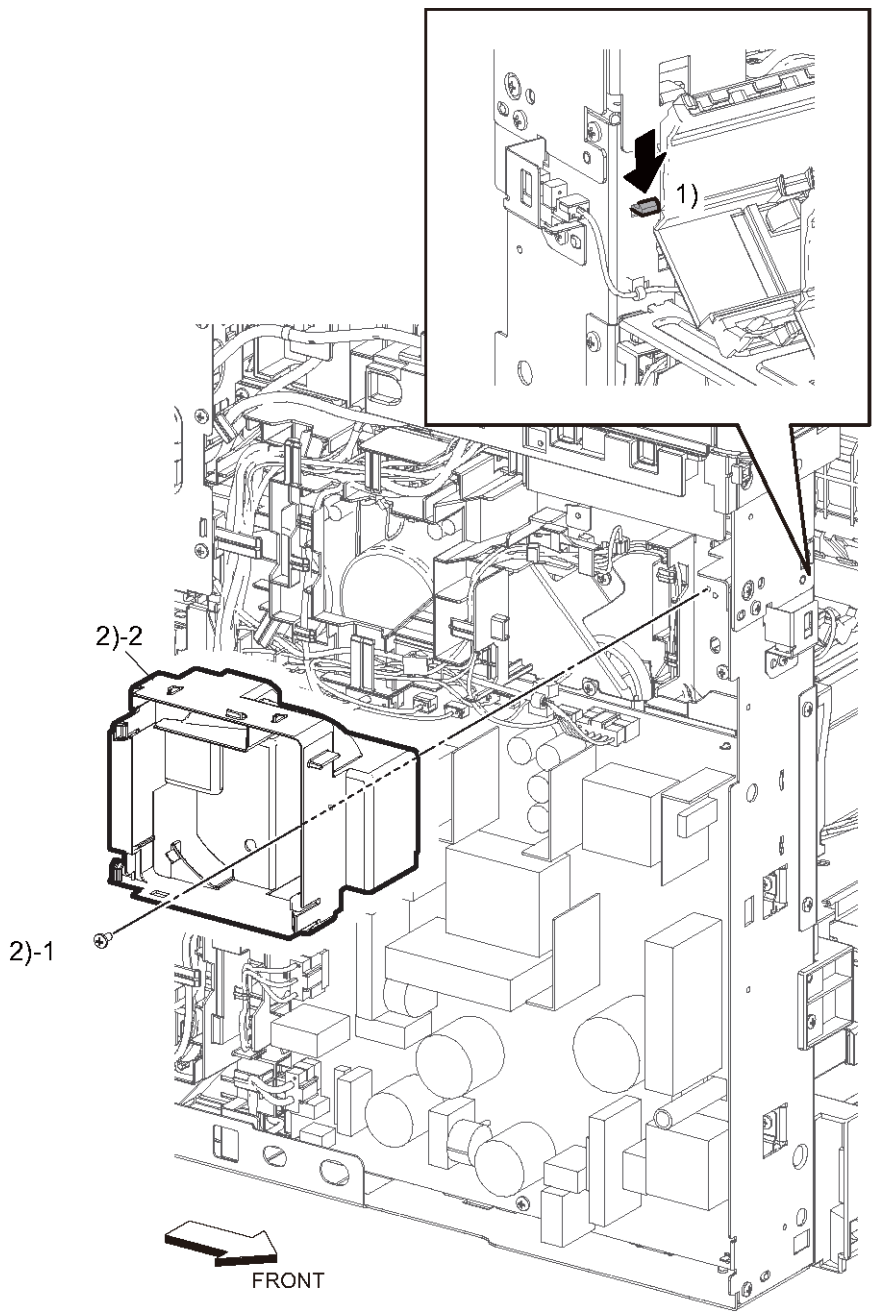
[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Main Fan (**Main Fan (FAN1)**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**) (Only IM C530F: Tall model)
- Right Upper Cap (**Right Upper Cap**) (Only IM C530F: Tall model)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)

[Removal]

1. Release the hook of the Main Fan Duct.

2. Remove one screw (Silver, M3X6mm) to remove the Main Fan Duct.



FR04097XA

Replacement and Adjustment

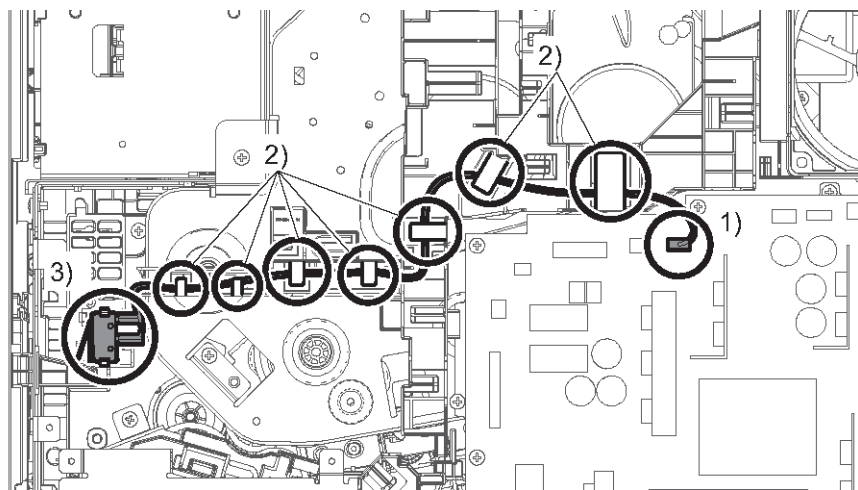
4.17.17 HARNESS BETWEEN THE REAR INTERLOCK SWITCH AND LVPS

[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Controller Box Cover (**Controller Box Cover**)
- FCU (**FCU (PCB6)**)
- IPU (**IPU (PCB3)**)
- Controller Board (**Controller Board (PCB1)**)
- Controller Box (**Controller Box**)

[Removal]

1. Disengage the connector (P/J292).
2. Release the harness from the harness guides.
3. Release the hooks to remove the harness.



FR04244XB

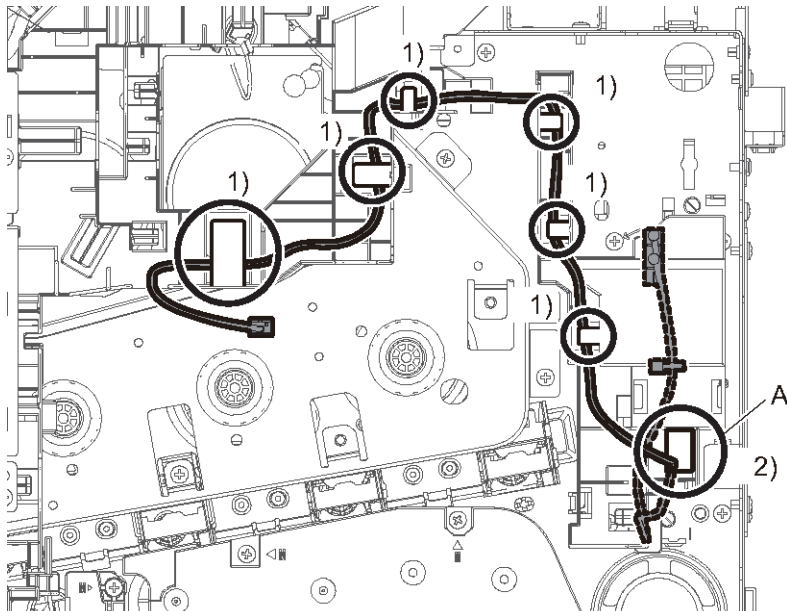
4.17.18 HARNESS BETWEEN THE SIDE INTERLOCK SWITCH AND LVPS

[Before removal]

- Paper Tray (**Paper Tray**)
- Bypass Tray Assy (**Bypass Tray Assy**)
- Toner Cover (**Toner Cover**)
- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Top Exit Cover (**Top Exit Cover**) (Only IM C530F: Tall model)
- Right Upper Cap (**Right Upper Cap**) (Only IM C530F: Tall model)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- Main Fan (**Main Fan (FAN1)**)
- Main Fan Duct (**Main Fan Duct**)
- LVPS (**LVPS (PCB4)**)
- LVPS Bracket (**LVPS Bracket**)

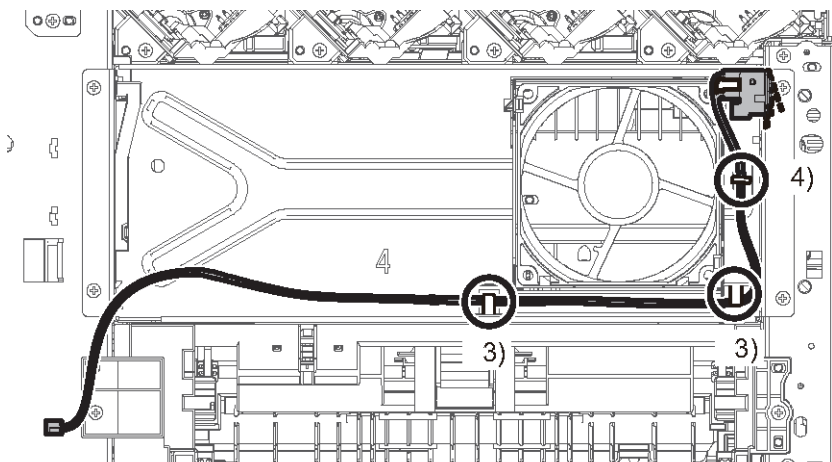
[Removal]

1. Release the harness from the harness guides.
2. Pull out the harness from the hole [A].

Machine left side:

FR04245XA

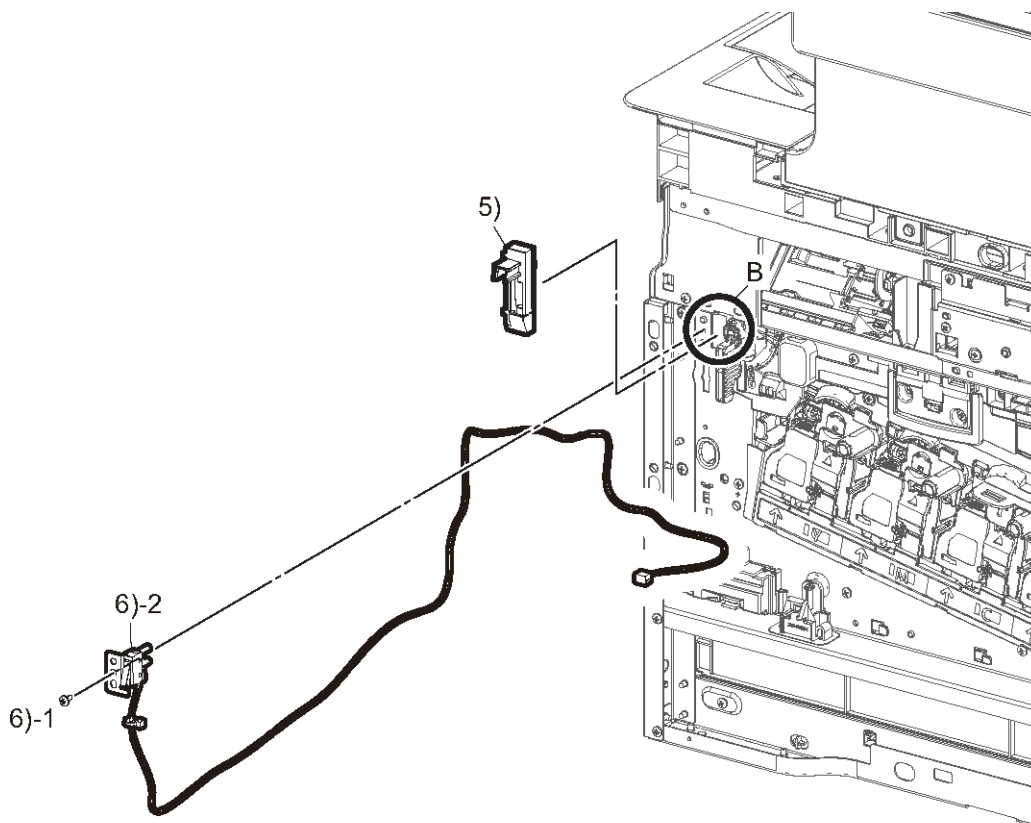
3. Release the harness from the Sub Fan Duct.
4. Remove the harness from one push-tie of the Sub Fan Duct.

Machine front side:

FR04246XA

5. Remove the link for the Waste Toner Bottle.
6. Remove one screw (Silver, M3X6mm) and pull out the harness from the hole [B].

Machine right side:



FR04247XA

Replacement
and
Adjustment

4.17.19 HARNESS BETWEEN THE FUSING UNIT AND LVPS

[Before removal]

(IM C530F: Tall model)

- Paper Tray (*Paper Tray*)
- Bypass Tray Assy (*Bypass Tray Assy*)
- Toner Cover (*Toner Cover*)
- Front Left Cover (*Front Left Cover*)
- Left Cover (*Left Cover*)
- Front Right Cover (*Front Right Cover*)
- Top Exit Cover (*Top Exit Cover*)
- Right Upper Cap (*Right Upper Cap*)
- Right Cover (*Right Cover*)
- Front Inner Cover (*Front Inner Cover*)

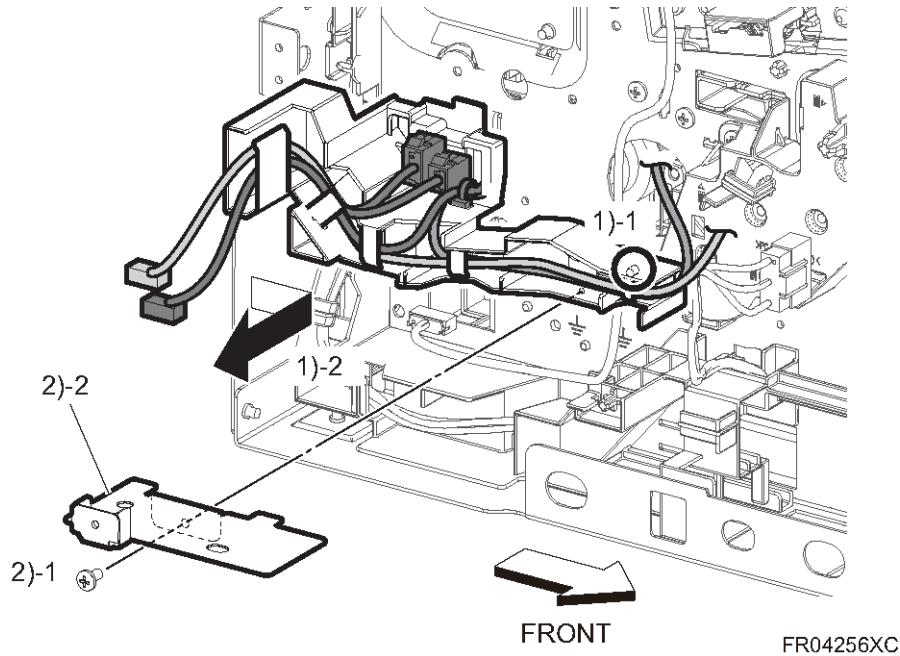
- IC Card Cover (**IC Card Cover**)
 - Front Upper Cover (**Front Upper Cover**)
 - Left Inner Cover (**Left Inner Cover**)
 - Left Upper Cover (**Left Upper Cover**)
 - Left Sub Cover (**Left Sub Cover**)
 - Rear Upper Cover (**Rear Upper Cover**)
 - Upper Inner Cover (**Upper Inner Cover**)
 - Rear Left Inner Cover (**Rear Left Inner Cover**)
 - Frame (**Frame**)
 - Right Upper Cover (**Right Upper Cover**)
 - Right Inner Cover (**Right Inner Cover**)
 - Top Cover (**Top Cover/ Option Blind Cover**)
 - Controller Box Cover (**Controller Box Cover**)
 - FCU (**FCU (PCB6)**)
 - IPU (**IPU (PCB3)**)
 - FFC Guide Bracket (**FFC Guide Bracket**)
 - Controller Board (PCB1) (**Controller Board (PCB1)**)
 - Controller Box (**Controller Box**)
 - Harness between the Rear Interlock Switch and LVPS (**Harness between the Rear Interlock Switch and LVPS**)
 - MCU (**MCU (PCB2)**)
 - MCU Bracket (**MCU Bracket**)
 - LVPS (**LVPS (PCB4)**)
 - LVPS Bracket (**LVPS Bracket**)
 - Main Fan (**Main Fan (FAN1)**)
 - Main Fan Duct (**Main Fan Duct**)
 - Fusing Unit (**Fusing Unit**)
 - Main Drive Assy (**Main Drive Assy**)
 - Paper Exit Drive Assy (**Paper Exit Drive Assy**)
 - Paper Exit Assy (**Paper Exit Assy**)
- (IM C530FB: Short model)**
- Paper Tray (**Paper Tray**)
 - Bypass Tray Assy (**Bypass Tray Assy**)
 - Toner Cover (**Toner Cover**)

- Front Left Cover (**Front Left Cover**)
- Left Cover (**Left Cover**)
- Front Right Cover (**Front Right Cover**)
- Right Cover (**Right Cover**)
- Front Inner Cover (**Front Inner Cover**)
- IC Card Cover (**IC Card Cover**)
- Left Sub Cover (**Left Sub Cover**)
- Rear Left Inner Cover (**Rear Left Inner Cover**)
- Right Upper Cover (**Right Upper Cover**)
- Rear Right Inner Cover (**Rear Right Inner Cover**)
- Controller Box Cover (**Controller Box Cover**)
- SPDF Unit and Scanner Unit (**SPDF Unit and Scanner Unit (IM C530FB: Short Model)**)
- Top Cover (**Top Cover**)
- FCU (**FCU (PCB6)**)
- IPU (**IPU (PCB3)**)
- FFC Guide Bracket (**FFC Guide Bracket**)
- Controller Board (PCB1) (**Controller Board (PCB1)**)
- Controller Box (**Controller Box**)
- Harness between the Rear Interlock Switch and LVPS (**Harness between the Rear Interlock Switch and LVPS**)
- MCU (**MCU (PCB2)**)
- MCU Bracket (**MCU Bracket**)
- LVPS (**LVPS (PCB4)**)
- LVPS Bracket (**LVPS Bracket**)
- Main Fan (**Main Fan (FAN1)**)
- Main Fan Duct (**Main Fan Duct**)
- Fusing Unit (**Fusing Unit**)
- Main Drive Assy (**Main Drive Assy**)
- Paper Exit Drive Assy (**Paper Exit Drive Assy**)
- Paper Exit Assy (**Paper Exit Assy**)

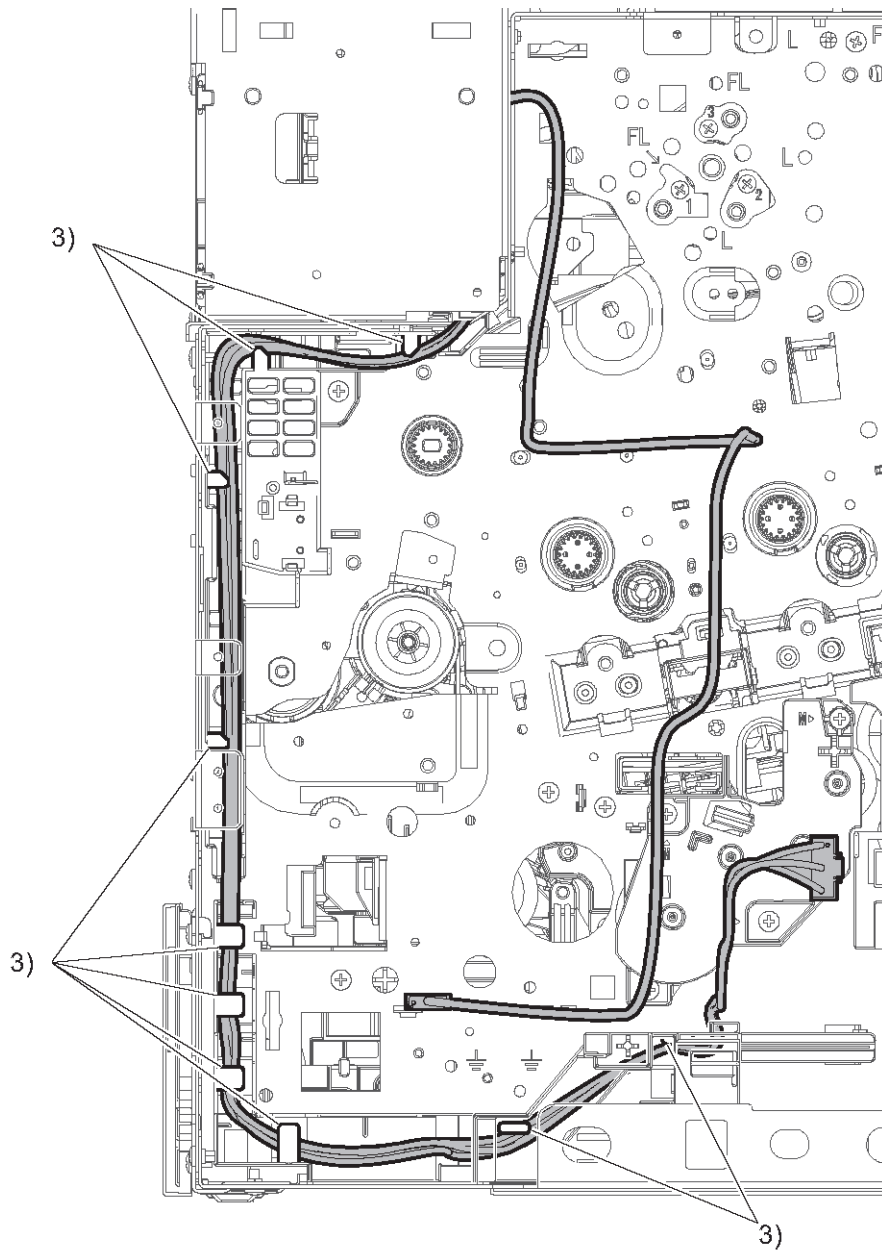


[Removal]

1. Release one boss of the harness guide with a flathead screwdriver, and slightly release the harness guide with the harnesses in the direction of the arrow.
2. Remove one screw (Silver, M3X6mm) to remove the plate.

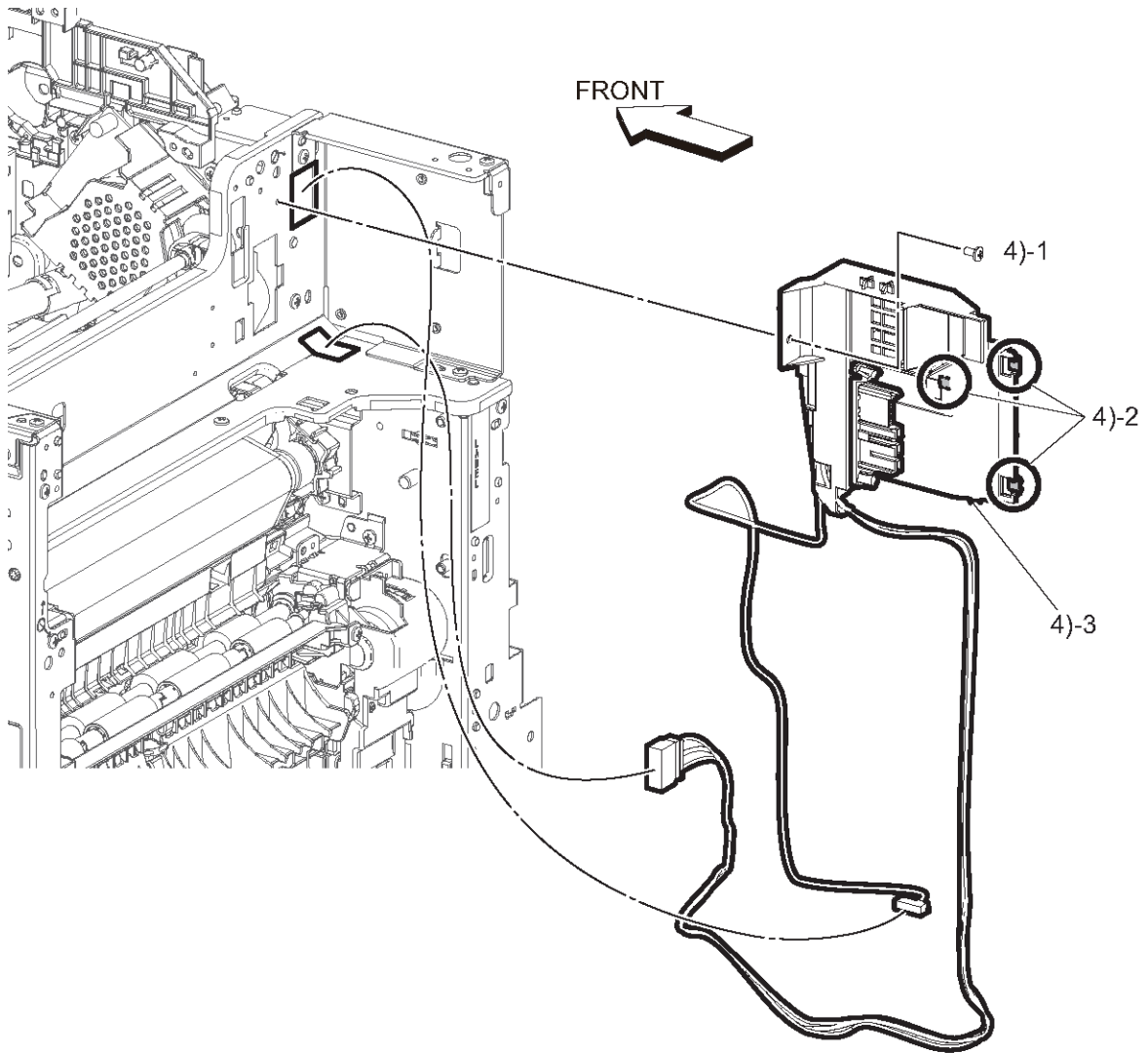


3. Release the following harness from the harness guides.



FR04257XA

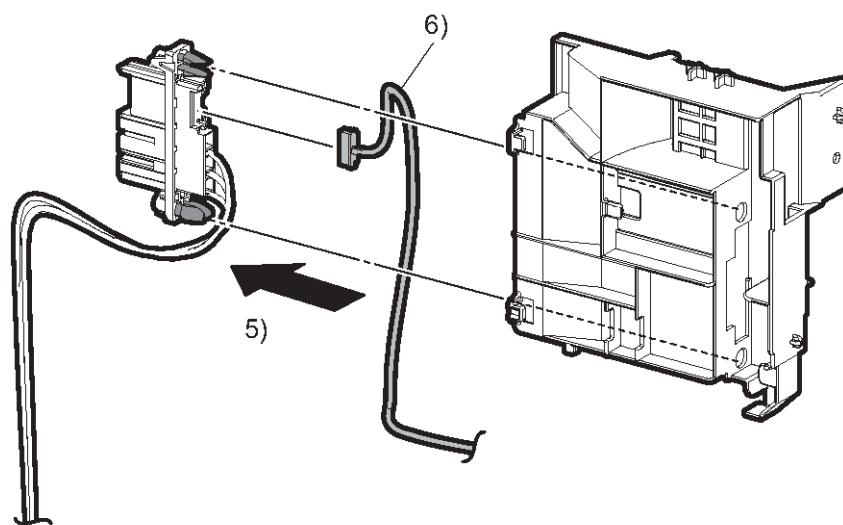
- Remove one screw (Silver, M3X6mm), and release three hooks to remove the harnesses with the fusing harness guide.



FR04403XA

- Remove the harnesses from the fusing harness guide.

6. Remove the harness between the Fusing Unit and LVPS.



FR04258XA

Replacement
t and
Adjustment

4.18 IMAGE ADJUSTMENT

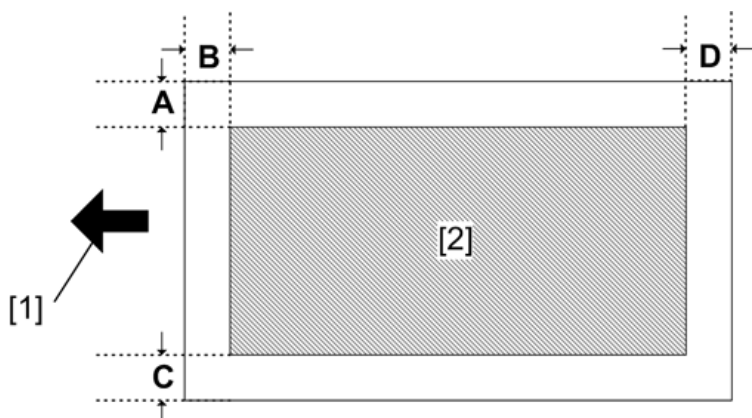
4.18.1 REGISTRATION ADJUSTMENT

Make sure that the registration is adjusted within the adjustment standard range.

Note

- If it cannot be adjusted by registration below, do the erase margin adjustment in the next section.

Image Area



[1]: Feed direction, [2]: Image area

Adjustment Standard

- B, D: Leading edge and trailing edge (sub-scan direction):
± 2.0 mm
- A, C: Side-to-side (main-scan direction):
± 2.5 mm

Adjustment Procedure

1. Enter the SP mode.
2. Print out a test pattern (14: Trimming Area) with SP2-109-003 (Test Pattern: Pattern Selection).

Note

- Print some pages of the trimming pattern for Steps 3 and 4. Then average the leading edge and side-to-side registration values, and adjust each SP mode.

3. Do the leading edge registration adjustment.

1) Check the leading edge registration for each paper trays and adjust them with SP1-001.

SP No.	SP Name	Range
SP1-001-001	Sub Scan Registration Correct: Front Main	±2.0 mm
SP1-001-002	Sub Scan Registration Correct: Front Option Tray 1	±2.0 mm
SP1-001-003	Sub Scan Registration Correct: Front Option Tray 2	±2.0 mm
SP1-001-004	Sub Scan Registration Correct: Front Option Tray 3	±2.0 mm
SP1-001-005	Sub Scan Registration Correct: Front Option Tray 4	±2.0 mm
SP1-001-006	Sub Scan Registration Correct: Front By-Pass Tray	±2.0 mm
SP1-001-011	Sub Scan Registration Correct: Rear Main	±2.0 mm
SP1-001-012	Sub Scan Registration Correct: Rear Option Tray 1	±2.0 mm
SP1-001-013	Sub Scan Registration Correct: Rear Option Tray 2	±2.0 mm
SP1-001-014	Sub Scan Registration Correct: Rear Option Tray 3	±2.0 mm
SP1-001-015	Sub Scan Registration Correct: Rear Option Tray 4	±2.0 mm
SP1-001-016	Sub Scan Registration Correct: Rear By-Pass Tray	±2.0 mm

2) Input the value. Then press [#].

3) Generate a trim pattern to check the leading edge adjustment.

4. Do the side-to-side registration adjustment.

1) Check the side-to-side registration for each paper trays and adjust them with SP1-002.

SP No.	SP Name	Range
SP1-002-001	Main Scan Registration Correct: Front Main	±2.0 mm
SP1-002-002	Main Scan Registration Correct: Front Option Tray 1	±2.0 mm
SP1-002-003	Main Scan Registration Correct: Front Option Tray 2	±2.0 mm
SP1-002-004	Main Scan Registration Correct: Front Option Tray 3	±2.0 mm
SP1-002-005	Main Scan Registration Correct: Front Option Tray 4	±2.0 mm
SP1-002-006	Main Scan Registration Correct: Front By-Pass Tray	±2.0 mm
SP1-002-011	Main Scan Registration Correct: Rear Main	±2.0 mm
SP1-002-012	Main Scan Registration Correct: Rear Option Tray 1	±2.0 mm
SP1-002-013	Main Scan Registration Correct: Rear Option Tray 2	±2.0 mm
SP1-002-014	Main Scan Registration Correct: Rear Option Tray 3	±2.0 mm
SP1-002-015	Main Scan Registration Correct: Rear Option Tray 4	±2.0 mm
SP1-002-016	Main Scan Registration Correct: Rear By-Pass Tray	±2.0 mm

2) Input the value. Then press [#].

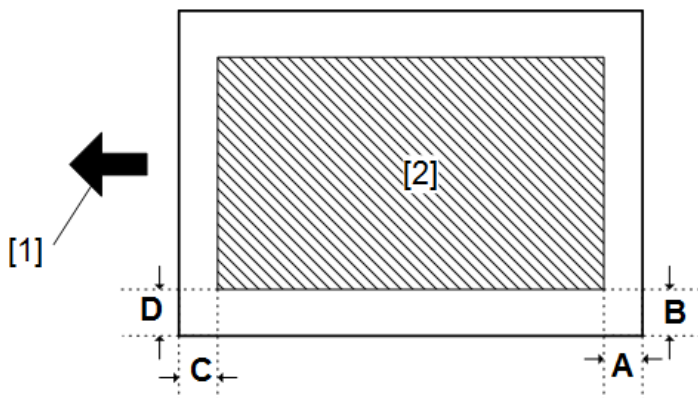
3) Generate a trim pattern to check the side-to-side registration adjustment.

4.18.2 ERASE MARGIN ADJUSTMENT

Adjust the erase margin width only if it cannot be adjusted by registration (leading edge and side-to-side registration).

First adjust C and D; then A and B.

Image Area



[1]: Feed direction, [2]: Image area

Adjustment Procedure

1. Enter the SP mode.
2. Print out a test pattern (14: Trimming Area) with SP2-109-003 (Test Pattern: Pattern Selection).
3. Check the erase margin C and D. Adjust them with SP2-103-001 and -003 if necessary.
4. Check the erase margin A and B. Adjust them with SP2-103-002 and -004 if necessary.

Standard:

Leading and trailing edge: 4.0 ± 2.7 mm

Left and right edge: 4.0 ± 2.3 mm

SP No.	SP Name	Range
SP2-103-001	Erase Margin Adjustment: Lead Edge Width	4.0 to 9.9 mm (Default: 4.0 mm)
SP2-103-002	Erase Margin Adjustment: Trail Edge Width	4.0 to 9.9 mm (Default: 4.0 mm)
SP2-103-003	Erase Margin Adjustment: Left Edge Width	4.0 to 9.9 mm (Default: 4.0 mm)
SP2-103-004	Erase Margin Adjustment: Right Edge Width	4.0 to 9.9 mm (Default: 4.0 mm)
SP2-103-005	Erase Margin Adjustment: Duplex Left Edge	0.0 to 1.5 mm (Default: 0.0 mm)
SP2-103-006	Erase Margin Adjustment: Duplex Right Edge	0.0 to 1.5 mm (Default: 0.0 mm)

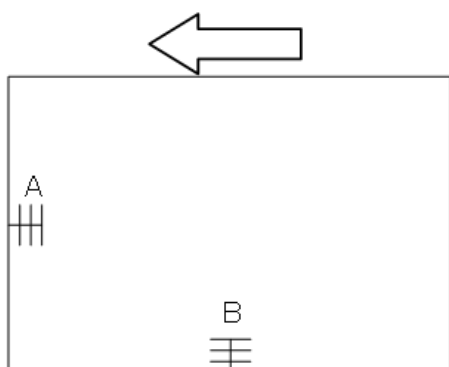
4.18.3 SCANNER IMAGE ADJUSTMENT

Check the printing registration adjustment and the blank margin adjustment before you do the following scanner image adjustments.

Note

- Use C-5Y color chart to do the following adjustments.

Leading Edge and Side-to-Side Registration



A: Leading edge registration

B: Side-to-side Registration

- Put the test chart on the exposure glass. Then make a copy from one of the feed stations.
- Check the leading edge and side-to-side registration. If necessary, adjust the registration with the following SPs.

Standard:

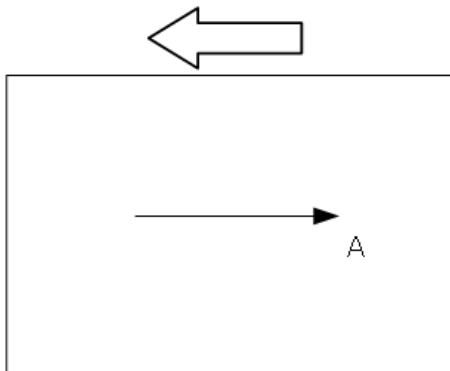
±1.0 mm for the leading edge registration

±1.0 mm for the side-to-side registration

SP No.	SP Name	Range
SP4-010-001	L-Edge Regist Adjustment	±1.0 mm
SP4-011-001	S-to-S Regist Adjustment	±10.0 mm
SP4-805-001	Home Position Adjustment	±4.3 mm

Note

- If the adjustment for the leading edge is necessary, adjust with SP4-010-001.
- If it cannot be adjusted within ±1.0 mm, adjust with SP4-805-001.

Sub-scan Magnification

A: Sub-scan magnification

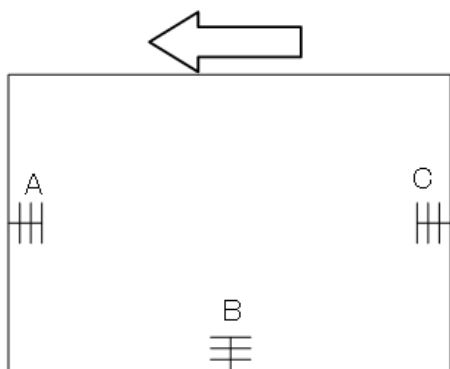
1. Put the test chart on the exposure glass. Then make a copy from one of the feed stations.
2. Check the magnification ratio. If necessary, adjust the magnification with the following SP.

Standard: $\pm 1.0\%$

SP No.	SP Name	Range
SP4-008-001	Sub Scan Mag.Adjustment	$\pm 0.6\%$

4.18.4 SPDF IMAGE ADJUSTMENT

Check and perform the SPDF image adjustment when replacing the SPDF unit.

SPDF Side-to-Side, Leading Edge, and Trailing Edge Registration

A: Leading edge registration

B: Side-to-side registration

C: Trailing edge registration

1. Use A4/LT paper to make a temporary test chart as shown below.
2. Put the temporary test chart on the SPDF. Then make a copy from one of the feed stations.

3. Check the leading edge, trailing edge, and side-to-side registration. If necessary, adjust the registration with the following SPs.

Standard:

±1.5 mm for the leading edge and trailing edge registration (front, back)

±2.0 mm for the side-to-side registration (front, back)

SP No.	SP Name	Range	What It does
SP6-006-001	ADF Regi Adj: Side 1 Side	±3.0 mm	Side-to-side registration (front)
SP6-006-002	ADF Regi Adj: Side 2 Side	±12.0 mm	Side-to-side registration (back)
SP6-007-016	ADF Lead Regi Adj ALL: Side1	-11.0 to +4.0 mm	Leading edge registration
SP6-008-017	ADF Tail Regi Adj ALL: Side1	-7.5 to +10.8 mm	Trailing edge registration
SP6-008-022	ADF Regi Side2 Adjustment: Face	±12.0 mm	
SP6-008-023	ADF Regi Side2 Adjustment: Back	±12.0 mm	

SPDF Sub-scan Magnification

1. Put the temporary test chart on the SPDF. Then make a copy from one of the feed stations.
2. Check the magnification ratio. If necessary, adjust the magnification with the following SPs.

Standard: ±1.0%

SP No.	SP Name	Range
SP6-018-013	ADF Sub Magnification Adj ALL: Side 1&2	±2.0 %

4.18.5 ACC (AUTOMATIC COLOR CALIBRATION)

Be sure to execute color registration when installing the machine.

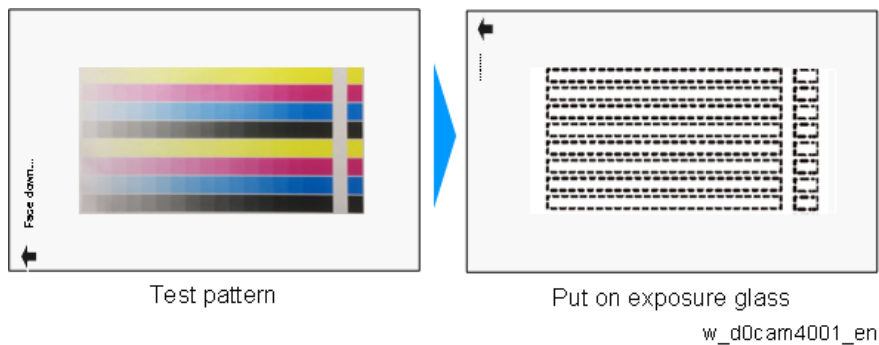
Copier mode

1. Press [Settings] on the Home screen.
2. Press [Maintenance] > [Auto Color Calibration].
3. Press [Start Auto Calibration] for "Copier Function".
4. Press [Start Printing] to print the test pattern.

The test pattern is printed in A4 size.

5. Clean the exposure glass.
6. Put the test pattern on the exposure glass, and then put 10 sheets of white paper on the test pattern.

This ensures the precise ACC adjustment. Close the ADF.

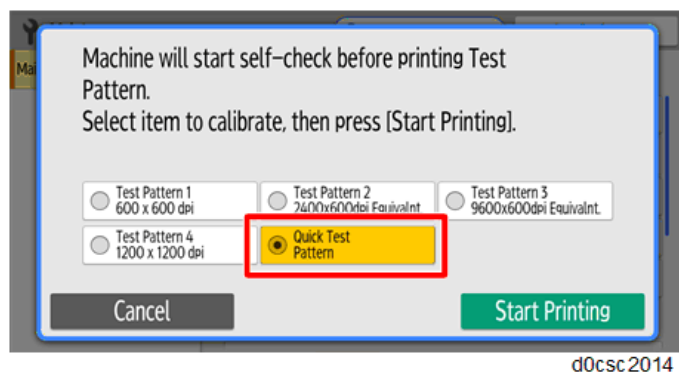


7. Press [Start Scanning].
- The machine starts the ACC.

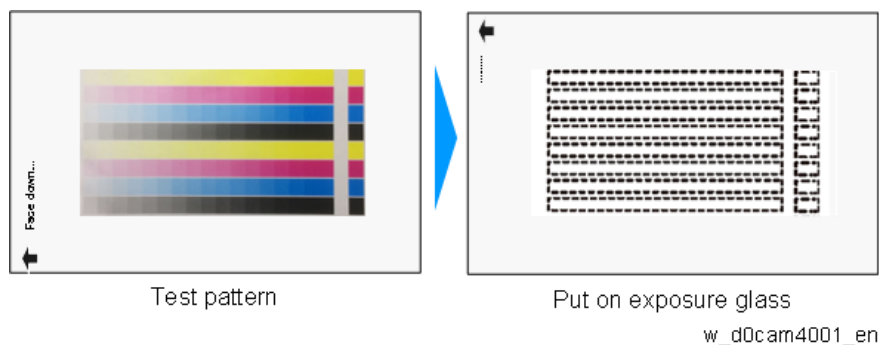
Printer mode

1. Then, Press [Start Auto Calibration] for "Printer Function".
2. Press [Quick Test Pattern], then press [Start Printing] to print the test pattern.

The test pattern is printed after self-checking.



3. Place the test pattern on the exposure glass, then close the ADF.
- Put 10 sheets of white paper on the test chart. This ensures the precise ACC adjustment.



4. Press [Start Scanning].

The machine starts the ACC.

5. Confirm that the execution result is displayed.

For the Quick Test Pattern, the execution result is recorded with all resolutions (patterns 1 to 4).

Note

- If the printed image is not adjusted correctly after executing Quick Mode, perform ACC in normal mode (test pattern in applicable resolution) again.

4.18.6 SCANNER ACC

When the color difference between the front and back of the scanned image or the copied image is large, it can be reduced by executing the scanner ACC.

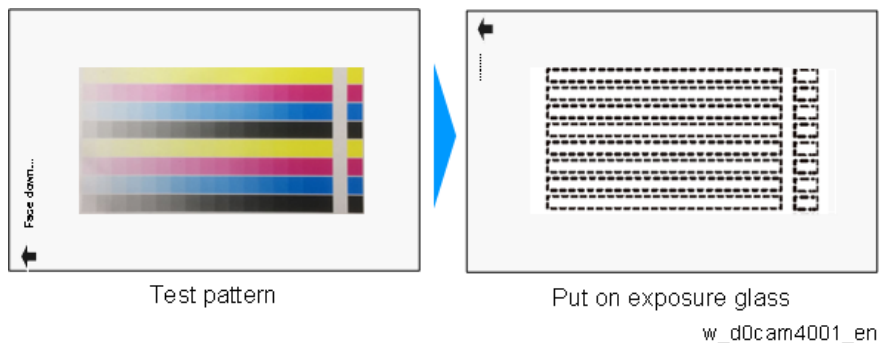
Be sure to execute both the front and back sides.

1. Press [Settings] on the Home screen.
2. Press [Maintenance] > [Auto Color Calibration].
3. Press [Start Auto Calibration] for "Copier Function".
4. Press [Start Printing] to print the test pattern.

The test pattern is printed in A4 size.

5. Clean the exposure glass.
6. Put the test pattern on the exposure glass, and then put 10 sheets of white paper on the test pattern.

This ensures the precise ACC adjustment. Close the ADF.



7. Press [Cancel] to exit the User Tools mode.

8. Enter the SP mode, and then execute SP4-472-001 (Scanner ACC Front: Read New Chart).

The machine starts scanning. If it failed, refer to note below.

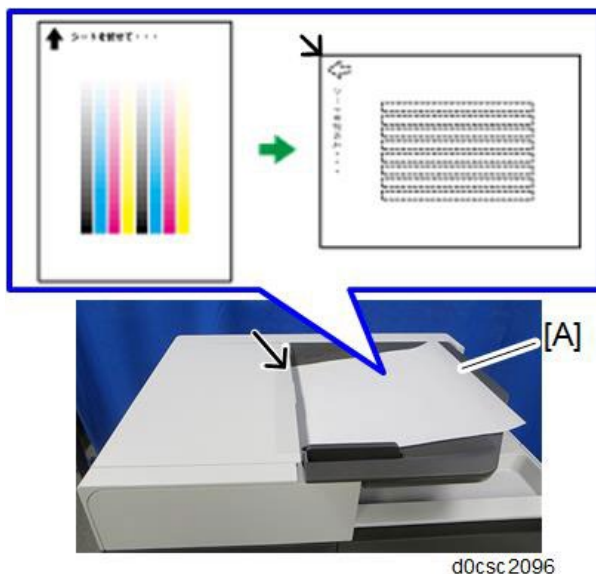
Note

When scanning test chart failed, check the following and then execute the scanning again.

- The test pattern was not set correctly.
- The ACC test pattern is abnormal (e.g. a pattern is missing). -> Print a test pattern again.
- The reading position has deviated due to skewing (ADF guide fence set correctly?).
- A jam occurred at the time of reading.

9. Turn over the ACC test pattern [A] and set it on the ADF.

Set the arrow position of the test pattern in accordance with the arrow position of the photograph below. Be sure to set the ADF guide fence correctly.



10. Execute SP4-482-001 (Scanner ACC Back: Read New Chart).

The machine starts scanning. If it failed, refer to note above.

11. Exit the SP mode if there is no problem.

Note

- After executing the scanner ACC, if it is desired to return to the original color tone, execute the followings.

SP4-472-002 (Scanner ACC Front: Recall Prev. Chart)

SP4-482-002 (Scanner ACC Back: Recall Prev. Chart)

- The readings of the test chart are held up to the previous value.

4.18.7 COLOR REGISTRATION (SKEW ADJUSTMENT)

Execute SP2-111-004 (Forced Line Position Adj.: Mode d).

Note

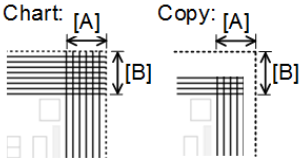
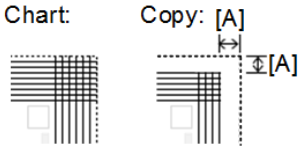
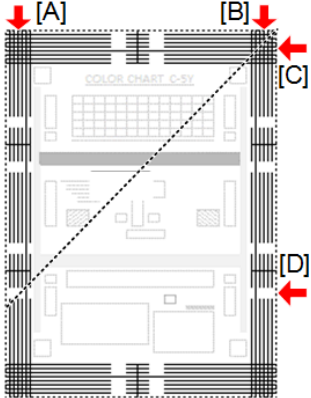
- This SP only needs to run. There is no SP to check the results.

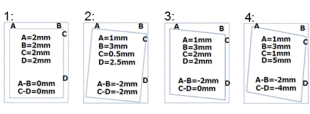
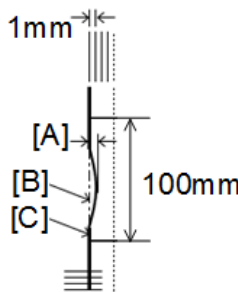
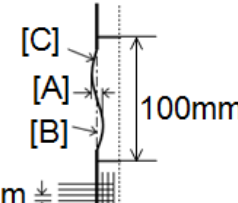
4.18.8 HOW TO USE THE COLOR CHARTS

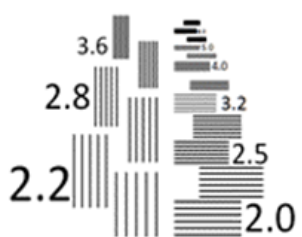
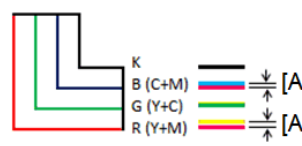
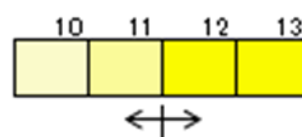
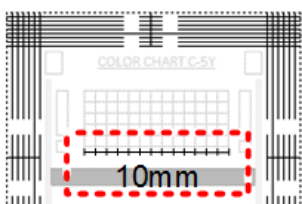
Here is an introduction of how to check the image quality using the color charts.

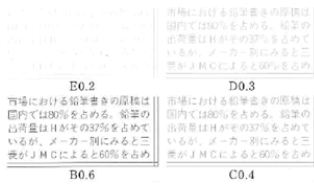



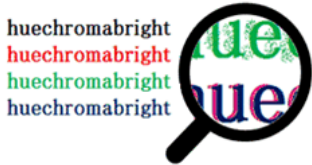
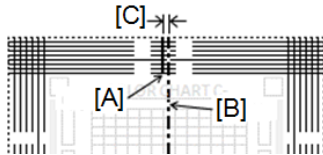
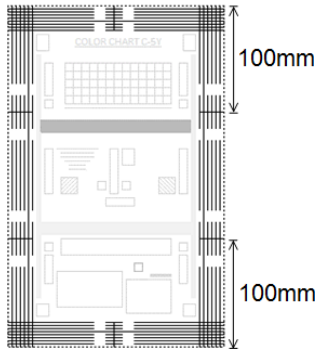
No.	Check Area	Check Item	Description
1	Frame line	Registration amount	Check the registration amount of the leading edge and trailing edge (sub scan direction). Overlay the chart and the copy, then check that the frame lines of the side [A] and leading edge [B]

No.	Check Area	Check Item	Description
			<p>do not deviate.</p> 
		Margin length	<p>Check the margin length of the leading edge and trailing edge (sub scan direction). Overlay the chart and the copy, then check the erased length [A] (margin length).</p> 
		Perpendicularity	<p>Fold the paper, and check the deviation of the superimposed frame lines. If deviations in the main scan direction and sub scan direction are the same, it is a right angle.</p>  <ol style="list-style-type: none"> 1. Check the lengths between the leading edge and front end frame line at measuring positions [A] and [B]. 2. Check the lengths between the side edge and lateral frame line at measuring positions [C] and [D]. <p>At this time, position [D] is equivalent to position [A], when making the fold line as shown in the above figure.</p> <ol style="list-style-type: none"> 3. Check the difference between 1 and 2. <p>If each deviation is different, it is a parallelogram image (non-right angle).</p> <p>If the deviations are the same, it is a right angle. If there are deviations, check the feed mechanism for errors such as</p>

No.	Check Area	Check Item	Description
			<p>skewing.</p> <p>Example:</p>  <p>1: Right angle, correct feeding 2: Right angle, incorrect feeding (Oblique feeding) 3: Non-right angle, correct feeding (Parallelogram) 4: Non-right angle, incorrect feeding (Oblique feeding+Parallelogram)</p>
		<p>Linearity</p>	<p>Check the linearity with a scale. Check in both the main scan direction and sub scan direction.</p> <p>Overlay the scale on any frame line, adjust to a position where the frame line is not hidden, and measure the most distant position. If difficult to check, draw an auxiliary baseline in position with no distortion to the frame line, and measure the deviation length from the baseline with the scale.</p>  <p>A: Measuring length, B: Base line, C: Copy</p> <p>If meandering, measure the maximum amplitude. If difficult to measure, draw an auxiliary baseline, measure the deviation length from the baseline with the scale, and sum it up.</p>  <p>A: Measuring length, B: Base line, C: Copy</p>
2	Cornfield	Resolution	<p>Check the number next to the finest set of lines that can be</p>

No.	Check Area	Check Item	Description
	pattern		<p>distinguished from each other clearly, and do not blur into each other. The intervals between lines in the chart are the following, in 15 steps. A higher number means a finer image (higher resolution).</p> <p>2.0/2.2/2.5/2.8/3.2/3.6/4.0/4.5/5.0/5.6/6.3/7.1/8.0/9.0/10.0 [lines/mm]</p> 
3	Colored L-shaped lines	Color registration errors	<p>Check the distances [A] between the colors making up the RGB lines (Y+M/ Y+C/ C+M), using a loupe.</p> 
4	Solid color patches	Solid density	Check the density of each color patch between the chart and the copy .
5	13 gradations scale	Halftone density	Check that the density of each color patch in the 3rd row in the chart and the copy are the same.
		Gray balance	Check that the K density of the 3rd and 5th rows in the chart and the copy are the same.
		Gradation	On the copy, check that the densities of each color patch in the 11th and 12th rows are different.
		Equal magnification (main scan direction)	<p>Check that the magnification is equal in the chart and the copy using the scale under the gradation patches.</p> <p>The scale is 10mm per row. Check 10 consecutive rows.</p>  

No.	Check Area	Check Item	Description
6	Halftone area	Gray color difference	Check that the density in the chart and the copy is the same. There must be no unevenness in density between the front, rear, and middle.
7	Solid area	Solid filling	Check that there is no density unevenness in solid color. There should be no color unevenness in density between the front, rear, and middle.
8	Low contrast characters	Reproducibility of low contrast	Check that "C0.4" is readable in the copy when using the center notch (notch 5). In addition, "E0.2" must be deleted. 
9	Six sizes of characters	Character reproducibility (no broken lines or blurred characters)	Check the minimum size of characters that are readable, and that have no broken lines or blurred characters.
10	Gray patches	Gray color difference and density	Check that the color and density of the 3rd row in the chart and the copy are the same.
11	Color patch	Color reproducibility	Check that the density of each color (KCMYRGB) in the chart and the copy are the same.
		Color reproducibility of 2nd generation	Check that the density in the chart and a 2nd generation copy are the same.
12	Radial lines	Jagged slanting lines	Check that the lines in the copy are not rough or jagged. 
		Broken slanting lines	Check that the lines in the copy are not broken.
13	Color bold text	Solid color filling	Check that there is no missing color and no unevenness in RGB (YM/YC/CM) solid colors.
14	Color text	Color text reproduction	Check that the reproduced image is the same as the chart.

No.	Check Area	Check Item	Description
			<p>The following diagram shows examples of errors.</p> 
15	Horizontal scale	Image position in the main scan direction (Whether the image is at the center of the paper)	<p>In the copy, check the distance between the center line made by folding the paper and the line at the center of the chart.</p> <p>Trim pattern adjustment for each paper feed tray must be completed before checking.</p>  <p>A: Center line, B: Fold line, C: Distance between the center line and the fold line</p>
16	Vertical scale	Equal magnification (Sub scan direction)	<p>Check the magnification error in the sub scan direction using the crossed lines 100mm away from the leading and trailing edges of the paper</p> 
17	Lot number	-	Shows the lot number of the test chart.
18	Chart name	Reproduction of black characters	Check that the reproduced image is the same as the chart.
19	Portrait photograph	Reproducibility of the skin, hair, and clothes	<p>Make a copy after setting the document type to photo mode, and check the reproducibility of the photo.</p> <p>Check the reproducibility of the granular state, and tone of color in the skin, hair, and clothes. Also check for overexposure and underexposure.</p>

No.	Check Area	Check Item	Description
20	Landscape photograph	Reproducibility of sky blue	<p>Make a copy after setting the document type to photo mode, and check the reproducibility of the photo.</p> <p>Check that the color tone of the chart and the copy are the same.</p>
21	Notes	Check the reproducibility (for example, there should be no breaks in frame lines and characters).	<p>Check the reproducibility, such as the presence of breaks in frame lines and characters.</p> <p>There is a place for writing down the output settings when you print the image samples and/or compare adjustments.</p>

SYSTEM MAINTENANCE

5. SYSTEM MAINTENANCE

5.1 SERVICE PROGRAM MODE

5.1.1 SP TABLES

See "Appendices" for the following information:

- Service Program Mode
- SP Tables - SP1-XXX
- SP Tables - SP2-XXX
- SP Tables - SP3-XXX
- SP Tables - SP4-XXX
- SP Tables - SP5-XXX
- SP Tables - SP6-XXX
- SP Tables - SP7-XXX
- SP Tables - SP8-XXX
- Printer SP Mode
- Scanner SP Mode
- Input and Output Check

5.2 OVERVIEW OF FIRMWARE UPDATE

Note

- The firmware is basically supplied as a package. However, an individual firmware module may be provided on special occasions, such as for correcting a problem.

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 four ways to update using the firmware package.

- SD Card

By downloading the firmware package to an SD card in advance, you can update the firmware when there is no network connection.

- SFU (Smart Firmware Update)

Operate the machine to download the firmware package from the server, either immediately or at the programmed date and time.

- RFU (Remote Firmware Update)

You can have the firmware package sent from the call center to the machine over the network for automatic firmware update.

- ARFU (Automatic Remote Firmware Update)

The machine automatically checks the server for firmware packages every 76 hours. If there is a newer package than that on the machine, that package is downloaded for firmware update.

Types of firmware update files, supported update methods:

	SD Card	SFU	RFU	ARFU
Individual firmware	Available	N/A	Available	N/A
Firmware package	Available	Available	Available	Available

5.3 FIRMWARE UPDATE BY SD CARD

5.3.1 OVERVIEW

★ Important

- An SD card is a precision device, so when you handle an SD card, respect the following.
 - When the power is turned ON, do not insert or remove a card.
 - During installation, do not turn 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 the firmware, disconnect the network cable and remove the wireless board from this machine (so that they are not accessed during the update).
- If SC818 is generated during the software update, switch the power OFF -> ON, and complete the update which was interrupted.

5.3.2 PREPARATION

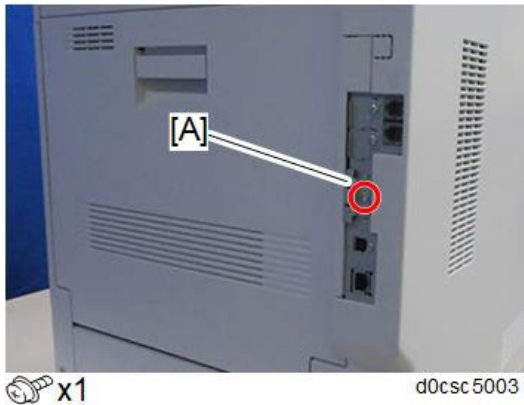
- If the SD card is blank, copy the entire "romdata" folder onto the SD card. Make sure that the folder "romdata" is in lower characters.
- If the SD card already contains the "romdata" folder, copy the "D0CS (machine code)" folder onto the card.
- If the card already contains folders up to "D0CS (machine code)", copy the necessary firmware files (e.g. D0CSxxxx.fwu) into this folder.

↓ Note

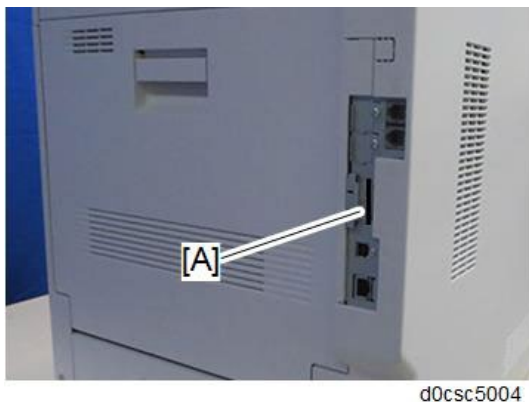
- Do not put multiple machine firmware programs on the same SD card. Copy the only model firmware you want.

5.3.3 UPDATING PROCEDURE

1. Download the new firmware to the SD card.
2. Turn OFF the main power.
3. Remove the SD card slot cover [A].



4. Remove the pre-installed SD card for logging.
5. Insert the prepared SD card into the SD card slot (service slot) [A].

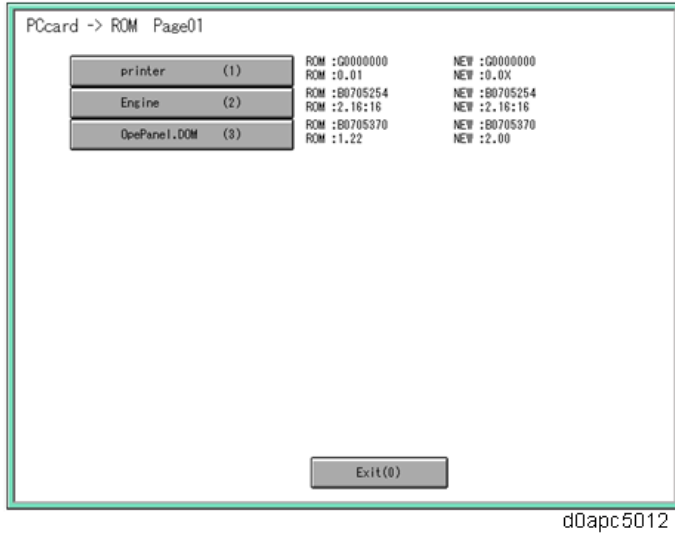


Note

- Check whether the card is properly in the SD card slot. When an SD card is inserted, a click is heard, and it is locked.

6. Turn ON the main power.
7. Wait until the update screen starts (about 45 seconds).
When it appears, "Please Wait" is displayed.

8. Check whether a program installation screen is displayed. (The screen is always in English, regardless of the machine's language settings.) When the SD card contains two or more software modules, they are displayed as follows.

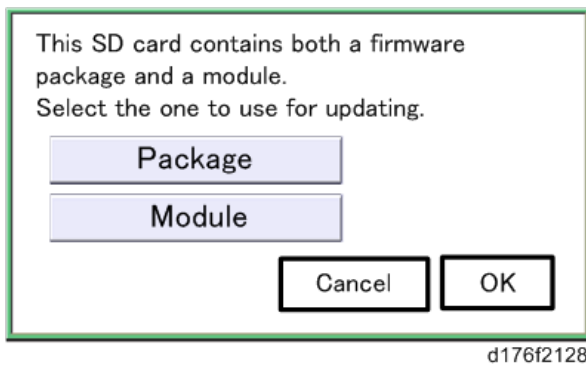


Note

When the SD card contains both a firmware package and one or more modules, the following display may show up. Select the [Module] and touch [OK] to move above.

If you want to update the package firmware, refer to "Firmware Update (Smart Firmware Update)

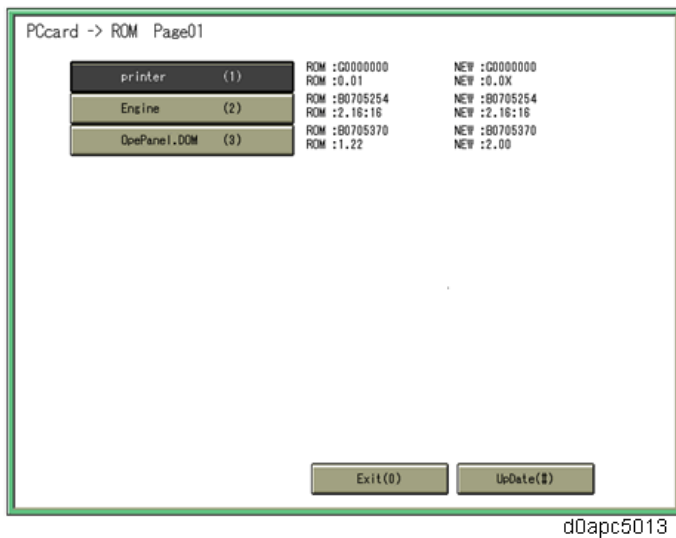
> **Update via SD card"**



9. Select the modules you want to update. The selected module is highlighted, and [Update] are displayed.

Note

- Depending on the combination of modules to update, it may not be possible to select all of them simultaneously.

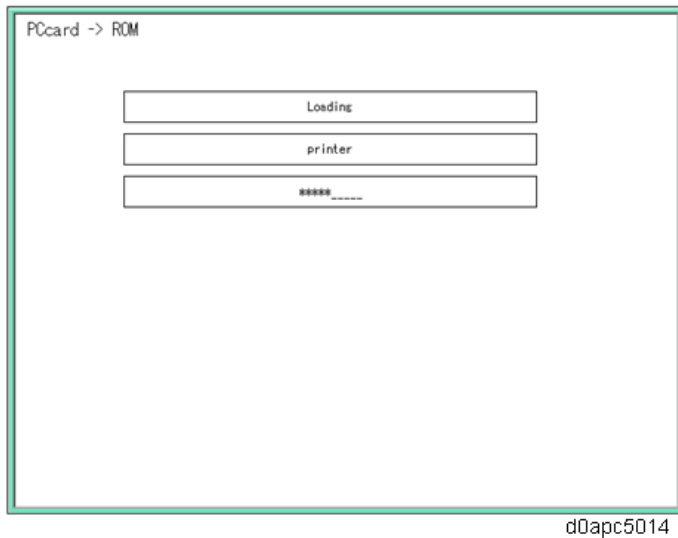


ROM/NEW	Contents
ROM:	Display installed module number (upper row)/ version information (lower row).
NEW:	Display module number (upper row)/ version information (lower row) on the SD card.

10. Press the [Update]. The software will be updated.

11. During the firmware update, a "firmware update/ verification progress screen" is displayed. When the firmware update is complete, the "firmware update end screen" is displayed.

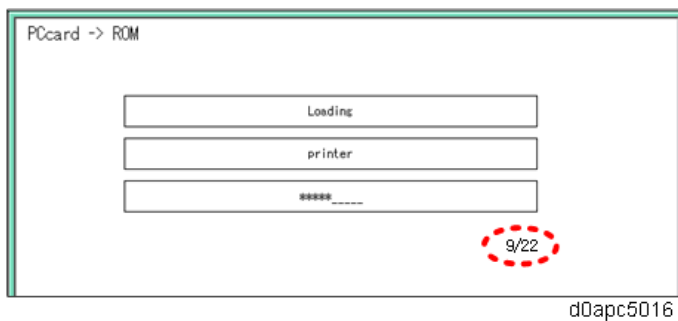
- In the middle row, the name of the module currently being updated is displayed (in this case, the printer module is being updated).
- In the lower row, a progress bar is displayed in ten steps. (The more *, the more the progress.)



d0apc5014

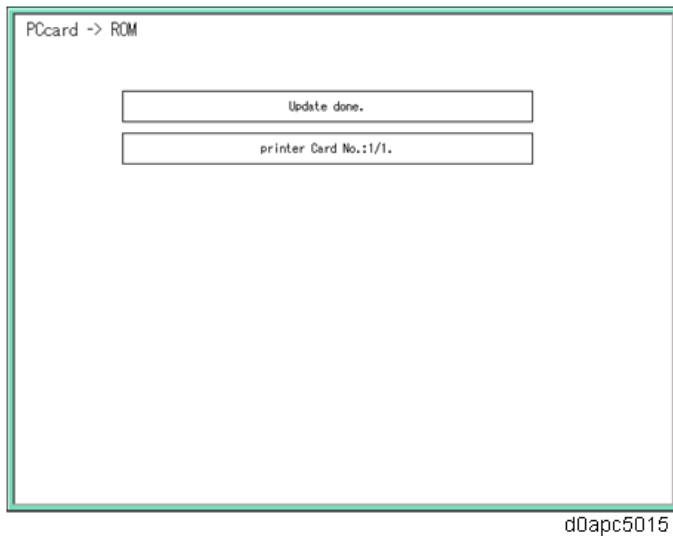
Note

The figures at the lower right of the display indicate "Number of updated items/ All items to be updated".



d0apc5016

12. When the update was completed normally, the "Update done" is displayed.



13. Turn OFF the main power.

14. Remove the SD card from the SD card slot.

15. Insert the SD card removed in Step 4.

16. Turn ON the main power again, and then check whether the machine is operating normally.

17. Attach the SD card slot cover removed Step 3.

18. Enter the SP mode, and then select SP5-858-002 (Collect Machine Info: Save To (0:HDD 1:SD)).

19. Make sure that SP5-858-002 is set to "1" (SD Card). If it is set to "0", change to "1" so that the logs can be captured.

Note

- When the power supply is switched OFF during the firmware update, the update process is interrupted, and when the power is switched ON again, normal operation cannot be guaranteed.
- To guarantee operation, an update error continues to be displayed until the 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.

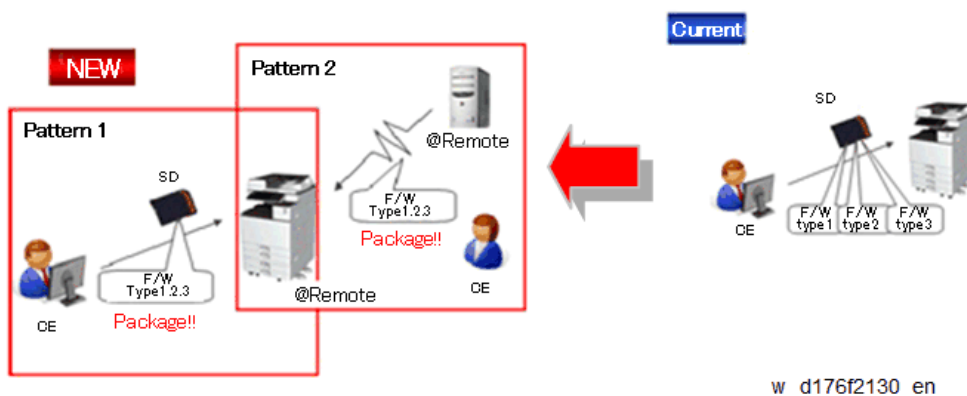
5.4 FIRMWARE UPDATE (SMART FIRMWARE UPDATE)

5.4.1 OVERVIEW

Previous update method was consisted of modules (System/Copy, Engine etc.). However, current application is all-inclusive (System/Copy, Engine etc.) firmware packages.

There are two ways to update using the package firmware update:

- Via the network: SFU (Smart Firmware Update)
- Or using 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.

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.

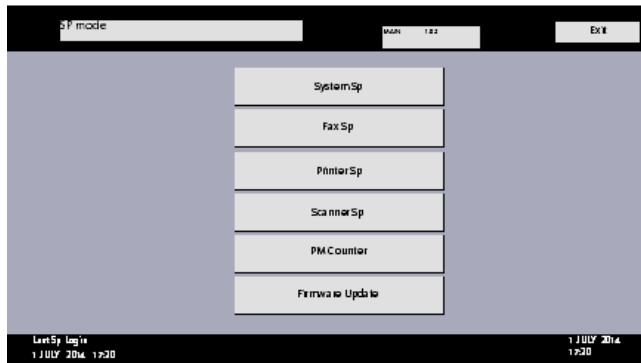
5.4.2 IMMEDIATE UPDATE

Enter the [Firmware Update] menu in the SP mode and update the package firmware.

Note

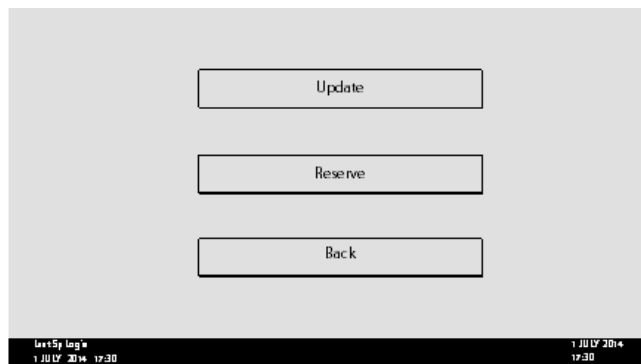
- The [Firmware Update] button will appear even when a machine is connected to @Remote with a device which does not have an embedded @Remote communicating function.
- If an error code is displayed, refer to Error screens during updating (**Error Screens during Updating**).

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



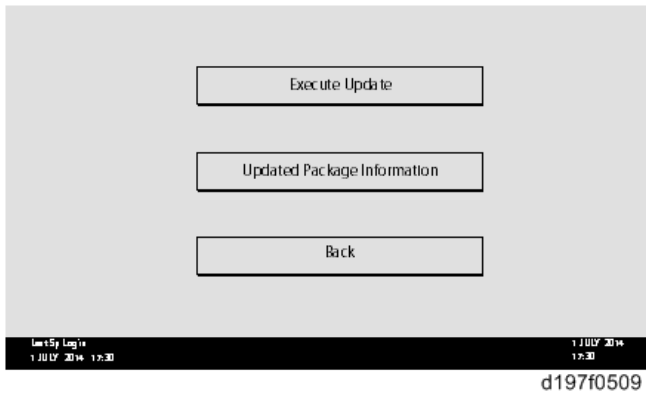
d197f0507

3. Press [Update].

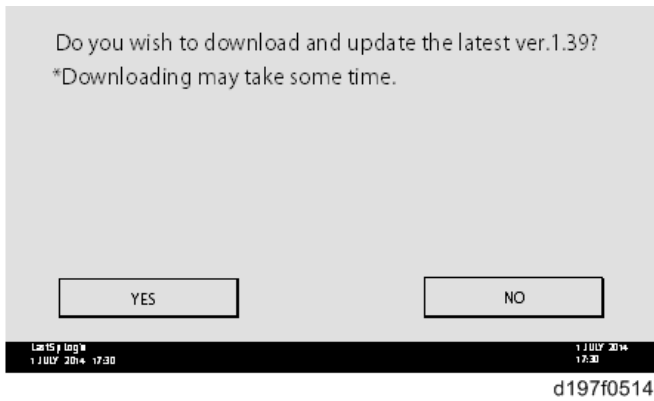


d197f0508

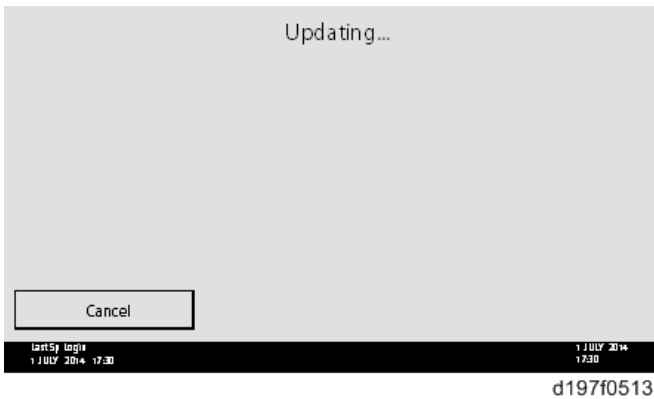
4. Press [Execute Update].



5. Press [YES].

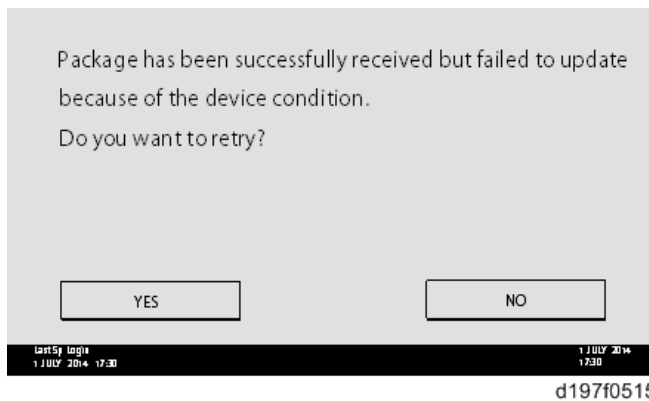


6. The following screen will be displayed.



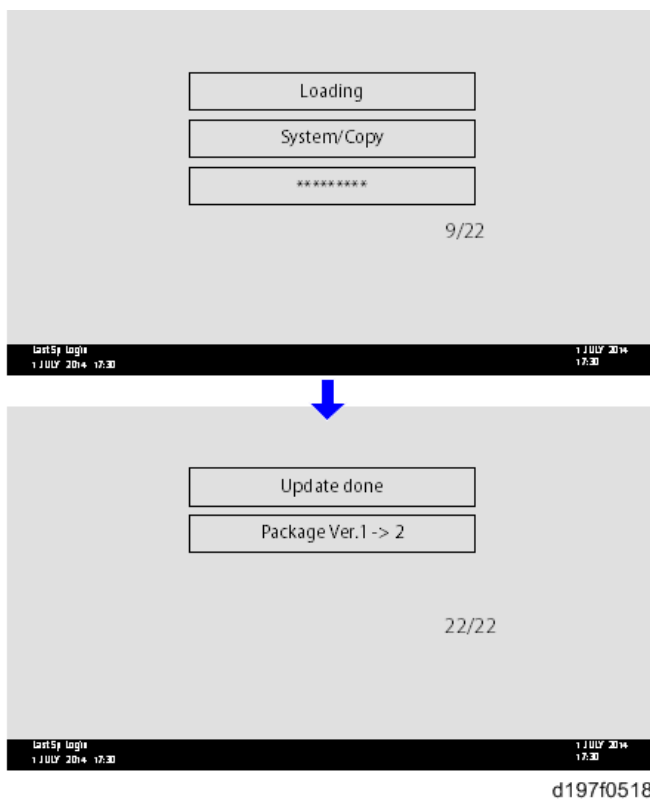
Note

- If the error code E66, which indicates that the download of the firmware has failed, is displayed, implement this procedure from 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 implemented. After the print job is finished, Press [YES] on the display shown with the following picture to restart updating.



7. [Update done] is displayed.

- The machine will automatically reboot itself.



Note

- The figures at the right bottom part of the status indicators “Number of updated items/ All items to be updated”.



5.4.3 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 the waiting time for the firmware to download at the service visit.

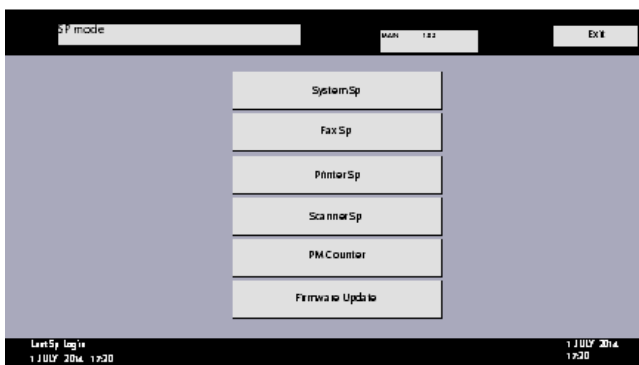
How to Set the Machine to Download Firmware Later (Reserve)

Enter the [Firmware Update] menu in the SP mode and update the package firmware.

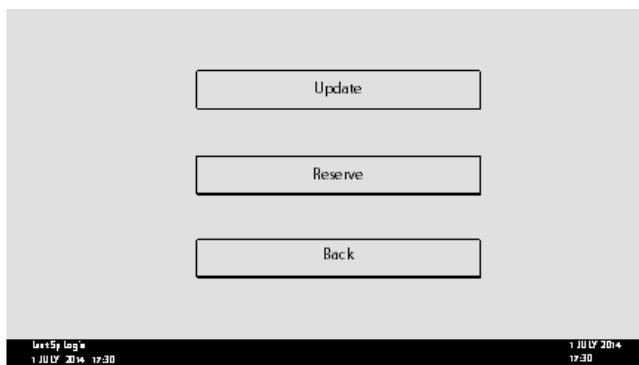
Note

- 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.

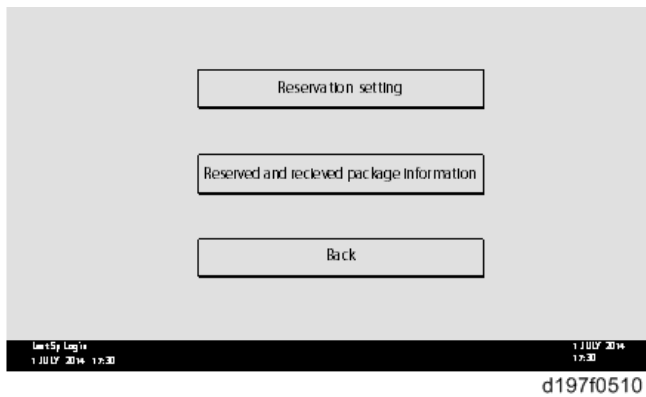
1. Enter the SP mode.
2. Press [Firmware Update].



3. Press [Reserve].

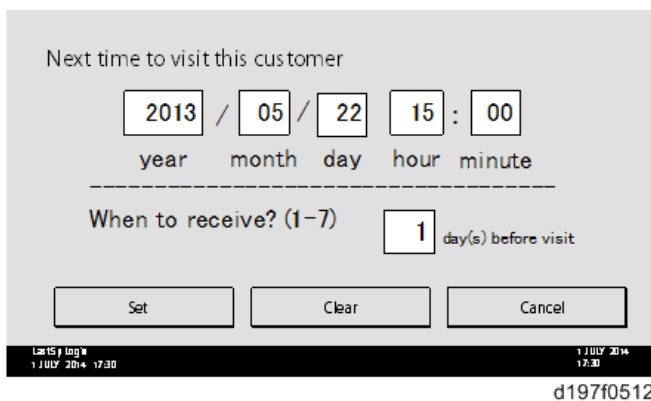


4. Press [Reservation setting].



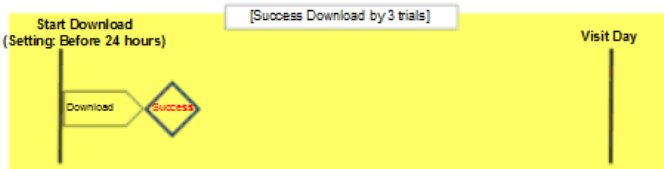
5. Enter the dates and times of the next visit and start of receiving data.

- "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.



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.

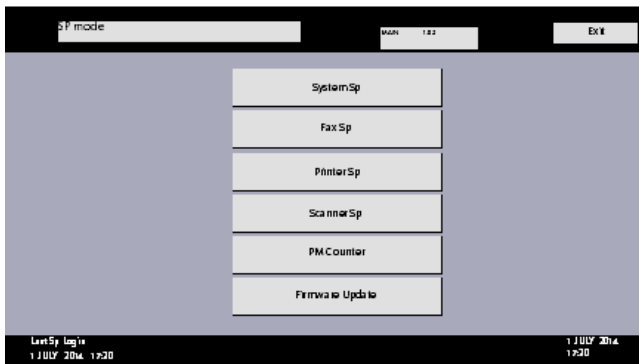


w_d197f0507_en

- 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 OFF the main power 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.

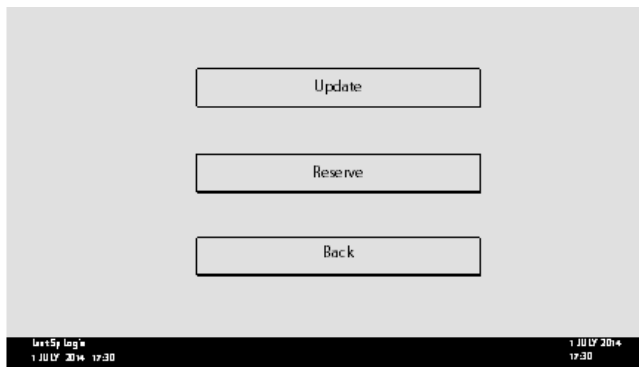
How to Check if the Firmware Downloaded with Reserve

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



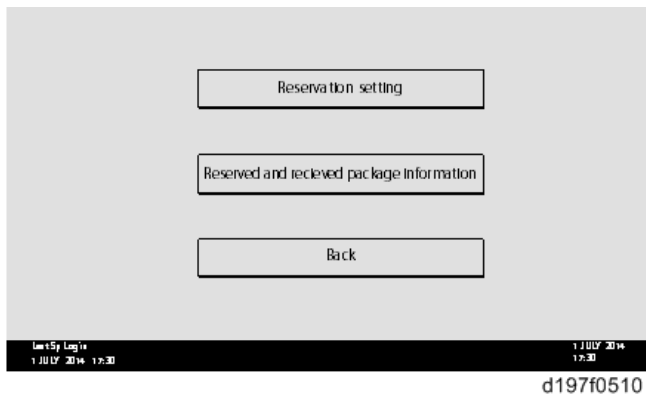
d197f0507

3. Press [Reserve].



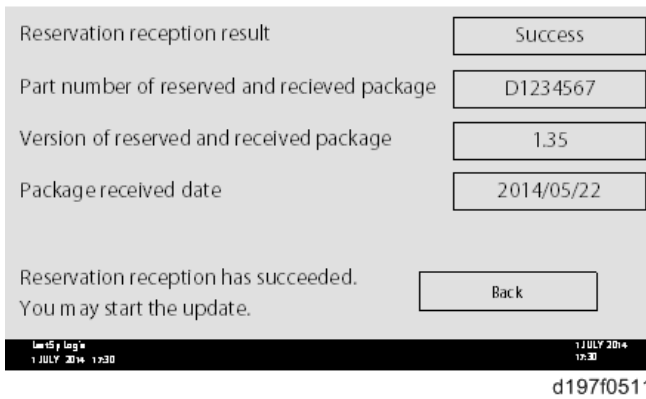
d197f0508

4. Press [Reserve and received package information].



5. Check the information displayed.

When the package firmware is downloaded successfully, the details of the download result are displayed as the following picture shows.

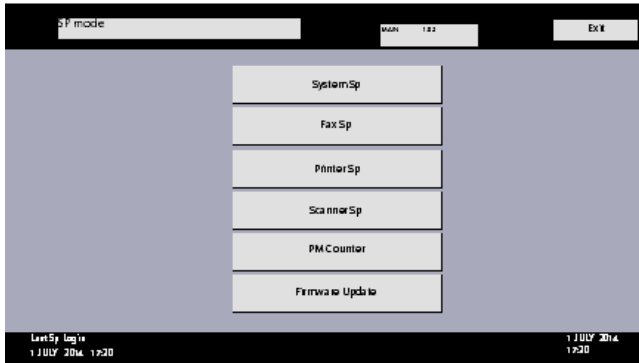


Note

- This information will only be displayed if the reserved firmware has already been downloaded. If not, all the data items are indicated with “-”.

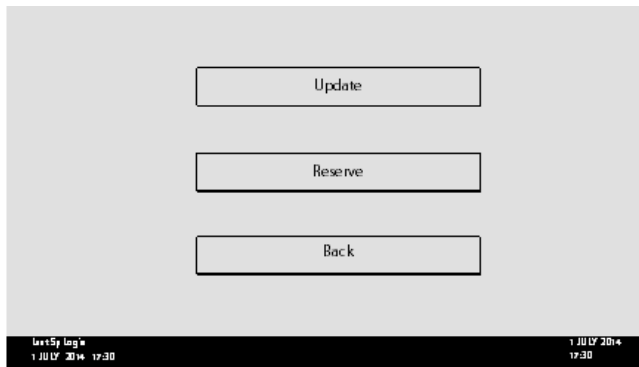
How to Install Firmware Downloaded with Reserve

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



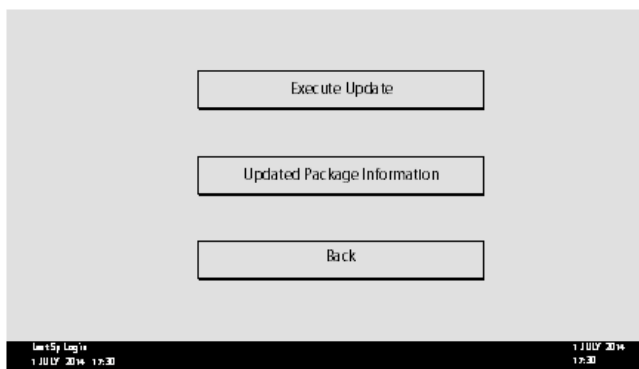
d197f0507

3. Press [Update].



d197f0508

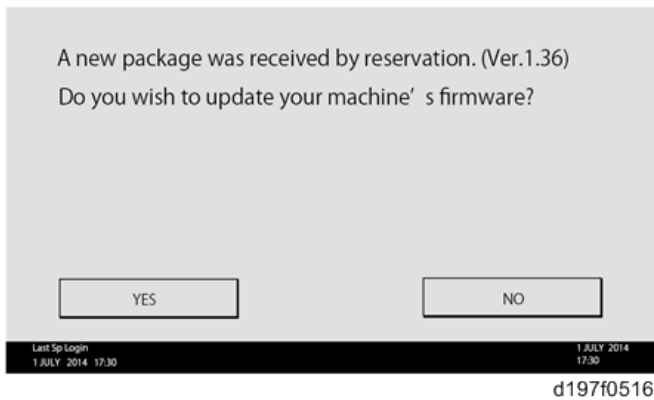
4. Press [Execute Update].



d197f0509

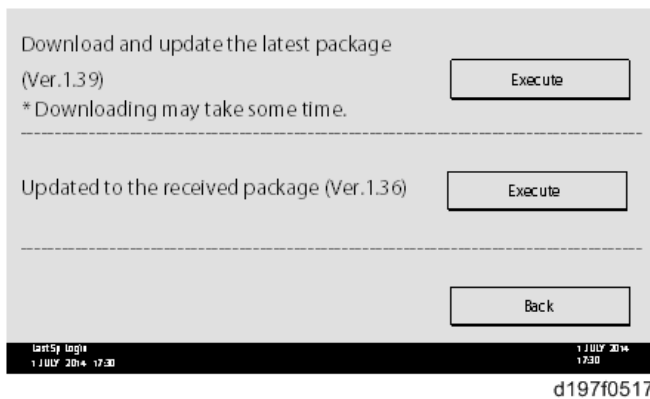
5. Check the version of the received package firmware, and then Press [YES].

- The update is started.



Note

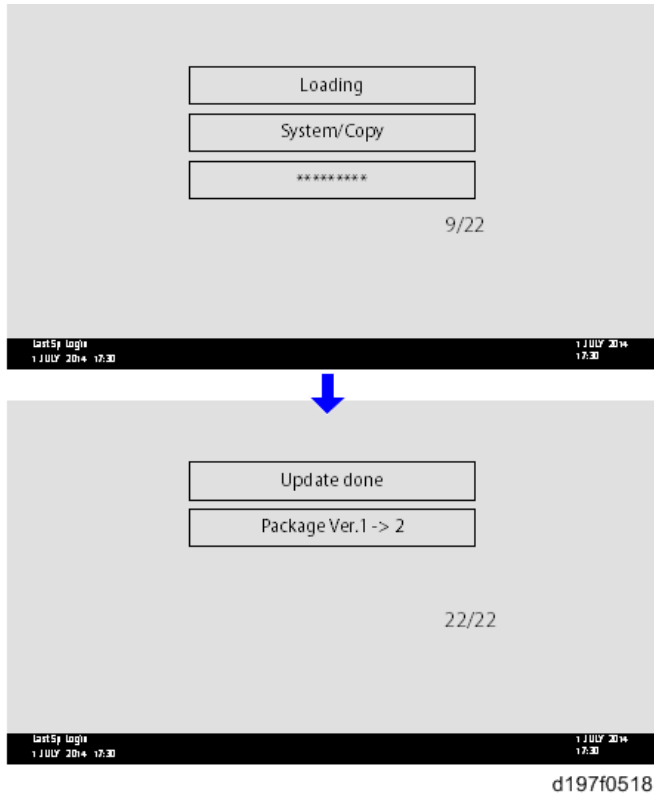
- If the version of the reserved package in the memory is older than the latest version, the messages shown in the following picture are displayed.



- If you wish to download the latest version, Press [Execute] beside the message “Download and update the latest package.” Then the update of the package firmware will be started.
- If you wish to update using the firmware in the memory (old version), Press [Execute] beside the message “Update to the received package.”

6. [Update done] message is displayed.

- The machine will automatically reboot itself.



Note

- The figures at the lower right of the display indicate “Number of updated items/ All items to be updated”.

5.4.4 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

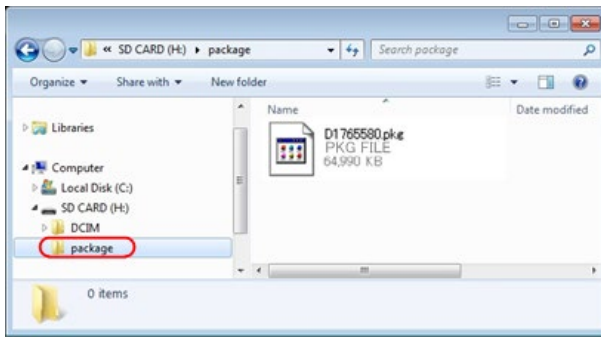
- If an error code is displayed, refer to ***Error Screens during Updating***.

1. Create a new folder called "package" in small letters on an SD card.

Important

- If you create a folder named in capital letters, the update will not work.

2. Copy the package firmware (xxxxxxx.pkg) to this folder.



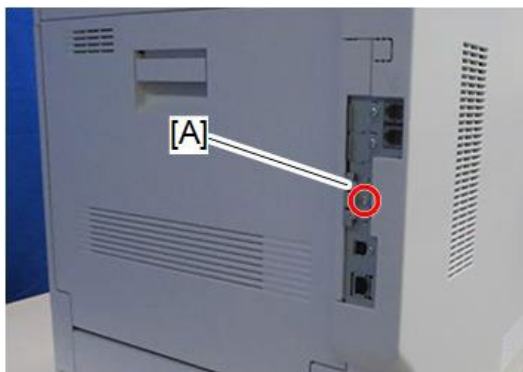
d197f0504

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 OFF the main power.

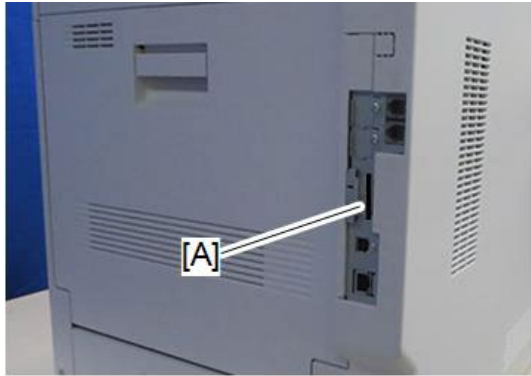
4. Remove the SD card slot cover [A].



⚙️ x1

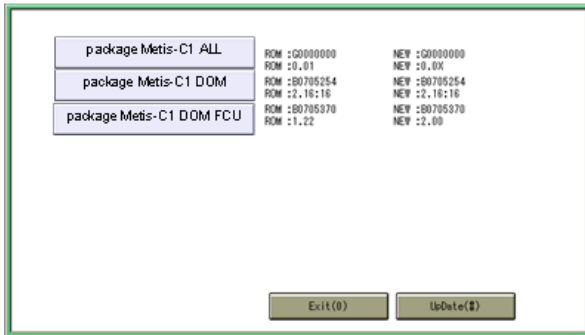
d0csc 5003

5. Remove the inserted SD card for logging.
6. Insert the SD card which contains the package into SD card slot [A].



d0csc5004

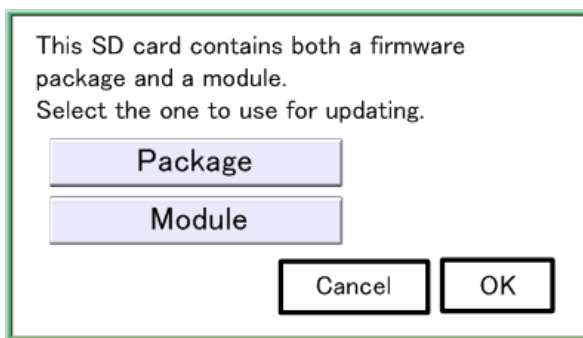
7. Turn ON the main power
8. Press [Update].



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Note

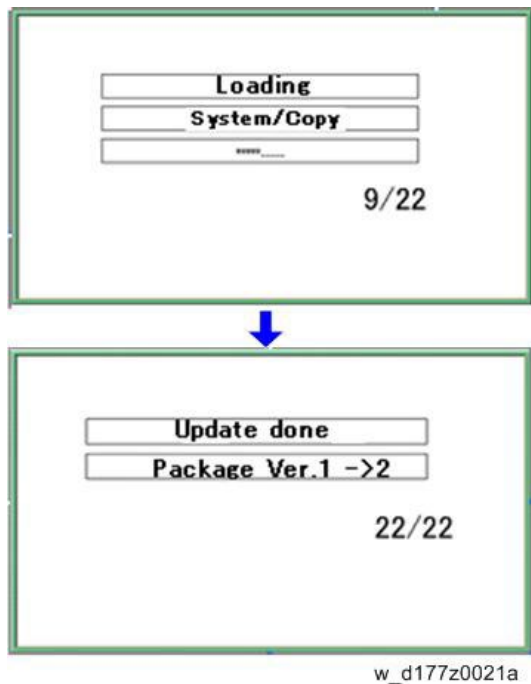
- When the SD card contains both a firmware package and one or more modules, the following display may show up. Select [Package] and Press [OK] to move to step 4 above.



d176f2128

9. The update is started automatically after the package firmware download to the memory has been completed.

10. When the update is completed, "Update done" is displayed.



Note

- The figures at the lower right of the display indicate "Number of updated items/ All items to be updated".

11. Turn OFF the main power.

12. Remove the SD card from the SD card slot.

13. Insert the SD card removed in Step 5.

14. Attach the SD card slot cover

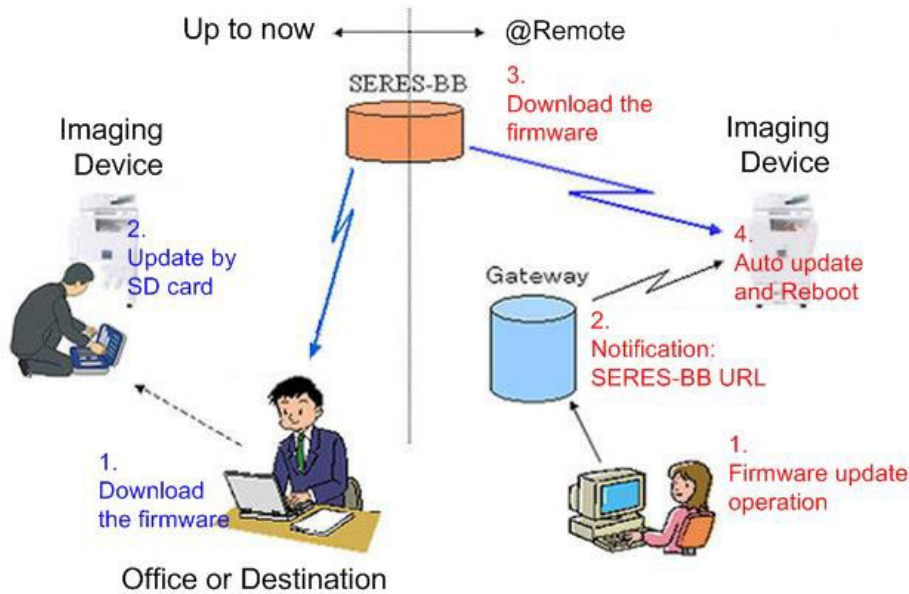
15. Turn ON the main power.

16. Enter the SP mode, and then select SP5-858-002 (Collect Machine Info: Save To (0:HDD 1:SD)).

17. Make sure that SP5-858-002 is set to "1" (SD Card). If it is set to "0", change to "1" so that the logs can be captured.

5.5 FIRMWARE UPDATE (REMOTE FIRMWARE UPDATE)

In this machine, the software can be updated by remote control using @Remote.



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5.5.1 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 device is connected to a network via TCP/IP for @Remote.

5.6 FIRMWARE UPDATE (AUTO REMOTE FIRMWARE UPDATE)

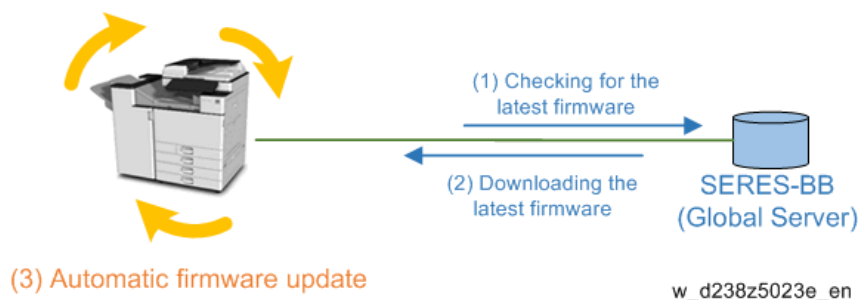
Note

- Auto remote firmware update (ARFU) requires a connection to an external network. Be sure to get permission from the customer before setting.
- Internet connection is needed.

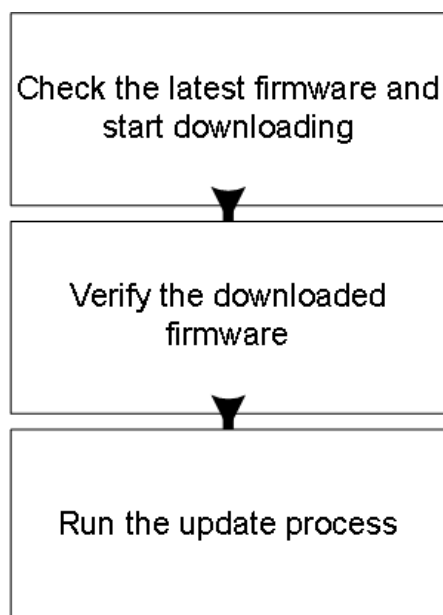
5.6.1 OVERVIEW

Using Auto Remote Firmware Update (ARFU), the machine checks package firmware files on the global server every 76 hours. If there is a version available newer than the one on the machine, the machine downloads the file to update the machine's package firmware.

Function Overview



5.6.2 DOWNLOADING AND UPDATING PROCESS



w_d238z5024f_en

Latest Package Download

The machine accesses the server to check for 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 the 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.

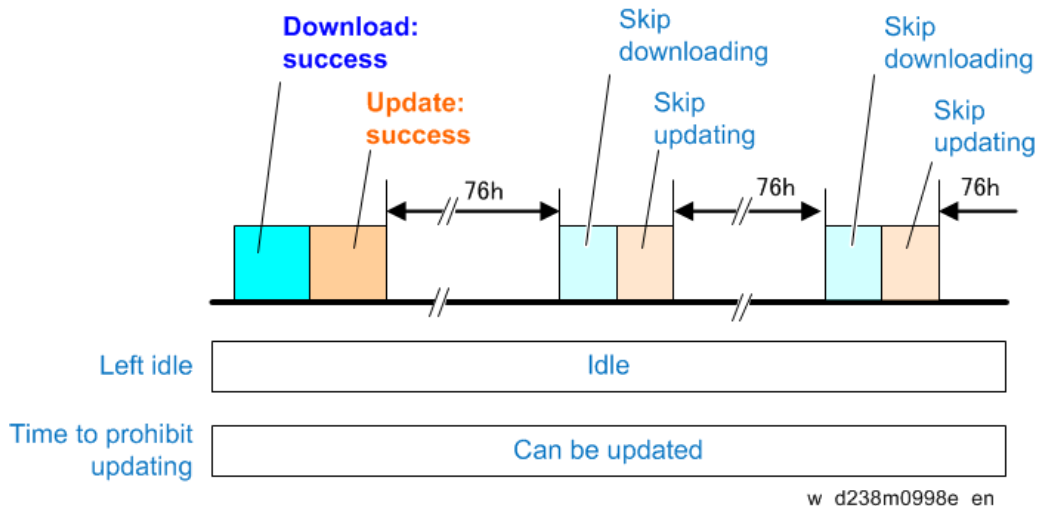
When the machine connects to the server where the package files are stored, the DNS settings and the name solution by DNS is needed. The machine will still try to download the package even if the name cannot be resolved, but will fail as the name is not resolved.

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).

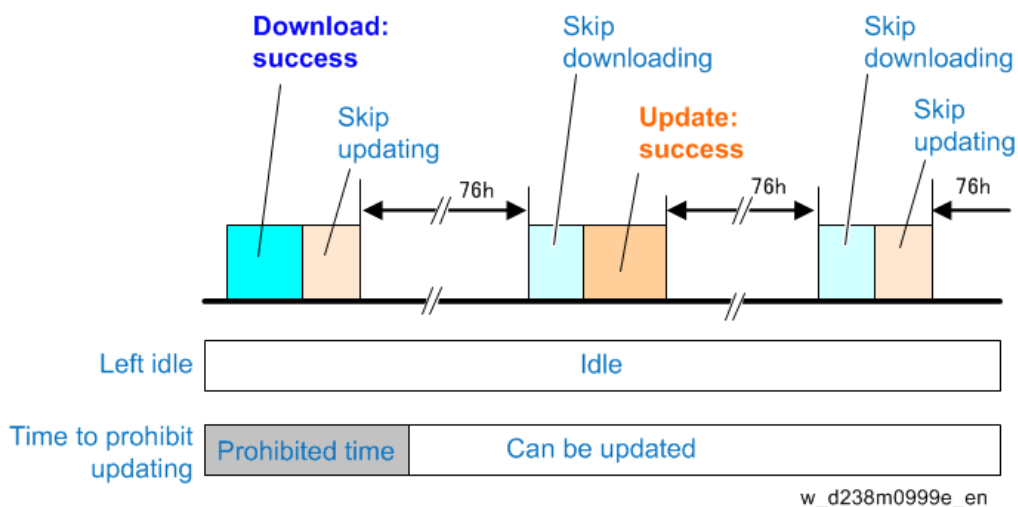
The auto remote firmware update is executed every 76 hours.

Validation of ARFU

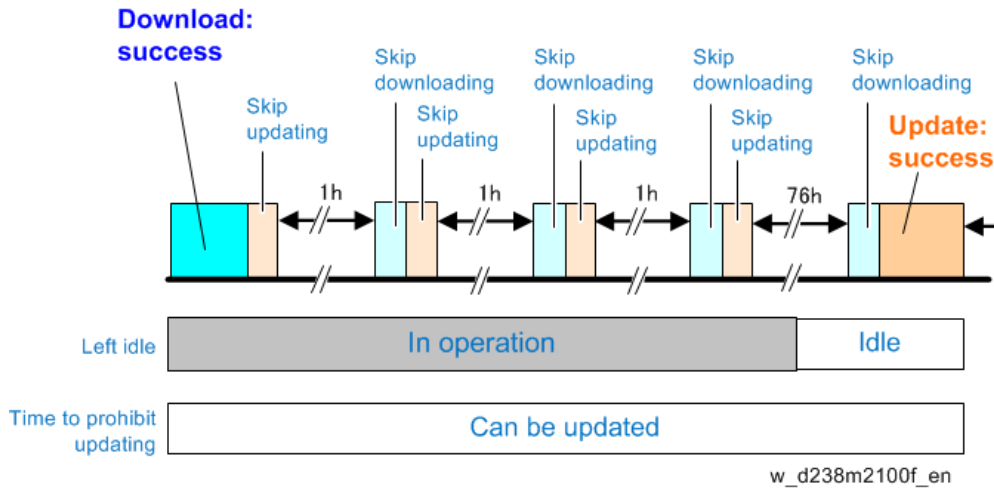
Update validation is done when the latest update package is successfully downloaded, or the package has already been downloaded.



If the validation 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 validation process runs, the process will be 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.



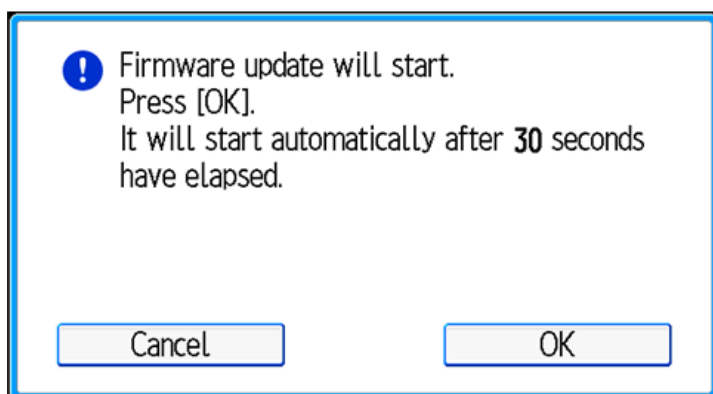
Situations validated as the machine in use

No.	Situations validated as the 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 the network
7	While initial setting (User Tools settings) or SP is being set
8	While fax is transferring data
9	During on-hook / on the 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 the firmware update due to the modules that are running e.g.) Waiting for DCS transfer (refer to appendix), accessing devices such as eMMC/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

No.	Situations validated as the machine in use
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
22	While shutting down
23	While importing or exporting preferences
24	Until rebooting after changing settings that require a reboot (A reboot notification message pops up after changing the settings)
25	While verifying operation panel firmware on startup

Update Process

When the machine has decided to run the auto firmware update, the following message is displayed.



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“Cancel” and “OK” buttons appear in the dialog box. Update can be manually started by pressing “OK” or starts automatically if the button is not pressed for 30 seconds.

If “Cancel” is pressed, the machine will perform the same retry process as when the machine is in use at the time of update.

If the firmware update and three retries fail, the SC of the defective module during update will be displayed as the update error. If the following SC occurs, replacing the corresponding device restores the machine. The SC will not be reported to the call center.

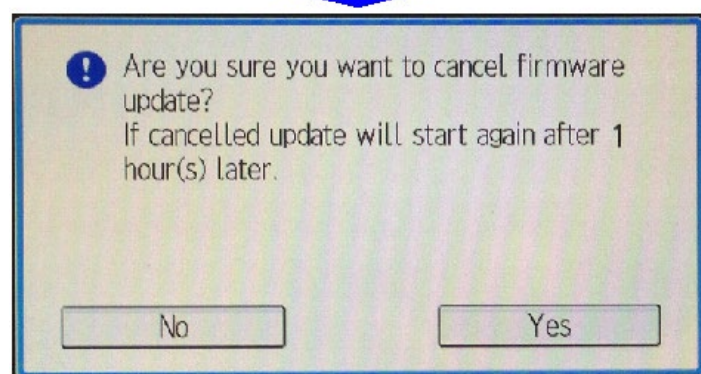
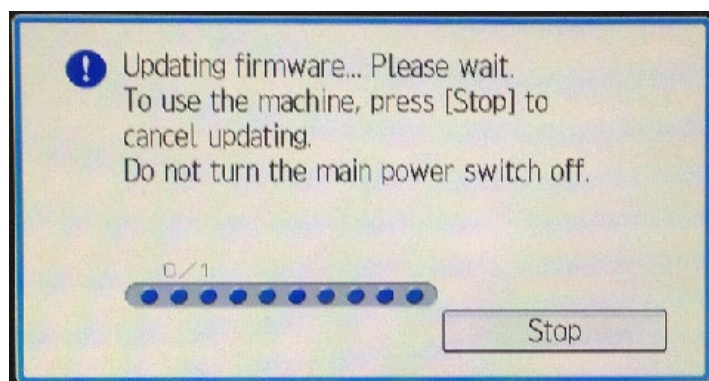
Device and corresponding SC number.

Device name	SC number
MCU (Engine board)	SC845-01
Controller board	SC845-02
Operation panel (normal panel) *1	SC845-03
Operation panel (smart panel)	SC845-04
FCU	SC845-05

*1 Not available for this machine

Cancellation of update by user

Using the operation panel, the user can cancel the update (including update through the retry process) being performed by Auto Remote Firmware Update (ARFU).



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However, while the firmware of the operation panel is being updated, cancellation is not possible because the keys are disabled.

(Since the update of the operation panel firmware is performed at the end, you cannot cancel the update at this point.)

If the update is canceled, the machine will reboot when the firmware update of all modules included in the following parts is complete.

1. MCU (Engine board)
2. FCU (Fax controller board)
3. Controller board
4. Operation panel

For example, if the first firmware update for the Controller board is canceled, the machine will reboot when the firmware update of all modules included in the Controller board is complete.

The firmware configuration contained in the package is listed in the accompanying SERES release note.

If the update is canceled, it will be performed again 76 hours later. If there is a difference in version between the package obtained at that time and the one already stored (in other words, the one canceled), the old package will be discarded and the latest one will be received.

5.6.3 RELATED SP

SP Number	Selection (Bold is the default)	Overview
SP5-886-111	0: OFF 1: ON	Sets auto update ON/OFF by ARFU.
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. <ul style="list-style-type: none"> • 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 auto 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	Set time for the next version check after retrying.

SP Number	Selection (Bold is the default)	Overview
	1	
SP5-886-120	0x00	<p>The update will not run if the corresponding bit for each day below is set to 1.</p> <ul style="list-style-type: none"> • prohibited: bit7 • Monday: bit 6 • Tuesday: bit 5 • Wednesday: bit 4 • Thursday: bit 3 • Friday: bit 2 • Saturday: bit 1 • Sunday: bit 0 <p>This setting is not affected by the prohibited time setting. e.g.) Prohibited on Mon., Fri., Sat., and Sun. : 0x47 (01000111)</p>
SP7-520-011 to 015	Display only	<p>History of date and time when the update has started.</p> <p>The five most recent are recorded, the lowest number being the most recent.</p> <p>If the last update failed, this is not recorded.</p>
SP7-520-021 to 025	Display only	<p>History of date and time when the update has finished.</p> <p>The five most recent are recorded, the lowest number being the most recent.</p> <p>The record is created when the update has successfully finished.</p> <p>When the update is canceled, no record is created.</p>
SP7-520-031 to 035	Display only	<p>History of the package number (including suffix) for which update has completed.</p> <p>The five most recent are recorded, the lowest number being the most recent.</p> <p>The record is created when the update has successfully finished.</p> <p>When the update is canceled, no record is created.</p>
SP7-520-041 to 045	Display only	<p>History of the package version for which update has completed.</p> <p>The five most recent are recorded, the lowest number being the</p>

SP Number	Selection (Bold is the default)	Overview
		<p>most recent.</p> <p>The record is created when the update has successfully finished.</p> <p>When the update is canceled, no record is created.</p>
SP7-520-051 to 060	Display only	<p>History of the result of the download and the update.</p> <p>Refer below for the numbers set.</p>

Numbers set for the result history for SP7-520-051 to 060

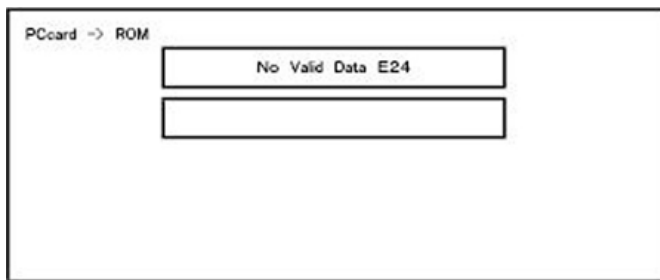
No.	Result	Description
1	Downloading with SFU	Cannot download or update as the machine is now downloading the package for SFU.
2	HDD uninstalled	Cannot download or update as the machine has no HDD.
3	Updating with SFU	Cannot download or update as the machine is being updated with SFU.
4	HDD error	Cannot 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 the 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

No.	Result	Description
		update was prohibited (SP5-886-120).
10	Update postponed due to the machine in use	<p>Cannot start update due to the following conditions when the update was initiated.</p> <ul style="list-style-type: none"> • The machine is in use by a user (the panel was used within 30 seconds) • Machine offline for other reasons • Operation prohibited • Displaying SP/UP menu • The firmware update is running with another method • Configuration change prohibited • Verifying the operation panel (smart panel)
11	Update canceled by the user	The update was canceled 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	The update was started and successfully completed.
14	Update failed	The update was started but failed.
15	Update canceled by the user after update initiated	The update was canceled after the process initiated because a user selected "Cancel" during the update.
16	Update deemed completed	<p>The update was canceled 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:</p> <ul style="list-style-type: none"> • 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 the 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.

Firmware Update (Auto Remote Firmware Update)

No.	Result	Description
20	Update download error (other than proxy verification failure when the 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	<p>After a power failure, unsuccessful update, or rebooting, update by retry is executed successfully.</p> <p>However, this does not apply to the case where the update was canceled after the process was initiated because a user selected "Cancel".</p> <p>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).</p>
23	Update data decompression has failed	<p>Receiving the update data successfully completed but failed to update because update data decompression failed.</p> <p>Data in the package file may be corrupted, or data may be garbled due to a defect in the memory.</p>

5.7 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.	<ul style="list-style-type: none"> • Switch the main power supply OFF and ON to try again. • Re-insert the removable media to reboot it. • Replace the controller board if the above solutions do not solve the problem.
21	Insufficient memory for the download	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • Switch the main power supply OFF and ON to try again. • Replace the removable media used for the update. • Replace the controller board if the above solutions do not solve the problem.
24	Removable media access error	<ul style="list-style-type: none"> • Re-insert the removable media. • Switch the main power supply OFF and ON to try again. • Replace the removable media used for the update. • Replace the controller board if the above

Code	Contents	Solutions
		solutions do not solve the problem.
32	<p>The removable media used after download suspension is incorrect.</p> <p>Removable media is different between the one which was inserted before power interruption and the one which was inserted after the power interruption.</p>	<ul style="list-style-type: none"> • Insert the removable media containing the same program as when the firmware update was suspended, and then switch the main power supply OFF and ON to try again. • There is a possibility that the removable media is damaged if the update cannot be done after the correct removable media has been inserted. In this case, try again with a different removable media. • Replace the controller board if the above solutions do not solve the problem. Replace all relevant boards if the update is done for the engine board and the fax board. Replace the operation panel unit if the update is done for the operation panel. • After replacing the unit, update it using the same removable media. If the update is successful, this error code disappears.
33	<p>Removable media version error.</p> <p>The wrong removable media version is downloaded.</p>	<ul style="list-style-type: none"> • Install the correct ROM update data for each version in the removable media.
34	<p>Destination error.</p> <p>A removable media for the wrong destination is inserted.</p>	<ul style="list-style-type: none"> • Install the correct ROM update data for each destination (JPN/ EXP/ OEM) in the removable media.
35	<p>Model error.</p> <p>A removable media for the wrong model is inserted.</p>	<ul style="list-style-type: none"> • Install the correct ROM update data for each model in the removable media.
36	<p>Module error.</p> <p>The program to be downloaded does not exist on the main machine.</p> <p>The download destination specified by the removable media does not match up to the destination for the main machine's</p>	<ul style="list-style-type: none"> • Install the program to be updated in advance. • There is a possibility that the removable media containing the program to be updated has not been mounted. Check to confirm that the removable media has been correctly mounted.

Code	Contents	Solutions
	program.	<ul style="list-style-type: none"> The removable media is incorrect if the program to be updated has been correctly installed. In this case, insert the correct removable media.
38	The version of the downloaded program has not been authorized for the update.	<ul style="list-style-type: none"> Make sure that the program to be overwritten is the specified version.
40	Engine download fails.	<ul style="list-style-type: none"> Switch the main power supply OFF and ON to try again. If this error occurs while using the media slot on the left side of the operation panel, perform a retry using the media slot on the back of the machine. If the download fails again, replace the controller board and the engine board. After replacing the unit, update it using the same removable media. If the update is successful, this error code disappears.
41	Fax download fails.	<ul style="list-style-type: none"> Switch the main power supply OFF and ON to try again. If the download fails again, replace the controller board and the fax board. After replacing the unit, update it using the same removable media. If the update is successful, this error code disappears.
42	Operation panel/language download fails.	<ul style="list-style-type: none"> Switch the main power supply OFF and ON to try again. If the download fails again, replace the controller board and the operation panel unit. After replacing the unit, update it using the same removable media. If the update is successful, this error code disappears.
43	Printing download fails.	<ul style="list-style-type: none"> Switch the main power supply OFF and ON to try again. The removable media is damaged if the update

Code	Contents	Solutions
		fails again. Replace the removable media.
44	The data to be overwritten cannot be accessed when controller-related programs are downloaded.	<ul style="list-style-type: none"> • Switch the main power supply OFF and ON to try again. • Install the correct ROM update data in the removable media. • Replace the controller board if the data to be overwritten is contained on the controller board.
49	Firmware updates are currently prohibited.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • Install the correct ROM update data in the removable media.
57	@Remote is not connected at the date/time reserved for receiving the package firmware update from the network.	<ul style="list-style-type: none"> • Check the @Remote connection.
58	Update cannot be done due to a reception route problem.	<ul style="list-style-type: none"> • Check the @Remote connection.
59	HDD is not mounted.	<ul style="list-style-type: none"> • Check the HDD connection.
60	HDD could not be used during the package firmware update.	<ul style="list-style-type: none"> • Try again. • Replace the HDD if the download fails again.
61	The module ID for the package firmware update is incorrect.	<ul style="list-style-type: none"> • Prepare the correct package files.
62	The configuration of the package firmware update files is incorrect.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • Reset the reservation date/time for the remote update.
65	Reception fails due to the status error of the	<ul style="list-style-type: none"> • Update is to be done automatically when the

Code	Contents	Solutions
	machine at the reserved date/time of the remote firmware update from the network.	next 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.	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> Check that the network is connected correctly.
68	Acquisition of the latest version information from the Gateway fails.	<ul style="list-style-type: none"> Check that the network is connected correctly.
69	Download fails at the reserved date/time of the remote firmware update from the network.	<ul style="list-style-type: none"> Check that the network is connected correctly.
70	Package firmware download from the network fails.	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> Set the setting of @Remote Service in the Administrator Tools to [Do not Prohibit].
74	Package file decompression has failed.	<ul style="list-style-type: none"> If this occurred during the update by the removable media, check that the removable media is not defective, download the package again, and retry the update. If this occurred during the remote firmware update (WIM and utility) in the local environment, replace the package file in the local environment with the correct one and retry the update. If this has occurred on other occasions or keeps occurring even on the above

Code	Contents	Solutions
		<p>mentioned occasions, replace the DIMM of the controller board.</p> <p>If it persists, replace the hard disk.</p>
75	The amount of update data has exceeded the limit. There is too much data in the removable media.	<ul style="list-style-type: none"> • Move “fwu” in the “/romdata” directory out of that directory so that the same modules are not located in the same directory.
83	Package RFU reception has been canceled by the user.	<ul style="list-style-type: none"> • Package RFU reception has been canceled by the user.
84	Package RFU reception timeout. The reception time has exceeded the limit (100 minutes).	<ul style="list-style-type: none"> • Check the network connection.
221	Failed to terminate an application when attempting to update or uninstall it.	<ul style="list-style-type: none"> • If a job is underway in the target application, wait until the job is finished, and then try updating again. • Power cycle the machine and try updating again.
222	Failed to verify the signature attached to the application or firmware.	<ul style="list-style-type: none"> • Try updating again using a valid signature.
224	The storage capacity is not enough.	<ul style="list-style-type: none"> • Reduce the number of applications to be installed. • Uninstall unnecessary applications.
228	The target firmware file cannot be found.	<ul style="list-style-type: none"> • Copy the correct update data and try updating again.
229	<p>The target update file is invalid. Occurs in the following cases.</p> <ul style="list-style-type: none"> • Failed to decompress the file. • Failed to obtain application information. • Failed to read the public key for signature verification. 	<ul style="list-style-type: none"> • Copy the correct update data and try updating again.
230	The folder directory of the Smart Operation Panel firmware is invalid.	<ul style="list-style-type: none"> • Copy the correct update data and try updating again.
231	Failed to write data when updating the Smart Operation Panel firmware. (There is a problem with the hardware.)	<ul style="list-style-type: none"> • Power cycle the machine and try updating again.

Code	Contents	Solutions
		<ul style="list-style-type: none"> • Replace the operation panel if the above solution does not solve the problem.
235	The target file is invalid, and the Android OS returns an error.	<ul style="list-style-type: none"> • Copy the correct update data and try updating again. • If the same application has already been installed, uninstall it and then try updating again.
236	The Android SDK version required by the application is not installed on the Smart Operation Panel.	<ul style="list-style-type: none"> • Check that the Android SDK version required by the application is installed on the Smart Operation Panel.
255	Software malfunction	<ul style="list-style-type: none"> • Power cycle the machine and try updating again.

5.8 NVRAM (EEPROM) DATA UPLOAD/DOWNLOAD

5.8.1 UPLOADING CONTENT OF NVRAM TO AN SD CARD

Do the following procedure to upload SP code settings from NVRAM to an SD card.

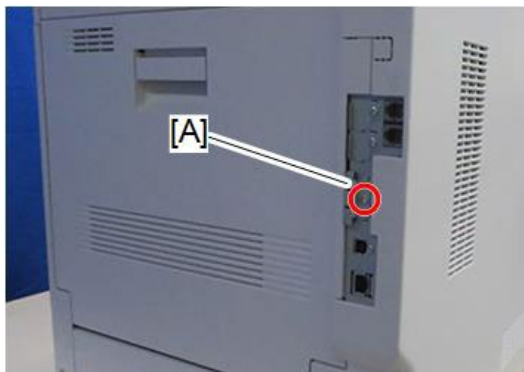
Note

- 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 turn 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.

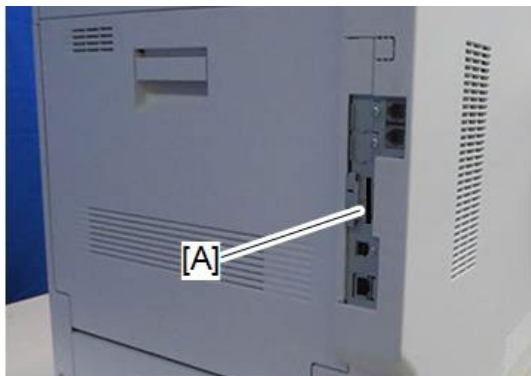
2. Turn OFF the power.
3. Remove the SD slot cover [A].



 x1

d0csc5003

4. Remove the pre-installed SD card for logging.
5. Insert the SD card into SD card slot (service slot) [A].



d0csc5004

6. Turn ON the main power.
7. Do SP5-824-001 (NVRAM Data Upload) and then press [Execute].

8. The following files are copied 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

9. 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.

Important

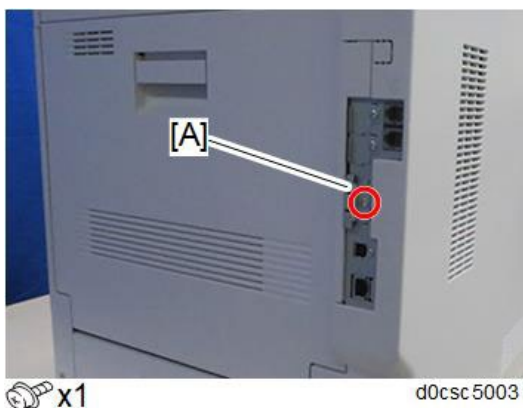
- Be sure to return the SD card for capturing logs after removing it.
- When the SD card for capturing logs is removed and the machine is turned ON again, make sure that the setting value of SP5-858-002 (Collect Machine Info: Save To (0:HDD 1:SD)) is "1". If it is set to "0", change to "1" so that the logs can be captured.

5.8.2 DOWNLOADING AN SD CARD TO NVRAM

Do the following procedure to download SP data from an SD card to the NVRAM in the machine.

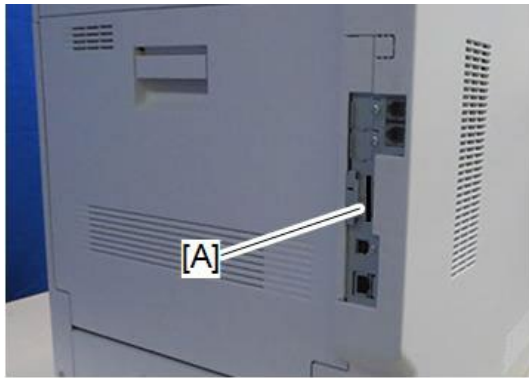
- The NVRAM data download may fail if the SD card with the NVRAM data is damaged, or if the connection between the controller board and the engine board is defective.
- Do the download procedure again if the download fails.
- Do the following procedure if the second attempt fails:
- Enter the NVRAM data manually using the SMC print you created before uploading the NVRAM data.

- Turn OFF the power.
- Remove the SD card slot cover [A].



- Remove the pre-installed SD card for logging.

4. Insert the SD card into SD card slot (service slot) [A].



5. Turn ON the power.

6. Do SP5-825-001 (NVRAM Data Download) and press [Execute].

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

Important

- Be sure to return the SD card for capturing logs after removing it.
- When the SD card for capturing logs is removed and the machine is turned ON again, make sure that the setting value of SP5-858-002 (Collect Machine Info: Save To (0:HDD 1:SD)) is "1". If it is set to "0", change to "1" so that the logs can be captured.

5.9 ADDRESS BOOK UPLOAD/DOWNLOAD

Use the Web Image Monitor to backup and restore the address book.

For the procedure, refer to the user's manual.

5.10 SMC LIST CARD SAVE FUNCTION

5.10.1 OVERVIEW

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 SD card slot on the operation panel.

★ 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.

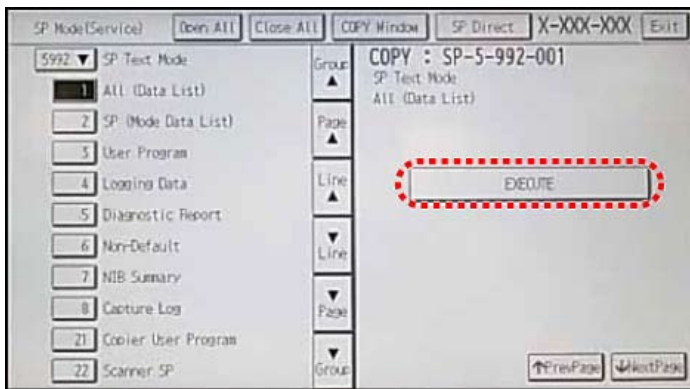
5.10.2 PROCEDURE

1. Turn ON the main power.
2. Enter SP mode.
3. Insert the SD card into the SD card slot on the operation panel.
4. Select [System/Copy SP].
5. Select SP5-992-xxx (SP Text Mode) shown below to save data on the SD card.

SP5-992-xxx (SP Text Mode)

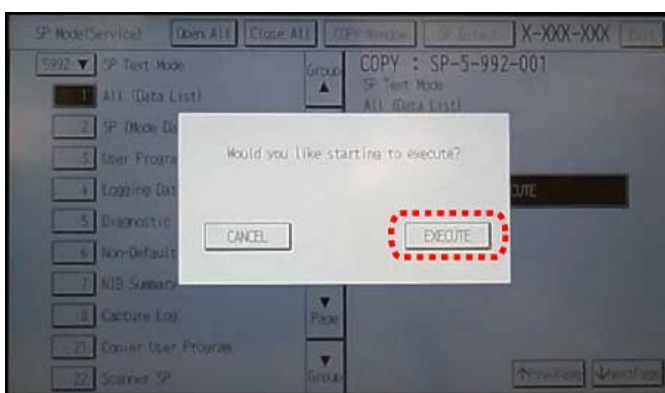
Detail No.	SMC Categories to Save
001	All (Data List)
002	SP (Mode Data List)
003	User Program
004	Logging Data
005	Diagnostic Report
006	Non-Default
007	NIB Summary
021	Copier User Program
022	Scanner SP
023	Scanner User Program
026	Printer SP
027	Smart Operation Panel SP
028	Smart Operation Panel UP

6. Press [EXECUTE].



d1440127

7. Press [EXECUTE] again to start. Press [CANCEL] to cancel the saving.



d1440128

8. "It is executing it" is shown on the screen while executing.



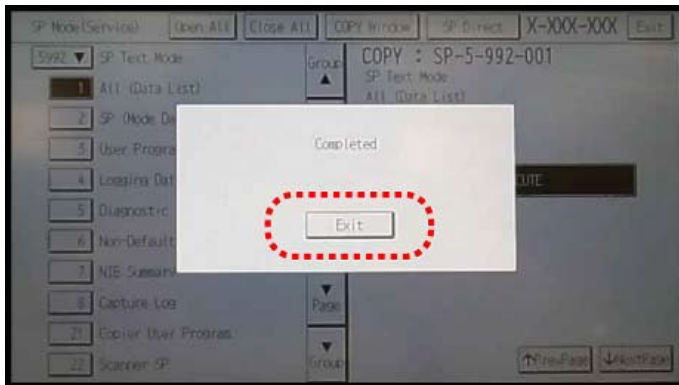
d1440130

9. 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.

10. Press [Exit].



d1440129

11. Press [Exit] to exit from SP mode.

5.10.3 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:

W801P999017_59921_20111011_53954.csv

[A]
[B]
[C]
[D]
[E]

d1440131a

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.

5.10.4 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.

5.11 CAPTURING THE DEVICE LOGS

5.11.1 OVERVIEW

With this feature, you can save device logs that are stored in the machine. It allows the Customer Engineer to save and retrieve error information for analysis.

The Capturing Log feature saves device logs for the following five.

- Controller device log including operation 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 when problems occur. Then you can copy the logs to an SD card.
- You can retrieve the device logs using an 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 Debug Logs. Otherwise, the latest settings may not be collected when the debug logs are retrieved.
- This machine comes with a 16 GB SD card pre-installed for capturing logs in the SD card slot (service slot). Up to 8GB of SD card capacity is used for capturing logs.

Types of device logs that can be saved

Type	Storage Timing	Destination (maximum storage capacity)
Controller device log including operation log	<ul style="list-style-type: none"> • Saved at all times 	SD card in the service slot When the data gets over the capacity of the SD card for logging (Up to 8 GB), the older data is deleted.
Engine device log	<ul style="list-style-type: none"> • When an engine SC occurs • When paper feeding/output stop because of a jam • When the machine doors are opened during 	SD card in the service slot (Up to 300 times)

Type	Storage Timing	Destination (maximum storage capacity)
	normal operation	
Fax controller device log	<ul style="list-style-type: none"> When a specified amount of fax controller device log is stored in the fax controller board. If fax application is unavailable (e.g. not installed), the machine does not transfer the log. 	SD card in the service slot
Operation panel log	<ul style="list-style-type: none"> 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 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

5.11.2 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

★ Important

- This procedure should only be performed if there is a problem with the machine.

1. Enter the SP mode.
2. Set SP1-998-002 (Reserve SP: reserve2) to "1".
3. Open the front cover with the main machine turned ON.

↓ Note

- If the engine log remains in the SRAM on the engine board, the engine log for the last 5 to 10 minutes can be transferred by opening the front cover.

4. Turn OFF the main power.

5. Insert the SD card into the slot on the side of the operation panel.

★ 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)

* 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".

6. Turn ON the main power.

7. Enter the SP mode.

8. 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.

9. 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.

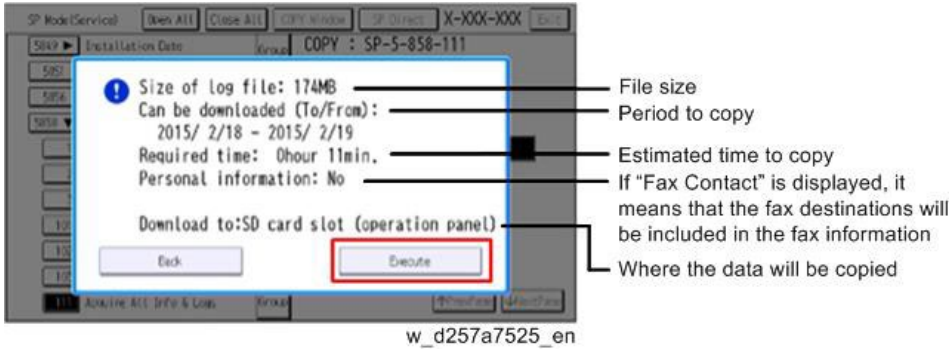
10. Execute SP5-858-111 (Acquire All Info & Logs) to copy all of the log types to an SD card.

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
SP5-858-124	Error log
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, fax controller log, and SMC.
SP5-858-142	Controller log

SP	Collectable Information and/or Logs
SP5-858-143	Engine log
SP5-858-144	Operation panel log
SP5-858-145	Fax controller log
SP5-992-001	SMC

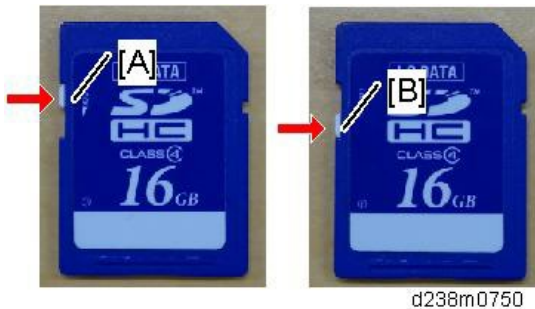
11. After executing the SP for copying the information and/or logs, a confirmation screen will appear. To proceed with obtaining the information and/or logs, tap "Execute"



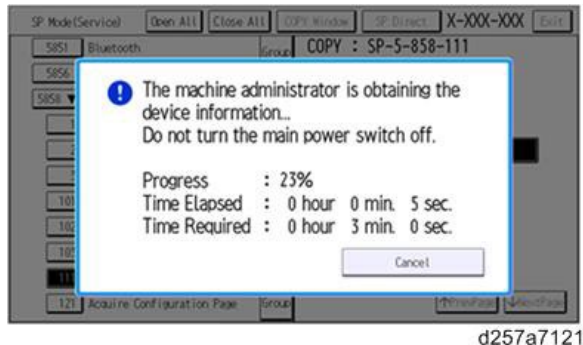
Note

- 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.
-3	<p>The SD card is locked. In this case, unlock the SD card, as shown below.</p>  <p>[A]: Unlocked, [B]: Locked</p>

12. Wait for the information and/or logs to be copied to the SD card.



13. 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.

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.

14. Enter the SP mode.
15. Set SP1-998-002 (Reserve SP: reserve2) to "0".

★ Important

- This step must be performed.

If you forget to return the SP settings, the machine may not work correctly.

5.11.3 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](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 "Calculate".

↓ Note

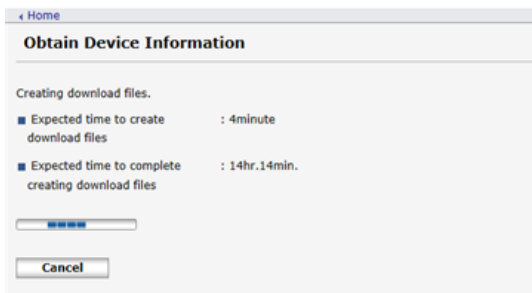
- "2" is set by default for "Number of days, including date fault occurred, to obtain". However "2", which is the minimum needed for investigating the problems, is recommended for reducing the downloading time.
- "Obtain Fax Destination(s) Information" is set to "Off" by default.

3. Click "Start".



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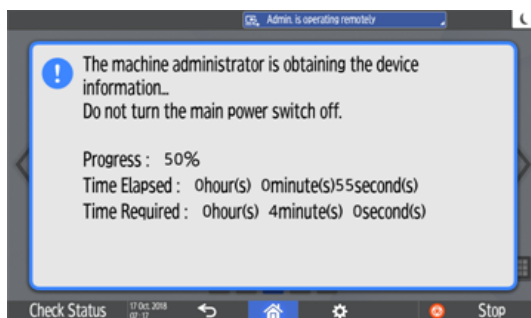
4. The confirmation screen will appear and the information and/or logs will start downloading. To proceed to download the information and/or logs, wait for the save or save and open dialog to appear.



d0bqm2203

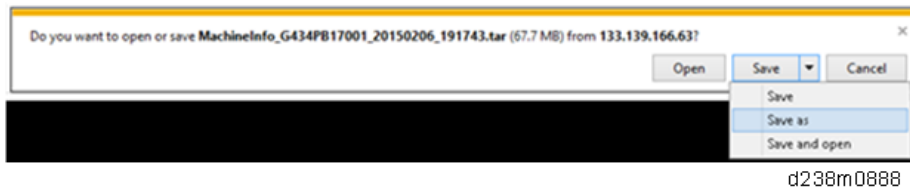
Note

- To cancel downloading, click "Cancel".
- Operation panel when downloading the logs:



d0bqm2204

5. After a while, the save or save and open 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.

Following device logs are saved.

- Engine debug log
- Condition data log
- Operation panel debug log
- FCU debug log
- Communication log (network packet)
- Configuration Page
- Printer Setting List
- Font List
- Error Log
- Fax information
- SMC
- SC 819 log

5.12 UP/SP DATA IMPORT/EXPORT

5.12.1 UP DATA IMPORT/EXPORT

Data that Can Be Imported and Exported

- Copier / Document Server Settings
- Printer Settings
- Scanner Settings
- Fax Settings
- Browser settings
- Program (Document Server)
- Program (Copy)
- Program (Scanner)
- Web Image Monitor Setting
- Web Service Settings
- System Settings
- Screen Features Settings
- Home screen customization settings*¹

*¹ Wallpaper cannot be exported if "Live Wallpaper" is selected.

Data that Cannot Be Imported or Exported

- Some System Settings *¹
- Extended Feature Settings
- Address book
- Program (Fax function)
- Program (Printer function)
- Settings that can be specified via telnet
- RICOH@Remote-related data
- Counters
- Settings that can only be specified via Web Image Monitor or Web Service (for example, Bonjour, SSDP setting)

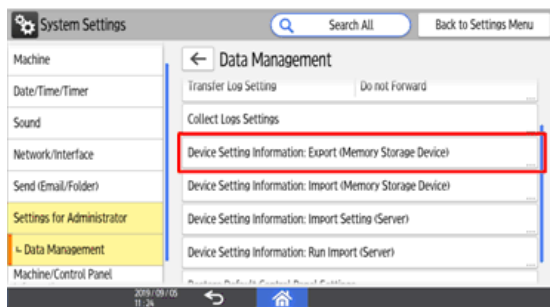
*¹ The setting for the date, settings that require device certificate, settings that need to be adjusted for each machine (for example, image adjustment settings), settings only for executing functions, and settings only for viewing cannot be imported or exported.

Exporting Device Information

This can be exported / imported by an administrator with all privileges.

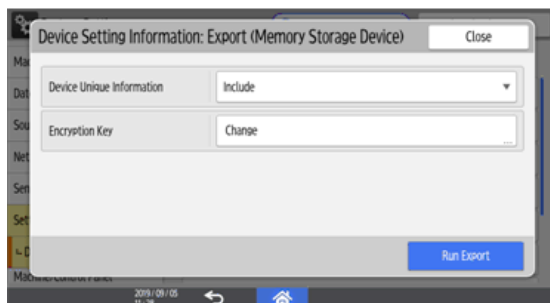
When exporting SP device information from the operation panel, the data is saved on an SD card.

1. With the Copy/Printer/Scanner/Fax/Settings screen open, insert an SD card into the slot on the operation panel.
2. Log in from the operation panel as an administrator with all privileges.
3. Press [Settings] on the Home screen > [System Settings].
4. Press [Settings for Administrator] > [Data Management] > [Device Setting Information: Export (Memory Storage Device)].



d0cam1073

5. 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.

6. Press [Run Export].
7. Press [OK].
8. Press [Exit].
9. 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. With the Copy/Printer/Scanner/Fax/Settings screen open, insert an SD card into the slot on the operation panel.
2. Log in from the operation panel as an administrator with all privileges.
3. Press [Settings] on the Home screen > [System Settings].
4. Press [Settings for Administrator] > [Data Management] > [Device Setting Information: Import (Memory Storage Device)].
5. Configure the import conditions.



- Press [Select File] of the "Device Setting Information File" to select the file(s) to import.
 - Specify whether to [Include] or [Exclude] the "Device Unique Information". "Device Unique Information" includes the IP address, host name, fax number, etc.
 - Press [Change], enter the encryption key that was specified when the file was exported, and press [OK].
6. Press [Run Import].
 7. Press [OK].
 8. Press [Exit].

The machine restarts.

Note

- If data export/import fails, the details of the error can be viewed in the log.

5.12.2 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 operation panel, the data is saved on an SD card.

1. With the Copy/Printer/Scanner/Fax/Settings screen open, insert an SD card into the slot on the operation 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.	<p>Unique information that can be updated</p> <p>#1. Items that are to be used to identify the machine.</p> <p>Example: Network Information/ Host name / Information related to fax number /Mail address assigned to the machine</p> <p>#2. Items for specifying the options equipped on the machine.</p> <p>Example: Lot number for developer</p> <p>Unique information that cannot be updated</p> <p>#1. Items that may cause a problem if imported</p> <p>Example: Serial number / Information related to @Remote</p> <p>#2. Items for managing the history of the machine</p> <p>Example: Time and date / Counter information / Installation date</p>

Item	Specification	Note
		#3. Setting values for the Engine
Secret	Secret information is exported if you select "Secret" setting.	<p>Secret information</p> <p>#1. Data that cannot be exported without being encrypted. (Exported data is encrypted.) Example: Password / Encryption key / PIN code</p> <p>#2. Confidential information for the customer Example: User name / User ID / Department code / Mail address / Phone number</p> <p>#3. Personal information Example: Document name / Image data</p> <p>#4. Sensitive information for the customer Example: MAC address / Network parameters</p>

* The IP address is exported when both 'Unique' and 'Secret' are selected.

6. Select "Crypt 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. <ul style="list-style-type: none"> Type the arbitrary password using the soft keyboard Can enter up to 32 characters
------------	--	--

7. Press [Execute].

8. Press [OK].

Note

- If data export/import 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 slot on the operation 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/import fails, the details of the error can be viewed in the log.

5.12.3 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

```
*1.0.0*
*ExecType*,*Date*,*SerialNo*,*PnP*,*Model*,*Destination*,*IP*,*Host*,*Storage*,*FileName*
*FileID*,*TotalItem*,*NumOfOkItem*,*ResultCode*,*ResultName*,*Identifier*
*IMPORT*
*2012-07-05T15:29:16+09:00*
*3C35-7M0014*
*Brand Name*
*Product Name*
*0*
*10*
*10.250.155.125*
*RNP00267332582D*
*SD*
*201207051519563C35-710220.csv*
*201207051519563C35-710220*
* 0*
* 2*
*INVALID REQUEST*
*TargetID*,*ModuleID*,*PrefID*,*Item*,*NgCode*,*NgName*
```

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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.

Result Code	Cause	Solutions
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.	<p>The reason for the failure is logged in "NgCode". Check the code.</p> <p>Reason for the Error (Ng-Name)</p> <p>2. INVALID VALUE The specified value exceeds the allowable range.</p> <p>3. PERMISSION ERROR The permission to edit the setting is missing.</p> <p>4. NOT EXIST The setting does not exist in the system.</p> <p>5. INTERLOCK ERROR The setting cannot be changed because of the system status or interlocking with other specified settings.</p> <p>6. OTHER ERROR The setting cannot be changed for some other reason.</p>
21 (INVALID FILE)	Failed to import the file because it is in the wrong format in the external medium.	<p>Check whether the file format is correct.</p> <p>The import file should be a CSV file.</p>

Result Code	Cause	Solutions
22 (INVALID KEY)	The encryption key is not valid.	Use the correct encryption key.

Note

- When exporting device information from the operation panel, the data can be saved only on an SD card.
- The file format for exports is CSV.

5.13 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, an SC occurs.

- Enter the SP mode.
- Select **SP2-109-003**.
- Enter the number for the test pattern that you want to print and press [#].

No.	Pattern	No.	Pattern
0	None	10	Argyle P:L
1	1dot Vertical	11	1dot Ind
2	2dot Vertical	12	2dot Ind
3	1dot Horizontal Line	13	4dot Ind
4	2dot Horizontal Line	14	Trimming Area
5	Grid Vert	15	Black Band H
6	Grid Horizontal	16	Black Band V
7	Grid Pattern Small	17	Checker Flag Pattern
8	Grid Pattern Large	18	Full Dot Pattern
9	Argyle Pattern Small	19	Mushi Pattern

- When you want to select the single color of Black, Magenta, Yellow or Cyan for printing a test pattern, select the color with SP2-109-005 (1: Bk, 2: Cy, 3: Ma, 4: Ye).
- Touch "Copy Window" to open the copy window, then select the settings for the test print (paper size etc.).
- Press the "Start" key to start the test print.
- After checking the test pattern, touch "SP Mode" on the LCD to return to the SP mode display.
- Reset all settings to the default values.
- Touch "Exit" twice to exit SP mode.

5.14 CARD SAVE FUNCTION

5.14.1 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.

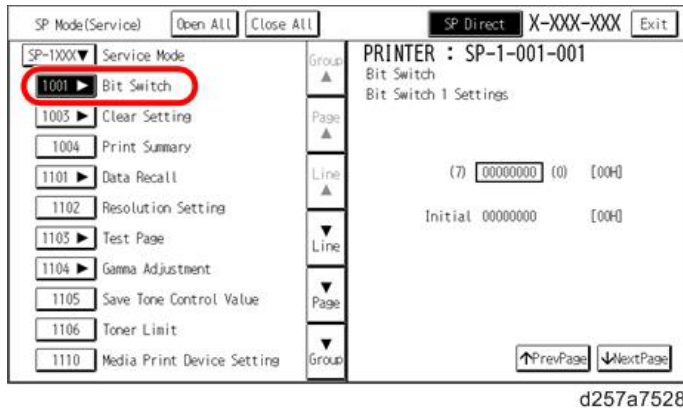
5.14.2 PROCEDURE

★ Important

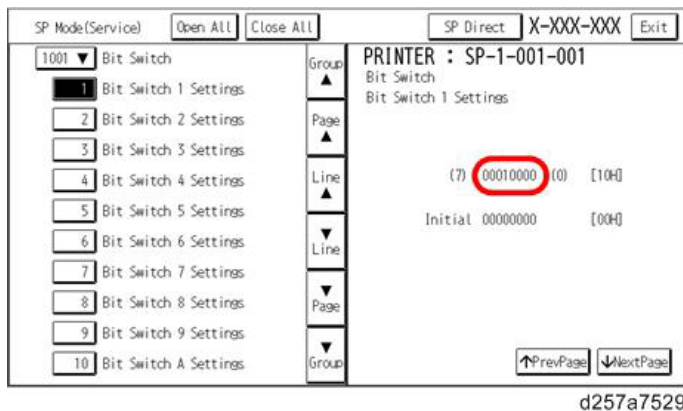
- This machine comes with a 16 GB SD card pre-installed for capturing logs in the SD card slot (service slot). Up to 8GB of SD card capacity is used for capturing logs.
The remaining 8GB can be used for this Card Save function. You do not need to prepare a new SD card for Card Save function.

1. Enter SP mode.
2. Select the [Printer SP].

3. Select SP1-001 (Bit Switch).



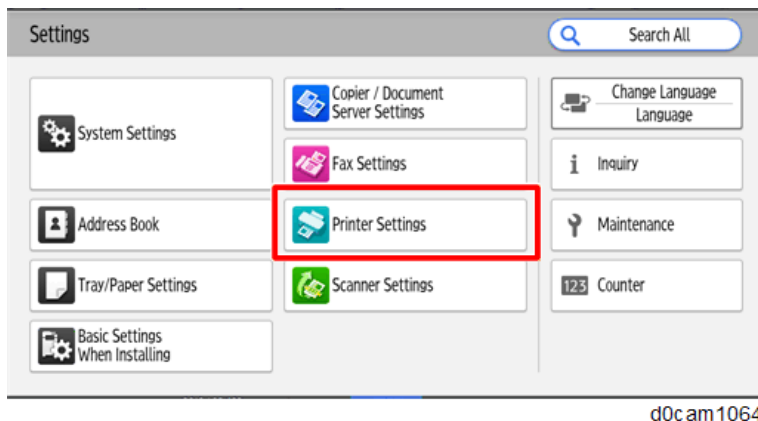
4. Select "Bit Switch 1 Settings" and use the numeric keypad to turn bit 4 ON and then press the "#" button to register the change. The result should look like: 00010000. By doing this, Card Save option will appear in the "List/Test Print" menu.



5. Press [Exit] to exit SP Mode.

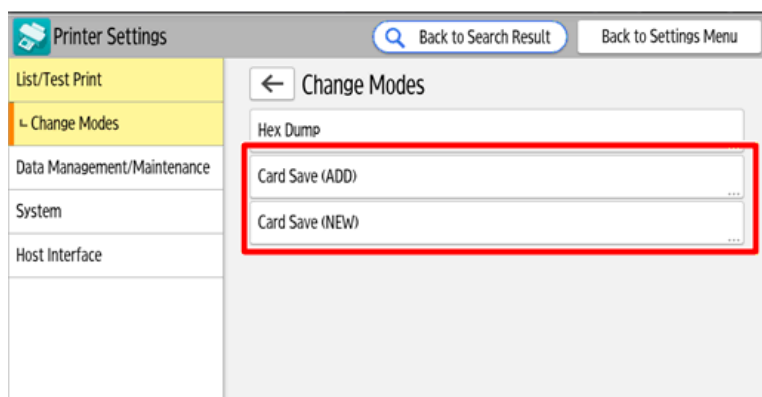
6. Press [Settings] icon.

7. Press [Printer Settings].



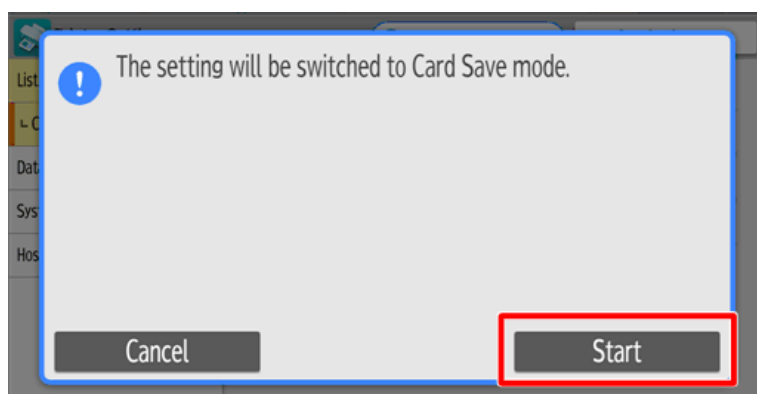
8. Press [List/Test Print] > [Change Modes].

9. [Card Save (Add)] and [Card Save (New)] should be displayed on the screen. Select [Card Save (Add)] or [Card Save (New)].



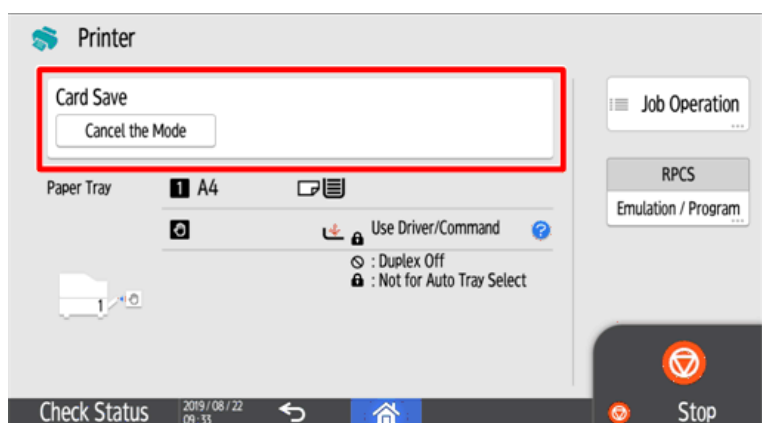
d0cam1065

10. Press [Start] and then exit the "Settings" menu.



d0cam 1066

11. Press [Printer] icon.
12. "Card Save" is displayed in the top left of the display panel.



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13. Send a job to the printer. The Communicating light should start blinking.
14. 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.

15. Press [Cancel the Mode] to exit Card Save mode.
16. Change the Bit Switch Settings back to the default 00000000. Press [#] in the numeric keypad to register the changes.
17. Remove the SD card after the power is turned OFF.

★ Important

- Be sure to return the SD card after removing it.
- When the SD card for capturing logs is removed and the machine is turned ON again, make sure that the setting value of SP5-858-002 (Collect Machine Info: Save To (0:HDD 1:SD)) is "1". If it is set to "0", change to "1" so that the logs can be captured.

5.14.3 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.

TROUBLESHOOTING



6. TROUBLESHOOTING

6.1 SELF-DIAGNOSTIC MODE

6.1.1 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 SP5-810-001) 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 (downtime 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

Type	Display	How to reset	SC call or SC alarm in customer support system
			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, a reboot is not performed. During the 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 asterisk (*) 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).

6.1.2 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.

6.1.3 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 an 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

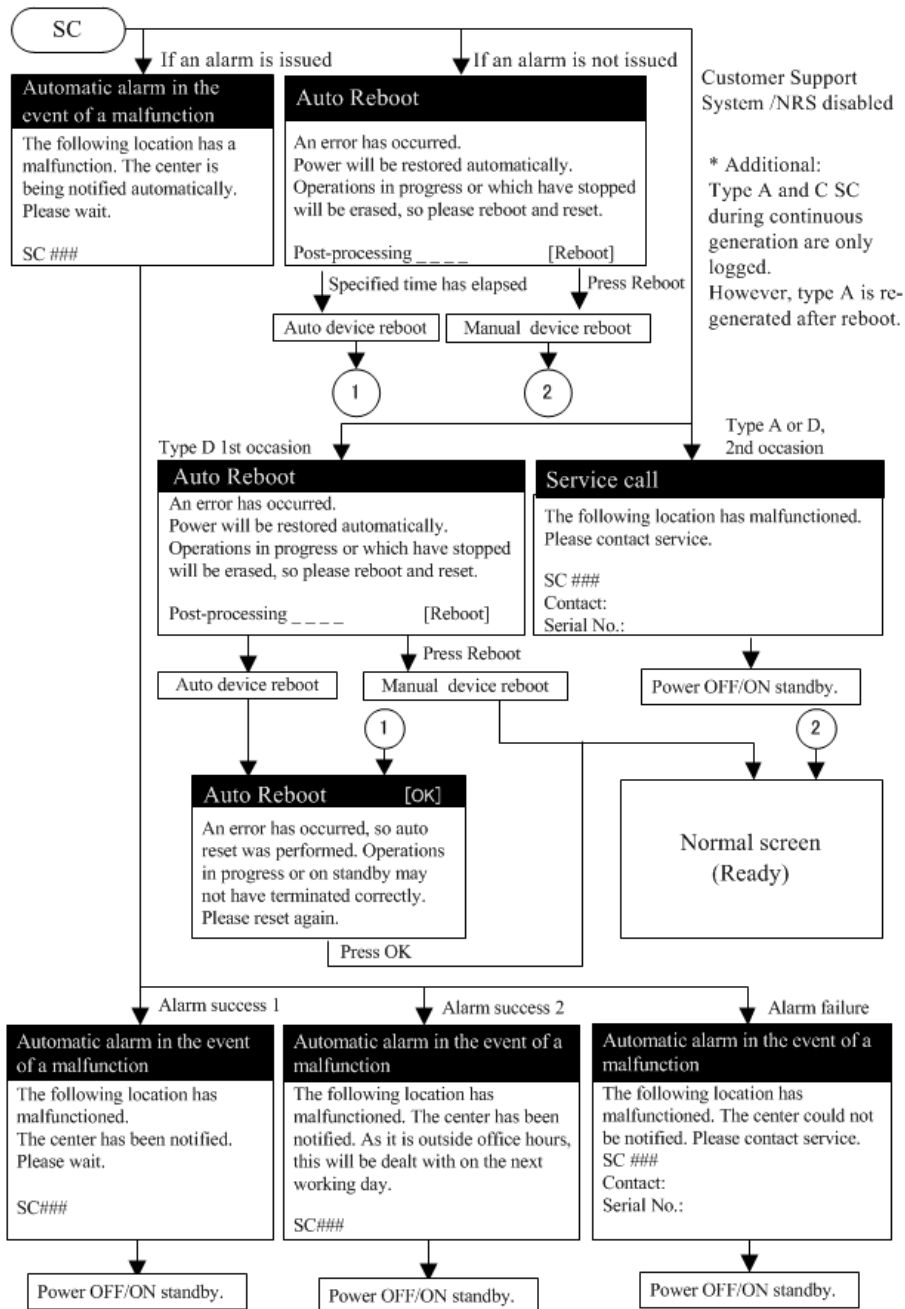
Reboot is performed 30 seconds after an engine reboot is possible, after the end of post-processing during printing, etc.

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

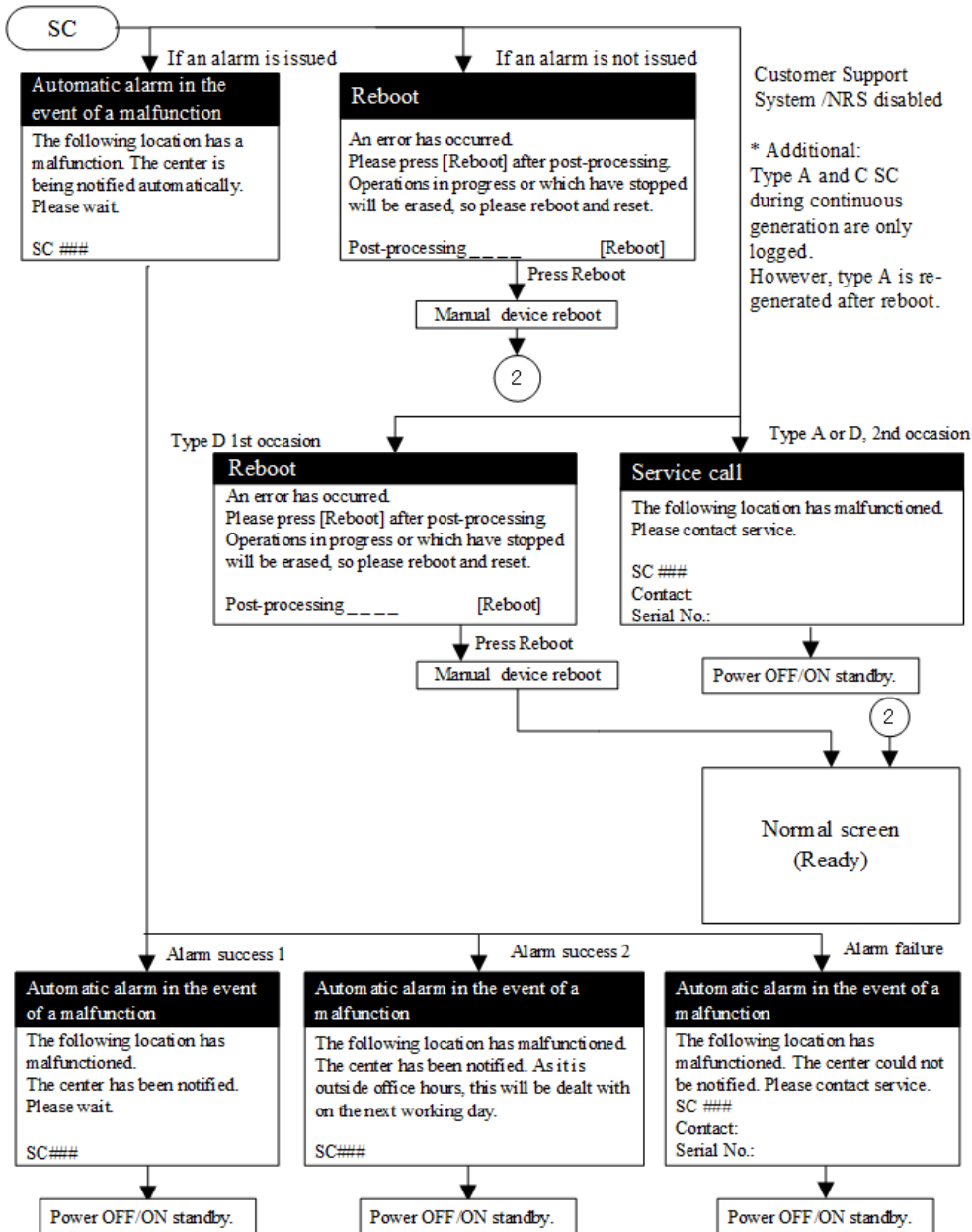
See the flowchart below.



w_m205z8002_en

6.1.4 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.



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.

w_m205z8003_en


6.2 SERVICE CALL

6.2.1 SC100 (SCANNING)


SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
SC101-00	D	LED error (scanning): Front side
		The peak white level is less than the prescribed value.
		<ul style="list-style-type: none"> • Condensation in the Scanner Unit • Loose, broken or defective connector • Defective CIS in the Scanner Unit • Defective Controller Board (PCB1) • White plate is dirty or defective • Scanning guide plate is dirty or defective
		<p>Power cycle the machine to see if the error reoccurs. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power off/on after each step.</p> <ol style="list-style-type: none"> 1. Clean the scanning guide plate. 2. Check or reconnect the FFC connectors between the CIS and the Controller Board (PCB1) (right FFC). 3. Replace the Controller Board (PCB1). 4. Replace the Scanner Unit.

SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
SC102-01	D	LED error (LED illumination adjustment): Front side: Color
SC102-02	D	LED error (LED illumination adjustment): Front side: BW
		<p>The peak white level is less than the prescribed value. This SC is detected when the machine adjusts the LED's light intensity.</p> <ul style="list-style-type: none"> • Condensation in the Scanner Unit • Loose, broken, defective connector • Defective CIS in the Scanner Unit • Defective Controller Board (PCB1) • Defective harness • White plate is dirty or defective <p>Power cycle the machine to see if the error reoccurs. If the SC occurs again, do the</p>

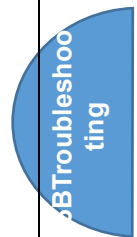
SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
		<p>following steps. Check if the SC reoccurs by cycling the power off/on after each step.</p> <ol style="list-style-type: none"> 1. Check or reconnect the FFC connectors between the CIS and the Controller Board (PCB1) (right FFC). 2. Replace the Controller Board (PCB1). 3. Replace the Scanner Unit.

SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
SC111-00	D	<p>LED error (scanning): Rear side</p> <p>The peak white level is less than the prescribed value.</p> <ul style="list-style-type: none"> • Condensation in the Scanner Unit • Scanning guide plate (rear side) is dirty or defective • Loose, broken or defective connector • Defective CIS in the SPDF Unit • Defective Controller Board (PCB1) <p>Power cycle the machine to see if the error reoccurs. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power off/on after each step.</p> <ol style="list-style-type: none"> 1. Clean the scanning guide plate (rear side). 2. Check or reconnect the FFC connectors between the CIS and the Controller Board (PCB1) (left FFC). 3. Replace the Controller Board (PCB1). 4. Replace the SPDF Unit. <p> Note</p> <p>When the SPDF Unit is replaced, the EEPROM (shading data and GB adjustment value) is changed and the following operations must be performed.</p> <ol style="list-style-type: none"> 1. Execute SP4-719-001. (The adjustment value stored in EEPROM is stored in SP.) 2. Turn the power OFF and ON. (Make adjustments using the values stored in the SP.)

SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
SC112-01	D	LED error (LED illumination adjustment): Rear side: Color
SC112-02	D	LED error (LED illumination adjustment): Rear side: BW
		The peak white level is less than the prescribed value. This SC is detected when the

SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
		<p>machine adjusts the LED's light intensity.</p> <ul style="list-style-type: none"> • Condensation in the Scanner Unit • Scanning guide plate (rear side) is dirty or defective • Loose, broken, defective connector • Defective CIS in the SPDF Unit • Defective harness • Defective Controller Board (PCB1) <p>Power cycle the machine to see if the error reoccurs. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power off/on after each step.</p> <ol style="list-style-type: none"> 1. Clean the scanning guide plate (rear side). 2. Check or reconnect the FFC connectors between the CIS and the Controller Board (PCB1) (left FFC). 3. Replace the Controller Board (PCB1). 4. Replace the SPDF Unit. <p> Note</p> <p>When the SPDF Unit is replaced, the EEPROM (shading data and GB adjustment value) is changed and the following operations must be performed.</p> <ol style="list-style-type: none"> 1. Execute SP4-719-001. (The adjustment value stored in EEPROM is stored in SP.) 2. Turn the power OFF and ON. (Make adjustments using the values stored in the SP.)

SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
SC112-03	D	<p>LED error (LED illumination adjustment): LED left-right ratio: Rear side</p> <p>When the CIS LEDs are turned on one at a time and the white level ratio is less than the prescribed value.</p> <ul style="list-style-type: none"> • Condensation in the Scanner Unit • Scanning guide plate (rear side) is dirty or defective • Loose, broken or defective connector • Defective CIS in the SPDF Unit • Defective Controller Board (PCB1) <p>Power cycle the machine to see if the error reoccurs. If the SC occurs again, do the</p>



SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
		<p>following steps. Check if the SC reoccurs by cycling the power off/on after each step.</p> <ol style="list-style-type: none"> 1. Clean the scanning guide plate (rear side). 2. Check or reconnect the FFC connectors between the CIS and the Controller Board (PCB1) (left FFC). 3. Replace the Controller Board (PCB1). 4. Replace the SPDF Unit. <p>Note</p> <p>When the SPDF Unit is replaced, the EEPROM (shading data and GB adjustment value) is changed and the following operations must be performed.</p> <ol style="list-style-type: none"> 1. Execute SP4-719-001. (The adjustment value stored in EEPROM is stored in SP.) 2. Turn the power OFF and ON. (Make adjustments using the values stored in the SP.)

SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
SC120-00	D	<p>Scanner home position error 1</p> <p>The Scanner Home Position Sensor (S13) did not go OFF :</p> <ul style="list-style-type: none"> • During homing operation (power ON, leaving low power mode) • During auto adjustment (power ON, leaving low power mode) • During document, book scanning • During homing operation • During scanning • During shading operation <ul style="list-style-type: none"> • Scanner Motor drive PCB error • Scanner Motor (M10) defective • Scanner Home Position Sensor (S13) defective • Harness defective • Timing belt, pulley, wire, or carriage not installed correctly <p>Power cycle the machine to see if the error reoccurs. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power off/on after each step.</p> <ol style="list-style-type: none"> 1. Replace the Scanner Unit.

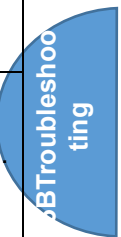
SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
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SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
SC121-00	D	Scanner home position error 2
		The Scanner Home Position Sensor (S13) did not go ON :
		<ul style="list-style-type: none"> • During homing operation • Scanner Motor drive PCB error • Scanner Motor (M10) defective • Scanner Home Position Sensor (S13) defective • Harness defective • Timing belt, pulley, wire, or carriage not installed correctly
		<p>Power cycle the machine to see if the error reoccurs. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power off/on after each step.</p> <ol style="list-style-type: none"> 1. Replace the Scanner Unit.

SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
SC141-00	D	Black level correction error: Front side
		The automatic adjustment has failed to correct the black level to the permissible range.
		<ul style="list-style-type: none"> • Loose, broken, or defective connector • Defective CIS in the Scanner Unit • Harness defective • Controller Board (PCB1) defective
		<p>Power cycle the machine to see if the error reoccurs. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power off/on after each step.</p> <ol style="list-style-type: none"> 1. Check or reconnect the FFC connectors between the CIS and the Controller Board (PCB1) (right FFC). 2. Replace the Controller Board (PCB1) 3. Replace the Scanner Unit.


SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
SC144-00	D	Communication error: Front side
		Communication cannot be established or communication content is abnormal.
		<ul style="list-style-type: none"> • Loose, broken, or defective connector

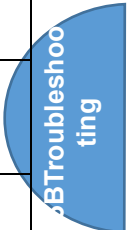
SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
		<ul style="list-style-type: none"> • Defective CIS in the Scanner Unit • Harness defective • Controller Board (PCB1) defective
		<p>Power cycle the machine to see if the error reoccurs. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power off/on after each step.</p> <ol style="list-style-type: none"> 1. Check or reconnect the FFC connectors between the CIS and the Controller Board (PCB1) (right FFC). 2. Replace the Controller Board (PCB1) 3. Replace the Scanner Unit.



SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
SC151-00	D	Black level correction error: Rear side
		The automatic adjustment has failed to correct the black level (rear side) to the permissible range.
		<ul style="list-style-type: none"> • Loose, broken, or defective connector • Defective CIS in the SPDF Unit • Harness defective • Controller Board (PCB1) defective
		<p>Power cycle the machine to see if the error reoccurs. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power off/on after each step.</p> <ol style="list-style-type: none"> 1. Check or reconnect the FFC connectors between the CIS and the Controller Board (PCB1) (left FFC). 2. Replace the Controller Board (PCB1) 3. Replace the SPDF Unit. <p>Note</p> <p>When the SPDF Unit is replaced, the EEPROM (shading data and GB adjustment value) is changed and the following operations must be performed.</p> <ol style="list-style-type: none"> 1. Execute SP4-719-001. (The adjustment value stored in EEPROM is stored in SP.) 2. Turn the power OFF and ON. (Make adjustments using the values stored in the SP.)

SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
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SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
SC154-01	D	Communication error: Rear side
		Communication cannot be established or communication content is abnormal
		<ul style="list-style-type: none"> • Loose, broken, or defective connector • Defective CIS in the SPDF Unit • Harness defective • Controller Board (PCB1) defective
		<p>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.</p> <ol style="list-style-type: none"> 1. Check or reconnect the FFC connectors between the CIS and the Controller Board (PCB1) (left FFC). 2. Replace the Controller Board (PCB1). 3. Replace the SPDF Unit. <p> Note</p> <p>When the SPDF Unit is replaced, the EEPROM (shading data and GB adjustment value) is changed and the following operations must be performed.</p> <ol style="list-style-type: none"> 1. Execute SP4-719-001. (The adjustment value stored in EEPROM is stored in SP.) 2. Turn the power OFF and ON. (Make adjustments using the values stored in the SP.)



SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
SC154-02	D	Communication error: FPGA
		Communication with scanning device cannot be established or communication content is abnormal
		<ul style="list-style-type: none"> Controller Board (PCB1) defective
		<p>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.</p> <ol style="list-style-type: none"> Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC154-03	D	Communication error: EEPROM
		Communication with EEPROM cannot be established or communication content is abnormal
		<ul style="list-style-type: none"> Loose, broken, or defective connector Harness defective Defective PCB in the SPDF Unit Controller Board (PCB1) defective
		<p>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.</p> <ol style="list-style-type: none"> Check or reconnect the connectors between the SPDF Unit and the Controller Board (PCB1). Replace the Controller Board (PCB1). Replace the SPDF Unit. <p>Note</p> <p>When the SPDF Unit is replaced, the EEPROM (shading data and GB adjustment value) is changed and the following operations must be performed.</p> <ol style="list-style-type: none"> Execute SP4-719-001. (The adjustment value stored in EEPROM is stored in SP.) Turn the power OFF and ON. (Make adjustments using the values stored in the SP.)

SC No.	Type	Error Name/ Error Condition/ Major Cause/ Solution
SC161-20	D	IPU error (Memory initialization failure)
		An error occurred every time the machine is turned on or returns to full operation from energy saver mode.
		<ul style="list-style-type: none"> • Defective IPU (PCB3) • DRAM device defective
		<p>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.</p> <ol style="list-style-type: none"> 1. Reconnect all the connectors if they are disconnected or loose. 2. Replace the IPU (PCB3)/ MCU (PCB2).

6.2.2 SC200 (LED OPTICS)

SC No.	Type	Error Name/ Major Cause/ Solution
SC240-01	D	LED Head Ack Fail K
SC240-02	D	LED Head Ack Fail Y
SC240-03	D	LED Head Ack Fail M
SC240-04	D	LED Head Ack Fail C
		<p>Communication failure between the IPU (PCB3) and the LED Head (Defect of communication IC or cables).</p> <p>The cause could be external noise or bad connection of FFC or power failure. Or the cause could be defect inside of LED Head.</p> <ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.10.

SC No.	Type	Error Name/ Major Cause/ Solution
SC240-05	D	LED Head Read Fail K
SC240-06	D	LED Head Read Fail Y
SC240-07	D	LED Head Read Fail M
SC240-08	D	LED Head Read Fail C
		<p>Communication failure between the IPU (PCB3) and the LED Head (Data reading failure from LED Head).</p> <p>The cause could be external noise or bad connection of FFC or power failure. Or the</p>

SC No.	Type	Error Name/ Major Cause/ Solution
		cause could be defect inside of LED Head.
		1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.10 .

SC No.	Type	Error Name/ Major Cause/ Solution
SC240-09	D	LED Head Write Fail K
SC240-10	D	LED Head Write Fail Y
SC240-11	D	LED Head Write Fail M
SC240-12	D	LED Head Write Fail C
		Communication failure between IPU (PCB3) and LED Head (Data writing failure from LED Head). The cause could be external noise or bad connection of FFC or power failure. Or the cause could be defect inside of LED Head.
		1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.10 .

SC No.	Type	Error Name/ Major Cause/ Solution
SC240-13	D	LED Head DL Fail K
SC240-14	D	LED Head DL Fail Y
SC240-15	D	LED Head DL Fail M
SC240-16	D	LED Head DL Fail C
		ASIC register error during IBY initial DL check. Failure occurs on LED Head of all colors simultaneously. Common parts (such as IPU (PCB3) which has the power supply control device for LED Heads) could be defective. LED Head color actually failing can be checked by MCU ROM2 (PWB ASSY NVM) (PCB13).
		1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.10 .

SC No.	Type	Error Name/ Major Cause/ Solution
SC240-17	D	LED Head DL Fail POWER
		ASIC register error during IBY initial DL check. Failure occurs on LED Head of all colors simultaneously. Common parts (such as IPU (PCB3) which has the power supply control device for LED Heads) could be defective. LED Head color actually failing can be checked by MCU ROM2 (PWB ASSY NVM) (PCB13).

SC No.	Type	Error Name/ Major Cause/ Solution
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Check connection between the LED Head and the IPU (PCB3). (LED Head color actually failing can be checked by MCU ROM2 (PWB ASSY NVM) (PCB13).) 3. Replace the IPU (PCB3). 4. Replace the LED Head Base. 5. Replace the LED Head.

SC No.	Type	Error Name/ Major Cause/ Solution
SC240-18	D	LED Head DL Fail MULT
		ASIC register error during IBY initial DL check. Failure occurs on multiple LED Head (2 or 3 colors) simultaneously. Common parts (such as IPU (PCB3) which has the power supply control device for LED Heads) could be defective. LED Head color actually failing can be checked by MCU ROM2 (PWB ASSY NVM) (PCB13).
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Check connection between the IPU (PCB3) and the MCU (PCB2) and the LED Head. (LED Head color actually failing can be checked by MCU ROM2 (PWB ASSY NVM) (PCB13).) 3. Replace the FFCs. 4. Replace the MCU (PCB2). 5. Replace the IPU (PCB3).

SC No.	Type	Error Name/ Major Cause/ Solution
SC240-23	D	LED Head Timeout Fail K
SC240-24	D	LED Head Timeout Fail Y
SC240-25	D	LED Head Timeout Fail M
SC240-26	D	LED Head Timeout Fail C
		Communication failure (Time Out) between Video ASIC and LED Head.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Check connection between the MCU (PCB2) and LED Head. 3. Check the LED Head for failure.

SC No.	Type	Error Name/ Major Cause/ Solution
SC270-00	D	Write ASIC communication error

SC No.	Type	Error Name/ Major Cause/ Solution
SC270-20	D	Write ASIC communication error (Configuration initialization error)
SC270-21	D	Write ASIC communication error (Configuration communication error)
		Defective Controller Board (PCB1) (ASIC Error)
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON. 2. Replace the Controller Board (PCB1).

SC No.	Type	Error Name/ Major Cause/ Solution
SC281-00	D	Video ASIC Fail
		Video ASIC register read/write fail. The cause could be external noise or bad connection of wire harness or power failure. Or the cause could be ASIC fail.
		<ol style="list-style-type: none"> 1. Check connection for IPU (PCB3). 2. Replace the IPU (PCB3).

SC No.	Type	Error Name/ Major Cause/ Solution
SC282-01	D	ContIF K Error Fail
SC282-02	D	ContIF Y Error Fail
SC282-03	D	ContIF M Error Fail
SC282-04	D	ContIF C Error Fail
		Controller does not send Valid signal (K/Y/M/C)
		<ol style="list-style-type: none"> 1. Check connection for the IPU (PCB3). And then turn the power OFF and ON to check if the error recurs. 2. Update the firmware. 3. Replace the IPU (PCB3) or the Controller Board (PCB1).

SC No.	Type	Error Name/ Major Cause/ Solution
SC283-01	C	RC Sample Block Fail A1_IN
		ID/MUSIC sensor detection failure or A1/C Patch forming failure: Valid sample block count is less than specified count when ID/MUSIC sensor IN during A1/C Patch detection. (Only to register on SC history)
		<ol style="list-style-type: none"> 1. Clean up the ID/MUSIC sensor (S10, S11). 2. Refer to Troubleshooting Procedure 1.22.

SC No.	Type	Error Name/ Major Cause/ Solution
SC283-02	C	RC Sample Block Fail A1_OUT
		ID/MUSIC sensor detection failure or A1/C Patch forming failure: Valid sample block count is less than specified count when ID/MUSIC sensor OUT during A1/C Patch detection. (Only to register on SC history)
		<ol style="list-style-type: none"> Clean up the ID/MUSIC sensor (S10, S11). Refer to Troubleshooting Procedure 1.22.

SC No.	Type	Error Name/ Major Cause/ Solution
SC283-03	C	RC Sample Lateral Fail A
		Main scanning correction failure: Main scanning position of #4(Black) color which is a standard is abnormal during A1/C Patch detection. (Only to register on SC history)
		<ol style="list-style-type: none"> Clean up the ID/MUSIC sensor (S10, S11). Refer to Troubleshooting Procedure 1.22.

6.2.3 SC300 (IMAGE PROCESSING)

SC No.	Type	Error Name/ Major Cause/ Solution
SC300-00	D	Image Ready NG
		Image preparation error in IPU (PCB3)
		<ol style="list-style-type: none"> Turn the power OFF and ON to check if the error recurs. Update the firmware. Check connection between the MCU (PCB2) and the IPU (PCB3). Replace the IPU (PCB3).

SC No.	Type	Error Name/ Major Cause/ Solution
SC301-00	D	IM Logic Fail
		Software control error of MCU (PCB2) is detected.
		<ol style="list-style-type: none"> Turn the power OFF and ON to check if the error recurs. Update the firmware. Replace the MCU (PCB2).

SC No.	Type	Error Name/ Major Cause/ Solution
SC302-00	D	ID Chip ASIC Comm Fail

SC No.	Type	Error Name/ Major Cause/ Solution
		Drum ID Chip ASIC failure
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Re-install the PCDU (YMCK). 3. Refer to Troubleshooting Procedure 1.12.

SC No.	Type	Error Name/ Major Cause/ Solution
SC307-00	D	Toner ID Chip Auth IC Error
		Toner Cartridge K ID Chip recognition area data is wrong.
		<ol style="list-style-type: none"> 1. Re-install the Toner Cartridge. 2. Refer to Troubleshooting Procedure 1.13.

SC No.	Type	Error Name/ Major Cause/ Solution
SC308-01	D	ID/MUSIC Sensor (S10, S11) Error1
		Measurement result under the ID/MUSIC Sensor LED OFF condition exceeds upper limit.
		<ol style="list-style-type: none"> 1. Clean up the ID/MUSIC Sensor (S10, S11). (Refer to Troubleshooting Procedure 1.1) 2. Refer to Troubleshooting Procedure 1.6.

SC No.	Type	Error Name/ Major Cause/ Solution
SC308-02	D	ID/MUSIC Sensor (S10, S11) Error2
		Measurement result of the belt surface exceeds upper and lower limit.
		<ol style="list-style-type: none"> 1. Clean up the ID/MUSIC Sensor (S10, S11). (Refer to Troubleshooting Procedure 1.1) 2. Refer to Troubleshooting Procedure 1.6.

SC No.	Type	Error Name/ Major Cause/ Solution
SC308-03	D	ID/MUSIC Sensor (S10, S11) Error3
		Measurement result of potential/density patch is too dark.
		<ol style="list-style-type: none"> 1. Clean up the ID/MUSIC Sensor (S10, S11). (Refer to Troubleshooting Procedure 1.1)

SC No.	Type	Error Name/ Major Cause/ Solution
		2. Refer to <i>Troubleshooting Procedure 1.6.</i>

SC No.	Type	Error Name/ Major Cause/ Solution
SC309-00	D	Color Development Motor (M4) Fail
		Motor rotation of Color Development Motor (M4) is detected.
		1. Turn the power OFF and ON to check if the error recurs. 2. Refer to <i>Troubleshooting Procedure 1.24.</i>

SC No.	Type	Error Name/ Major Cause/ Solution
SC310-00	D	Paper Feed/ K Development Motor (M1) Fail
		Paper Feed/ K Development Motor does not rotate correctly.
		1. Turn the power OFF and ON to check if the error recurs. 2. Refer to <i>Troubleshooting Procedure 1.20.</i>

SC No.	Type	Error Name/ Major Cause/ Solution
SC311-00	D	Main Motor (M2) Fail
		Main Motor (M2) does not rotate correctly.
		1. Turn the power OFF and ON to check if the error recurs. 2. Refer to <i>Troubleshooting Procedure 1.4.</i>

SC No.	Type	Error Name/ Major Cause/ Solution
SC312-00	D	Sub Motor (M3) Fail
		Sub Motor does not rotate correctly.
		1. Turn the power OFF and ON to check if the error recurs. 2. Refer to <i>Troubleshooting Procedure 1.5.</i>

SC No.	Type	Error Name/ Major Cause/ Solution
SC313-00	D	Image Transfer Roller Position Fail (K Mode Clutch (CL6) Fail)
		Image Transfer Roller contact/retract did not complete within the start of operation through MCU ROM2 (PWB ASSY NVM) (PCB13): Image Transfer Roller Position Fail occurrence time.

SC No.	Type	Error Name/ Major Cause/ Solution
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.11.

SC No.	Type	Error Name/ Major Cause/ Solution
SC314-00	D	Paper Feed Module Logic Fail
		Fatal error of paper feed module is detected.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Replace the MCU (PCB2).

SC No.	Type	Error Name/ Major Cause/ Solution
SC356-01	C	MOB LED Fail IN
		During LED light amount correction of gain correction, LED light amount is not converged (IN side). (Only to register on SC history)
		<ol style="list-style-type: none"> 1. Clean up the LED Head. (Refer to Troubleshooting Procedure 1.2) 2. Clean up the ID/MUSIC Sensor (S10, S11). (Refer to Troubleshooting Procedure 1.1) 3. Refer to Troubleshooting Procedure 1.22.

SC No.	Type	Error Name/ Major Cause/ Solution
SC356-02	C	MOB LED Fail OUT
		During LED light amount correction of gain correction, LED light amount is not converged (OUT side). (Only to register on SC history)
		<ol style="list-style-type: none"> 1. Clean up the LED Head. (Refer to Troubleshooting Procedure 1.2) 2. Clean up the ID/MUSIC Sensor (S10, S11). (Refer to Troubleshooting Procedure 1.1) 3. Refer to Troubleshooting Procedure 1.22.

SC No.	Type	Error Name/ Major Cause/ Solution
SC357-01	C	MOB TH Fail IN
		During LED light amount correction of gain correction, sensor output voltage value on the Image Transfer Belt is abnormal (IN side). (Only to register on SC history)
		<ol style="list-style-type: none"> 1. Clean up the LED Head. (Refer to Troubleshooting Procedure 1.2)

SC No.	Type	Error Name/ Major Cause/ Solution
		<p>2. Clean up the ID/MUSIC Sensor (S10, S11). (Refer to Troubleshooting Procedure 1.1)</p> <p>3. Refer to Troubleshooting Procedure 1.22.</p>

SC No.	Type	Error Name/ Major Cause/ Solution
SC357-02	C	<p>MOB TH Fail OUT</p> <p>During LED light amount correction of gain correction, sensor output voltage value on the Image Transfer Belt is abnormal (OUT side). (Only to register on SC history)</p> <p>1. Clean up the LED Head. (Refer to Troubleshooting Procedure 1.2)</p> <p>2. Clean up the ID/MUSIC Sensor (S10, S11). (Refer to Troubleshooting Procedure 1.1)</p> <p>3. Refer to Troubleshooting Procedure 1.22.</p>

SC No.	Type	Error Name/ Major Cause/ Solution
SC358-01	C	<p>Vout Stability Fail IN</p> <p>During LED light amount correction of gain correction, sensor output voltage value on the Image Transfer Belt is abnormal (IN side). (Only to register on SC history)</p> <p>1. Clean up the LED Head. (Refer to Troubleshooting Procedure 1.2)</p> <p>2. Clean up the ID/MUSIC Sensor (S10, S11). (Refer to Troubleshooting Procedure 1.1)</p> <p>3. Refer to Troubleshooting Procedure 1.22.</p>

SC No.	Type	Error Name/ Major Cause/ Solution
SC358-02	C	<p>Vout Stability Fail OUT</p> <p>During LED light amount correction of gain correction, sensor output voltage value on the Image Transfer Belt is abnormal (OUT side). (Only to register on SC history)</p> <p>1. Clean up the LED Head. (Refer to Troubleshooting Procedure 1.2)</p> <p>2. Clean up the ID/MUSIC Sensor (S10, S11). (Refer to Troubleshooting Procedure 1.1)</p> <p>3. Refer to Troubleshooting Procedure 1.22.</p>

SC No.	Type	Error Name/ Major Cause/ Solution
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SC No.	Type	Error Name/ Major Cause/ Solution
SC358-03	C	RC Data Over Range Fail
		After adding offset value to correction value, the value exceeded valid setting range. (Only to register on SC history)
		1. Clean up the ID/MUSIC Sensor (S10, S11). (Refer to <i>Troubleshooting Procedure 1.1</i>) 2. Replace the machine.

6.2.4 SC400 (IMAGE PROCESSING)

SC No.	Type	Error Name/ Major Cause/ Solution
SC400-00	D	Belt Detached
		Image Transfer Belt Unit is not installed.
		<ol style="list-style-type: none"> 1. Re-install the ITB Unit. 2. Replace the ITB Unit.

SC No.	Type	Error Name/ Major Cause/ Solution
SC401-00	D	Over Temp Detect
		Temperature inside of the machine increases more than specified value and printing cannot continue.
		<ol style="list-style-type: none"> 1. Printing interrupted due to abnormally high temperature inside the machine. Wait until the error message turns off. 2. Refer to Troubleshooting Procedure 1.6.

SC No.	Type	Error Name/ Major Cause/ Solution
SC402-51	D	K Patch Error for image adjustment
SC402-52	D	Y Patch Error for image adjustment
SC402-53	D	M Patch Error for image adjustment
SC402-54	D	C Patch Error for image adjustment
		<p>Detected (TC/SAD patch abnormal - pale color) the measurement result of potential/density patch shows abnormally pale color.</p> <p>Toner cartridge became empty (toner recovery does not work), although toner cartridge is not supposed to be empty.</p> <ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Shake the Toner Cartridge well and then re-install it. 3. Re-install the PCDU. 4. Replace the Toner Cartridge. 5. Replace the PCDU.

SC No.	Type	Error Name/ Major Cause/ Solution
SC403-00	C	ADC (Auto Density Control) Sensor Dirty

SC No.	Type	Error Name/ Major Cause/ Solution
		ADC sensor gets dirty
		1. Clean up the ID/MUSIC sensor (S10, S11). Refer to Troubleshooting Procedure 1.1 .
		2. Refer to Troubleshooting Procedure 1.6 .

SC No.	Type	Error Name/ Major Cause/ Solution
SC404-01	C	ADC (Auto Density Control) Tone Patch Fail Y
SC404-02	C	ADC (Auto Density Control) Tone Patch Fail M
SC404-03	C	ADC (Auto Density Control) Tone Patch Fail C
SC404-04	C	ADC (Auto Density Control) Tone Patch Fail K
		This failure occurs when ADC gradation patch is abnormally pale/dark.
		1. Clean up the ID/MUSIC sensor (S10, S11). Refer to Troubleshooting Procedure 1.1 .
		2. Refer to Troubleshooting Procedure 1.23 .

SC No.	Type	Error Name/ Major Cause/ Solution
SC496-00	D	Drum Motor Fail
		Sub Motor (M3) does not rotate correctly.
		1. Turn the power OFF and ON to check if the error recurs.
		2. Refer to Troubleshooting Procedure 1.5 .

SC No.	Type	Error Name/ Major Cause/ Solution
SC497-00	C	Temperature Sensor Fail
		Value of temperature sensor is out of upper and lower limit range.
		1. Turn the power OFF and ON to check if the error recurs.
		2. Replace the Humidity and Temperature Sensor (S12) [ID/MUSIC Sensor Assy].

SC No.	Type	Error Name/ Major Cause/ Solution
SC498-00	D	Humidity Sensor Fail
		Value of humidity sensor is out of upper and lower limit range.
		1. Turn the power OFF and ON to check if the error recurs.
		2. Replace the Humidity and Temperature Sensor (S12) [ID/MUSIC Sensor Assy].

6.2.5 SC500 (PAPER FEED AND FUSING)

SC No.	Type	Error Name/ Major Cause/ Solution
SC500-02	D	Option Feeder Motor 2 Failure
		Feeder Motor Alarm on Tray 2 is detected.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Re-install the optional paper feed unit. 3. Refer to Troubleshooting Procedure 1.15 for Tray 2.

SC No.	Type	Error Name/ Major Cause/ Solution
SC500-03	D	Option Feeder Motor 3 Failure
		Feeder Motor Alarm on Tray 3 is detected.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Re-install the optional paper feed unit. 3. Refer to Troubleshooting Procedure 1.15 for Tray 3.

SC No.	Type	Error Name/ Major Cause/ Solution
SC500-04	D	Option Feeder Motor 4 Failure
		Feeder Motor Alarm on Tray 4 is detected.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Re-install the optional paper feed unit. 3. Refer to Troubleshooting Procedure 1.15 for Tray 4.

SC No.	Type	Error Name/ Major Cause/ Solution
SC500-05	D	Option Feeder Motor 5 Failure
		Feeder Motor Alarm on Tray 5 is detected.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Re-install the optional paper feed unit. 3. Refer to Troubleshooting Procedure 1.15 for Tray 5.

SC No.	Type	Error Name/ Major Cause/ Solution
SC501-01	D	Option Feeder Lift Up Motor 2 Failure
		Tray 2 Lift Up fault occurred two times continuously.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs.

SC No.	Type	Error Name/ Major Cause/ Solution
		2. Refer to Troubleshooting Procedure 1.19 for Tray 2.

SC No.	Type	Error Name/ Major Cause/ Solution
SC501-02	D	Option Feeder Lift Up Motor 3 Failure
		Tray 3 Lift Up fault occurred two times continuously.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.19 for Tray 3.

SC No.	Type	Error Name/ Major Cause/ Solution
SC502-01	D	Option Feeder 2 Mode Error
		Operation mode for Tray 2 (Download mode) is detected.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Re-install the optional paper feed unit or LCIT. 3. Update the firmware. 4. Replace the optional paper feed unit or LCIT.

SC No.	Type	Error Name/ Major Cause/ Solution
SC502-02	D	Option Feeder 3 Mode Error
		Operation mode for Tray 3 (Download mode) is detected.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Re-install the optional paper feed unit or LCIT. 3. Update the firmware. 4. Replace the optional paper feed unit or LCIT.

SC No.	Type	Error Name/ Major Cause/ Solution
SC502-03	D	Option Feeder 4 Mode Error
		Operation mode for Tray 4 (Download mode) is detected.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Re-install the optional paper feed unit. 3. Update the firmware. 4. Replace the optional paper feed unit.

SC No.	Type	Error Name/ Major Cause/ Solution
SC502-04	D	Option Feeder 5 Mode Error
		Operation mode for Tray 5 (Download mode) is detected.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Re-install the optional paper feed unit. 3. Update the firmware. 4. Replace the optional paper feed unit.

SC No.	Type	Error Name/ Major Cause/ Solution
SC503-00	D	Feeder I/F Failure (Option Comm Fail)
		Communication failure between the MCU (PCB2) and optional paper feed unit is detected.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.14.

SC No.	Type	Error Name/ Major Cause/ Solution
SC503-01	D	Feeder 2 Maker Mismatch Failure
SC503-02	D	Feeder 3 Maker Mismatch Failure
		The system detected that the Paper Feed Unit or LCIT for another model was installed.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Check the optional Paper Feed Unit or LCIT to install the correct Paper Feed Unit or LCIT.

SC No.	Type	Error Name/ Major Cause/ Solution
SC503-03	D	Feeder 4 Maker Mismatch Failure
SC503-04	D	Feeder 5 Maker Mismatch Failure
		The system detected that the Paper Feed Unit for another model was installed.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Check the optional Paper Feed Unit to install the correct Paper Feed Unit.

SC No.	Type	Error Name/ Major Cause/ Solution
SC530-00	D	Main Fan (FAN1) Fail (Process 1 Fan Fail)
		Main Fan (FAN1) does not rotate correctly.

SC No.	Type	Error Name/ Major Cause/ Solution
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.3.

SC No.	Type	Error Name/ Major Cause/ Solution
SC531-00	D	Sub Fan (FAN2) Fail (Process 2 Fan Fail)
		Sub Fan (FAN2) does not rotate correctly.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.18.

SC No.	Type	Error Name/ Major Cause/ Solution
SC532-00	D	Rear Fan (FAN3) Fail
		Rear Fan (FAN3) does not rotate correctly.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.17.

SC No.	Type	Error Name/ Major Cause/ Solution
SC540-00	D	Fusing Unit Nip Fail
		Envelope Mode Sensor (S9) does not turn ON/OFF after the Nip CAM has been driven for the specified time.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.16.

SC No.	Type	Error Name/ Major Cause/ Solution
SC542-01	D	Fusing Fail 3: Fusing Thermistor (Edge) (TH3) disconnection error
		The Fusing Thermistor (Edge) (TH3) AD value that exceeds the disconnection detection limit is detected continuously more than the specified number of times.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.7.

SC No.	Type	Error Name/ Major Cause/ Solution
SC542-02	D	Fusing Fail 5: Fusing Thermistor (Edge) (TH3) temperature error
		Over Temperature in the Fusing Unit detected.

SC No.	Type	Error Name/ Major Cause/ Solution
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to <i>Troubleshooting Procedure 1.7.</i>

SC No.	Type	Error Name/ Major Cause/ Solution
SC542-03	D	Fusing Fail 1: Fusing Thermistor (Center) (TH2) disconnection error
		The Fusing Thermistor (Center) (TH2) disconnected
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to <i>Troubleshooting Procedure 1.7.</i>

SC No.	Type	Error Name/ Major Cause/ Solution
SC542-04	D	Fusing Fail 13: Fusing Thermistor (Center) (TH2) temperature error
		The Fusing Thermistor (Center) (TH2) compensation output AD value is out of the specification value.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to <i>Troubleshooting Procedure 1.7.</i>

SC No.	Type	Error Name/ Major Cause/ Solution
SC542-05	D	Fusing Fail 2: Fusing Thermistor (Center) (TH2) disconnection error
		The Fusing Thermistor (Center) (TH2) disconnected
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to <i>Troubleshooting Procedure 1.7.</i>

SC No.	Type	Error Name/ Major Cause/ Solution
SC542-06	D	Fusing Fail 14: Fusing Thermistor (Center) (TH2) temperature error
SC542-07	D	Fusing Fail 15: Fusing Thermistor (Center) (TH2) temperature error
		The Fusing Thermistor (Center) (TH2) compensation output AD value is out of the specification value.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.7.

SC No.	Type	Error Name/ Major Cause/ Solution
SC542-08	D	Fusing Fail 4: Fusing Thermistor (Center) (TH2) temperature error
		The Fusing Thermistor (Center) (TH2) detected temperature that is the specified value or more.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.7.

SC No.	Type	Error Name/ Major Cause/ Solution
SC542-09	D	Fusing Fail 8: Temperature error
SC542-10	D	Fusing Fail 9: Temperature error
		Fusing Thermistor (Center) (TH2) detected abnormal temperature.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.7.

SC No.	Type	Error Name/ Major Cause/ Solution
SC542-11	D	Fusing Fail 6: Fusing Thermistor (Center) (TH2) temperature error
		The Fusing Thermistor (Center) (TH2) detected temperature that is the specified value or less.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.7.

SC No.	Type	Error Name/ Major Cause/ Solution
SC542-12	D	Fusing Fail 7: Fusing Thermistor (Edge) (TH3) temperature error
		Heat Roller standby temperature is low.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to <i>Troubleshooting Procedure 1.7.</i>

SC No.	Type	Error Name/ Major Cause/ Solution
SC542-13	D	Fusing Fail H1: Temperature error
		Fusing Relay Circuit disconnected.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to <i>Troubleshooting Procedure 1.7.</i>

SC No.	Type	Error Name/ Major Cause/ Solution
SC542-14	D	Fusing Fail 12: Timeout error
		When the Heating Main Lamp kept on for more than 15 seconds, the temperature of the Fusing Thermistor (center or edge) (TH2, TH3) did not change.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to <i>Troubleshooting Procedure 1.7.</i>

SC No.	Type	Error Name/ Major Cause/ Solution
SC542-15	D	Fusing Fail 17: Timeout error
		The Heating Main or Sub Lamp kept on for more than MCU ROM2 (PCB13) setting time.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Refer to <i>Troubleshooting Procedure 1.7.</i>

SC No.	Type	Error Name/ Major Cause/ Solution
SC542-16	D	Fusing Fail 11: Paper wrapping error
		Abnormal temperature change of the Heat Roller is detected.
		<ol style="list-style-type: none"> 1. If any paper is left near the Fusing Unit, remove the paper. 2. Replace the Fusing Unit. (After replacement, reset the counter.)

SC No.	Type	Error Name/ Major Cause/ Solution
SC542-17	D	Fusing Fail 10: Timeout error
		The Heating Main or Sub Lamp kept on for more than NV memory setting time.
		1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.7.

SC No.	Type	Error Name/ Major Cause/ Solution
SC580-01	D	Fusing Fail: Cannot be reload (Center)
		The temperature is not reached specified degrees within specified time.
		1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.7.

SC No.	Type	Error Name/ Major Cause/ Solution
SC580-02	D	Fusing Fail: Slow temperature rise (Center)
		The temperature at the center of the Heat Roller does not rise to the target temperature within the specified time.
		1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.7.

SC No.	Type	Error Name/ Major Cause/ Solution
SC580-03	D	Fusing Fail: Rapid temperature rise (Center)
		The temperature at the center of the Heat Roller rises to the target temperature earlier than the specified time.
		1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.7.

SC No.	Type	Error Name/ Major Cause/ Solution
SC580-04	D	Fusing Fail: Temperature error (Edge)
		Abnormal temperature of the Fusing Unit detected
		1. Turn the power OFF and ON to check if the error recurs. 2. Refer to Troubleshooting Procedure 1.7.

SC No.	Type	Error Name/ Major Cause/ Solution
SC580-05	D	Fusing Fail: Temperature error (Center)
		Over Temperature of the Fusing Unit detected
		1. Turn the power OFF and ON to check if the error recurs. 2. Refer to <i>Troubleshooting Procedure 1.7.</i>

SC No.	Type	Error Name/ Major Cause/ Solution
SC580-06	D	Fusing Fail: Temperature error (Center)
		Abnormal temperature of the Fusing Unit detected
		1. Turn the power OFF and ON to check if the error recurs. 2. Refer to <i>Troubleshooting Procedure 1.7.</i>

6.2.6 SC600 (DEVICE COMMUNICATION)

SC No.	Type	Error Name/ Major Cause/ Solution
SC600-01	D	ID error 1
		Serial number mismatch is detected.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Replace the printer.

SC No.	Type	Error Name/ Major Cause/ Solution
SC600-02	D	ID error 2
		XPC mismatch is detected.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Replace the printer.

SC No.	Type	Error Name/ Major Cause/ Solution
SC600-03	D	ID error 3
		Data mismatch is detected.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Replace the MCU (PCB2).

SC No.	Type	Error Name/ Major Cause/ Solution
SC602-00	D	MCU (PCB2) - MCU ROM1 (PCB12) access error
		MCU ROM1 (PCB12) access error (MCU ROM1 (PCB12) can be accessible or not is checked by reading or writing when the machine starts up. In case data mismatch occurs, access is performed twice and fails if data mismatch occurred three consecutive times)
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Update the firmware. 3. Replace the MCU (PCB2).

SC No.	Type	Error Name/ Major Cause/ Solution
SC603-00	D	MCU (PCB2) - MCU ROM1 (PCB12) read verify error
		MCU ROM1 (PCB12) read verifying error (When data is read from MCU ROM1 (PCB12), data is read by the page twice and checks if data matches or not. In case

SC No.	Type	Error Name/ Major Cause/ Solution
		data mismatch occurs, data reading is performed twice and fails if data mismatch occurred three consecutive times)
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Update the firmware. 3. Check the connection between the MCU ROM1 (PCB12) and the MCU (PCB2). 4. Replace the MCU (PCB2).

SC No.	Type	Error Name/ Major Cause/ Solution
SC604-00	D	MCU (PCB2) - MCU ROM1 (PCB12) write verify error
		MCU ROM1 (PCB12) write verify error (When data is written into MCU ROM1 (PCB12), data is written by the page twice and reading is performed to check if data matches or not. In case data mismatch occurs, data writing is performed twice and fails if data mismatch occurred three consecutive times)
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Update the firmware. 3. Check the connection between the MCU ROM1 (PCB12) and the MCU (PCB2). 4. Replace the MCU (PCB2).

SC No.	Type	Error Name/ Major Cause/ Solution
SC605-00	D	MCU (PCB2) - MCU ROM1 (PCB12) data broken error
		MCU ROM1 (PCB12) write verify error (When data is written into MCU ROM1 (PCB12) , data is written by the page twice and reading is performed to check if data matches or not. In case data mismatch occurs, data writing is performed twice and fails if data mismatch occurred three consecutive times)
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Update the firmware. 3. Check the connection between the MCU ROM1 (PCB12) and the MCU (PCB2). 4. Replace the MCU (PCB2).

SC No.	Type	Error Name/ Major Cause/ Solution
SC606-00	D	Controller communication error
		Communication failure between MCU (PCB2) and Controller Board (PCB1)

SC No.	Type	Error Name/ Major Cause/ Solution
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Update the firmware. 3. Check the connection between the MCU (PCB2) and the Controller Board (PCB1). 4. Replace the MCU (PCB2). 5. Replace the Controller Board (PCB1).

SC No.	Type	Error Name/ Major Cause/ Solution
SC607-00	D	Optional PFU/LCT communication error
		Communication failure between the MCU (PCB2) and the PFU/LCT Controller Board (PCB30/PCB40).
		<ol style="list-style-type: none"> 1. Re-install the optional paper feed unit or LCT. 2. When the PFU installed, go to Troubleshooting Procedure 1.14. When the LCT installed, go to Troubleshooting Procedure 1.21.

SC No.	Type	Error Name/ Major Cause/ Solution
SC608-00	D	HVPS communication error
		<ol style="list-style-type: none"> 1. Communication failure between the MCU (PCB2) and the HVPS (PCB5). 2. HVPS (PCB5) defective
		<ol style="list-style-type: none"> 1. Re-install the optional paper feed unit or LCT. 2. Go to Troubleshooting Procedure 1.9.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC620-00	D	SPDF communication error
		When the communication with SPDF cannot confirmed
		<ul style="list-style-type: none"> • SPDF communication error • SPDF Controller Board (PCB17) defective • Controller Board (PCB1) defective • Electrical noise
		<ul style="list-style-type: none"> • Turn the power OFF and ON to check if the error recurs. • Reconnect the connectors. • Replace the harnesses.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> • Replace the Controller Board (PCB1). • Replace SPDF Unit.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC636-01	D	IC card error (Expanded authentication module error)
		Issued when expanded authentication management is set to "ON" but either of the following occur. <ul style="list-style-type: none"> • There is no expanded authentication module in the machine. • The SD card or the file of the expanded authentication module is broken. • There is no DESS module in the machine.
		<ul style="list-style-type: none"> • There is no DESS module in the machine (models on which the function is optional). • There is no expanded authentication module in the machine. • The SD card or the file of the expanded authentication module is broken.
		<ul style="list-style-type: none"> • Set a working SD card/expanded authentication module file. • Install the DESS module. • In the SSP mode set SP5-401-160 to "0". • In the SSP mode, set SP5-401-161 to "0". • Replace the NVRAM on the Controller Board.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC637-01	D	Tracking information notification error (Tracking application error)
		Tracking information was lost.
		<ul style="list-style-type: none"> • Tracking SDK application error • Internal notification error
		Power cycle the machine.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC637-02	D	Tracking Information Notification Error (Management Server Error)
		Tracking information was lost.
		Communication with tracking management server failed.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> • Network error • tracking management server error • Tracking SDK application error
		Power cycle the machine.

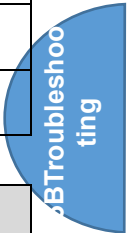
SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC641-00	D	Engine to controller communication error (No response)
		The controller sent a data frame by RAPI protocol, but there was no response after trying 3 times, once every 100ms.
		<ul style="list-style-type: none"> • Controller Board (PCB1) or software failure • MCU (PCB2) or software failure • Controller Board (PCB1) and MCU (PCB2) are not connected properly.
		<ul style="list-style-type: none"> • Check the connection between the Controller Board (PCB1) and MCU (PCB2). • Power cycle the machine.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC641-01	D	Engine serial communication error (Time-out)
		No response over the specified time.
SC641-02	D	Engine serial communication error (Retry-over)
		When commands are sent in the normal mode, communication fails over the upper limit numbers (3 times) of command byte retry.
SC641-03	D	Engine serial communication error (Download error)
		In the download command mode or download data mode, a communication error is returned from the engine.
SC641-04	D	Engine serial communication error (UART error)
		UART receive errors (Break condition, Framing, Parity or Overrun error) are detected.
		<ul style="list-style-type: none"> • Controller Board (PCB1) or software failure • Controller Board (PCB1)-MCU (PCB2) connection fault • MCU (PCB2) or software failure
		<ul style="list-style-type: none"> • Check and reconnect the connectors between the Controller Board (PCB1) and MCU (PCB2). • Power cycle the machine.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC650-01	C	Remote service modem communication error (Dialup authentication failure)
		<ul style="list-style-type: none"> • An error related to communication (dialup connection, modem board etc.) using the RC Gate Type M was detected or an error that prevents RC Gate operation was detected at power on. • Displayed only when an error is detected while RC Gate is operating. • SC is not issued if an error occurs during RC Gate installation (because it can be referenced using SP).
		Dialup authentication failure
		Check the following SPs. <ul style="list-style-type: none"> • SP5-816-156 • SP5-816-157

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC650-04	C	Remote service modem communication error (Dialup failing because of incorrect modem configuration)
		<ul style="list-style-type: none"> • An error related to communication (dialup connection, modem board etc.) using the RC Gate Type M was detected or an error that prevents RC Gate operation was detected at power on. • Displayed only when an error is detected while RC Gate is operating. • SC is not issued if an error occurs during RC Gate installation (because it can be referenced using SP).
		Dialup failing because of incorrect modem configuration
		Check if the setting of SP5-816-160 is correct. If it is correct, then there is a software bug.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC650-05	C	Remote service modem communication error (Insufficient current or connection error)
		<ul style="list-style-type: none"> • An error related to communication (dialup connection, modem board etc.) using the RC Gate Type M was detected or an error that prevents RC Gate operation was detected at power on. • Displayed only when an error is detected while RC Gate is operating.



SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> • SC is not issued if an error occurs during RC Gate installation (because it can be referenced using SP).
		Insufficient current or connection error
		The line is not supported and nothing can be done.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC650-13	C	Remote service modem communication error (RC Gate Type M was installed but modem is not present (detected during operation))
		<ul style="list-style-type: none"> • An error related to communication (dialup connection, modem board etc.) using the RC Gate Type M was detected or an error that prevents RC Gate operation was detected at power on. • Displayed only when an error is detected while RC Gate is operating. • SC is not issued if an error occurs during RC Gate installation (because it can be referenced using SP).
		RC Gate Type M was installed but modem is not present (detected during operation)
		<ul style="list-style-type: none"> • If a modem board is not installed, install it. • Check again if the modem driver configurations (SP5-816-160, SP5-816-165 to 171) are correct. • If the problem is not solved, replace the modem.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC650-14	C	Remote service modem communication error (RC Gate Type N was installed but modem is present or wired/wireless LAN is not working correctly)
		<ul style="list-style-type: none"> • An error related to communication (dialup connection, modem board etc.) using the RC Gate was detected or an error that prevents RC Gate operation was detected at power on. • Displayed only when an error is detected while RC Gate is operating. • SC is not issued if an error occurs during RC Gate installation (because it can be referenced using SP).
		RC Gate Type N was installed but modem is present or wired/wireless LAN is not working correctly
		<ul style="list-style-type: none"> • If a modem board is attached, remove it. • Check if wired/wireless LAN works.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC651-01	C	Illegal remote service dial-up (Chat program parameter error)
		An unexpected error occurred when RC Gate Type M dialed up the NRS Center.
		Software bug
		Logging only.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC651-02	C	Illegal remote service dial-up (Chat program execution error)
		An unexpected error occurred when RC Gate dialed up the NRS Center.
		Software bug
		Logging only.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC652-00	A	Remote service ID2 mismatching
		There was an authentication mismatch between ID2 for @Remote, the Controller Board, and NVRAM on the Controller Board.
		<ul style="list-style-type: none"> Used Controller Board (PCB1) installed Used NVRAM installed (such action is not allowed.)
		<ul style="list-style-type: none"> If this occurs during RC Gate installation: <ul style="list-style-type: none"> Check the validity of the certificate and the NVRAM on the Controller Board, check the machine serial number, write the common certificate, and then begin installation again. If this occurs after RC Gate installation: <ul style="list-style-type: none"> Clear the RC Gate install status, check the validity of the certificate and the NVRAM on the Controller Board, check the machine serial number, write the common certificate, and then begin installation again.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC653-00	A	Incorrect remote service ID2
		<p>ID2 stored in the NVRAM on the Controller Board has either of the following problems.</p> <ul style="list-style-type: none"> Number of characters is not 17.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> Includes a character that cannot be printed. All spaces NULL
		Replace the NVRAM on the Controller Board.
		Clear the RC Gate install status, write the common certificate, and then begin installation again.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC665-21	D	IPU (PCB3) ASIC communication error
		Communication error between the CPU and IPU (PCB3) ASIC1 is detected during the startup operation of the engine (when the main power is turned on or when the machine returns from energy save mode).
		Controller Board (PCB1) defective
		<ol style="list-style-type: none"> Power cycle the machine. Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC665-71	D	IPU (PCB3) ASIC communication error (continuous detection)
		Communication error between the CPU and IPU (PCB3) ASIC1 is detected (continuous detection).
		Controller Board (PCB1) defective
		<ol style="list-style-type: none"> Power cycle the machine. Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC667-01	D	ENG CPU operating mode setting error
		The mode setting error for CPU is detected during the startup operation of the engine (when the main power is turned on or when the machine returns from energy save mode).
		Controller Board (PCB1) defective
		<ol style="list-style-type: none"> Power cycle the machine. Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC667-20	D	IPU (PCB3) ASIC operating mode setting error
		The mode setting error for IPU (PCB3) ASIC is detected during the startup operation of the engine (when the main power is turned on or when the machine returns from energy save mode).
		Controller Board (PCB1) defective
		1. Power cycle the machine. 2. Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC668-00	D	IPU (PCB3) power check error
		The 3.3 V voltage in the IPU (PCB3) does not turn on (Hi Level).
		IPU (PCB3) defective
		1. Power cycle the machine. 2. Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC669		EEPROM Communication Error with MCU (PCB2)
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
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

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
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
SC669-24	D	EEPROM Data read: Operation stopped error
SC669-25	D	EEPROM Data read: Buffer full
SC669-26	D	EEPROM Data read: No error code
SC669-36	D	Verification error
SC669-37	D	Error Detection
		<p>The toner density sensor cannot be recovered after retrying N*1 times for EEPROM communication error.</p> <p>(*1 SC669-01 to 26: 3, SC669-36: 2, SC669-37: 1)</p> <ul style="list-style-type: none"> • Electrical noise • EEPROM not installed correctly • EEPROM defective • MCU (PCB2) defective <ol style="list-style-type: none"> 1. Power cycle the machine. 2. Re-install the EEPROM on the Controller Board (PCB1). 3. Replace the EEPROM on the Controller Board (PCB1). 4. Replace the MCU (PCB2).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC670-00	D	Engine startup error
		Engine board does not start up.
		<ul style="list-style-type: none"> • MCU (PCB2) defective • LVPS (PCB4) defective • Controller Board (PCB1) defective
		<p>Power cycle the machine to see if the error reoccurs. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power off/on after each step.</p> <ol style="list-style-type: none"> 1. Power cycle the machine ten times. 2. Check the connection between the Controller Board (PCB1) and the MCU (PCB2). 3. Replace the MCU (PCB2). 4. Replace the LVPS (PCB4). 5. Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC670-01	D	ASIC device mode setting error
		When the machine starts or returns from the energy saver mode, an ASIC mode setting error is detected.
		<ul style="list-style-type: none"> • MCU (PCB2) defective
		<p>Power cycle the machine to see if the error reoccurs. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power off/on after each step.</p> <ol style="list-style-type: none"> 1. Check the LED lighting on the MCU (PCB2). If abnormal lighting, replace the MCU (PCB2). <ul style="list-style-type: none"> - Normal lighting: ON and OFF repeats at regular intervals - Abnormal lighting: LED lights twice, then turns OFF for 4 sec. 2. Check the connection between the Controller Board (PCB1) and MCU (PCB2). 3. Replace the Controller Board (PCB1). 4. Replace the MCU (PCB2).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC674-01	D	Transfer error (M2P error)

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		The video transfer error has occurred on the Controller Board (PCB1). If image data transfer to the engine fails for some reason, an SC occurs.
		Controller Board (PCB1)/software defective
		Power cycle the machine.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC674-02	D	Transfer error (PCI error)
		The expanded engine ASIC has failed in its attempt to access another PCI device. The PCI error may occur simultaneously with the M2P error (SC674-01).
		Controller Board/software defective
		Power cycle the machine.

SC No.	Type	Error Name/ Major Cause/ Solution
SC685-04	D	SPI error
		Communication failure between Video ASIC and the engine. The cause could be external noise.
		1. Power cycle the machine to check if the error recurs. 2. Replace the MCU (PCB2).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC687-00	D	PER not received error
		RAPI-PER command was not received from the controller within the specified time (120 sec.) after RAPI-PES (preparation request for image transmission) is issued.
		Controller software error
		Power cycle the machine.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC692-01	D	Receive flag error between engine and controller
		MCU (PCB2) received signal (EW_CMDRDY) does not become ready.
SC692-02	D	Communication error between engine and controller
		There is no response from the MCU (PCB2) even if the communication start command from the the Controller Board (PCB1) is sent 60 times at an interval of 1

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		second.
SC692-03	D	<p>Retry timeout error between engine and controller</p> <p>Communication between the Controller Board (PCB1) and MCU (PCB2) was not possible even after two retries.</p>
		<ul style="list-style-type: none"> <li>• Defective harness between the MCU (PCB2) and the IPU (PCB3) <li>• MCU (PCB2) defective <li>• Controller Board (PCB1) defective <li>• IPU (PCB3) defective <hr/> <ol style="list-style-type: none"> <li>1. Power cycle the machine. <li>2. Reconnect the harness between the MCU (PCB2) and the IPU (PCB3). <li>3. Replace the part below. <ul style="list-style-type: none"> <li>- Harness between the MCU (PCB2) and the IPU (PCB3) <li>- MCU (PCB2) <li>- Controller Board (PCB1) <li>- IPU (PCB3)

6.2.7 SC700 (PERIPHERALS)

SC No.	Type	Error Name/ Major Cause/ Solution
SC720-00	B	Finisher Communication Error
		The reply from the finisher was abnormal.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Check the connection between the machine and the Internal Finisher.

SC No.	Type	Error Name/ Major Cause/ Solution
SC721-00	D	Finisher Model Mismatch Error
		Finisher for another model was installed.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Check the Internal Finisher is installed correctly.

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-01	D	Finisher Download Mode Error
		The download is aborted and the device can be activated only in Download Mode at power-on.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Go to Troubleshooting Procedure 1.27.

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-02	B	Finisher NVM Error
		An error is detected in NVM access.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Go to Troubleshooting Procedure 1.27.

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-03	B	Finisher Self Priming Sensor (S61) Error
		At the start of stapling, Self Priming Sensor (S61) is OFF.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Go to Troubleshooting Procedure 1.27.

SC No.	Type	Error Name/ Major Cause/ Solution
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SC No.	Type	Error Name/ Major Cause/ Solution
SC723-04	B	Finisher Staple Error
		<ul style="list-style-type: none"> • In the staple operation, Staple Home Sensor (S60) does not detect OFF-ON within the specified time. • After the reverse operation, Staple Home Sensor (S60) detects ON within the specified time.
		<ol style="list-style-type: none"> 1. Remove the jam paper. 2. Remove the Staple Cartridge, and then remove the clogged stapler. 3. Re-install the Staple Cartridge. 4. Go to Troubleshooting Procedure 1.36.

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-05	B	Finisher Output Tray Lower Safety Warning
		After the output tray start to move down, the Stacker Height Sensor 1 (S56) does not detect OFF within the specified time in three consecutive times.
		<ol style="list-style-type: none"> 1. Check below; <ul style="list-style-type: none"> - Remove the stack of papers on the output tray. - Is there anything under the output tray? - Does the output tray touch a wall, etc.? 2. Go to Troubleshooting Procedure 1.38.

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-06	B	Finisher Output Tray Error
		After the output tray starts to move up, the Tray Height Sensor Lower does not detect ON within the specified time.
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs. 2. Go to Troubleshooting Procedure 1.28.

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-07	B	Finisher Output Tray Upper Limit Error
		Output tray went up abnormally exceeding the specified highest position (stack height).
		<ol style="list-style-type: none"> 1. Turn the power OFF and ON to check if the error recurs.

SC No.	Type	Error Name/ Major Cause/ Solution
		2. Go to Troubleshooting Procedure 1.28.

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-08	B	Finisher Output Tray Lower Limit Error
		Output tray went down abnormally exceeding the specified lowest position (full stack).
		1. Turn the power OFF and ON to check if the error recurs. 2. Go to Troubleshooting Procedure 1.28.

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-09	B	Finisher Sub Paddle Home Sensor (S51) ON Error
		Finisher Sub Paddle Home Sensor (S51) does not turn ON within the specified time.
		1. Remove the hap paper on the stacker tray, and then turn the power OFF/ON. 2. Go to Troubleshooting Procedure 1.29

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-10	B	Finisher Sub Paddle Home Sensor (S51) OFF Error
		Finisher Sub Paddle Home Sensor (S51) does not turn OFF within the specified time.
		1. Remove the hap paper on the stacker tray, and then turn the power OFF/ON. 2. Go to Troubleshooting Procedure 1.28.

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-11	B	Finisher Eject Home Sensor (S54) ON Error
		Eject Home Sensor (S54) does not turn ON within the specified time.
		1. Turn the power OFF and ON to check if the error recurs. 2. Go to Troubleshooting Procedure 1.30

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-12	B	Finisher Eject Home Sensor (S54) OFF Error
		Eject Home Sensor (S54) does not turn OFF within the specified time.
		1. Turn the power OFF and ON to check if the error recurs.

SC No.	Type	Error Name/ Major Cause/ Solution
		2. Go to <i>Troubleshooting Procedure 1.30</i>

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-13	B	Finisher Set Clamp Home Sensor (S55) ON Error
		Set Clamp Home Sensor (S55) does not turn ON within the specified time.
		1. Turn the power OFF and ON to check if the error recurs. 2. Go to <i>Troubleshooting Procedure 1.31</i> .

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-14	B	Finisher Set Clamp Home Sensor (S55) OFF Error
		Set Clamp Home Sensor (S55) does not turn OFF within the specified time.
		1. Turn the power OFF and ON to check if the error recurs. 2. Go to <i>Troubleshooting Procedure 1.31</i> .

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-15	B	Finisher Stapler Error
		<ul style="list-style-type: none"> • In the staple operation, Staple Home Sensor (S60) does not detect OFF-ON within the specified time. • After the reverse operation, Staple Home Sensor (S60) detects ON within the specified time.
		1. Turn the power OFF and ON to check if the error recurs. 2. Go to <i>Troubleshooting Procedure 1.33</i>

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-16	B	Finisher Right Jogger Fence Home Sensor (S58) ON Error
		Right Jogger Fence Home Sensor (S58) dose not turn ON within the specified time.
		1. Turn the power OFF and ON to check if the error recurs. 2. Go to <i>Troubleshooting Procedure 1.34</i> .

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-17	B	Finisher Right Jogger Fence Home Sensor (S58) OFF Error
		Right Jogger Fence Home Sensor (S58) dose not turn OFF after stopping operation

SC No.	Type	Error Name/ Major Cause/ Solution
		by detecting that the Right Jogger Fence Home Sensor (S58) is turned OFF from ON.
		1. Turn the power OFF and ON to check if the error recurs. 2. Go to Troubleshooting Procedure 1.34 .

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-18	B	Finisher Left Jogger Fence Home Sensor (S59) ON Error
		Left Jogger Fence Home Sensor (S59) dose not turn ON within the specified time.
		1. Turn the power OFF and ON to check if the error recurs. 2. Go to Troubleshooting Procedure 1.35 .

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-19	B	Finisher Left Jogger Fence Home Sensor (S59) OFF Error
		Left Jogger Fence Home Sensor (S59) dose not turn OFF after stopping operation by detecting that the Left Jogger Fence Home Sensor (S59) is turned OFF from ON.
		1. Turn the power OFF and ON to check if the error recurs. 2. Go to Troubleshooting Procedure 1.35 .

SC No.	Type	Error Name/ Major Cause/ Solution
SC723-20	B	Finisher Interlock 24V Disconnect
		The interlock OPEN detection signal (Staple Cover_IL_SW) detected CLOSE.
		1. Turn the power OFF and ON to check if the error recurs. 2. Go to Troubleshooting Procedure 1.32 .

6.2.8 SC800 (CONTROLLER)

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC816	-	Energy save I/O subsystem error
SC816-00	D	Subsystem error detection
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	D	Sysarch (LPUX_GET_PORT_INFO) error
SC816-11	D	Sysarch (LPUX_GET_PORT_INFO) error
SC816-12	D	Sysarch (LPUX_GET_PORT_INFO) error
SC816-13	D	open() error
SC816-14	D	Memory address error
SC816-15	D	open() error
SC816-16	D	open() error
SC816-17	D	open() error
SC816-18	D	open() error
SC816-19	D	Double open() error
SC816-20	D	open() error
SC816-22	D	Parameter error
SC816-23	D	read() error
SC816-24	D	read() error
SC816-25	D	write() error
SC816-26	D	write() communication retry error
SC816-27	D	write() communication retry error

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC816-28	D	write() communication retry error
SC816-29	D	read() communication retry error
SC816-30	D	read() communication retry error
SC816-35	D	read() error
SC816-36 to 97	D	Subsystem error
		<p>Energy save I/O subsystem detected some abnormality.</p> <ul style="list-style-type: none"> • Energy save I/O subsystem defective • Energy save I/O subsystem detected a Controller Board (PCB1) error (non-response). • An error was detected during preparation for the transition to STR. <p>Power cycle the machine to see if the error reoccurs. If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power off/on after each step.</p> <ol style="list-style-type: none"> 1. Update the "System/Copy" firmware and the other system firmware to the latest version. 2. Disable the STR shift function with SP5-191-001 (Power Str Set). 3. Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC817-00	D	<p>Monitor error: File detection / Digital signature error</p> <ul style="list-style-type: none"> • Bootloader cannot read any of diagnostic module, kernel, or root filesystem. • In a bootloader SD card, the digital signature checking for any of diagnostic module, kernel, or root filesystem is failed. • Any of the following items does not exist or is broken OS Flash ROM, Diagnostic module in SD card, Kernel, Root filesystem • Any of the following items is revised fraudulently: Diagnostic module in SD card, Kernel, Root filesystem • ROM update for controller system • Use another booting SD card having a valid digital signature

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC819-00	D	Fatal kernel error

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		[XXXX]: Detailed error code
	[0x5032]	HAIC-P2 error
		HAIC-P2 decompression error (An error occurred in the ASIC compression/decompression module.)
		1. Power cycle the machine. 2. Replace the Controller Board (PCB1).
	[0x5245]	Link up error
		0x53554D45 -> "Link up error"
		1. Power cycle the machine. 2. Replace the Controller Board (PCB1). 3. Replace the MCU (PCB2).
	[0c5355]	L2 status timeout
		0x5350454E44 -> "L2 status time out"
		1. Power cycle the machine. 2. Replace the Controller Board (PCB1). 3. Replace the MCU (PCB2).
	[0x696e]	gwinit process ending
		If an unexpected error occurs at SCS processing end, gwinit processing also halts (this result is judged a kernel stop error, by gwinit specification)
		"0x69742064" -> "init died"
		Power cycle the machine.
	Console string	Other error (characters on operation panel)
		Error in the OS
		Power cycle the machine.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC821-00	D	Self-diagnostics error: ASIC [xxxx]: Detailed error code
	[0B00]	ASIC register check error
		The write-&-verify check has occurred in the ASIC.
		Defective ASIC device

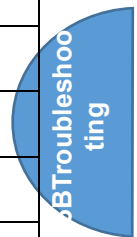
SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		Replace the Controller Board (PCB1).
	[0B06]	ASIC detection error
		Error in the I/O ASIC for system control detection
		<ul style="list-style-type: none"> Defective ASIC Defective North Bridge and PCI I/F
		Replace the Controller Board (PCB1).
	[0D05]	Comparison error of CPU and ASIC timer
		The CPU checks if the ASIC timer works correctly compared with the CPU timer. If the ASIC timer does not function in the specified range, this SC code is displayed.
		<ul style="list-style-type: none"> Defective ASIC timer device Defective CPU device
		Replace the Controller Board (PCB1).
	[50A1]	Video bridge device detection error
		Video bridge device is not detected.
		<ul style="list-style-type: none"> Video bridge device ASIC (HARP or KLAUIER) defective. Connection error between PCI I / F of the controller ASIC and video bridge device ASIC.
		Replace the Controller Board (PCB1).
	[50A2]	Video bridge device (ASIC) register error
		The CPU detects the video bridge device, but detects error data from the video bridge device.
		Defective I/F between the video bridge device and the controller
		Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC823-00	B	Self-diagnostics error: NIC [XXXX]: Detailed error code
	[6101]	MAC address check sum error
		The result of the MAC address check sum does not match the check sum stored in ROM.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> Defective SEEP ROM Defective I2C bus (connection)
		Replace the Controller Board (PCB1).
	[6104]	PHY IC error
		The PHY IC on the controller cannot be correctly recognized.
		<ul style="list-style-type: none"> Defective PHY chip Defective ASIC I/F
		Replace the Controller Board (PCB1).
	[6105]	PHY IC loop-back error
		An error occurred during the loop-back test for the PHY IC on the controller.
		<ul style="list-style-type: none"> PHY chip Defective MAC of ASIC (SIMAC/COMIC/CELLO)
		Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC824-00	C	Self-diagnostics error: NVRAM (resident)
		[XXXX]: Detailed error code
	[1401]	NVRAM verify error
		NVRAM device is missing or NVRAM device is damaged.
		<ul style="list-style-type: none"> The NVRAM device is missing. The NVRAM device is damaged. NVRAM backup battery exhausted NVRAM socket damaged
Replace the NVRAM device.		

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC827-00	D	Self-diagnostic Error: RAM
		[XXXX]: Detailed error code
	[0201]	Resident Memory Verification Error
	Error detected during a write/verify check for the standard RAM on the Controller	



SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		Board (PCB1).
		<ul style="list-style-type: none"> Defective memory device on the Controller Board (PCB1).
		<ul style="list-style-type: none"> Replace the Controller Board (PCB1).
	[0202]	Resident Memory Structure Error
		The SPD values in all RAM DIMM are incorrect or unreadable.
		<ul style="list-style-type: none"> Defective RAM DIMM Defective SPD ROM on RAM DIMM Defective 12C bus
		<ul style="list-style-type: none"> Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC828-00	D	Self-diagnostic Error: ROM
		[xxxx]: Detailed error code
	[0101]	Check Sum Error 1
		The boot monitor and OS program stored in the ROM DIMM is checked. If the check sum of the program is incorrect, this SC code is displayed.
		<ul style="list-style-type: none"> Defective flash ROM device Defective CPU device
	<ul style="list-style-type: none"> Replace the Controller Board (PCB1). 	

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC833-00	D	Self-diagnostic error: Engine I/F ASIC
		[XXXX]: Detailed error code
	[0F30]	Engine I/F ASIC detection error
		ASIC (Mandolin) for engine control could not be detected.
		ASIC (Mandolin) error
		Replace the engine board.
	[50B1]	Video device: clock generator detection error
		Could not initialize or read the bus connection.
		<ul style="list-style-type: none"> Defective connection bus

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> Defective SSCG
		Replace the engine board.
	[50B2]	Video device: clock generator verify error
		Value of the SSCG register is incorrect.
		<ul style="list-style-type: none"> Defective connection bus Defective SSCG
		Replace the engine board.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC834-00	D	Self-diagnostic error: Optional memory
		[5101] Engine I/F optional memory verify error
	An error occurs after write/verify check for optional RAM on the engine I/F board (mother board).	
	Defective memory device	
	Replace the engine board.	

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC838-00	C	Self-diagnostic Error: Clock Generator
		[2701] Verify error
	A verify error occurred when setting data was read from the clock generator via the I2C bus.	
	<ul style="list-style-type: none"> Defective clock generator Defective I2C bus Defective I2C port on the CPU 	
	Replace the Controller Board (PCB1).	

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC840-00	D	EEPROM access error
		<ul style="list-style-type: none"> During the I/O processing, a reading error occurred. The 3rd reading failure causes this SC code.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> During the I/O processing, a writing error occurred.
		EEPROM is defective or has reached its end of life.
		-

SC No.	Type	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.
		-

SC 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
		Power cycle the machine.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC842-50	C	Insufficient Nand-Flash blocks (threshold exceeded)
		At startup, or when machine returned from energy saver mode, the Nand-Flash status was read and judged that the number of unusable blocks had exceeded the threshold, and then SCS generated the SC code.
		Number of unusable blocks exceeded the threshold for Nand-Flash
		Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC842-51	C	The number of Nand-Flash block deletions exceeded
		At startup, or when the machined returned from energy saver mode, the Nand-Flash was read and judged that the number of deleted blocks had exceeded the threshold, and then SCS generated this SC code.
		Number of blocks deleted exceeded threshold for Nand-Flash

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC842-52	D	Nand-Flash (eMMC) data read failure
		The data written to the Nand-Flash (eMMC) cannot be read due to bad sectors.
		-
		1. Power cycle the machine. 2. If the problem persists, replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC842-53	D	Nand-Flash CRC error
		CRC error occurs during NandFlash (eMMC) operation.
		-
		1. Power cycle the machine. 2. If the problem persists, replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC842-54	D	Nand-Flash CRC error
		During Nand-Flash (eMMC) operation, an access error other than for SC842-52 and SC842-53 is detected.
		-
		1. Power cycle the machine. 2. If the problem persists, replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC843-02	B	eMMC rewrite frequency exceeded the threshold (Smart Operation Panel)
		At startup, or when the machined returned from energy saver mode, the eMMC was read and judged that the number of rewrote blocks had exceeded the threshold.
		Number of blocks rewrote exceeded threshold for eMMC
		Replace the Smart Operation Panel.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC845-01	D	Hardware error detected when the automatic firmware update: Engine board (MCU)

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		(PCB2))
SC845-02	D	Hardware error detected when the automatic firmware update: Controller Board (PCB1)
SC845-03	D	Hardware error detected when the automatic firmware update: Operation panel (normal)
SC845-04	D	Hardware error detected when the automatic firmware update: Operation panel (Smart Operation Panel)
SC845-05	D	Hardware error detected when the automatic firmware update: 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
		Replacing the target board.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC845-50	D	DMM or hard disk failure
		This SC occurs if auto firmware decompression fails after downloading the package firmware during auto firmware update or receiving reservation setting in SFU. The machine operates normally if you turn the main power off and then back on, but the SC occurs again when firmware decompression fails again during the next auto firmware update.
		Hardware failure (DIMM or hard disk failure) or the package file released via the global server (SERES) is corrupt.
		Replace the DIMM on the Controller Board (PCB1). If the problem persists after replacing the DIMM, replace the hard disk.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC845-51	C	Network, DIMM or hardware failure
		This SC occurs if auto firmware decompression fails after downloading the package firmware during auto firmware update, update from the application site, or receiving reservation setting in SFU.
		Failure in the customer's network or hardware failure.
		1. This may be recovered by retrying the firmware update. 2. If the problem persists, replace the Controller Board (PCB1).

SC No.	Type	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)
		<ul style="list-style-type: none"> • Defective wireless LAN board • Loose connection
		<ol style="list-style-type: none"> 1. Power cycle the machine. 2. Replace wireless LAN board.

SC No.	Type	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)
		<ul style="list-style-type: none"> • Defective wireless LAN board • Loose connection
		<ol style="list-style-type: none"> 1. Power cycle the machine. 2. Replace wireless LAN board.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC857-00	B	USB I/F Error
		The USB interface is unusable because of a driver error.
		USB driver error (There are three causes of USB error: RX error/CRC error/STALL. SC is issued only in the case of STALL.)
		<ol style="list-style-type: none"> 1. Check the USB connection. 2. Replace the Controller Board (PCB1).

SC No.	Type	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.
		<ul style="list-style-type: none"> • USB Flash, other data, corrupted • Communication error caused by electrostatic noise • Controller Board (PCB1) defective
		Replace the Controller Board (PCB1).

SC No.	Type	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
		<ol style="list-style-type: none"> 1. Replace the NVRAM on the Controller Board (PCB1). 2. Replace the Controller Board (PCB1).

SC No.	Type	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.
		<ol style="list-style-type: none"> 1. Power cycle the machine. 2. If the error persists, replace the Controller Board (PCB1).

SC No.	Type	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 (PCB1) defective
		Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC860-50	D	Storage startup error at main power on
		An access error occurred at power-on, or no storage device connection.
		<ul style="list-style-type: none"> • The data written to the storage device cannot be read normally. • The storage device is not connected securely.
		<ol style="list-style-type: none"> 1. Power cycle the machine. 2. If the problem persists, replace the storage device.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC860-51	C	Number of Nand-Flash defective block exceeded
		At startup, or when recovery from energy saving, the Nand-Flash status was read and the number of defective blocks exceeded the threshold.
		Number of defective blocks exceeded threshold for Nand-Flash.
		<ol style="list-style-type: none"> 1. Power cycle the machine. 2. If the problem persists, replace the storage device.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC860-52	C	Number of Nand-Flash block deletions exceeded
		At startup, or when recovery from energy saving, the Nand-Flash status was read and the number of defective blocks exceeded the threshold.
		Number of blocks deleted exceeded threshold for Nand-Flash
		<ol style="list-style-type: none"> 1. TPower cycle the machine. 2. If the problem persists, replace the storage device.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC861-50	D	Storage boot failure
		Access to the storage device fails when recovery from energy saving.
		No response from the storage device.
		<ol style="list-style-type: none"> 1. Power cycle the machine. 2. If the problem persists, replace the storage device.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC863-50	D	Storage data read failure
		The data written to the storage device cannot be read due to bad sectors.
		Access destination in the storage device is in a bad sector.
		<ol style="list-style-type: none"> 1. Power cycle the machine. 2. If the problem persists, replace the storage device.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC864-50	D	Storage CRC error

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		CRC error occurs during storage device operation.
		Bad sectors were generated during operation.
		1. Power cycle the machine. 2. If the problem persists, replace the storage device.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC865-80	D	Storage access error
		An access error occurred when reading/writing the data in the storage device.
		During storage device operation, an access error other than those for SC863-50 and SC864-50 is detected.
		1. Power cycle the machine. 2. If the problem persists, replace the storage device.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC866-00	B	SD card authentication error
		When a correct license for digital authentication is not found in an SD card application.
		The SD card contains the wrong program data.
		Store the correct program data on the SD card.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC867-00	B	SD card removal detection
		When an application SD card is removed from the slot (/mnt/sd0) while the application is being activated.
SC867-01	B	SD card removal detection
		When an application SD card is removed from the slot (/mnt/sd1) while the application is being activated.
SC867-02	B	SD card removal detection
		When an application SD card is removed from the slot (/mnt/sd2) while the application is being activated.
		An application SD card has been removed from the slot (from the mount point /mnt/sd*).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		Power cycle the machine.

SC No.	Type	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)
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)
SC868-02	D	SD card access error
		The SD controller returned an error during operation. (An error occurred at the mount point of /mnt/sd2)
		<ul style="list-style-type: none"> • SD card defective • SD controller defective
		<p>SD card that starts an application:</p> <ul style="list-style-type: none"> • Power cycle the machine 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. <p>SD card for users:</p> <ul style="list-style-type: none"> • 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 power off and check the SD card insertion status. <ul style="list-style-type: none"> • If no problem is found, insert the SD card and turn the power on. • If an error occurs, use another SD card. • If the error persists even after replacing the SD card, replace the Controller Board (PCB1).

* Do not format the SD card supplied with the main machine or sold as an option. You may only format SD cards used for firmware update by the Customer Engineer.

SC No.	Type	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.)

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
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.)
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: Space for storing the address book is unusable.)
SC870-09	B	Address book data error (Machine configuration: Failed to store the settings required for the address book configuration in the NVRAM area.)
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 the 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 the file.)
SC870-22	B	Address book data error (File I/O: Failed to open the 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 the file.)
SC870-25	B	Address book data error (File I/O: Failed to check the 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 the 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

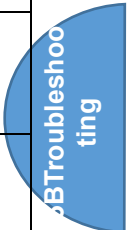
SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		search.)
SC870-32	B	Address book data error (Search: Failed to obtain data from cache while searching the WS-scanner address book.)
SC870-41	B	Address book data error (Cache: Failed to obtain data from the cache.)
SC870-50	B	Address book data error (On startup: Detected abnormality of the address book encryption status.)
SC870-51	B	Address book data error (Encryption settings: Failed to create the 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 plain text.)
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 the 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.)
		When an error related to the Address Book is detected during startup or operation.
		<ul style="list-style-type: none"> • Software bug • Inconsistency of Address Book source location (machine/delivery server/LDAP server) • Inconsistency of Address Book encryption setting or encryption key (NVRAM or Controller Board was replaced individually without formatting the Address Book)

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> The address Book storage device was temporarily removed or hardware configuration does not match the application configuration. Address Book data corruption was detected.
		<ol style="list-style-type: none"> Power cycle the machine. Update the controller firmware.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC871-01	D	Fax control unit error
		An error occurred when FCS detects fax control unit defective.
		<ul style="list-style-type: none"> Time-out error Abnormal parameter
		<ol style="list-style-type: none"> Power cycle the machine. Update the firmware if the more recent firmware was released.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC871-02	D	Fax control unit job error (Recovery possible)
		This SC occurs when the fax control unit has detected a job error (failure to start or complete a job) that may be recovered by auto reboot.
		-
		<ol style="list-style-type: none"> Power cycle the machine. Update the firmware if more recent firmware was released.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC871-03	D	Fax control unit job error (Recovery not possible)
		This SC occurs when the fax control unit has detected a job error (failure to start or complete a job) that will not be recovered by auto reboot.
		-
		<ol style="list-style-type: none"> Power cycle the machine. Update the firmware if more recent firmware was released.



SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC878-00	D	TPM electronic authentication error
		The machine failed TPM electronic authentication. System hash registered in the TPM did not match the data on the USB flash.
		<ul style="list-style-type: none"> System module was updated in an unauthorized manner. USB flash is not working correctly.
		Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC878-01	D	USB Flash error
		USB Flash file system error
		USB Flash file system has been destroyed.
		Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC878-02	D	TPM error
		An error occurred in the TPM or TPM driver.
		TPM is defective
		Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC878-03	D	TCSD error
		An error occurred in TPM software stack.
		<ul style="list-style-type: none"> Unable to start TPM Necessary files missing from the TPM.
		Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC878-20	D	DESS self-test error
		The power-on self-test for TPM failed at startup when the controller encryption software was tested.
		TPM is defective
		<ol style="list-style-type: none"> 1. Power cycle the machine. 2. Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC878-21	D	Random number generator error
		An error occurred when doing self-check against seed for random number generated.
		TPM is defective
		<ol style="list-style-type: none"> 1. Power cycle the machine. 2. Replace the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC882-01	A	Smart Operation Panel software verification error
		Smart Operation Panel verification was executed and an invalid result returned.
		<ul style="list-style-type: none"> • The Smart Operation Panel software has corrupted the memory. • An unauthorized application has been installed on Smart Operation Panel.
		<ul style="list-style-type: none"> • Reinitialize Smart Operation Panel or rewrite the firmware.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC899-00	D	Software performance error (signal reception end)
		-
		Occurs when an internal program behaves abnormally.
		<p>In the case of a hardware defect</p> <ul style="list-style-type: none"> • Replace the hardware. <p>In the case of a software error</p> <ul style="list-style-type: none"> • Power cycle the machine. • Try updating the firmware.

6.2.9 SC900 (OTHERS)

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC900-00	D	Electronic counter error
		The electronic total counter value is not the specified value. This error is detected when the counter moves forward.
		<ul style="list-style-type: none"> The NVRAM connection is not correct. The NVRAM is defective. The NVRAM data is corrupted. The data was written in the wrong area due to external factors. When PRT received signals at SRM, the requested count is not completed.
		Replace the NVRAM on the Controller Board (PCB1).

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC920-02	B	Printer Error 1 (WORK memory not acquired)
SC920-04	B	Printer Error 1 (Filter processing ended abnormally)
		When an error is detected in the application, which makes continued operation impossible.
		<ul style="list-style-type: none"> Software bug Unexpected hardware configuration (such as insufficient memory)
		Power cycle the machine.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC921-00	B	Printer application error (Resident font not found)
		The Resident font was not found at printer startup.
		Preinstalled font files not found.
		Power cycle the machine.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC940-81	D	Load SW overcurrent detection
		Current limiting to the load SW has been detected.
		Shortcircuit of the following harnesses

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> The harness between the Controller Board (PCB1) and the optional counter interface board The harness between the optional counter interface board and the optional counter device
		<p>Disconnect CN200 of the Controller Board (PCB1), and then turn on the machine.</p> <ul style="list-style-type: none"> If SC940-81 does not occur, there is a short circuit in the harnesses, optional counter interface board or the optional counter device. Replace the harness, optional counter interface board or the optional counter device. If SC940-81 occurs, there may be a short circuit in the Controller Board (PCB1). Replace the Controller Board (PCB1).

SC No.	Type	Error Name/ Major Cause/ Solution
SC990-00	D	Marking Logic Fail
		Fatal defect is detected during Marking control
		<ul style="list-style-type: none"> Power cycle the machine. Update the firmware. Replace the MCU (PCB2). Replace the Controller Board (PCB1).

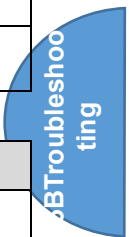
SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC991-00	C	Recoverable software operation error
		The software performed an unexpected function and the program cannot continue. Recovery processing allows the program to continue.
		<ul style="list-style-type: none"> Abnormal variable Internal parameter error Insufficient work memory Hardware error not detected by SC
		Logging only

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC992-00	D	Undefined Error (No SC Code)
		An error not controlled by the system occurred (the error does not come under any

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
		other SC code).
		Software defective
		Power cycle the machine.

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC994-00	C	Application Item Error
		The numbers of executed application items on the operation panel reach the maximum limit for the operation panel structure.
		Too many executed application items
		Logging only

SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC997-00	B	Application function selection error
		The application did not function normally after pressing the application key on the operation panel.
		There is a bug in the software.
		<ul style="list-style-type: none"> • Check if the options required by the application devices and boards are installed properly. • Check whether downloaded applications are correctly configured.



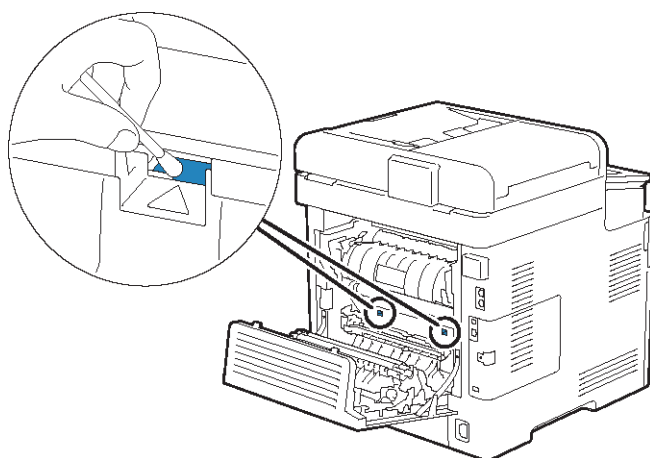
SC No.	Type	Error Name/Error Condition/Major Cause/Solution
SC998-00	D	Application start error
		<ul style="list-style-type: none"> • After power ON, no application program was registered to the system within the specified period of time. (No application started or ended normally.). • Even though the application started up, it cannot be rendered due to an unknown fault.
		<ul style="list-style-type: none"> • There is a bug in the software. • The options required by the application devices and boards are not installed.
		<ul style="list-style-type: none"> • Power cycle the machine. • Check the devices and boards. • Check the application configurations. • Replace the Controller Board (PCB1).

6.2.10 FLOWCHART FOR IDENTIFYING THE CAUSE OF THE PROBLEM

Level 1

Troubleshooting Procedure 1.1

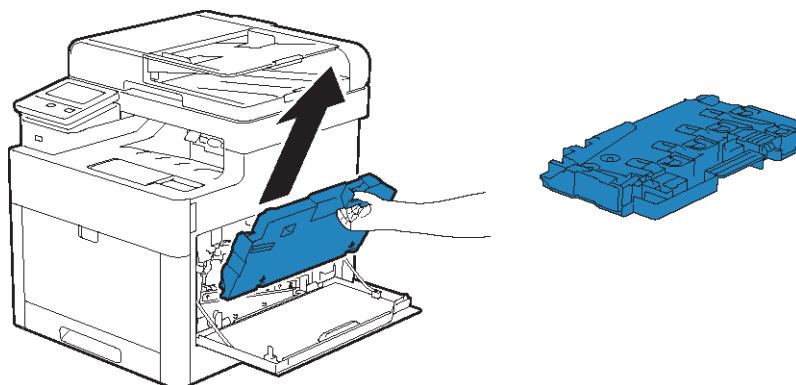
1. Make sure that the printer is turned off.
2. Pull up the handle lever of the rear cover, and open the rear cover.
3. Clean the ID/MUSIC Sensors (S10, S11) with a clean and dry cotton swab.



4. Close the rear cover.

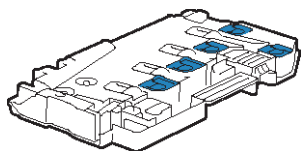
Troubleshooting Procedure 1.2

1. Open the right side cover.
2. Push down the latch to release the Waste Toner Bottle from the printer.
3. Gently pull the Waste Toner Bottle upwards.

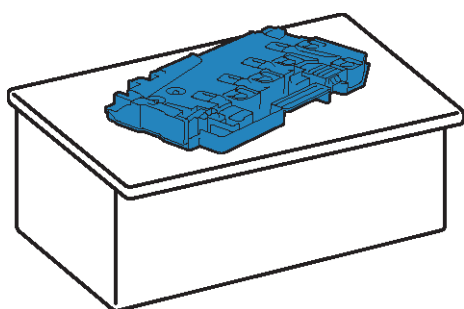


Note

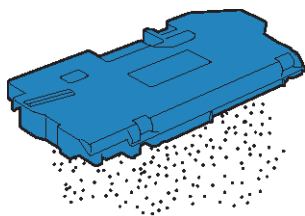
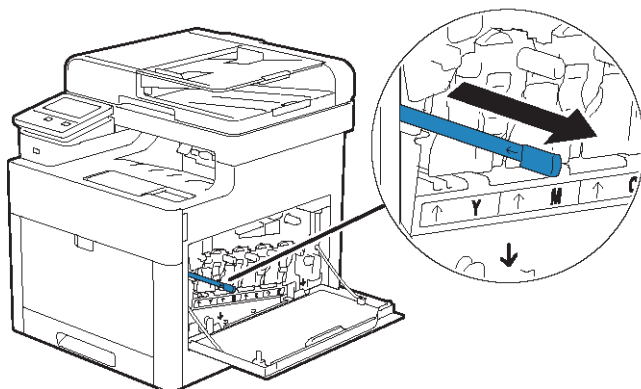
- Take care not to drop the Waste Toner Bottle while you are removing it.
- After removing the Waste Toner Bottle, do not touch the parts shown below. Toner can dirty or stain your hands.

**4. Place the Waste Toner Bottle on a level surface.**

Always keep the side that was attached to the printer facing up.

**Note**

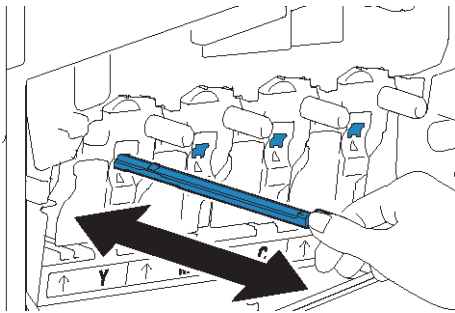
- Never let the side that was attached to the printer face down. This may cause the toner to spill out.

**5. Pull out the cleaning rod from inside the printer.**

6. Insert the cleaning rod into one of the four holes of the tabs on the drum cartridges until it stops, and then pull it out.

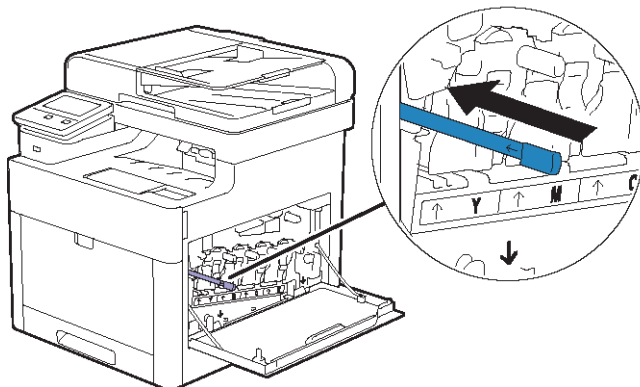
Note

- Insert the cleaning rod with the pad side up.
- It is not necessary to move the cleaning rod back and forth repeatedly.



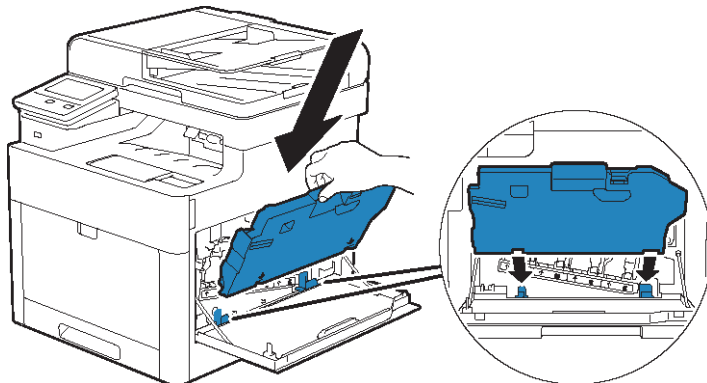
7. Repeat Step 6 for the other three holes.

8. Return the cleaning rod to its original location.

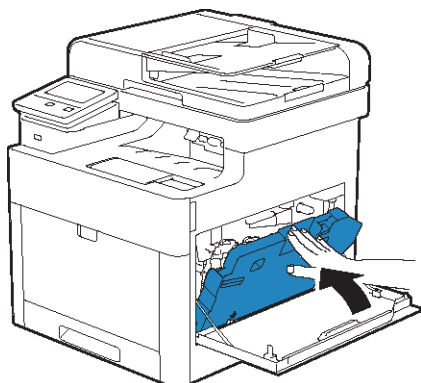


9. Insert the Waste Toner Bottle.

Make sure that the two indented parts on the bottom go into the brackets on the printer.



10. Push on the handle of the Waste Toner Bottle until it clicks.



11. Close the right side cover.

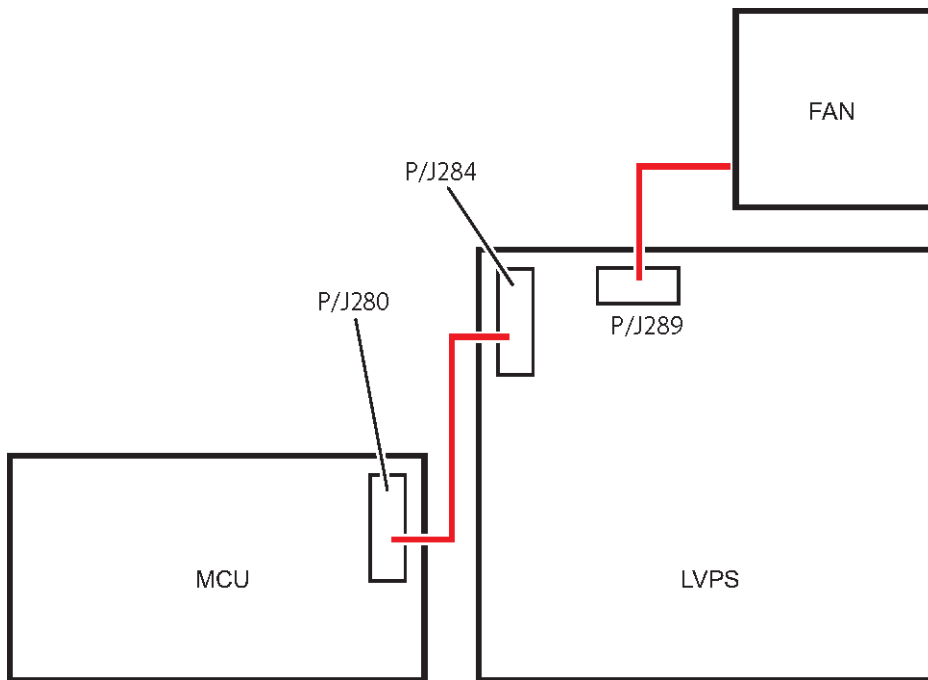
Troubleshooting Procedure 1.3

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Main Fan (FAN1) • Harness between the LVPS (PCB4) and the MCU • LVPS (PCB4) • MCU 		
1	Checking the Main Fan (FAN1) operation Execute the diagnosis and check the Main Fan (FAN1) rotation. Does the Main Fan (FAN1) function normally?	Replace the MCU (PCB2).	Go to Step 2.
2	Checking the Main Fan (FAN1) installation Rotate the Main Fan (FAN1) manually. Is there an overload?	Reinstall the Main Fan (FAN1).	Go to Step 3.
3	Checking the Main Fan (FAN1) connection Check the connection between the Main Fan (FAN1) and the LVPS (PCB4). Is P/J289 connected surely? (Refer to Reference)	Go to Step 4.	Connect P/J289 surely.
4	Checking the connections between the LVPS (PCB4) and the MCU (PCB2)	Go to Step 5.	Connect P/J284 and P/J280 surely.


Step	Check	Yes	No
	Are P/J284 and P/J280 connected surely?		
5	Checking the continuity between the LVPS (PCB4) and the MCU Is each cable of P/J284<=>P/J280 continuous?	Go to Step 6.	Replace the Harness between the LVPS (PCB4) and the MCU.
6	Checking after replacing the Main Fan (FAN1) Replace the Main Fan (FAN1). Does the error still occur?	Replace the LVPS (PCB4).	END

Troubleshooting

Reference



Troubleshooting Procedure 1.4

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Main Motor (M2) [Motor Drive Assy] • MCU (PCB2) 		
1	Checking the Main Motor (M2) operation Execute the SP OUTPUT check to check the Main Motor (M2) rotation.  Important PCDUs need to be removed during Main Motor rotation. Does the Main Motor (M2) function normally?	Replace the MCU (PCB2).	Go to Troubleshooting Procedure 2.8 .

Troubleshooting Procedure 1.5

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Sub Motor (M3) [Main Drive Assy] • MCU (PCB2) 		
1	Checking the Sub Motor (M3) operation Execute the SP OUTPUT check to check the Sub Motor (M3) rotation. Does the Sub Motor (M3) function normally?	Replace the MCU (PCB2).	Go to Troubleshooting Procedure 2.9 .

Troubleshooting Procedure 1.6

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • ID/MUSIC Sensor Assy • Harness between the ID/MUSIC sensors and the MCU (PCB2) • MCU (PCB2) 		
1	Checking the ID/MUSIC Sensor Assy	Clean* the ID/MUSIC	Go to Step 2.

Step	Check	Yes	No
	(ID/MUSIC Sensor (S10), MUSIC Sensor (S11)) surface for any smears or foreign objects. Are there any smears or foreign objects on the surface of the ID/MUSIC Sensor (S10) and MUSIC Sensor (S11)?	sensors surface or remove a foreign objects. *: Wipe it with a dry, soft cloth (without alcohol).	
2	Checking the ID/MUSIC Sensor Assy installation Is the ID/MUSIC Sensor Assy installed correctly?	Go to Step 3.	Reinstall the ID/MUSIC Sensor Assy.
3	Checking the ID/MUSIC Sensor Assy (ID/MUSIC Sensor (S10), MUSIC Sensor (S11)) connection Check the connection between the ID/MUSIC sensors and the MCU (PCB2). Are P/J142, P/J143, P/J141 and P/J140 connected surely?	Go to Step 4.	Connect P/J142, P/J143, P/J141 and P/J140 surely.
4	Checking after replacing the Main Fan (FAN1) Replace the Main Fan (FAN1). Does the error still occur?	Replace the MCU (PCB2).	END

Troubleshooting Procedure 1.7

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Fusing Unit • Harness between the Fusing Unit and the MCU (PCB2) • Harness between the LVPS (PCB4) and the MCU (PCB2) • Harness between the LVPS (PCB4) and the Fusing Unit • LVPS (PCB4) • MCU 		

Step	Check	Yes	No
1	<p>Checking the Fusing Unit installation</p> <p>Are the Fusing Unit, and the drawer connector of the printer installed properly (without a bent pin, or any foreign or burnt objects, etc.)?</p>	Go to Step 2.	Reinstall the Fusing Unit.
2	<p>Checking the Fusing Unit connection</p> <p>Check the connection between the Fusing Unit and the MCU (PCB2), and the connection between the Fusing Unit and the LVPS (PCB4).</p> <p>Are P/J283, DP/DJ277, P/J270, and P/J277 connected surely?</p>	Go to Step 3.	Connect P/J283, DP/DJ277, P/J270, and P/J277 surely.
3	<p>Checking the connections between the LVPS (PCB4) and the MCU (PCB2)</p> <p>Check the connection between the LVPS (PCB4) and the MCU (PCB2).</p> <p>Are P/J284 and P/J280 connected surely?</p>	Go to Step 4.	Connect P/J284 and P/J280 surely.
4	<p>Checking the Harness between the Fusing Unit and the MCU (PCB2) continuity.</p> <p>Is each cable of P/J270\leftrightarrowDP/DJ277 continuous?</p>	Go to Step 5.	Replace the Harness between the Fusing Unit and the MCU (PCB2).
5	<p>Checking the Harness between the LVPS (PCB4) and the MCU (PCB2) continuity.</p> <p>Is each cable of P/J284\leftrightarrowP/J280 continuous?</p>	Go to Step 6.	Replace the Harness between the LVPS (PCB4) and the MCU (PCB2).
6	<p>Checking after replacing the Fusing Unit</p> <p>Replace the Fusing Unit. (After replacement, reset the counter.)</p> <p>Does the error still occur?</p>	Go to Step 7.	END
7	<p>Checking after replacing the LVPS (PCB4)</p> <p>Replace the LVPS (PCB4).</p> <p>Does the error still occur?</p>	Replace the MCU (PCB2).	END

Troubleshooting Procedure 1.8

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Main Fan (FAN1) • Fusing Unit • Harness between the Fusing Unit and the MCU (PCB2) • Harness between the LVPS (PCB4) and the MCU (PCB2) • Harness between the LVPS (PCB4) and the Fusing Unit • LVPS (PCB4) • MCU (PCB2) 		
1	Checking the Main Fan (FAN1) operation Execute the diagnosis and check the Main Fan (FAN1) rotation. Does the Main Fan (FAN1) function normally?	Go to Step 5.	Go to Step 2.
2	Checking the Main Fan (FAN1) installation Rotate the Main Fan (FAN1) manually. Is there an overload?	Reinstall the Main Fan (FAN1).	Go to Step 3.
3	Checking the Main Fan (FAN1) connection Check the connection between the Main Fan (FAN1) and the LVPS (PCB4). Is P/J289 connected surely?	Go to Step 4.	Connect P/J289 surely.
4	Checking after replacing the Main Fan (FAN1) Replace the Main Fan (FAN1). Does the error still occur?	Go to Step 5.	END
5	Checking the Fusing Unit installation Are the Fusing Unit, and the drawer connector of the printer installed properly (without a bent pin, or any foreign or burnt objects, etc.)?	Go to Step 6.	Reinstall the Fusing Unit.
6	Checking the Fusing Unit connection	Go to Step 7.	Connect P/J283,

Step	Check	Yes	No
	Check the connection between the Fusing Unit and the MCU (PCB2), and the Fusing Unit and the LVPS (PCB4). Are P/J283, DP/DJ277, P/J270, and P/J277 connected surely?		DP/DJ275, P/ J270, and P/J277 surely.
7	Checking the connections between LVPS (PCB4) and the MCU (PCB2) Check the connection between the LVPS (PCB4) and the MCU (PCB2). Are P/J284 and P/J280 connected surely?	Go to Step 8.	Connect P/J284 and P/J280 surely.
8	Checking the Harness between the Fusing Unit and the MCU (PCB2) continuity. Is each cable of P/J270<=>DP/DJ277 continuous?	Go to Step 9.	Replace the Harness between the Fusing Unit and the MCU (PCB2).
9	Checking the Harness between the LVPS (PCB4) and the MCU (PCB2) continuity. Is each cable of P/J284<=>P/J280 continuous?	Go to Step 10.	Replace the Harness between the LVPS (PCB4) and the MCU (PCB2)
10	Checking after replacing the Fusing Unit Replace the Fusing Unit. (After replacement, reset the counter.) Does the error still occur?	Go to Step 11.	END
11	Checking after replacing the LVPS (PCB4) Replace the LVPS (PCB4). Does the error still occur?	Replace the MCU (PCB2).	END

Troubleshooting Procedure 1.9

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • HVPS (PCB5) • Harness between the HVPS (PCB5) and the MCU (PCB2) • MCU (PCB2) 		

Step	Check	Yes	No
1	<p>Checking the HVPS (PCB5) connection</p> <p>Check the connection between the HVPS (PCB5) and the MCU (PCB2).</p> <p>Are P/J100 and P/J1001 connected surely?</p>	Go to Step 2.	Connect P/J100 and P/J1001 surely.
2	<p>Checking after replacing the HVPS (PCB5)</p> <p>Replace the HVPS (PCB5).</p> <p>Does the error still occur?</p>	Replace the MCU (PCB2).	END

Troubleshooting Procedure 1.10

Step	Check	Yes	No
	<p>Possible causative parts:</p> <ul style="list-style-type: none"> • LED Head Assy • IPU (PCB3) • LED Head Base 		
1	<p>Checking the connectors for connection</p> <p>Check to see if there is any poor connection between the LED Head and the IPU where failure is occurring.</p> <p>Are P/J1360, P/J1361, P/J1362 and P/J1363 connected surely?</p> <ul style="list-style-type: none"> • P/J1360: Connects to the LED Head Assy (Y) • P/J1361: Connects to the LED Head Assy (M) • P/J1362: Connects to the LED Head Assy (C) • P/J1363: Connects to the LED Head Assy (K) 	Go to Step 2.	Connect P/J1360, P/J1361, P/J1362 and P/J1363 surely.
2	<p>Checking after replacing the LED Head Assy</p> <p>Replace the LED Head Assy where failure is occurring.</p> <p>Does the error still occur?</p>	Go to Step 3.	END
3	<p>Checking after replacing the LED Head Base</p> <p>Replace the LED Head Base.</p> <p>Does the error still occur?</p>	Go to Step 4.	END
4	<p>Checking after replacing the IPU (PCB3)</p>	Replace the machine.	END

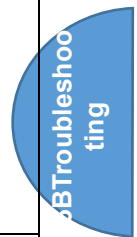
Step	Check	Yes	No
	Replace the IPU (PCB3). Does the error still occur?		

Troubleshooting Procedure 1.11

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • K Mode Sensor (S3) • K Mode Clutch (CL6) [Main Drive Assy] • ITB Unit (Image Transfer Belt Unit) 		
1	Checking the K Mode Sensor (S3) installation Is the K Mode Sensor (S3) installed properly?	Go to Step 2.	Reinstall the K Mode Sensor (S3)
2	Checking the K Mode Sensor (S3) operation Execute the SP INPUT Check to check the K Mode Sensor (S3) operation. Does the K Mode Sensor (S3) function normally?	Go to Step 3.	Go to Troubleshooting Procedure 2.6.
3	Checking the K Mode Clutch (CL6) operation Execute the SP OUTPUT Check to check the K Mode Clutch (CL6) operation. Does the K Mode Clutch (CL6) function normally?	Go to Step 4.	Go to Troubleshooting Procedure 2.7.
4	Checking the ITB Unit Is the ITB Unit deformed or damaged?	Replace the ITB Unit.	Replace the MCU (PCB2).

Troubleshooting Procedure 1.12

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • PCDU (Y) • PCDU (M) • PCDU (C) • PCDU (K) • Harness between the MCU (PCB2) and the ID Chip connector for PCDU 		



Step	Check	Yes	No
	<ul style="list-style-type: none"> MCU (PCB2) 		
1	<p>Checking the PCDU installation</p> <p>Is the connection part between the holder and the ID Chip on the PCDU (YMCK) clean (without any foreign objects)?</p> <p>And, is the PCDU (YMCK) installed correctly?</p>	Go to Step 2.	Reinstall the PCDU (YMCK).
2	<p>Checking the ID Chip for PCDU</p> <p>Is the connection terminal of the ID Chip on the PCDU (YMCK) broken?</p>	Replace the PCDU (YMCK).	Go to Step 3.
4	<p>Checking the connection between the ID Chip connector and the MCU (PCB2)</p> <p>Check the connection between the ID Chip connector and the MCU (PCB2).</p> <p>Are P/J401, P/J402, P/J403, P/J404 and P/J400 connected surely?</p> <ul style="list-style-type: none"> P/J400: Connects to MCU (PCB2) P/J401: Connects to PCDU (Y) P/J402: Connects to PCDU (M) P/J403: Connects to PCDU (C) P/J404: Connects to PCDU (K) 	Replace the MCU (PCB2).	Connect P/J401, P/J402, P/J403, P/J404 and P/J400 surely.

Troubleshooting Procedure 1.13

Step	Check	Yes	No
	<p>Possible causative parts:</p> <ul style="list-style-type: none"> Toner Cartridge Y Toner Cartridge M Toner Cartridge C Toner Cartridge K Toner Supply Assy Y Toner Supply Assy M Toner Supply Assy C Toner Supply Assy K Harness between the Toner Supply Assy 		

Step	Check	Yes	No
	(YMCK) and the MCU (PCB2). <ul style="list-style-type: none"> MCU (PCB2) 		
1	Checking the Toner Cartridge installation Is the connection part between the Toner Supply Assy and the ID Chip inside the Toner Cartridge (YMCK) clean (without any foreign objects)? And, is the Toner Cartridge (YMCK) installed correctly?	Go to Step 2.	Reinstall the Toner Cartridge (YMCK).
2	Checking the ID Chip inside the Toner Cartridge Is the connection terminal of the ID Chip inside the Toner Cartridge (YMCK) broken?	Replace the Toner Cartridge (YMCK).	Go to Step 3.
3	Checking the Toner Supply Assy Is the connection terminal of the Toner Supply Assy (YMCK) broken?	Replace the Toner Supply Assy (YMCK).	Go to Step 4.
4	Checking the Toner Supply Assy connection Check the connection between the Toner Supply Assy (YMCK) and the MCU (PCB2). Are P/J111, P/J112, P/J113, P/J114 and P/J110 connected surely? <ul style="list-style-type: none"> P/J110: Connects to the MCU (PCB2) P/J111: Connects to the connector of the ID Chip for Toner Cartridge (Y) P/J112: Connects to the connector of the ID Chip for Toner Cartridge (M) P/J113: Connects to the connector of the ID Chip for Toner Cartridge (C) P/J114: Connects to the connector of the ID Chip for Toner Cartridge (K) 	Replace the MCU (PCB2).	Connect P/J111, P/J112, P/J113, P/J114 and P/J110 surely.

Troubleshooting Procedure 1.14

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Harness between the MCU (PCB2) and drawer connector • Drawer connector • Harness between the drawer connector and the PFU Controller Board (PCB30) • PFU Controller Board (PCB30) • MCU (PCB2) 		
1	(Tray 2) Checking the connections between the PFU Controller Board (PCB30) and the MCU (PCB2) Are P/J800, DP/DJ801, and P/J802 connected surely?	Go to Step 2.	Connect P/J800, DP/DJ801, and P/J802 surely.
2	Checking the drawer connector Is the drawer connector deformed?	Replace the Paper Feed Unit.	Go to Step 3.
3	(Tray 2) Checking the continuity between the MCU (PCB2) and the drawer connector Is each cable of P/J800<=>DP/DJ801 continuous?	Go to Step 4.	Replace the Harness between the MCU (PCB2) and drawer connector.
4	(Tray 3/4/5) Checking the connections between the upper PFU Controller Board (PCB30) in the lower PFU Controller Board (PCB30) Are P/J815, DP816, DJ801, and P/J802 connected surely?	Replace the MCU (PCB2).	Connect P/J815, DP816, DJ801, and P/J802 surely.

Troubleshooting Procedure 1.15

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • PFU Feed Motor (M30) • MCU (PCB2) 		
1	Checking the PFU Feed Motor (M30) Execute the SP OUTPUT Check to check the PFU Feed Motor (M30) operation. Does the PFU Feed Motor (M30) operation normally?	Replace the MCU (PCB2).	Go to Troubleshooting Procedure 2.3 .

Troubleshooting Procedure 1.16

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Envelope Mode Sensor (S9) [Nip Retract Drive Assy] • Fusing Envelope Motor (M5) [Nip Retract Drive Assy] • Nip Retract Drive Assy • Nip Retract Shaft Assy • MCU (PCB2) 		
1	Checking the Nip Retract Drive Assy Are there any foreign objects, or paper pieces, etc. in the Nip Retract Drive Assy?	Remove the foreign objects, or paper pieces, etc.	Go to Step 2.
2	Checking the Envelope Mode Sensor (S9) operation Execute the SP OUTPUT Check to check the Envelope Mode Sensor (S9) operation. Does the Envelope Mode Sensor (S9) function normally?	Go to Step 3.	Go to Troubleshooting Procedure 2.10 .
3	Checking the Fusing Envelope Motor	Go to Step 4.	Go to Troubleshooting

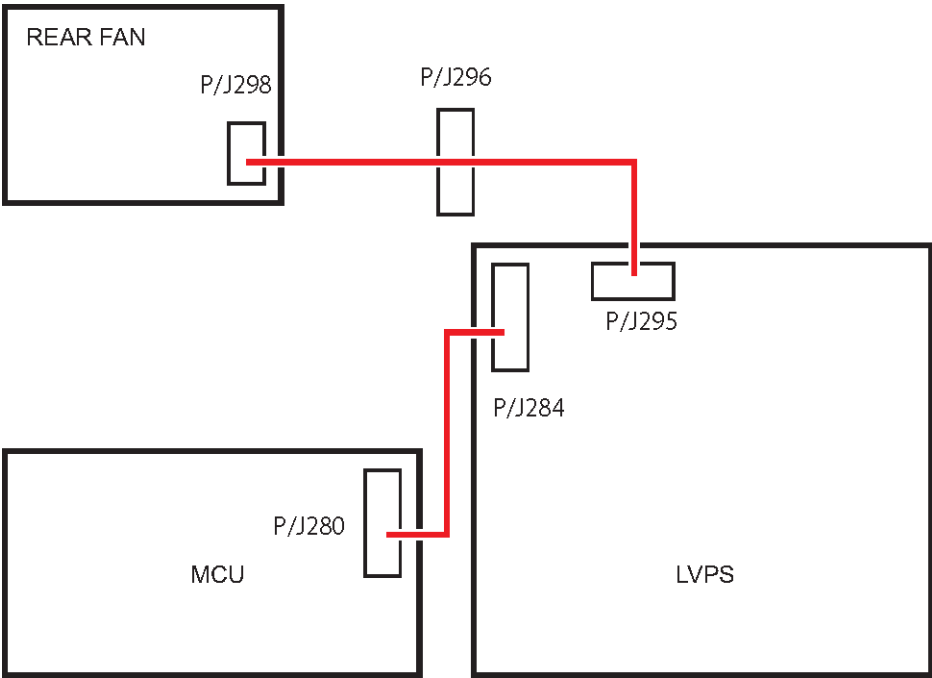
Step	Check	Yes	No
	(M5) operation Execute the SP OUTPUT Check to check the Fusing Envelope Motor (M5) rotation. Does the Fusing Envelope Motor (M5) function normally?		Procedure 2.11.
4	Checking the Nip Retract Drive Assy and Nip Retract Shaft Assy Is the Nip Retract Drive Assy, and Nip Retract Shaft Assy deformed or damaged?	Replace the Nip Retract Drive Assy and/or Nip Retract Shaft Assy.	Replace the MCU (PCB2).

Troubleshooting Procedure 1.17

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Rear Fan (FAN3) • Harness between the Rear Fan (FAN3) and the LVPS (PCB4) • Harness between the MCU (PCB2) and the LVPS (PCB4) • LVPS (PCB4) • MCU (PCB2) 		
1	Checking the Rear Fan (FAN3) operation Execute the SP OUTPUT Check to check the Rear Fan (FAN3) rotation. Does the Rear Fan (FAN3) function normally?	Replace the MCU (PCB2).	Go to Step 2.
2	Checking the Rear Fan (FAN3) installation Rotate the Rear Fan (FAN3) manually. Is there an overload?	Reinstall the Rear Fan (FAN3).	Go to Step 3.
3	Checking the connections between the LVPS (PCB4) and the Rear Fan (FAN3) Are P/J298,P/J296 and P/J295 connected surely?	Go to Step 4.	Connect P/J298, P/J296 and P/J295 surely.
4	Checking the connections between the LVPS	Go to Step 5.	Connect P/J284 and

Step	Check	Yes	No
	(PCB4) and the MCU (PCB2) Are P/J284 and P/J280 connected surely?		P/J280 surely.
5	Checking after replacing the Rear Fan (FAN3) Replace the Rear Fan (FAN3). Does the error still occur?	Replace the LVPS (PCB4).	END

Reference 1



Troubleshooting Procedure 1.18

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Sub Fan (FAN2) • Harness between the Sub Fan (FAN2) and the LVPS (PCB4) • Harness between the LVPS (PCB4) and the MCU (PCB2) • LVPS (PCB4) • MCU (PCB2) 		
1	Checking the Sub Fan (FAN2) operation Execute the diagnosis and check the Sub Fan (FAN2) rotation. Does the Sub Fan (FAN2) function normally?	Replace the MCU (PCB2).	Go to Step 2.
2	Checking the Sub Fan (FAN2) installation Rotate the Sub Fan (FAN2) manually. Is there an overload?	Reinstall the Sub Fan (FAN2).	Go to Step 3.
3	Checking the connections between the LVPS (PCB4) and the Sub Fan (FAN2) Are P/J294 and P/J293 connected surely?	Go to Step 4.	Connect P/J294 and P/J293 surely.
4	Checking the continuity between the LVPS (PCB4) and the Sub Fan (FAN2). Is each cable of P/J294<=>P/J293 continuous?	Go to Step 5.	Replace the Harness between the Sub Fan (FAN2) and the LVPS (PCB4).
5	Checking the connections between the LVPS (PCB4) and the MCU (PCB2) Are P/J284 and P/J280 connected surely?	Go to Step 6.	Connect P/J284 and P/J280 surely.
6	Checking the continuity between the LVPS (PCB4) and the MCU Is each cable of P/J284<=>P/J280	Go to Step 7.	Replace the Harness between the LVPS (PCB4) and the MCU (PCB2).

Step	Check	Yes	No
	continuous?		
7	Checking after replacing the Sub Fan (FAN2) Replace the Sub Fan (FAN2). Does the error still occur?	Replace the LVPS (PCB4).	END

Troubleshooting Procedure 1.19

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Lift Up Sensor (S42) • Harness between the Lift Up Sensor (S42) and the LCT Controller Board (PCB40) • Lift Motor (M41) • LCT Controller Board (PCB40) 		
1	Checking the LCT Are the gears in the LCT deformed, rotating poorly, or worn out?	Replace the LCT.	Go to Step 2.
2	Checking the Lift Up Sensor (S42) operation Execute the SP INPUT Check to check the Lift Up Sensor (S42) (Tray 2 or 3) operation. Does the Lift Up Sensor (S42) function normally?	Go to Step 3.	Go to Troubleshooting Procedure 2.12.
3	Checking the Lift Motor (M41) operation Execute the SP OUTPUT Check to check the Lift Motor (M41)(Tray 2 or 3) operation. Does the Lift Motor (M41) function normally?	Go to Step 4.	Go to Troubleshooting Procedure 2.13.
4	Checking after replacing the LCT Controller Board (PCB40) Replace the LCT Controller Board (PCB40). Does the error still occur?	Replace the LCT.	END

Troubleshooting Procedure 1.20

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> Paper Feed/K Development Motor (M1) [Main Drive Assy 2] MCU (PCB2) 		
1	Checking the Paper Feed/K Development Motor (M1) operation Execute the SP OUTPUT Check to check the Paper Feed/K Development Motor (M1) rotation. Does the Paper Feed/K Development Motor (M1) function normally?	Replace the MCU (PCB2).	Go to Troubleshooting Procedure 2.14 .

Troubleshooting Procedure 1.21

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> Harness between the MCU (PCB2) and the drawer connector Drawer connector Harness between the drawer connector and the LCT Controller Board (PCB40) Harness between the drawer connector and the PFU Controller Board (PCB30) LCT Controller Board (PCB40) PFU Controller Board (PCB30) MCU (PCB2) 		
1	(Tray 2: LCT) Checking the connections between the LCT Controller Board (PCB40) and the MCU (PCB2) Are P/J800, DP/DJ801, and P/J802 connected surely?	Go to Step 2.	Connect P/J800, DP/DJ801, and P/J802 surely.
2	Checking the drawer connector Is the drawer connector deformed?	Replace the LCT.	Go to Step 3.

Step	Check	Yes	No
3	<p>(Tray 2: LCT)</p> <p>Checking the continuity between the MCU (PCB2) and the drawer connector</p> <p>Is each cable of P/J800<=>DP/DJ801 continuous?</p>	Go to Step 4.	Replace the Harness between the MCU (PCB2) and the drawer connector.
4	<p>(Tray 3: LCT)</p> <p>Checking the connections between the PFU Controller Board (PCB30) and the LCT Controller Board (PCB40)</p> <p>Are P/J815, DP816, DJ801, and P/J802 connected surely?</p>	Go to Step 5.	Connect P/J815, DP816, DJ801, and P/J802 surely.
5	<p>Checking after replacing the LCT Controller Board (PCB40)</p> <p>Replace the LCT Controller Board (PCB40)</p> <p>Does the error still occur?</p>	Replace the MCU (PCB2).	END

Troubleshooting Procedure 1.22

Step	Check	Yes	No
	<p>Possible causative parts:</p> <ul style="list-style-type: none"> • ID/MUSIC Sensor Assy • Harness between the MCU (PCB2) and ID/MUSIC sensors • ITB Unit • MCU (PCB2) 		
1	<p>Checking the ID/MUSIC Sensor Assy (ID/MUSIC sensor (S10), MUSIC sensor (S11)) surface for any smears or foreign objects.</p> <p>Are there any smears or foreign objects on the surface of the ID/MUSIC sensor and MUSIC sensor?</p>	<p>Clean* the ID/MUSIC sensors surface or remove a foreign objects.</p> <p>*: Wipe it with a dry, soft cloth (without alcohol).</p>	Go to Step 2.
2	<p>Checking the ID/MUSIC Sensor Assy (ID/MUSIC sensor (S10), MUSIC sensor (S11)) installation</p>	Go to Step 3.	Reinstall the ID/MUSIC Sensor Assy.

Step	Check	Yes	No
	Is the ID/MUSIC Sensor Assy installed correctly?		
3	<p>Checking the ID/MUSIC Sensor Assy (ID/MUSIC sensor (S10), MUSIC sensor (S11)) connection</p> <p>Check the connection between the ID/MUSIC sensors and the MCU (PCB2).</p> <p>Are P/J142, P/J143, P/J141 and P/J140 connected surely?</p>	Go to Step 4.	Connect P/J142, P/J143, P/J141 and P/J140 surely.
4	<p>Checking after replacing the ID/MUSIC Sensor Assy (ID/MUSIC sensor (S10), MUSIC sensor (S11))</p> <p>Replace the ID/MUSIC Sensor Assy.</p> <p>Does the error still occur?</p>	Go to Step 5.	END
5	<p>Checking after replacing the ITB Unit</p> <p>Replace the ITB Unit.</p> <p>Does the error still occur?</p>	Replace the MCU (PCB2).	END

Troubleshooting Procedure 1.23

Step	Check	Yes	No
	<p>Possible causative parts:</p> <ul style="list-style-type: none"> • ID/MUSIC Sensor Assy • Harness between the MCU (PCB2) and ID/MUSIC sensors • PCDU (Y) • PCDU (M) • PCDU (C) • PCDU (K) • ITB Unit • LED Head Assy • MCU (PCB2) 		
1	Checking the ID/MUSIC Sensor Assy (ID/MUSIC sensor (S10), MUSIC sensor (S11)) surface for any smears or foreign	Clean* the ID/MUSIC sensors surface or	Go to Step 2.

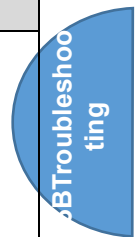
Step	Check	Yes	No
	objects Are there any smears or foreign objects on the surface of the ID/MUSIC sensor and MUSIC sensor?	remove a foreign objects. *: Wipe it with a dry, soft cloth (without alcohol).	
2	Checking the ID/MUSIC Sensor Assy (ID/MUSIC sensor (S10), MUSIC sensor (S11)) installation Is the ID/MUSIC Sensor Assy installed correctly?	Go to Step 3.	Reinstall the ID/MUSIC Sensor Assy.
3	Checking the ID/MUSIC Sensor Assy (ID/MUSIC sensor (S10), MUSIC sensor (S11)) connection Check the connection between the ID/MUSIC sensors and the MCU (PCB2). Are P/J142, P/J143, P/J141 and P/J140 connected surely?	Go to Step 4.	Connect P/J142, P/J143, P/J141 and P/J140 surely.
4	Checking after replacing the ID/MUSIC Sensor Assy (ID/MUSIC sensor (S10), MUSIC sensor (S11)) Replace the ID/MUSIC Sensor Assy. Does the error still occur?	Go to Step 5.	END
5	Checking after replacing the PCDU (corresponding color) Replace the PCDU. (corresponding color). Does the error still occur?	Go to Step 6.	END
6	Checking after replacing the ITB Unit Replace the ITB Unit. Does the error still occur?	Go to Step 7.	END
7	Checking after replacing the LED Head Assy Replace the LED Head Assy. Does the error still occur?	Replace the MCU (PCB2).	END

Troubleshooting Procedure 1.24


Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Color Development Motor (M4) [Main Drive Assy] • MCU (PCB2) 		
1	Checking the Color Development Motor (M4) operation Execute the SP OUTPUT Check to check the Color Development Motor (M4) rotation. Does the Color Development Motor (M4) function normally?	Replace the MCU (PCB2).	Go to Troubleshooting Procedure 2.16 .

Troubleshooting Procedure 1.25

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Registration Feeler • Registration Sensor (S1) • Exit Sensor Feeler [Paper Exit Assy] • Exit Sensor (S5) • Paper Feed/K Development Motor (M1) [Main Drive Assy 2] • Registration Clutch (CL1) • Main Motor (M2) [Motor Drive Assy] • Exit Clutch (CL5) [Paper Exit Drive Assy] • Invert Clutch (CL4) [Paper Exit Drive Assy] • MCU (PCB2) 		
1	Checking the paper path Are there any foreign objects, or	Remove the foreign objects, or paper pieces,	Go to Step 2.



Step	Check	Yes	No
	paper pieces, etc. on the paper path?	etc.	
2	Checking after adjusting the paper guides Adjust the paper guides (length guide and width guide) in the Tray. Does the error persist during printing?	Go to Step 3.	END
3	Checking the paper feed roller and the separation roller installation Are the paper feed roller and the separation roller installed correctly?	Go to Step 4.	Reinstall the paper feed roller and the separation roller.
4	Checking the paper feed roller and the separation roller Are the paper feed roller and the separation roller deformed or worn out?	Replace the paper feed roller and the separation roller.	Go to Step 5.
5	Checking the Registration Feeler Is the Registration Feeler deformed?	Replace the Registration Feeler.	Go to Step 6.
6	Checking the Registration Sensor (S1) installation Is the Registration Sensor (S1) installed correctly?	Go to Step 7.	Reinstall the Registration Sensor (S1).
7	Checking the Registration Sensor (S1) operation Execute the diagnosis and check the Registration Sensor (S1) operation. Does the Registration Sensor (S1) function normally?	Go to Step 8.	Go to Troubleshooting Procedure 2.1.
8	Checking the Exit Sensor Feeler Is the Actuator Exit Sensor deformed?	Replace the Exit Sensor Feeler.	Go to Step 9.
9	Checking the Exit Sensor (S5) installation	Go to Step 10.	Reinstall the Exit Sensor (S5).

Step	Check	Yes	No
	Is the Exit Sensor (S5) installed correctly?		
10	<p>Checking the Exit Sensor (S5) operation</p> <p>Execute the SP INPUT Check to check the Exit Sensor (S5) operation.</p> <p>Does the Exit Sensor (S5) function normally?</p>	Go to Step 11.	Go to Troubleshooting Procedure 2.4.
11	<p>Checking the Paper Feed/K Development Motor (M1) operation</p> <p>Execute the diagnosis and check the Paper Feed/K Development Motor (M1) rotation.</p> <p>Does the Paper Feed/K Development Motor (M1) function normally?</p>	Go to Step 12.	Go to Troubleshooting Procedure 2.14.
12	<p>Checking the Registration Clutch (CL1) operation</p> <p>Execute the SP OUTPUT Check and check the Registration Clutch (CL1) operation.</p> <p>Does the Registration Clutch (CL1) function normally?</p>	Go to Step 13.	Go to Troubleshooting Procedure 2.2.
13	<p>Checking the Main Motor (M2) operation</p> <p>Execute the diagnosis and check the Main Motor (M2) rotation.</p> <p> Important</p> <p>PCDUs need to be removed during Main Motor (M2) rotation.</p> <p>Does the Main Motor (M2) function normally?</p>	Go to Step 14.	Go to Troubleshooting Procedure 2.8.
14	Checking the Exit Clutch (CL5) operation	Go to Step 15.	Go to Troubleshooting Procedure 2.5.

Step	Check	Yes	No
	Execute the SP OUTPUT Check to check the Exit Clutch (CL5) operation. Does the Exit Clutch (CL5) function normally?		
15	Checking the Invert Clutch (CL4) operation Execute the SP OUTPUT Check to check the Invert Clutch (CL4) operation. Does the Invert Clutch (CL4) function normally?	Replace the MCU (PCB2).	Go to <i>Troubleshooting Procedure 2.8.</i>

Troubleshooting Procedure 1.26

Step	Check	Yes	No
	Possible causative parts (Internal Finisher): <ul style="list-style-type: none"> • Transport Roller • Transport Guide • Stacker Exit Sensor (S52) • Junction Gate Solenoid (SOL50) • Finisher Controller Board (PCB50) 		
1	Checking the paper path Are there any foreign objects, or paper pieces, etc. on the paper path?	Remove the foreign objects, or paper pieces, etc.	Go to Step 2.
2	Checking the the Transport Roller Is the spring of the Transport Roller installed correctly?	Go to Step 3.	Reinstall the spring of the Transport Roller.
3	Checking the Transport Guide Does the Transport Guide have any damages?	Replace the transport guide.	Go to Step 4.
4	Checking the Stacker Exit Sensor (S52) operation Execute the SP OUTPUT Check to	Go to Step 5.	Go to <i>Troubleshooting Procedure 2.16 .</i>

Step	Check	Yes	No
	check the Stacker Exit Sensor (S5) operation. Does the Stacker Exit Sensor (S52) function normally?		
5	Checking the Junction Gate Solenoid (SOL50) operation Execute the SP OUTPUT Check to check the Junction Gate Solenoid (SOL50) operation. Does the Junction Gate Solenoid function (SOL50) normally?	Go to Step 6.	Go to Troubleshooting Procedure 2.17.
6	Checking after replacing the Finisher Controller Board (PCB50) Replace the Finisher Controller Board (PCB50).	Replace the Finisher.	END



Troubleshooting Procedure 1.27

Step	Check	Yes	No
	Possible causative parts (Internal Finisher): <ul style="list-style-type: none"> • Harness between the main machine and the Finisher Controller Board (PCB50) • Harness between the main machine and the Finisher LVPS (PCB51) • Finisher Controller Board (PCB50) • Finisher LVPS (PCB51) 		
1	Checking the Finisher I/F connection Check the connection between the main machine and the Finisher Controller Board (PCB50). Are P/J8866 and P/J621 connected surely?	Go to Step 2.	Connect P/J8866 and P/J621 surely.
2	Checking the Finisher AC connection Check the connection between the main machine and the Finisher LVPS (PCB51). Are P/J590 and CN3 connected surely?	Go to Step 3.	Connect P/J590 and main machine I/F connector (CN3) surely.

Step	Check	Yes	No
3	Replace the Finisher LVPS (PCB51). Does the error still occur?	Go to Step 4.	END
4	Replace the Finisher Controller Board (PCB50). Does the error still occur?	Replace the Finisher.	END

Troubleshooting Procedure 1.28

Step	Check	Yes	No
	Possible causative parts (Internal Finisher): <ul style="list-style-type: none"> • Tray Paper End/ Full Sensor (S50) • Stacker Motor (M50) [Motor Gear Assy] • Finisher Controller Board (PCB50) 		
1	Checking the Output Tray Are the gears of the Output Tray deformed, rotating poorly, or worn out?	Replace the Finisher.	Go to Step 2.
2	Checking the Tray Paper End/ Full Sensor (S50) operation Execute the INPUT Check to check the Tray Paper End/ Full Sensor (S50) operation. Does the Tray Paper End/ Full Sensor (S50) function normally?	Go to Step 3.	Go to Troubleshooting Procedure 2.20.
3	Checking the Stacker Motor (M50) operation Execute the SP OUTPUT Check to check the Stacker Motor (M50) operation. Does the Stacker Motor (M50) function normally?	Go to Step 4.	Go to Troubleshooting Procedure 2.21.
4	Checking after replacing the Finisher Controller Board (PCB50) Replace the Finisher Controller Board (PCB50).	Replace the Finisher.	END

Troubleshooting Procedure 1.29

Step	Check	Yes	No
	Possible causative parts (Internal Finisher): <ul style="list-style-type: none"> • Spring Sub Paddle [Stacker Tray Assy] • Actuator Sub Paddle [Stacker Tray Assy] • Sub Paddle Home Sensor (S51) • Eject Belt Motor (M51) [Motor Gear Assy] • Finisher Controller Board (PCB50) 		
1	Checking the Spring Sub Paddle Is the belt of the Spring-Sub PDL installed properly?	Go to Step 2.	Reinstall the belt of the Spring Sub Paddle.
2	Checking the Sub Paddle Home Sensor (S51) operation Execute the SP INPUT Check to check the Sub Paddle Home Sensor (S51) operation. Does the Sub Paddle Home Sensor (S51) function normally?	Go to Step 3.	Go to Troubleshooting Procedure 2.22
3	Checking the Actuator Sub Paddle Is the Actuator Sub Paddle deformed, rotating poorly, or worn out?	Replace the Actuator Sub Paddle.	Go to Step 4.
4	Checking the Eject Belt Motor (M51) operation Execute the SP OUTPUT Check to check the Eject Belt Motor (M51) operation. Does the Eject Belt Motor (M51) function normally?	Go to Step 5.	Go to Troubleshooting Procedure 2.19.
5	Checking after replacing the Finisher Controller Board (PCB50) Replace the Finisher Controller Board (PCB50).	Replace the Finisher.	END

Troubleshooting Procedure 1.30

Step	Check	Yes	No
	Possible causative parts (Internal Finisher): <ul style="list-style-type: none"> • Stacker Tray Assy • Eject Home Sensor (S54) [Stacker Tray Assy] • Eject Belt Motor (M51) [Motor Gear Assy] • Finisher Controller Board (PCB50) 		
1	Checking the Stacker Tray Assy Are the gears of the Stacker Tray Assy deformed, rotating poorly, or worn out? Does the actuator have any damages?	Replace the Stacker Tray Assy.	Go to Step 2
2	Checking the Eject Home Sensor (S54) operation Execute the SP INPUT Check to check the Eject Home Sensor (S54) operation. Does the Eject Home Sensor (S54) function normally?	Go to Step 3.	Go to Troubleshooting Procedure 2.18.
3	Checking the Eject Belt Motor (M51) operation Execute the SP OUTPUT Check to check the Eject Belt Motor (M51) operation. Does the Eject Belt Motor (M51) function normally?	Go to Step 4.	Go to Troubleshooting Procedure 2.19.
4	Checking after replacing the Finisher Controller Board (PCB50) Replace the Finisher Controller Board (PCB50). Does the error still occur?	Replace the Finisher.	END

Troubleshooting Procedure 1.31

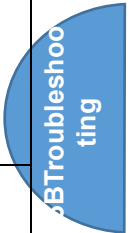
Step	Check	Yes	No
	Possible causative parts (Internal Finisher): <ul style="list-style-type: none"> • Stacker Tray Assy • Set Clamp Home Sensor (S55) [Stacker Tray Assy] • Eject Belt Motor (M51) [Motor Gear Assy] • Finisher Controller Board (PCB50) 		
1	Checking the Stacker Tray Assy Are the gears of the Stacker Tray Assy deformed, rotating poorly, or worn out? Does the actuator have any damages?	Replace the Stacker Tray Assy.	Go to Step 2
2	Checking the Set Clamp Home Sensor (S55) operation Execute the SP INPUT Check to check the Set Clamp Home Sensor (S55) operation. Does the Set Clamp Home Sensor (S55) function normally?	Go to Step 3.	Go to Troubleshooting Procedure 2.23.
3	Checking the Eject Belt Motor (M51) operation Execute the SP OUTPUT Check to check the Eject Belt Motor (M51) operation. Does the Eject Belt Motor (M51) function normally?	Go to Step 4.	Go to Troubleshooting Procedure 2.19.
4	Checking after replacing the Finisher Controller Board (PCB50) Replace the Finisher Controller Board (PCB50). Does the error still occur?	Replace the Finisher.	END

Troubleshooting Procedure 1.32

Step	Check	Yes	No
	Possible causative parts (Internal Finisher): <ul style="list-style-type: none"> • Staple Cover Interlock Switch (SW50) • Finisher Controller Board (PCB50) 		
1	Checking the Staple Cover Interlock Switch (SW50) operation Execute the SP INPUT Check to check the Staple Cover Interlock Switch (SW50) operation. Does the Staple Cover Interlock Switch (SW50) function normally?	Replace the Stacker Tray Assy.	Go to Troubleshooting Procedure 2.24.
2	Checking after replacing the Finisher Controller Board (PCB50) Replace the Finisher Controller Board (PCB50). Does the error still occur?	Replace the Finisher.	END

Troubleshooting Procedure 1.33

Step	Check	Yes	No
	Possible causative parts (Internal Finisher): <ul style="list-style-type: none"> • Stapler Assy • Low Staple Sensor (S62) [Stapler Assy] • Self Priming Sensor (S61) [Stapler Assy] • Staple Home Sensor (S60) [Stapler Assy] • Stapler Motor (M55) [Stapler Assy] • Finisher Controller Board (PCB50) 		
1	Are there paper pieces in the clinch part?	Remove the paper.	Go to Step 2.
2	Checking the Stapler Assy Do they have any damages? (Is the clinch part deformed?)	Replace the Stapler Assy.	Go to Step 3.
3	Checking the Low Staple Sensor (S62)	Go to Step 4.	Go to Troubleshooting



Step	Check	Yes	No
	operation Execute the SP INPUT Check to check the Low Staple Sensor (S62) operation. Does the Low Staple Sensor (S62) function normally?		Procedure 2.25.
4	Checking the Self Priming Sensor (S61) operation Execute the SP INPUT Check to check the Self Priming Sensor (S61) operation. Does the Self Priming Sensor (S61) function normally?	Go to Step 5.	Go to Troubleshooting Procedure 2.25.
5	Checking the Staple Home Sensor (S60) operation Execute the SP INPUT Check to check the Staple Home Sensor (S60) operation. Does the Staple Home Sensor (S60) function normally?	Go to Step 6.	Go to Troubleshooting Procedure 2.25.
6	Checking the Stapler Motor (M55) operation Execute the SP OUTPUT Check to check the Stapler Motor (M55) operation. Does the Stapler Motor (M55) function normally?	Go to Step 7.	Go to Troubleshooting Procedure 2.26.
7	Checking after replacing the Finisher Controller Board (PCB50) Replace the Finisher Controller Board (PCB50). Does the error still occur?	Replace the Finisher.	END

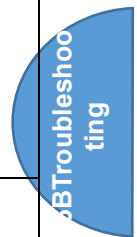
Troubleshooting Procedure 1.34

Step	Check	Yes	No
	Possible causative parts (Internal Finisher): <ul style="list-style-type: none"> • Stacker Tray Assy • Right Jogger Fence Home Sensor 		

Step	Check	Yes	No
	(S58) [Stacker Tray Assy] <ul style="list-style-type: none"> Right Jogger Motor (M53) [Stacker Tray Assy] 		
1	Checking the Stacker Tray Assy Are there any foreign objects, or paper pieces, etc. in the jogger fence part of the Stacker Tray Assy?	Remove the foreign objects, or paper pieces, etc.	Go to Step 2.
2	Checking the Right Jogger Fence Home Sensor (S58) operation Execute the SP INPUT Check to check the Right Jogger Fence Home Sensor (S58) operation. Does the Right Jogger Fence Home Sensor (S58) function normally?	Go to Step 3.	Go to Troubleshooting Procedure 2.27 .
3	Checking the Right Jogger Motor (M53) operation Execute the SP OUTPUT Check to check the Right Jogger Motor (M53) operation. Does the Right Jogger Motor (M53) function normally?	Go to Step 4.	Go to Troubleshooting Procedure 2.28 .
4	Checking after replacing the Finisher Controller Board (PCB50) Replace the Finisher Controller Board (PCB50). Does the error still occur?	Replace the Finisher.	END

Troubleshooting Procedure 1.35

Step	Check	Yes	No
	Possible causative parts (Internal Finisher): <ul style="list-style-type: none"> Stacker Tray Assy Left Jogger Fence Home Sensor (S59) [Stacker Tray Assy] Left Jogger Motor (M54) [Stacker Tray 		



Step	Check	Yes	No
	Assy]		
1	<p>Checking the Stacker Tray Assy</p> <p>Are there any foreign objects, or paper pieces, etc. in the jogger fence part of the Stacker Tray Assy?</p>	Remove the foreign objects, or paper pieces, etc.	Go to Step 2.
2	<p>Checking the Left Jogger Fence Home Sensor (S59) operation</p> <p>Execute the SP INPUT Check to check the Left Jogger Fence Home Sensor (S59) operation.</p> <p>Does the Left Jogger Fence Home Sensor (S59) function normally?</p>	Go to Step 3.	Go to Troubleshooting Procedure 2.29.
3	<p>Checking the Left Jogger Motor (M54) operation</p> <p>Execute the SP OUTPUT Check to check the Left Jogger Motor (M54) operation.</p> <p>Does the Left Jogger Motor (M54) function normally?</p>	Go to Step 4.	Go to Troubleshooting Procedure 2.30.
4	<p>Checking after replacing the Finisher Controller Board (PCB50)</p> <p>Replace the Finisher Controller Board (PCB50).</p> <p>Does the error still occur?</p>	Replace the Finisher.	END

Troubleshooting Procedure 1.36

Step	Check	Yes	No
	<p>Possible causative parts (Internal Finisher):</p> <ul style="list-style-type: none"> • Stapler Assy • Staple Home Sensor (S60) [Stapler Assy] • Stapler Motor (M55) [Stapler Assy] • Finisher Controller Board (PCB50) 		
1	Are there paper pieces in the clinch part?	Remove the paper pieces.	Go to Step 2.

Step	Check	Yes	No
2	Checking the Stapler Assy Do they have any damages? (Is the clinch part deformed?)	Replace the Stapler Assy.	Go to Step 3.
3	Checking the Staple Home Sensor (S60) operation Execute the INPUT Check to check the Staple Home Sensor (S60) operation. Does the Staple Home Sensor (S60) function normally?	Go to Step 4.	Go to Troubleshooting Procedure 2.25.
4	Checking the Stapler Motor (M55) operation Execute the OUTPUT Check to check the Stapler Motor (M55) operation. Does the Stapler Motor (M55) function normally?	Go to Step 5.	Go to Troubleshooting Procedure 2.26.
5	Checking after replacing the Finisher Controller Board (PCB50) Replace the Finisher Controller Board (PCB50). Does the error still occur?	Replace the Finisher.	END

Troubleshooting Procedure 1.37

Step	Check	Yes	No
	Possible causative parts (Internal Finisher): <ul style="list-style-type: none"> • Stapler Cartridge [Stapler Assy] • Self Priming Sensor (S61) [Stapler Assy] • Stapler Motor (M55) [Stapler Assy] • Finisher Controller Board (PCB50) 		
1	Checking the Stapler Cartridge installation Is the Stapler Cartridge installed correctly?	Go to Step 2.	Reinstall the Stapler Cartridge.
2	Checking the Self Priming Sensor (S61) operation Execute the SP INPUT Check to check the Self Priming Sensor (S61) operation.	Go to Step 3.	Go to Troubleshooting Procedure 2.25.

Step	Check	Yes	No
	Does the Self Priming Sensor (S61) function normally?		
3	Checking the Stapler Motor (M55) operation Execute the SP OUTPUT Check to check the Stapler Motor (M55) operation. Does the Stapler Motor (M55) function normally?	Go to Step 4.	Go to Troubleshooting Procedure 2.26.
4	Checking after replacing the Finisher Controller Board (PCB50) Replace the Finisher Controller Board (PCB50). Does the error still occur?	Replace the Finisher.	END

Troubleshooting Procedure 1.38

Step	Check	Yes	No
	Possible causative parts (Internal Finisher): <ul style="list-style-type: none"> • Tray Paper End/ Full Sensor (S50) • Stacker Height Sensor 1 (S56) [Stacker Tray Assy] • Finisher Controller Board (PCB50) 		
1	Checking the Tray Paper End/ Full Sensor (S50) operation Execute the SP INPUT Check to check the Tray Paper End/ Full Sensor (S50) operation. Does the Tray Paper End/ Full Sensor (S50) function normally?	Go to Step 2.	Go to Troubleshooting Procedure 2.20.
2	Checking the Stacker Height Sensor 1 (S56) operation Execute the SP INPUT Check to check the Stacker Height Sensor 1 (S56) operation. Does the Stacker Height Sensor 1 (S56) function normally?	Go to Step 3.	Go to Troubleshooting Procedure 2.31.
3	Checking after replacing the Finisher Controller Board (PCB50)	Replace the Finisher.	END

Step	Check	Yes	No
	Replace the Finisher Controller Board (PCB50). Does the error still occur?		

Level 2**Troubleshooting Procedure 2.1**

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> Registration Sensor (S1) Harness between the Registration Sensor (S1) and the MCU (PCB2) MCU (PCB2) 		
1	Checking the Registration Sensor (S1) connection Check the connection between the Registration Sensor (S1) and the MCU (PCB2). Are P/J540, P/J545, and P/J546 connected surely?	Go to Step 2.	Connect P/J540, P/J545, and P/J546 surely.
2	Checking after replacing the Registration Sensor (S1) Replace the Registration Sensor (S1). Does the error still occur?	Replace the MCU (PCB2).	END

Troubleshooting Procedure 2.2

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> Registration Clutch (CL1) Harness between the Registration clutch (CL1) and the MCU (PCB2) MCU (PCB2) 		
1	Checking the Registration Clutch (CL1) connection Check the connection between the Registration Clutch (CL1) and the MCU (PCB2). Are P/J540, P/J541, and P/J542 connected	Go to Step 2.	Connect P/J540, P/J541, and P/J542 surely.

Step	Check	Yes	No
	surely?		
2	Checking after replacing the Registration Clutch (CL1) Replace the Registration Clutch (CL1). Does the error still occur?	Replace the MCU (PCB2).	END

Troubleshooting Procedure 2.3

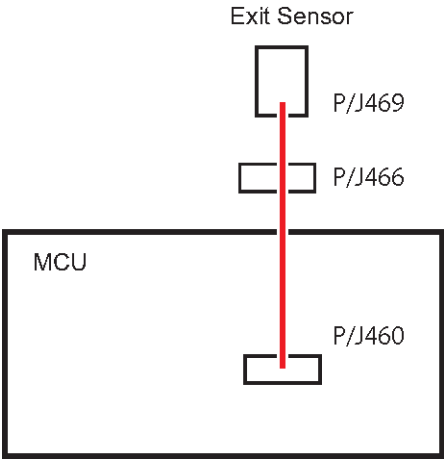
Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • PFU Feed Motor (M30) • Harness between the PFU Feed Motor (M30) and the PFU Controller Board (PCB30) • PFU Controller Board (PCB30) 		
1	Checking the PFU Feed Motor (M30) installation Rotate the PFU Feed Motor (M30) manually. Is there an overload?	Reinstall the PFU Feed Motor (M30).	Go to Step 2.
2	Checking the PFU Feed Motor (M30) connection Check the connection between the PFU Feed Motor (M30) and the PFU Controller Board (PCB30). Are P/J803 and P/J804 connected surely?	Replace the Paper Feed Unit	Connect P/J803, and P/J804 sure

Troubleshooting Procedure 2.4

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Exit Sensor (S5) • Harness between the Exit Sensor (S5) and the MCU (PCB2) • MCU (PCB2) 		
1	Checking the Exit Sensor (S5) connection Check the connection between the Exit Sensor (S5) and the MCU (PCB2). Are P/J469, P/J466, and P/J460	Go to Step 2.	Connect P/J469, P/J466, and P/J460 surely.

Step	Check	Yes	No
	connected surely?		
2	Checking the continuity between the P/J466 and the Exit Sensor (S5) Is each cable of P/J466<=>P/J469 continuous?	Go to Step 3.	Replace the harness between the Exit Sensor (S5) and the relay connector.
3	Checking the continuity between the P/J466 and the MCU (PCB2) Is each cable of P/J466<=>P/J460 continuous?	Go to Step 4.	Replace the harness between the MCU (PCB2) and the relay connector.
4	Checking after replacing the Exit Sensor (S5) Replace the Exit Sensor (S5) . Does the error still occur?	Replace the MCU (PCB2).	END

Reference



Troubleshooting Procedure 2.5

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Exit Clutch (CL5) [Paper Exit Drive Assy] • Harness between the Exit Clutch (CL5) and the MCU (PCB2) • MCU (PCB2) 		

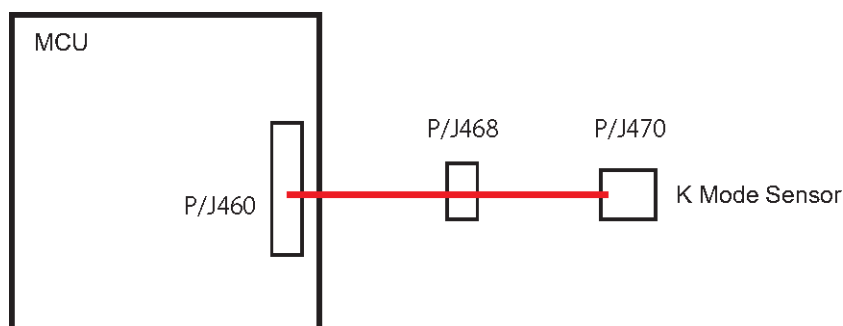
Step	Check	Yes	No
1	<p>Checking the Exit Clutch (CL5) connection</p> <p>Check the connection between the Exit Clutch (CL5) and the MCU (PCB2).</p> <p>Is P/J460, P/J462 connected surely?</p>	Go to Step 2.	Connect P/J460 and P/J462 surely.
2	<p>Checking the continuity between the Exit Clutch (CL5) and the MCU (PCB2)</p> <p>Is each cable of P/J462<=>P/J460 continuous?</p>	Go to Step 3.	Replace the harness between the Exit Clutch (CL5) and the MCU (PCB2).
3	<p>Checking after replacing the Exit Clutch (CL5)</p> <p>Replace the Paper Exit Drive Assy.</p> <p>Does the error still occur?</p>	Replace the MCU (PCB2).	END

Troubleshooting Procedure 2.6

Step	Check	Yes	No
	<p>Possible causative parts:</p> <ul style="list-style-type: none"> • K Mode Sensor (S3) • Harness between the K Mode Sensor (S3) and the MCU (PCB2). • MCU (PCB2) 		
1	<p>Checking the K Mode Sensor (S3) connection</p> <p>Check the connection between the K Mode Sensor (S3) and the MCU (PCB2).</p> <p>Are P/J470, P/J468, and P/J460 connected surely?</p>	Go to Step 2.	Connect P/J470, P/J468, and P/J460 surely.
2	<p>Checking the continuity between the K Mode Sensor (S3) and the P/J468</p> <p>Is each cable of P/J470<=>P/J468 continuous?</p>	Go to Step 3.	Replace the harness between the K Mode Sensor (S3) and the relay connector.
3	<p>Checking the continuity between the P/J468 and the MCU (PCB2)</p> <p>Is each cable of P/J468<=>P/J460</p>	Go to Step 4.	Replace the harness between the MCU (PCB2) and the relay connector.

Step	Check	Yes	No
	continuous?		
4	Checking after replacing the K Mode Sensor (S3) Replace the K Mode Sensor (S3) . Does the error still occur?	Replace the MCU (PCB2).	END

Reference



Troubleshooting Procedure 2.7

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • K Mode Clutch (CL6) [Main Drive Assy] • Harness between the K Mode Clutch (CL6) and the MCU (PCB2) • MCU (PCB2) 		
1	Checking the K Mode Clutch (CL6) connection Check the connection between the K Mode Clutch (CL6) and the MCU (PCB2). Is P/J464, P/J460 connected surely?	Go to Step 2.	Connect P/J464 and P/J460 surely.
2	Checking the continuity between the K Mode Clutch (CL6) and the MCU (PCB2) Is each cable of P/J464<=>P/J460 continuous?	Go to Step 3.	Replace the harness between the K Mode Clutch (CL6) and the MCU (PCB2).
3	Checking after replacing the K Mode Clutch (CL6)	Replace the MCU (PCB2).	END

Step	Check	Yes	No
	Replace the Main Drive Assy. Does the error still occur?		

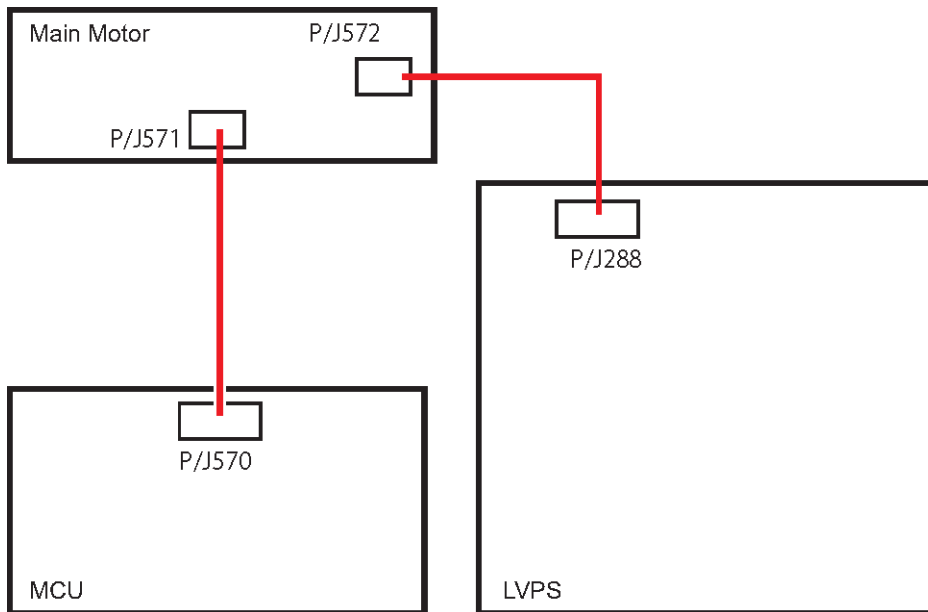


Troubleshooting Procedure 2.8

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Main Motor (M2) [Motor Drive Assy] • Harness between the Main Motor (M2) and the MCU (PCB2) • Harness between the Main Motor (M2) and the LVPS (PCB4) • LVPS (PCB4) • MCU (PCB2) 		
1	Checking the Main Motor (M2) connection Check the connection between the Main Motor (M2) and the MCU (PCB2). Are P/J571 and P/J570 connected surely?	Go to Step 2.	Connect P/J571 and P/J570 surely.
2	Checking the Main Motor (M2) connection Check the connection between the Main Motor (M2) and the LVPS (PCB4). Are P/J572 and P/J288 connected surely?	Go to Step 3.	Connect P/J572 and P/J288 surely.
3	Checking after replacing the Main Motor (M2) Replace the Motor Drive Assy. Does the error still occur?	Replace the MCU (PCB2).	END



Reference

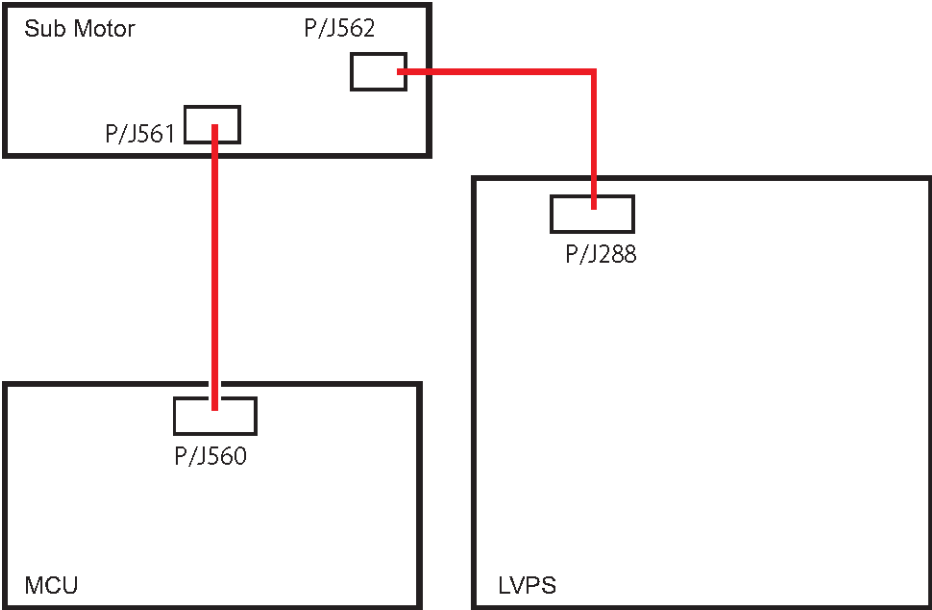


Troubleshooting Procedure 2.9

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Sub Motor (M3) [Main Drive Assy] • Harness between the Sub Motor (M3) and the MCU (PCB2) • Harness between the Sub Motor (M3) and the LVPS (PCB4) • LVPS (PCB4) • MCU (PCB2) 		
1	Checking the Sub Motor (M3) connection Check the connection between the Sub Motor (M3) and the MCU (PCB2). Are P/J561 and P/J560 connected surely?	Go to Step 2.	Connect P/J561 and P/J560 surely.
2	Checking the Sub Motor (M3) connection Check the connection between the Sub Motor (M3) and the LVPS (PCB4). Are P/J562 and P/J288 connected surely?	Go to Step 3.	Connect P/J562 and P/J288 surely.
3	Checking after replacing the Sub Motor (M3) Replace the Main Drive Assy.	Replace the MCU (PCB2).	END

Step	Check	Yes	No
	Does the error still occur?		

Reference



Troubleshooting Procedure 2.10

Step	Check	Yes	No
	<p>Possible causative parts:</p> <ul style="list-style-type: none"> Envelope Mode Sensor (S9) [Nip Retract Drive Assy] Harness between the Envelope Mode Sensor (S9) and the MCU (PCB2) MCU (PCB2) 		
1	<p>Checking the Envelope Mode Sensor (S9) connection</p> <p>Check the connection between the Envelope Mode Sensor (S9) and the MCU (PCB2).</p> <p>Is P/J171, P/J120 connected surely?</p>	Go to Step 2.	Connect P/J561 and P/J560 surely.
2	<p>Checking after replacing the Envelope Mode Sensor (S9)</p> <p>Replace the Nip Retract Drive Assy.</p> <p>Does the error still occur?</p>	Replace the MCU (PCB2).	END

Troubleshooting Procedure 2.11

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Fusing Envelope Motor (M5) [Nip Retract Drive Assy] • Harness between the Fusing Envelope Motor and the MCU (PCB2) • MCU (PCB2) 		
1	Checking the Fusing Envelope Motor (M5) connection Check the connection between the Fusing Envelope Motor (M5) and the MCU (PCB2). Is P/J172, P/J120 connected surely?	Go to Step 2.	Connect P/J172 and P/J120 surely.
2	Checking after replacing the Fusing Envelope Motor (M5) Replace the Nip Retract Drive Assy. Does the error still occur?	Replace the MCU (PCB2).	END

Troubleshooting Procedure 2.12

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Lift Up Sensor (S42) [LCT Feeder Assy] • Harness between the Lift Up Sensor (S42) and the LCT Controller Board (PCB40) • LCT Controller Board (PCB40) 		
1	Checking the Lift Up Sensor connection Check the connection between the Lift Up Sensor (S42) and the LCT Controller Board (PCB40). Is P/J823, P/J822 connected surely?	Go to Step 2.	Connect P/J823 and P/J822 surely.
2	Checking after replacing the harness and the Lift Up Sensor (S42) Replace the LCT Feeder Assy containing the	Replace the LCT Controller Board (PCB40).	END

Step	Check	Yes	No
	harness and Lift Up Sensor (S42). Does the error still occur?		

Troubleshooting Procedure 2.13

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Lift Motor (M41) • Harness between the Lift Motor and the LCT Controller Board (PCB40) • LCT Controller Board (PCB40) 		
1	Checking the Lift Motor connection Check the connection between the Lift Motor (M41) and the LCT Controller Board (PCB40). Is P/J821, P/J811 connected surely?	Go to Step 2.	Connect P/J821 and P/J811 surely.
2	Checking after replacing the Lift Motor (M41) Replace the Lift Motor (M41). Does the error still occur?	Replace the LCT Controller Board (PCB40).	END

Troubleshooting Procedure 2.14

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Paper Feed/K Development Motor (M1) [Main Drive Assy 2] • Harness between the Paper Feed/K Development Motor (M1) and the MCU (PCB2) • Harness between the Paper Feed/K Development Motor (M1) and the LVPS (PCB4) • LVPS (PCB4) • MCU (PCB2) 		
1	Checking the Paper Feed/K Development Motor (M1) connection Check the connection between the Paper Feed/K Development Motor (M1) and the MCU (PCB2). Are P/J573 and P/J570 connected surely?	Go to Step 2.	Connect P/J573 and P/J570 surely.

Step	Check	Yes	No
2	<p>Checking the Paper Feed/K Development Motor (M1) connection</p> <p>Check the connection between the Paper Feed/K Development Motor (M1) and the LVPS (PCB4).</p> <p>Are P/J562 and P/J288 connected surely?</p>	Go to Step 3.	Connect P/J562 and P/J288 surely.
3	<p>Checking after replacing the Paper Feed/K Development Motor (M1)</p> <p>Replace the Main Drive Assy 2.</p> <p>Does the error still occur?</p>	Replace the MCU (PCB2).	END

Troubleshooting Procedure 2.15

Step	Check	Yes	No
	<p>Possible causative parts:</p> <ul style="list-style-type: none"> • Color Development Motor (M4) [Main Drive Assy] • Harness between the Color Development Motor (M4) and the MCU (PCB2) • Harness between the Color Development Motor (M4) and the LVPS (PCB4) • LVPS (PCB4) • MCU (PCB2) 		
1	<p>Checking the Color Development Motor (M4) connection</p> <p>Check the connection between the Color Development Motor (M4) and the MCU (PCB2).</p> <p>Are P/J551 and P/J550 connected surely?</p>	Go to Step 2.	Connect P/J551 and P/J550 surely.
2	<p>Checking the Color Development Motor (M4) connection</p> <p>Check the connection between the Color Development Motor (M4) and the LVPS (PCB4).</p> <p>Are P/J552 and P/J288 connected surely?</p>	Go to Step 3.	Connect P/J552 and P/J288 surely.
3	<p>Checking after replacing the Color Development Motor (M4)</p> <p>Replace the Main Drive Assy.</p>	Replace the MCU (PCB2).	END

Step	Check	Yes	No
	Does the error still occur?		

Troubleshooting Procedure 2.16

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Stacker Exit Sensor (S52) • Harness between the Staple Tray Exit Sensor (S52) and the Finisher Controller Board (PCB50) • Finisher Controller Board (PCB50) 		
1	Checking the Stacker Exit Sensor (S52) connection Check the connection between the Stacker Exit Sensor (S52) and the Finisher Controller Board (PCB50). Are P/J8877, P/J8913 and P/J8896 connected surely?	Replace the Finisher Controller Board (PCB50).	Connect P/J8877, P/J8913 and P/J8896 surely.

Troubleshooting Procedure 2.17

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Junction Gate Solenoid (SOL50) • Finisher Controller Board (PCB50) 		
1	Checking the Junction Gate Solenoid (SOL50) connection Check the connection between the Junction Gate Solenoid (SOL50) and Finisher Controller Board (PCB50). Are P/J8869 connected surely?	Go to Step 2.	Connect P/J8869 surely.
2	Checking after replacing the Junction Gate Solenoid (SOL50) Replace the Junction Gate Solenoid (SOL50). Does the error still occur?	Replace the Finisher Controller Board (PCB50).	END

Troubleshooting Procedure 2.18

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> Eject Home Sensor (S54) [Stacker Tray Assy] Harness between the Eject Home Sensor (S54) and the Finisher Controller Board (PCB50) Finisher Controller Board (PCB50) 		
1	Checking the Eject Home Sensor (S54) connection Check the connection between the Eject Home Sensor (S54) and the Finisher Controller Board (PCB50). Are P/J8874 and P/J8895 connected surely?	Go to Step 2.	Connect P/J8874 and P/J8895 surely.
2	Checking after replacing the Eject Home Sensor (S54) Replace the Stacker Tray Assy. Does the error still occur?	Replace the Finisher Controller Board (PCB50).	END

Troubleshooting Procedure 2.19

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> Eject Belt Motor (M51) [Motor Gear Assy] Harness between the Eject Belt Motor (M51) and the Finisher Controller Board (PCB50) Finisher Controller Board (PCB50) 		
1	Checking the Eject Belt Motor (M51) connection Check the connection between the Eject Belt Motor (M51) and the Finisher Controller Board (PCB50). Are P/J8862 and P/J8906 connected surely?	Go to Step 2.	Connect P/J8862 and P/J8906 surely.

Step	Check	Yes	No
2	Checking after replacing the Eject Belt Motor (M51) Replace the Motor Gear Assy. Does the error still occur?	Replace the Finisher Controller Board (PCB50).	END

Troubleshooting Procedure 2.20

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Tray Paper End/Full Sensor (S50) • Harness between the Tray Paper End/Full Sensor (S50) and the Finisher Controller Board (PCB50) • Finisher Controller Board (PCB50) 		
1	Checking the output Tray Paper End/Full Sensor (S50) connection Check the connection between the Tray Paper End/Full Sensor (S50) and the Finisher Controller Board (PCB50). Are P/J8860 and P/J8891 connected surely?	Replace the Finisher Controller Board (PCB50).	Connect P/J8860 and P/J8891 surely.

Troubleshooting Procedure 2.21

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Stacker Motor (M50) [Motor Gear Assy] • Harness between the Stacker Motor (M50) and the Finisher Controller Board (PCB50) • Finisher Controller Board (PCB50) 		
1	Checking the Stacker Motor (M50) connection Check the connection between the Stacker Motor (M50) and the Finisher Controller Board (PCB50). Are P/J8878 and P/J8907 connected surely?	Go to Step 2.	Connect P/J8878 and P/J8907 surely.
2	Checking after replacing the Stacker Motor	Replace the Finisher	END

Step	Check	Yes	No
	(M50) Replace the Motor Gear Assy. Does the error still occur?	Controller Board (PCB50).	

Troubleshooting Procedure 2.22

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Sub Paddle Home Sensor (S51) • Harness between the Sub Paddle Home Sensor (S51) and the Finisher Controller Board (PCB50) • Finisher Controller Board (PCB50) 		
1	Checking the Sub Paddle Home Sensor (S51) connection Check the connection between the Sub Paddle Home Sensor (S51) and the Finisher Controller Board (PCB50). Are P/J8860 and P/J8892 connected surely?	Replace the Finisher Controller Board (PCB50).	Connect P/J8860 and P/J8892 surely.

Troubleshooting Procedure 2.23

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Set Clamp Home Sensor (S55) [Stacker Tray Assy] • Harness between the Set Clamp Home Sensor (S55) and the Finisher Controller Board (PCB50) [Stacker Tray Assy] • Finisher Controller Board (PCB50) 		
1	Checking the Set Clamp Home Sensor (S55) connection Check the connection between the Set Clamp Home Sensor (S55) and the Finisher Controller Board (PCB50). Are P/J8865 and P/J8900 connected surely?	Go to Step 2.	Connect P/J8865 and P/J8900 surely.

Step	Check	Yes	No
2	Checking after replacing the Set Clamp Home Sensor (S55) Replace the Stacker Tray Assy. Does the error still occur?	Replace the Finisher Controller Board (PCB50).	END

Troubleshooting Procedure 2.24

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Staple Cover Interlock Switch (SW50) • Harness between the Staple Cover Interlock Switch (SW50) and the Finisher Controller Board (PCB50) • Finisher Controller Board (PCB50) 		
1	Checking the Staple Cover Interlock Switch (SW50) connection Check the connection between the Staple Cover Interlock Switch (SW50) and the Finisher Controller Board (PCB50). Are P/J8864 and P/J8909 connected surely?	Go to Step 2.	Connect P/J8864 and P/J8909 surely.
2	Checking after replacing the Staple Cover Interlock Switch (SW50) Replace the Staple Cover Interlock Switch (SW50). Does the error still occur?	Replace the Finisher Controller Board (PCB50).	END

Troubleshooting Procedure 2.25

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Low Staple Sensor (S62)/Self Priming Sensor (S61)/Staple Home Sensor (S60) [Stapler Assy] • Harness between the Stapler Assy and the Finisher Controller Board (PCB50) • Finisher Controller Board (PCB50) 		

Step	Check	Yes	No
1	<p>Checking the Stapler Assy connection</p> <p>Check the connection between the Stapler Assy and the Finisher Controller Board (PCB50).</p> <p>Are P/J8876 and P/J8897 connected surely?</p>	Go to Step 2.	Connect P/J8876 and P/J8897 surely.
2	<p>Checking after replacing the Stapler Assy</p> <p>Replace the Stapler Assy.</p> <p>Does the error still occur?</p>	Replace the Finisher Controller Board (PCB50).	END



Troubleshooting Procedure 2.26

Step	Check	Yes	No
	<p>Possible causative parts:</p> <ul style="list-style-type: none"> • Stapler Motor (M55) [Stapler Assy] • Harness between the Stapler Assy and the Finisher Controller Board (PCB50) • Finisher Controller Board (PCB50) 		
1	<p>Checking the Stapler Motor (M55) connection</p> <p>Check the connection between the Stapler Motor (M55) and the Finisher Controller Board (PCB50).</p> <p>Are P/J8863 and P/J8908 connected surely?</p>	Go to Step 2.	Connect P/J8863 and P/J8908 surely.
2	<p>Checking after replacing the Stapler Assy</p> <p>Replace the Stapler Assy.</p> <p>Does the error still occur?</p>	Replace the Finisher Controller Board (PCB50).	END

Troubleshooting Procedure 2.27

Step	Check	Yes	No
	<p>Possible causative parts:</p> <ul style="list-style-type: none"> • Right Jogger Fence Home Sensor (S58) [Stacker Tray Assy] • Harness between the Right Jogger Fence Home Sensor (S58) and the Finisher Controller Board (PCB50) • Finisher Controller Board (PCB50) 		

Step	Check	Yes	No
1	<p>Checking the Right Jogger Fence Home Sensor (S58) connection</p> <p>Check the connection between the Right Jogger Fence Home Sensor (S58) and the Finisher Controller Board (PCB50).</p> <p>Are P/J8865 and P/J8898 connected surely?</p>	Go to Step 2.	Connect P/J8865 and P/J8898 surely.
2	<p>Checking after replacing the Right Jogger Fence Home Sensor (S58)</p> <p>Replace the Stacker Tray Assy.</p> <p>Does the error still occur?</p>	Replace the Finisher Controller Board (PCB50).	END

Troubleshooting Procedure 2.28

Step	Check	Yes	No
	<p>Possible causative parts:</p> <ul style="list-style-type: none"> • Right Jogger Motor (M53) [Stacker Tray Assy] • Harness between the Right Jogger Motor (M53) and the Finisher Controller Board (PCB50) • Finisher Controller Board (PCB50) 		
1	<p>Checking the Right Jogger Motor (M53) connection</p> <p>Check the connection between the Right Jogger Motor (M53) and the Finisher Controller Board (PCB50).</p> <p>Are P/J8861 and P/J8903 connected surely?</p>	Go to Step 2.	Connect P/J8861 and P/J8903 surely.
2	<p>Checking after replacing the Right Jogger Motor (M53)</p> <p>Replace the Stacker Tray Assy.</p> <p>Does the error still occur?</p>	Replace the Finisher Controller Board (PCB50).	END

Troubleshooting Procedure 2.29

Step	Check	Yes	No
	Possible causative parts:		

Step	Check	Yes	No
	<ul style="list-style-type: none"> Left Jogger Fence Home Sensor (S59) [Stacker Tray Assy] Harness between the Left Jogger Fence Home Sensor (S59) and the Finisher Controller Board (PCB50) Finisher Controller Board (PCB50) 		
1	<p>Checking the Left Jogger Fence Home Sensor (S59) connection</p> <p>Check the connection between the Left Jogger Fence Home Sensor (S59) and the Finisher Controller Board (PCB50).</p> <p>Are P/J8865 and P/J8899 connected surely?</p>	Go to Step 2.	Connect P/J8865 and P/J8899 surely.
2	<p>Checking after replacing the left jogger fence home sensor</p> <p>Replace the Stacker Tray Assy.</p> <p>Does the error still occur?</p>	Replace the Finisher Controller Board (PCB50).	END

Troubleshooting Procedure 2.30

Step	Check	Yes	No
	<p>Possible causative parts:</p> <ul style="list-style-type: none"> Left Jogger Motor (M54) [Stacker Tray Assy] Harness between the Left Jogger Motor (M54) and the Finisher Controller Board (PCB50) Finisher Controller Board (PCB50) 		
1	<p>Checking the Left Jogger Motor (M54) connection</p> <p>Check the connection between the Left Jogger Motor (M54) and the Finisher Controller Board (PCB50).</p> <p>Are P/J8861 and P/J8904 connected surely?</p>	Go to Step 2.	Connect P/J8861 and P/J8904 surely.
2	<p>Checking after replacing the Left Jogger Motor (M54)</p> <p>Replace the Stacker Tray Assy.</p>	Replace the Finisher Controller Board (PCB50).	END

Step	Check	Yes	No
	Does the error still occur?		

Troubleshooting Procedure 2.31

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • Stacker Height Sensor 1 (S56) [Stacker Tray Assy] • Harness between the Stacker Height Sensor 1 (S56) and the Finisher Controller Board (PCB50) • Finisher Controller Board (PCB50) 		
1	Checking the Stacker Height Sensor 1 (S56) connection Check the connection between the Stacker Height Sensor 1 (S56) and the Finisher Controller Board (PCB50). Are P/J8865 and P/J8901 connected surely?	Go to Step 2.	Connect P/J8865 and P/J8901 surely.
2	Checking after replacing the Stacker Height Sensor 1 (S56) Replace the Stacker Tray Assy. Does the error still occur?	Replace the Finisher Controller Board (PCB50).	END

6.3 JAM DETECTION

6.3.1 JAM HISTORY

Checking Logs

Plotter (print engine) jam history can be displayed using SP7-507. The jam history of the 10 latest jams is displayed.

- SP7-507-001 "Plotter Jam: History Latest"
- SP7-507-002 "Plotter Jam: History Latest1"
- SP7-507-003 "Plotter Jam: History Latest2"
- SP7-507-004 "Plotter Jam: History Latest3"
- SP7-507-005 "Plotter Jam: History Latest4"
- SP7-507-006 "Plotter Jam: History Latest5"
- SP7-507-007 "Plotter Jam: History Latest6"
- SP7-507-008 "Plotter Jam: History Latest7"
- SP7-507-009 "Plotter Jam: History Latest8"
- SP7-507-010 "Plotter Jam: History Latest9"

Jam Display

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

- Initial jams at power on are not displayed here.

Paper Size Code

Size Code	Paper Size	Size Code	Paper Size
05	A4 LEF	141	B4 SEF
06	A5 LEF	142	B5 SEF
14	B5 LEF	160	DLT SEF
38	LT LEF	164	LG SEF
44	HLT LEF	166	LT SEF
133	A4 SEF	172	HLT SEF
134	A5 SEF	255	Others

6.3.2 JAM CODES**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.

Stay jam

The paper is within the location of the referenced sensor.

SPDF

Jam Code	Cause of jam	Late Jam	Lag Jam	Stay Jam
1	Initial jam			✓
13	SPDF Feed Sensor	✓		
16	SPDF Registration Sensor	✓		
66	SPDF Registration Sensor		✓	
17	SPDF Exit Sensor	✓		
67	SPDF Exit Sensor		✓	
94	Original document is too short			✓
95	Original document is too long			✓
239	Original document removed	✓		

Main Machine

Jam Code	Cause of jam	Late Jam	Lag Jam	Stay Jam
1	Initial jam: Registration Sensor			✓
1	Initial jam: Exit Sensor			✓
1	Initial jam: PFU Transport Sensor			✓
1	Initial jam: LCT Transport Sensor			✓
17	Registration Sensor (when paper not fed from optional tray)	✓		
9	Registration Sensor (when paper not fed from duplex)	✓		
57	Registration Sensor		✓	
60	Exit Sensor		✓	
97	Size mismatch: Exit Sensor			✓
20	Exit Sensor	✓		
96	Registration Sensor (The paper was not in time for the image.)	✓		
8	Registration Sensor (No paper feeding: Bypass tray)	✓		
3	Registration Sensor (No paper feeding: Tray 1)	✓		
4	PFU Transport Sensor (No paper feeding: Tray 2)	✓		
4	LCT Transport Sensor (No paper feeding: Tray 2)	✓		
5	PFU Transport Sensor (No paper feeding: Tray 3)	✓		
5	LCT Transport Sensor (No paper feeding: Tray 3)	✓		
6	PFU Transport Sensor (No paper feeding: Tray 4)	✓		
7	PFU Transport Sensor (No paper feeding: Tray 5)	✓		
12	PFU Transport Sensor (when paper fed from Tray 3)	✓		
13	PFU Transport Sensor (when paper fed from Tray 4)	✓		
14	PFU Transport Sensor (when paper fed from Tray 5)	✓		

Finisher

Jam Code	Cause of jam	Late Jam	Lag Jam	Stay Jam
242	Eject jam		✓	
240	Stacker Exit Sensor: Late jam	✓		
241	Stacker Exit Sensor: Lag jam		✓	
1	Initial jam: Finisher			✓
250	Stapling operation failed			✓
251	Staple failed to load			✓

6.4 IMAGE QUALITY TROUBLESHOOTING

6.4.1 PRINT QUALITY PROBLEMS

Entry Chart for Image Quality Problems

When an image quality problem occurs during printing, output a sample print to determine and grasp the nature of the problem and take proper steps, and then perform a troubleshooting efficiently using "Image Quality Troubleshooting Procedure".

If the problem persists even after the troubleshooting, check using the "Image Quality Troubleshooting Procedure" again, and then replace the "Possible causative parts" listed in the procedure one by one, and also perform the troubleshooting using the SP mode and others.

Items to be Confirmed Before Going to Image Quality Troubleshooting

Image Quality Problems

Taking firm steps to clarify image quality problems (streaks, color deterioration, and blanks) is required as one of the support items for an end user. To determine the cause of the print problem faced by the end user, first, confirm the following items to grasp the status of use by the end user.

1. Is the paper suitable for the recommended paper?
2. Is the remaining amount of the toner sufficient?
3. Has the printer been cleaned up lately?

Confirm the Printer Status

Toner

When the remaining amount of the toner is low, image quality problems such as faint print, streaks, white lines, and blanks) occur. Ask the end user to print the lower-capacity document using a different application, confirm the problem repeatability, and then check that the remaining amount of the toner is sufficient for printing. When a document is printed by an end user, the dialog box indicating the remaining amount of the toner appears on the laser printer status monitor.

When the remaining amount of the toner is low, the end user can extend the life of the toner cartridge slightly by removing the cartridge from the printer, shaking it right and left slowly (this softens the firm toner), and reinstalling the cartridge.

Cleaning

Image quality problems such as smears and toner spots might occur when particles of paper, toner, or dust is piled up in the printer. Cleaning the inside of the printer can prevent the problems.

6.4.2 IMAGE QUALITY TROUBLESHOOTING PROCEDURE

Determine the Mode when a Print Failure Occurs

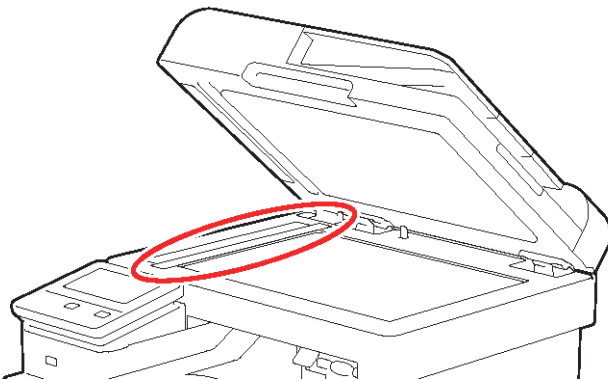
Firstly, perform the following procedures when a print failure occurs and determine the mode.

Secondly, carry out troubleshooting for each image.


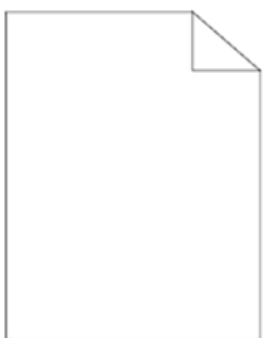
Step	Check	Yes	No
1	Which mode is used when the print failure occurs? <ul style="list-style-type: none"> • Print: Go to Step 2. • Copy: Go to Step 3. • FAX: Go to Step 4. 	-	-
2	Carry out troubleshoot for each print failure. Check the original. Go to " <i>Index</i> ".	-	-
3	What kind of copy methods are used? <ul style="list-style-type: none"> • Platen/Fratbed: Go to Step 5. • SPDF: Go to Step 6. 	-	-
4	Which side has the error, Receive/Send? <ul style="list-style-type: none"> • Fax Receive: Go to Step 7. • Fax Send: Go to Step 8. 	-	-
5	Check to copy with white paper. <ul style="list-style-type: none"> • Same line/spots appears: Clean the exposure glass. • Line/spot not seen: Original has defect. Is the problem solved?	END	Go to " <i>Index</i> ".
6	Compare with the printout Print a test page that can be reliably used. Does the same print failure occur?	Go to " <i>Index</i> ".	Clean up the exposure glass ^{*1} and scanning guide plate (white plate) with a clean dry cloth.
7	Compare with the printout Print a test page that can be reliably	This printer works normally.	Go to " <i>Index</i> ".



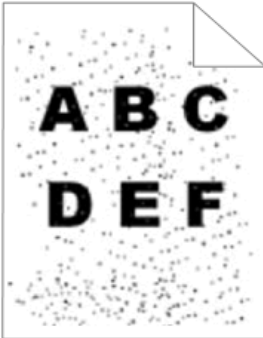


Step	Check	Yes	No
	used. Does the same print failure occur?	Contact the Sender about the print failure.	
8	Send the document occurred print failure to another FAX that reliably used. Does the same print failure occur?	Platen: Go to Step 5. SPDF: Go to Step 6.	The problem is due to the telephone line. Send the Fax again after fixed time passes.

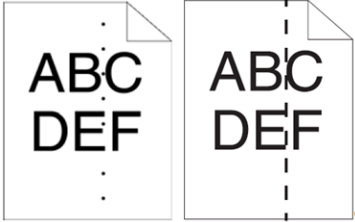




*1:


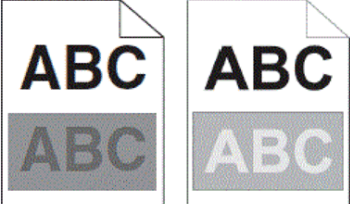
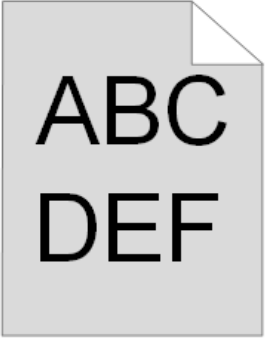
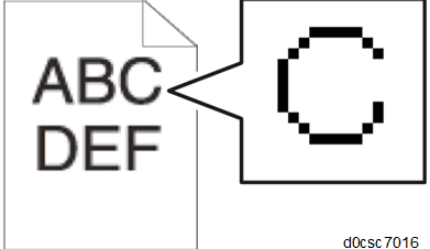
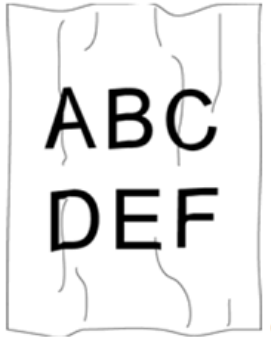






Index

No.	Classification	Sample image
1	Faint Print (Low Image Density)	 d0csc7001
2	Blank Page	 d0csc7002

No.	Classification	Sample image
3	<i>Smearred/Unfused Image</i>	 <p>d0csc7003</p>
4	<i>Spots</i>	 <p>d0csc7004</p>
5	<i>Bead Carry Over</i>	 <p>d0csc7005</p>
6	<i>Cyclic Banding (Low Density or Blurred Image in Horizontal)</i>	 <p>d0csc7006</p>
7	<i>Vertical lines/streaks</i>	 <p>d0csc7007</p>

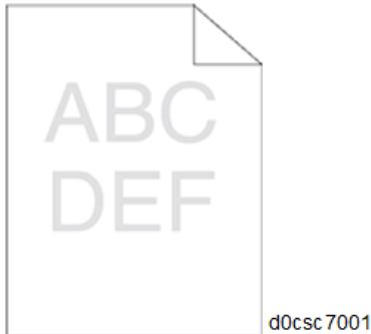
No.	Classification	Sample image
8	<i>Cyclic Dot/line (Color or Black in Vertical Direction)</i>	
9	<i>Vertical Deletion (Line or Band)</i>	
10	<i>Horizontal Band (Color or Black Band in Horizontal)</i>	
11	<i>Banding (Blurred Image in Horizontal)</i>	
12	<i>Cyclic Banding (Low Density or Blurred Image in Slantwise)</i>	

No.	Classification	Sample image
13	<i>Uneven Density (Mottle in Image/Text)</i>	 <p>d0csc 7013</p>
14	<i>Ghost Image</i>	 <p>d0csc 7014</p>
15	<i>High Background (Fog)</i>	 <p>d0csc7015</p>
16	<i>Jagged Image/text (At Outline)</i>	 <p>d0csc 7016</p>
17	<i>Wrinkled/creased</i>	 <p>d0csc7017</p>

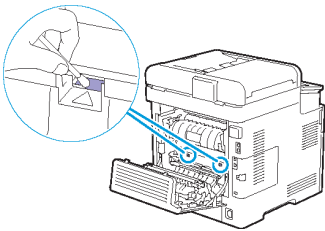
No.	Classification	Sample image
18	<i>Leading Edge Damaged</i>	 <p>d0csc7018</p>
19	<i>Image Position</i>	 <p>d0csc7019</p>
20	<i>Skewed</i>	 <p>d0csc7020</p>
21	<i>Color Registration is out of Alignment</i>	 <p>d0csc7021</p>

Faint Print (Low Image Density)

Sample image:

**Possible causative parts:**

- PCDU Y/M/C/K
- Toner Cartridge
- Paper Transfer Roller Unit
- MUSIC/ID Sensor Assy
- HVPS (PCB5)

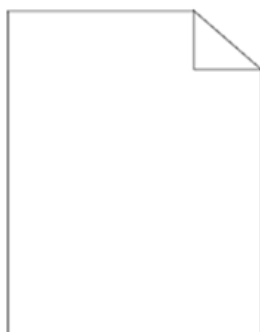
Step	Check	Yes	No
1	Refer to " Determine the Mode when a Print Failure Occurs " and determine the mode when a print failure occurs.	-	-
2	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 3.
3	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.  Turn the power OFF and ON five times. Note Wait until Ready screen appears after tuning on the power switch. Does this solve your problem?	END	Go to Step 4.

Step	Check	Yes	No
4	Make sure that the toner cartridges are correctly installed. Does this solve your problem?	END	Go to Step 5.
5	Check the paper tray guide. Are the end and side fences positioned against the paper correctly?	Go to Step 6.	Align the end and side fences against the paper.
6	Check the paper type. Do you use the recommended paper?	Go to Step 7.	Replace paper to the recommended one.
7	Check the paper condition. Is paper mutilated or damp.	Replace to unwrapped paper.	Go to Step 8.
8	Disable [Toner Saving] in the printer driver. <ul style="list-style-type: none"> Windows: Configure the setting on the [Image Quality] tab. macOS: Configure the setting on the [Print Quality] menu in [Feature Sets] of [Printer Features]. Does this solve your problem?	END	Go to Step 9.
9	The print media surface may be coarse. Try changing the paper type setting in the operation panel menu. For example, change the plain paper to thick. <ul style="list-style-type: none"> [Settings] > [Tray/Paper Settings] > [Paper Size/Paper Type] Does this solve your problem?	END	Go to Step 10.
10	Make sure that the Paper Transfer Roller Unit is correctly installed. Does this solve your problem?	END	Go to Step 11.
11	Execute the cleaning menu in the operation panel to stir the developer in the PCDU. <ul style="list-style-type: none"> "Settings" icon > [Maintenance] > [Development Unit and Paper Transfer Roller Cleaning] Does this solve your problem?	END	Go to Step 12.

Step	Check	Yes	No
12	Print a Color Pattern to check that the color can be printed correctly. <ul style="list-style-type: none"> "Settings" icon > [Printer Settings] > [Lest/Test Print] > [Sample Pages] > [Color Pattern] Replace the PCDU that print failure occurs. Does this solve your problem?	END	Go to Step 13.
13	Replace the Paper Transfer Roller Unit. Does this solve your problem?	END	Go to Step 14.
14	Check the installation of the ID/MUSIC Sensor Assy. Is the ID/MUSIC Sensor Assy installed correctly?	Go to Step 15.	Reinstall the ID/MUSIC Sensor Assy.
15	Replace the ID/MUSIC Sensor Assy. Turn the power OFF and ON five times. <p>Note</p> Wait until Ready screen appears after tuning on the power switch. Does this solve your problem?	END	Go to Step 16.
16	Check the HVPS (PCB5) connector connection. Are the HVPS (PCB5) connectors connected correctly?	Replace the HVPS Assy (PCB5).	Reconnect the connectors.

Blank Page

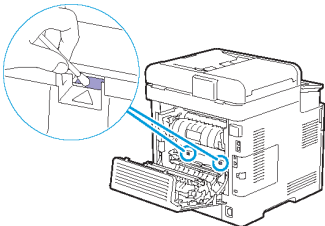
Sample image:



d0csc7002

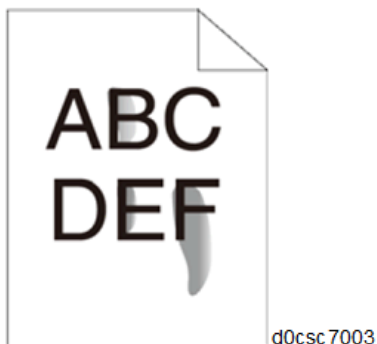
Possible causative parts:

- Paper Transfer Roller Unit
- HVPS (PCB5)

Step	Check	Yes	No
1	Refer to " Determine the Mode when a Print Failure Occurs " and determine the mode when a print failure occurs.	-	-
2	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 3.
3	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.  Turn the power OFF and ON five times. Note Wait until Ready screen appears after tuning on the power switch. Does this solve your problem?	END	Go to Step 4.
4	Make sure that the toner cartridges are correctly installed. Does this solve your problem?	END	Go to Step 5.
5	Check the paper tray guide. Are the end and side fences positioned against the paper correctly?	Go to Step 6.	Align the end and side fences against the paper.
6	Check the paper type. Do you use the recommended paper?	Go to Step 7.	Replace paper to the recommended one.
7	Check the paper condition. Is paper mutilated or damp.	Replace to unwrapped paper.	Go to Step 8.
8	Replace the Paper Transfer Roller Unit. Does this solve your problem?	END	Go to Step 9.
9	Check the HVPS (PCB5) connector connection. Are the HVPS (PCB5) connectors connected correctly?	Replace the HVPS Assy (PCB5).	Reconnect the connectors.

Smeared/Unfused Image

Sample image:

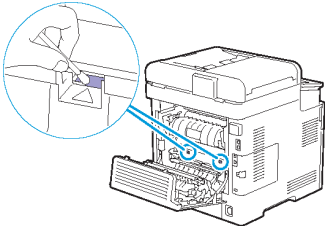


Possible causative parts:

- PCDU Y/M/C/K
- Toner Cartridge
- Fusing Unit
- ITB Unit

⚠ CAUTION

- To avoid burns, do not replace the Fusing Unit immediately after printing.
The Fusing Unit becomes extremely hot during use.

Step	Check	Yes	No
1	Refer to " Determine the Mode when a Print Failure Occurs " and determine the mode when a print failure occurs.	-	-
2	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 3.
3	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.  Turn the power OFF and ON five times. ⚡ Note Wait until Ready screen appears after tuning on the power switch.	END	Go to Step 4.

Step	Check	Yes	No
	Does this solve your problem?		
4	Make sure that the toner cartridges are correctly installed. Does this solve your problem?	END	Go to Step 5.
5	Check the paper tray guide. Are the end and side fences positioned against the paper correctly?	Go to Step 6.	Align the end and side fences against the paper.
6	Check the paper type. Do you use the recommended paper?	Go to Step 7.	Replace paper to the recommended one.
7	Check the paper condition. Is paper mutilated or damp.	Replace to unwrapped paper.	Go to Step 8.
8	Print a Color Pattern to check that the color can be printed correctly. <ul style="list-style-type: none"> "Settings" icon > [Printer Settings] > [Lest/Test Print] > [Sample Pages] > [Color Pattern] Replace the PCPU that print failure occurs. Does this solve your problem?	END	Go to Step 9.
9	Replace the Fusing Unit. Does this solve your problem?	END	Go to Step 10.
10	Check the Image Transfer Belt (ITB). Is the ITB Unit dirty, damaged, worn, or malfunctioning?	Replace the ITB Unit	Replace the printer.

Spots

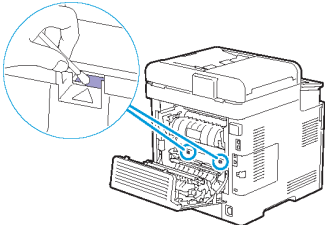
Sample image:



d0csc7004

Possible causative parts:

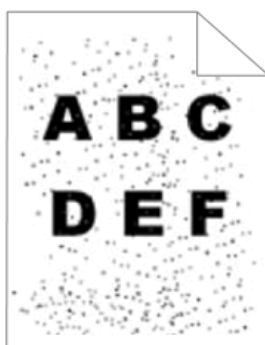
- PCDU Y/M/C/K
- Toner Cartridge
- ITB Unit

Step	Check	Yes	No
1	Refer to " Determine the Mode when a Print Failure Occurs " and determine the mode when a print failure occurs.	-	-
2	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 3.
3	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.  Turn the power OFF and ON five times. Note Wait until Ready screen appears after tuning on the power switch. Does this solve your problem?	END	Go to Step 4.
4	Make sure that the toner cartridges are correctly installed. Does this solve your problem?	END	Go to Step 5.
5	Check the paper tray guide. Are the end and side fences positioned against the paper correctly?	Go to Step 6.	Align the end and side fences against the paper.
6	Check the paper type. Do you use the recommended paper?	Go to Step 7.	Replace paper to the recommended one.
7	Check the paper condition. Is paper mutilated or damp.	Replace to unwrapped paper.	Go to Step 8.
8	Print a Color Pattern to check that the color can be	END	Go to Step 9.

Step	Check	Yes	No
	<p>printed correctly.</p> <ul style="list-style-type: none"> "Settings" icon > [Printer Settings] > [Lest/Test Print] > [Sample Pages] > [Color Pattern] <p>Replace the PCDU that print failure occurs.</p> <p>Does this solve your problem?</p>		
9	<p>Check the Image Transfer Belt (ITB).</p> <p>Is the ITB Unit not dirty, damaged, or worn, and its work abnormal?</p>	Replace the ITB Unit.	Replace the printer.

Bead Carry Over

Sample image:

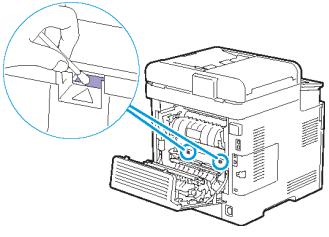


d0csc7005

Possible causative parts:

- PCDU Y/M/C/K
- Toner Cartridge
- HVPS (PCB5)

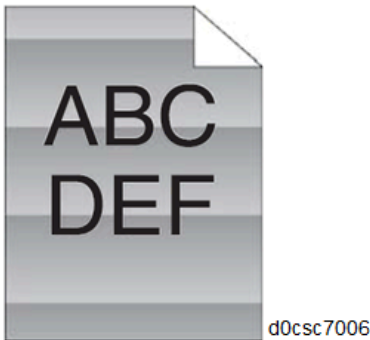
Step	Check	Yes	No
1	Refer to " <i>Determine the Mode when a Print Failure Occurs</i> " and determine the mode when a print failure occurs.	-	-
2	<p>Cleaning the LED Head.</p> <p>Does this solve your problem?</p>	END	Go to Step 3.
3	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.	END	Go to Step 4.

Step	Check	Yes	No
	 <p>Turn the power OFF and ON five times.</p> <p>Note</p> <p>Wait until Ready screen appears after tuning on the power switch.</p> <p>Does this solve your problem?</p>		
4	<p>Make sure that the toner cartridges are correctly installed.</p> <p>Does this solve your problem?</p>	END	Go to Step 5.
5	<p>Check the paper tray guide.</p> <p>Are the end and side fences positioned against the paper correctly?</p>	Go to Step 6.	Align the end and side fences against the paper.
6	<p>Check the paper type.</p> <p>Do you use the recommended paper?</p>	Go to Step 7.	Replace paper to the recommended one.
7	<p>Check the paper condition.</p> <p>Is paper mutilated or damp.</p>	Replace to unwrapped paper.	Go to Step 8.
8	<p>If the printer is installed in a high altitude location, set the altitude of the location.</p> <ul style="list-style-type: none"> "Settings" icon > [Maintenance] > [Altitude Adjustment] <p>Does this solve your problem?</p>	END	Go to Step 9.
9	<p>Print a Color Pattern to check that the color can be printed correctly.</p> <ul style="list-style-type: none"> "Settings" icon > [Printer Settings] > [Lest/Test Print] > [Sample Pages] > [Color Pattern] <p>Replace the PCDU that print failure occurs.</p> <p>Does this solve your problem?</p>	END	Go to Step 10.
10	<p>Check the HVPS (PCB5) connector connection.</p>	Replace the	Reconnect the

Step	Check	Yes	No
	Are the HVPS (PCB5) connectors connected correctly?	HVPS Assy (PCB5).	connectors.

Cyclic Banding (Low Density or Blurred Image in Horizontal)

Sample image:

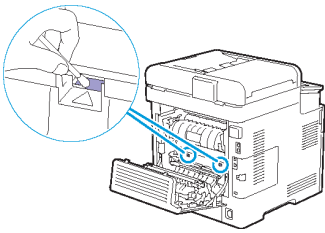


Possible causative parts:

- PCDU Y/M/C/K
- Toner Cartridge

Note

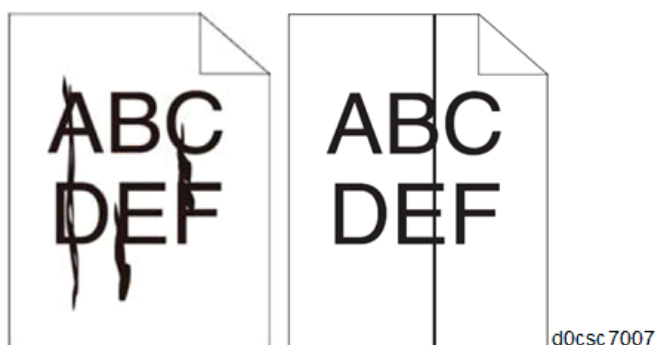
- If the PCDU was removed and places under light, this problem happened. Set it in the printer and keep it in an hour, then print ten sheets.

Step	Check	Yes	No
1	Refer to " <i>Determine the Mode when a Print Failure Occurs</i> " and determine the mode when a print failure occurs.	-	-
2	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 3.
3	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.  Turn the power OFF and ON five times. Note Wait until Ready screen appears after tuning on the	END	Go to Step 4.

Step	Check	Yes	No
	power switch. Does this solve your problem?		
4	Make sure that the toner cartridges are correctly installed. Does this solve your problem?	END	Go to Step 5.
5	Check the paper tray guide. Are the end and side fences positioned against the paper correctly?	Go to Step 6.	Align the end and side fences against the paper.
6	Check the paper type. Do you use the recommended paper?	Go to Step 7.	Replace paper to the recommended one.
7	Check the paper condition. Is paper mutilated or damp.	Replace to unwrapped paper.	Go to Step 8.
8	Print a Color Pattern to check that the color can be printed correctly. <ul style="list-style-type: none"> "Settings" icon > [Printer Settings] > [Lest/Test Print] > [Sample Pages] > [Color Pattern] Replace the PCDU that print failure occurs. Does this solve your problem?	END	Replace the printer.

Vertical lines/streaks

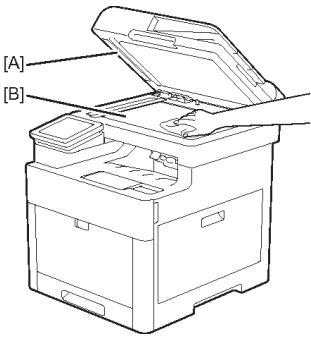
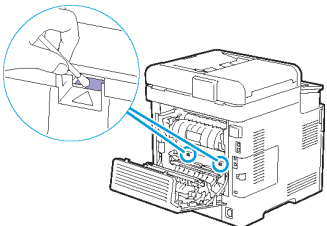
Sample image:



Possible causative parts:

- PCDU Y/M/C/K
- Toner Cartridge
- ITB Unit

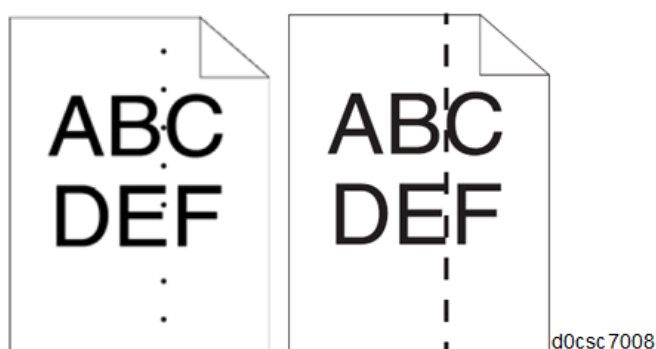
- Scanner Unit and SPDF Unit
- LED Head

Step	Check	Yes	No
1	Refer to " Determine the Mode when a Print Failure Occurs " and determine the mode when a print failure occurs.	-	-
2	Cleaning the scanning guide plate (white plate) [A] and exposure glass [B].  Does this solve your problem?	END	Go to Step 3.
3	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 4.
4	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.  Turn the power OFF and ON five times. Note Wait until Ready screen appears after tuning on the power switch. Does this solve your problem?	END	Go to Step 5.
5	Make sure that the toner cartridges are correctly installed. Does this solve your problem?	END	Go to Step 6.
6	Check the paper tray guide. Are the end and side fences positioned against the	Go to Step 7.	Align the end and side fences against the

Step	Check	Yes	No
	paper correctly?		paper.
7	Check the paper type. Do you use the recommended paper?	Go to Step 8.	Replace paper to the recommended one.
8	Check the paper condition. Is paper mutilated or damp.	Replace to unwrapped paper.	Go to Step 9.
9	Copy a blank sheet of paper. Does the problem appear?	Go to Step 10.	END
10	Print a Color Pattern to check that the color can be printed correctly. <ul style="list-style-type: none"> "Settings" icon > [Printer Settings] > [Lest/Test Print] > [Sample Pages] > [Color Pattern] Replace the PCDU that print failure occurs. Does this solve your problem?	END	Go to Step 11.
11	Replace the LED Head Assy. Does this solve your problem?	END	Go to Step 12.
12	Check the Image Transfer Belt (ITB). Is the ITB Unit dirty, damaged, worn, or malfunctioning?	Replace the ITB Unit.	Replace the Scanner Unit and SPDF Unit.

Cyclic Dot/line (Color or Black in Vertical Direction)

Sample image:



Possible causative parts:

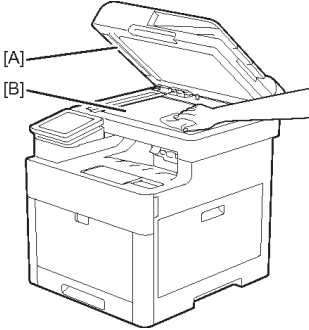
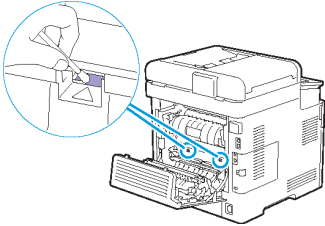
- PCDU Y/M/C/K
- Toner Cartridge
- Fusing Unit

- ITB Unit
- Scanner Unit and SPDF Unit

⚠ CAUTION

- To avoid burns, do not replace the Fusing Unit immediately after printing.

The Fusing Unit becomes extremely hot during use.

Step	Check	Yes	No
1	Refer to " Determine the Mode when a Print Failure Occurs " and determine the mode when a print failure occurs.	-	-
2	Cleaning the scanning guide plate (white plate) [A] and exposure glass [B].  Does this solve your problem?	END	Go to Step 3.
3	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 4.
4	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.  Turn the power OFF and ON five times. Note Wait until Ready screen appears after tuning on the power switch. Does this solve your problem?	END	Go to Step 5.
5	Make sure that the toner cartridges are correctly installed.	END	Go to Step 6.

Step	Check	Yes	No
	Does this solve your problem?		
6	Check the paper tray guide. Are the end and side fences positioned against the paper correctly?	Go to Step 7.	Align the end and side fences against the paper.
7	Check the paper type. Do you use the recommended paper?	Go to Step 8.	Replace paper to the recommended one.
8	Check the paper condition. Is paper mutilated or damp.	Replace to unwrapped paper.	Go to Step 9.
9	Print a Test Pattern and check the pitch*1 to locate the cause of the problem. (Test Pattern Printing) Which part does the print failure occur in?	<PCDU> Go to Step 9.	<Other> Go to Step 10.
10	Replace the PCDU that print failure occurs. Does this solve your problem?	END	Go to Step 11.
11	Check the installation status of the ITB Unit. Is the ITB Unit high-voltage terminal dirty or is it contacted to the spring incorrectly?	Clean the high-voltage terminal. Reinstall the ITB Unit.	Go to Step 12.
12	Replace the ITB Unit. Does this solve your problem?	END	Go to Step 13.
13	Replace the Fusing Unit. Does this solve your problem?	END	Replace the printer.

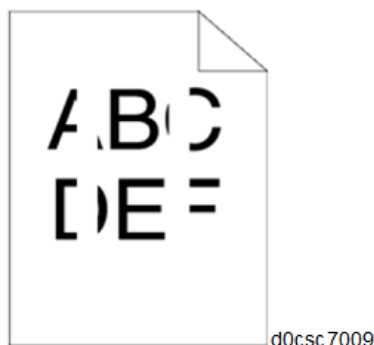
*1

Defective part		Interval
PCDU	Drum	94.2 mm
	Charge Roller	28.3 mm
	Cleaning Roller	27.3 mm
	Development Roller	27.9 mm
ITB Unit	Image Transfer Roller	18.8 mm
	ITB Transfer Roller	31.4 mm
Fusing Unit	Exit Roller	44.3 mm

Defective part		Interval
	Heat Roller	82.3 mm
	Pressure Belt	94.2 mm
Paper Feed Roller		56.5 mm

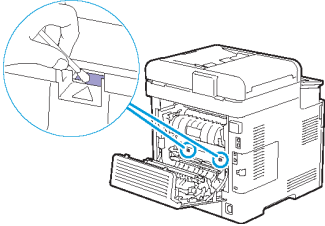
Vertical Deletion (Line or Band)


Sample image:



Possible causative parts:

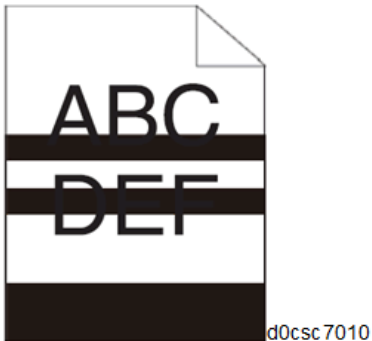
- LED HEAD
- PCDU Y/M/C/K
- Toner Cartridge
- Paper Transfer Roller Unit
- ITB Unit
- Scanner Unit and SPDF Unit

Step	Check	Yes	No
1	Refer to " Determine the Mode when a Print Failure Occurs " and determine the mode when a print failure occurs.	-	-
2	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 3.
3	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.  Turn the power OFF and ON five times.	END	Go to Step 4.

Step	Check	Yes	No
	<p> Note</p> <p>Wait until Ready screen appears after tuning on the power switch.</p> <p>Does this solve your problem?</p>		
4	<p>Make sure that the toner cartridges are correctly installed.</p> <p>Does this solve your problem?</p>	END	Go to Step 5.
5	<p>Check the paper tray guide.</p> <p>Are the end and side fences positioned against the paper correctly?</p>	Go to Step 6.	Align the end and side fences against the paper.
6	<p>Check the paper type.</p> <p>Do you use the recommended paper?</p>	Go to Step 7.	Replace paper to the recommended one.
7	<p>Check the paper condition.</p> <p>Is paper mutilated or damp.</p>	Replace to unwrapped paper.	Go to Step 8.
8	<p>Print a Color Pattern to check that the color can be printed correctly.</p> <ul style="list-style-type: none"> • "Settings" icon > [Printer Settings] > [Lest/Test Print] > [Sample Pages] > [Color Pattern] <p>Replace the PCDU that print failure occurs.</p> <p>Does this solve your problem?</p>	END	Go to Step 9.
9	<p>Replace the LED Head.</p> <p>Does this solve your problem?</p>	END	Go to Step 10.
10	<p>Check the Image Transfer Belt (ITB).</p> <p>Is the ITB Unit dirty, damaged, worn, or malfunctioning?</p>	Replace the ITB Unit.	Go to Step 11.
11	<p>Replace the Paper Transfer Roller Unit.</p> <p>Does this solve your problem?</p>	END	Go to Step 12.
12	<p>Replace the Scanner Unit and SPDF Unit.</p> <p>Does this solve your problem?</p>	END	Replace the printer.

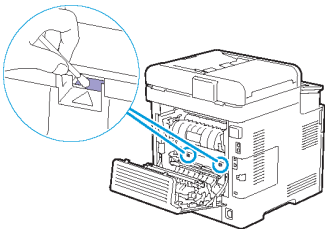
Horizontal Band (Color or Black Band in Horizontal)

Sample image:



Possible causative parts:

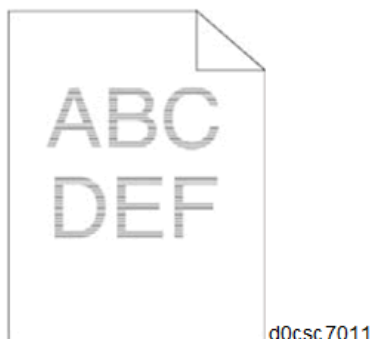
- PCDU Y/M/C/K
- Toner Cartridge
- HVPS (PCB5)

Step	Check	Yes	No
1	Refer to " Determine the Mode when a Print Failure Occurs " and determine the mode when a print failure occurs.	-	-
2	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 3.
3	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.  Turn the power OFF and ON five times. Note Wait until Ready screen appears after tuning on the power switch. Does this solve your problem?	END	Go to Step 4.
4	Make sure that the toner cartridges are correctly installed.	END	Go to Step 5.

Step	Check	Yes	No
	Does this solve your problem?		
5	Check the paper tray guide. Are the end and side fences positioned against the paper correctly?	Go to Step 6.	Align the end and side fences against the paper.
6	Check the paper type. Do you use the recommended paper?	Go to Step 7.	Replace paper to the recommended one.
7	Check the paper condition. Is paper mutilated or damp.	Replace to unwrapped paper.	Go to Step 8.
8	Make sure that the PCDUs are installed correctly. Does this solve your problem?	END	Go to Step 9.
9	Print a Color Pattern to check that the color can be printed correctly. <ul style="list-style-type: none"> "Settings" icon > [Printer Settings] > [Lest/Test Print] > [Sample Pages] > [Color Pattern] Replace the PCDU that print failure occurs. Does this solve your problem?	END	Go to Step 10.
10	Check the HVPS (PCB5) connector connection. Are the HVPS (PCB5) connectors connected correctly?	Replace the HVPS Assy (PCB5).	Reconnect the connectors.

Banding (Blurred Image in Horizontal)

Sample image:



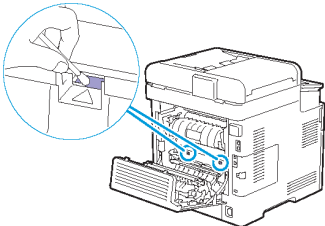
Possible causative parts:

- PCDU Y/M/C/K
- Toner Cartridge

- Fusing Unit
- paper Transfer Roller Unit
- ITB Unit

⚠ CAUTION

- To avoid burns, do not replace the Fusing Unit immediately after printing.
The Fusing Unit becomes extremely hot during use.

Step	Check	Yes	No
1	Refer to " Determine the Mode when a Print Failure Occurs " and determine the mode when a print failure occurs.	-	-
2	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 3.
3	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.  Turn the power OFF and ON five times. Note Wait until Ready screen appears after tuning on the power switch. Does this solve your problem?	END	Go to Step 4.
4	Make sure that the toner cartridges are correctly installed. Does this solve your problem?	END	Go to Step 5.
5	Check the paper tray guide. Are the end and side fences positioned against the paper correctly?	Go to Step 6.	Align the end and side fences against the paper.
6	Check the paper type. Do you use the recommended paper?	Go to Step 7.	Replace paper to the recommended one.
7	Check the paper condition.	Replace to unwrapped	Go to Step 8.

Step	Check	Yes	No
	Is paper mutilated or damp.	paper.	
8	Print a Test Pattern and check the pitch*1 to locate the cause of the problem. (Test Pattern Printing) Which part does the print failure occur in?	<PCDU> Go to Step 9.	<Other> Go to Step 10.
9	Replace the PCDU that print failure occurs. Does this solve your problem?	END	Go to Step 10.
10	Replace the ITB Unit. Does this solve your problem?	END	Go to Step 11.
11	Replace the Paper Transfer Roller Unit. Does this solve your problem?	END	Go to Step 12.
12	Check the Fusing Unit. Is the Fusing Unit installed correctly?	Go to Step 13.	Reinstall the Fusing Unit.
13	Remove the Fusing Unit. Rotate the gears by hand to check the Heat Roller section. Is the Heat Roller section dirty, damaged, or malfunctioning?	Replace the printer.	Replace the Fusing Unit.

*1

Defective part		Interval
PCDU	Drum	94.2 mm
	Charge Roller	28.3 mm
	Cleaning Roller	27.3 mm
	Development Roller	27.9 mm
ITB Unit	Image Transfer Roller	18.8 mm
	ITB Transfer Roller	31.4 mm
Fusing Unit	Exit Roller	44.3 mm
	Heat Roller	82.3 mm
	Pressure Belt	94.2 mm
Paper Feed Roller		56.5 mm

Cyclic Banding (Low Density or Blurred Image in Slantwise)

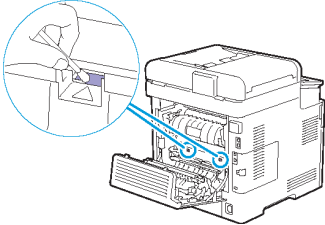
Sample image:



d0csc7012

Possible causative parts:

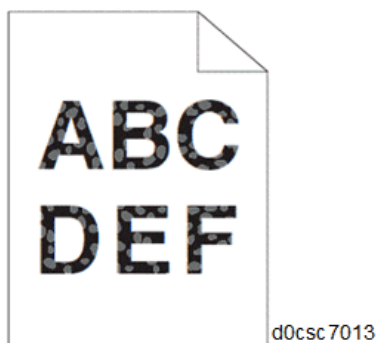
- PCDU Y/M/C/K
- Toner Cartridge

Step	Check	Yes	No
1	Refer to " Determine the Mode when a Print Failure Occurs " and determine the mode when a print failure occurs.	-	-
2	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 3.
3	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.  Turn the power OFF and ON five times. Note Wait until Ready screen appears after tuning on the power switch. Does this solve your problem?	END	Go to Step 4.
4	Make sure that the toner cartridges are correctly installed. Does this solve your problem?	END	Go to Step 5.

Step	Check	Yes	No
5	Check the paper tray guide. Are the end and side fences positioned against the paper correctly?	Go to Step 6.	Align the end and side fences against the paper.
6	Check the paper type. Do you use the recommended paper?	Go to Step 7.	Replace paper to the recommended one.
7	Check the paper condition. Is paper mutilated or damp.	Replace to unwrapped paper.	Go to Step 8.
8	Print a Color Pattern to check that the color can be printed correctly. <ul style="list-style-type: none"> "Settings" icon > [Printer Settings] > [Lest/Test Print] > [Sample Pages] > [Color Pattern] Replace the PCDU that print failure occurs. Does this solve your problem?	END	Replace the printer.

Uneven Density (Mottle in Image/Text)

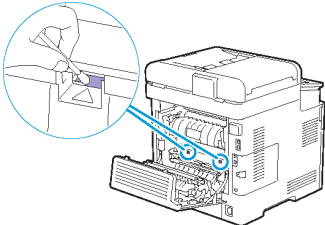
Sample image:



Possible causative parts:

- PCDU Y/M/C/K
- Toner Cartridge
- HVPS (PCB5)

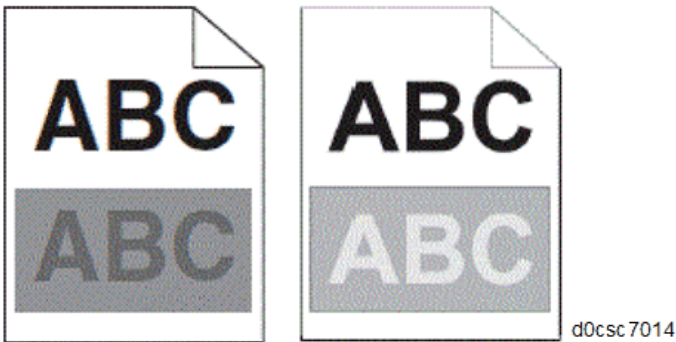
Step	Check	Yes	No
1	Refer to " <i>Determine the Mode when a Print Failure Occurs</i> " and determine the mode when a print failure occurs.	-	-
2	Cleaning the LED Head.	END	Go to Step 3.

Step	Check	Yes	No
	Does this solve your problem?		
3	<p>Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.</p>  <p>Turn the power OFF and ON five times.</p> <p>Note</p> <p>Wait until Ready screen appears after tuning on the power switch.</p> <p>Does this solve your problem?</p>	END	Go to Step 4.
4	<p>Make sure that the toner cartridges are correctly installed.</p> <p>Does this solve your problem?</p>	END	Go to Step 5.
5	<p>Check the paper tray guide.</p> <p>Are the end and side fences positioned against the paper correctly?</p>	Go to Step 6.	Align the end and side fences against the paper.
6	<p>Check the paper type.</p> <p>Do you use the recommended paper?</p>	Go to Step 7.	Replace paper to the recommended one.
7	<p>Check the paper condition.</p> <p>Is paper mutilated or damp.</p>	Replace to unwrapped paper.	Go to Step 8.
8	<p>Increase the paper transfer voltage.</p> <ul style="list-style-type: none"> "Settings" icon > [Maintenance] > [Adjust Transfer Voltage] <p>Does this solve your problem?</p>	END	Go to Step 9.
9	<p>Print a Color Pattern to check that the color can be printed correctly.</p> <ul style="list-style-type: none"> "Settings" icon > [Printer Settings] > [Lest/Test Print] > [Sample Pages] > [Color Pattern] <p>Replace the PCPU that print failure occurs.</p>	END	Go to Step 10.

Step	Check	Yes	No
	Does this solve your problem?		
10	Check the HVPS (PCB5) connector connection. Are the HVPS (PCB5) connectors connected correctly?	Replace the HVPS Assy (PCB5).	Reconnect the connectors.

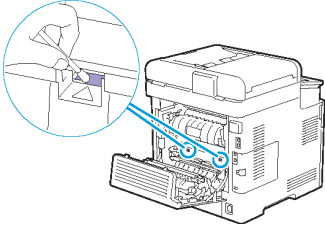
Ghost Image

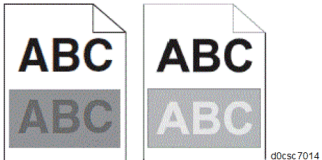
Sample image:



Possible causative parts:

- PCDU Y/M/C/K
- Toner Cartridge
- ITB Unit

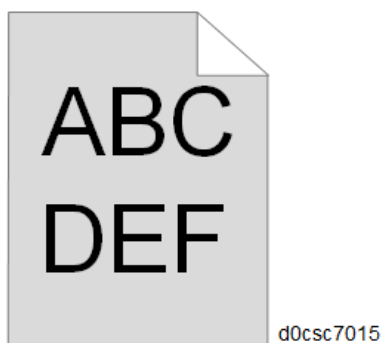
Step	Check	Yes	No
1	Refer to " Determine the Mode when a Print Failure Occurs " and determine the mode when a print failure occurs.	-	-
2	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 3.
3	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.  Turn the power OFF and ON five times. Note	END	Go to Step 4.

Step	Check	Yes	No
	Wait until Ready screen appears after tuning on the power switch. Does this solve your problem?		
4	Make sure that the toner cartridges are correctly installed. Does this solve your problem?	END	Go to Step 5.
5	Check the paper tray guide. Are the end and side fences positioned against the paper correctly?	Go to Step 6.	Align the end and side fences against the paper.
6	Check the paper type. Do you use the recommended paper?	Go to Step 7.	Replace paper to the recommended one.
7	Check the paper condition. Is paper mutilated or damp.	Replace to unwrapped paper.	Go to Step 8.
8	Identify the type of ghosting. [A] [B]  If the type of ghosting is positive ghost [A], go to Step 10. If the type of ghosting is negative ghost [B], go to Step 9.	-	-
9	Decrease the transfer bias. <ul style="list-style-type: none"> "Settings" icon > [Maintenance] > [Adjusting Transfer Voltage] If the problem persists, proceed to Step 11.	-	-
10	Print a Color Pattern to check that the color can be printed correctly. <ul style="list-style-type: none"> "Settings" icon > [Printer Settings] > [Lest/Test Print] > [Sample Pages] > [Color Pattern] Replace the PCDU that print failure occurs.	Go to Step 11.	END

Step	Check	Yes	No
	Does this solve your problem?		
11	Check the installation status of the ITB Unit. Is the ITB Unit high-voltage terminal dirty or is it contacted to the spring incorrectly?	Clean the high-voltage terminal. Reinstall the ITB Unit.	Go to Step 12.
12	Replace the ITB Unit. Does the problem persist even after the ITB Unit is replaced with a new one?	Replace the printer.	END

High Background (Fog)

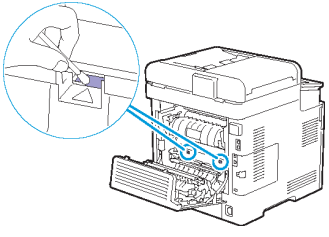
Sample image:



Possible causative parts:

- PCDU Y/M/C/K
- Toner Cartridge
- MUSIC/ID Sensor Assy
- HVPS (PCB5)

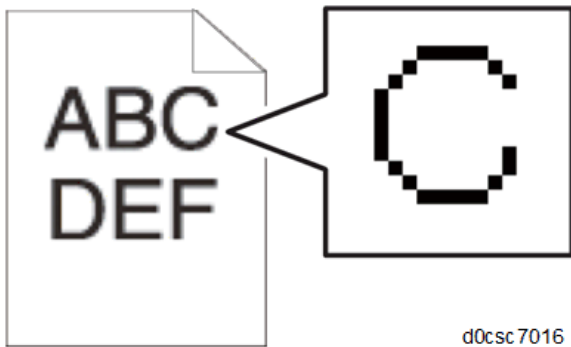
Step	Check	Yes	No
1	Refer to " Determine the Mode when a Print Failure Occurs " and determine the mode when a print failure occurs.	-	-
2	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 3.
3	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.	END	Go to Step 4.

Step	Check	Yes	No
	 <p>Turn the power OFF and ON five times.</p> <p>Note</p> <p>Wait until Ready screen appears after tuning on the power switch.</p> <p>Does this solve your problem?</p>		
4	<p>Make sure that the toner cartridges are correctly installed.</p> <p>Does this solve your problem?</p>	END	Go to Step 5.
5	<p>Check the paper tray guide.</p> <p>Are the end and side fences positioned against the paper correctly?</p>	Go to Step 6.	Align the end and side fences against the paper.
6	<p>Check the paper type.</p> <p>Do you use the recommended paper?</p>	Go to Step 7.	Replace paper to the recommended one.
7	<p>Check the paper condition.</p> <p>Is paper mutilated or damp.</p>	Replace to unwrapped paper.	Go to Step 8.
8	<p>Check if a problem occurs repeatedly.</p> <p>Print photo of images for 30 pages.</p> <p>Does the problem still persist?</p>	Go to Step 9.	END
9	<p>Print a Color Pattern to check that the color can be printed correctly.</p> <ul style="list-style-type: none"> • "Settings" icon > [Printer Settings] > [Lest/Test Print] > [Sample Pages] > [Color Pattern] <p>Replace the PCDU that print failure occurs.</p> <p>Does this solve your problem?</p>	END	Go to Step 10.
10	<p>Replace the ID/MUSIC Sensor Assy.</p> <p>Does this solve your problem?</p>	END	Go to Step 11.

Step	Check	Yes	No
11	Check the HVPS (PCB5) connector connection. Are the HVPS (PCB5) connectors connected correctly?	Replace the HVPS Assy (PCB5).	Reconnect the connectors.

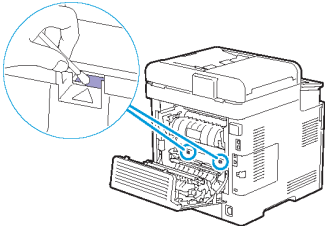
Jagged Image/text (At Outline)

Sample image:



Possible causative parts:

- Print data with no outline font.
- Low resolution print data.

Step	Check	Yes	No
1	Refer to " Determine the Mode when a Print Failure Occurs " and determine the mode when a print failure occurs.	-	-
2	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 3.
3	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.  Turn the power OFF and ON five times. Note Wait until Ready screen appears after tuning on the power switch.	END	Go to Step 4.

Step	Check	Yes	No
	Does this solve your problem?		
4	Make sure that the toner cartridges are correctly installed. Does this solve your problem?	END	Go to Step 5.
5	Check the paper tray guide. Are the end and side fences positioned against the paper correctly?	Go to Step 6.	Align the end and side fences against the paper.
6	Check the paper type. Do you use the recommended paper?	Go to Step 7.	Replace paper to the recommended one.
7	Check the paper condition. Is paper mutilated or damp.	Replace to unwrapped paper.	Go to Step 8.
8	Specify the print quality (Resolution, Image Smoothing, and Dithering) in the printer driver. <ul style="list-style-type: none"> Windows: Configure the setting on the [Image Quality] tab. macOS: Configure the setting on the [Print Quality] menu in [Feature Sets] of [Printer Features]. Is the image printed correctly?	END	Go to Step 9.
9	If using a downloaded font, Make sure that the font is recommended for the printer, operating system, and the application being used.	-	-

Wrinkled/creased**Sample image:**

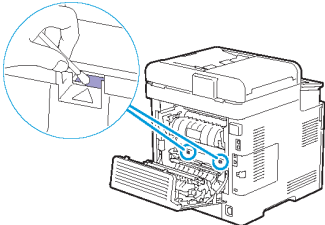
d0csc7017

Possible causative parts:

- Paper transfer Roller Unit
- Fusing Unit
- Separation Roller Assy
- Paper Feed Roller Assy
- Duplex Registration Roller Assy
- Bypass Roller Assy 1
- Bypass Roller Assy 2
- Paper Exit Assy

⚠ CAUTION

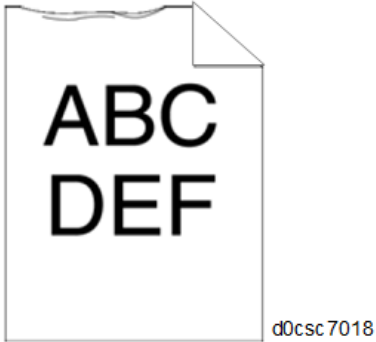
- To avoid burns, do not replace the Fusing Unit immediately after printing.
The Fusing Unit becomes extremely hot during use.

Step	Check	Yes	No
1	Refer to " <i>Determine the Mode when a Print Failure Occurs</i> " and determine the mode when a print failure occurs.	-	-
2	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 3.
3	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.  Turn the power OFF and ON five times. Note Wait until Ready screen appears after tuning on the power switch. Does this solve your problem?	END	Go to Step 4.
4	Make sure that the toner cartridges are correctly installed. Does this solve your problem?	END	Go to Step 5.
5	Check the paper tray guide.	Go to Step 6.	Align the end and

Step	Check	Yes	No
	Are the end and side fences positioned against the paper correctly?		side fences against the paper.
6	Check the paper type. Do you use the recommended paper?	Go to Step 7.	Replace paper to the recommended one.
7	Check the paper condition. Is paper mutilated or damp.	Replace to unwrapped paper.	Go to Step 8.
8	Check the wrinkle. Is the wrinkle within 30 mm of the four edges of the envelope? *Press envelopes by hands.	This type of wrinkle is considered normal. Your printer is not at fault.	Go to Step 9.
9	Load the envelopes in the printer correctly. Does this solve your problem?	END	Go to Step 10.
10	Check the paper path. Are there any smears or foreign substances on the path between the paper entrance and the paper exit?	Remove the foreign substance.	Go to Step 11.
11	Check the paper feed rollers. Are the rollers on the paper feed path dirty, damaged, worn, or malfunctioning? Also, are the roller installed incorrectly?	Clean or replace the corresponding roller, and reinstall it.	Go to Step 12.
12	Replace the Paper Transfer Roller Unit. Does this solve your problem?	END	Go to Step 13.
13	Check the Fusing Unit. Is the Fusing Unit installed correctly?	Go to Step 14.	Reinstall the Fusing Unit.
14	Replace the Fusing Unit. Does this solve your problem?	END	Replace the printer

Leading Edge Damaged

Sample image:

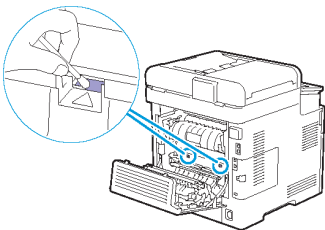



Possible causative parts:

- Paper transfer Roller Unit
- Fusing Unit
- Separation Roller Assy
- Paper Feed Roller Assy
- Duplex Registration Roller Assy
- Bypass Roller Assy 1
- Bypass Roller Assy 2
- Paper Exit Assy

⚠ CAUTION

- To avoid burns, do not replace the Fusing Unit immediately after printing.
The Fusing Unit becomes extremely hot during use.

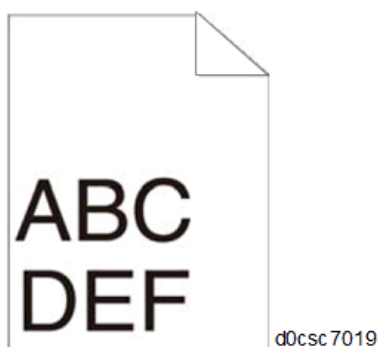
Step	Check	Yes	No
1	Refer to " Determine the Mode when a Print Failure Occurs " and determine the mode when a print failure occurs.	-	-
2	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 3.
3	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.  Turn the power OFF and ON five times. 	END	Go to Step 4.

Step	Check	Yes	No
	Wait until Ready screen appears after tuning on the power switch. Does this solve your problem?		
4	Make sure that the toner cartridges are correctly installed. Does this solve your problem?	END	Go to Step 5.
5	Check the paper tray guide. Are the end and side fences positioned against the paper correctly?	Go to Step 6.	Align the end and side fences against the paper.
6	Check the paper type. Do you use the recommended paper?	Go to Step 7.	Replace paper to the recommended one.
7	Check the paper condition. Is paper mutilated or damp.	Replace to unwrapped paper.	Go to Step 8.
8	Turn over the paper in the tray, and then try again. Does this solve your problem?	END	Go to Step 9.
9	Change the paper with another one and the try again. Does this solve your problem?	END	Go to Step 10.
10	Use another trays of the printer. Does this solve your problem?	END	Go to Step 11.
11	Check the paper feed rollers. Are the rollers on the paper feed path dirty, damaged, worn, or malfunctioning? Also, are the rollers installed incorrectly?	Clean or replace the corresponding roller, and reinstall it.	Go to Step 12.
12	Replace the Paper Transfer Roller Unit. Does this solve your problem?	END	Go to Step 13.
13	Check the Fusing Unit. Is the Fusing Unit installed correctly?	Go to Step 14.	Reinstall the Fusing Unit.
14	Remove the Fusing Unit. Then rotate the gears by hand to check the	Replace the Fusing Unit.	Replace the printer

Step	Check	Yes	No
	Heat Roller section. Is the Heat Roller section dirty, damaged, or malfunctioning?		

Image Position

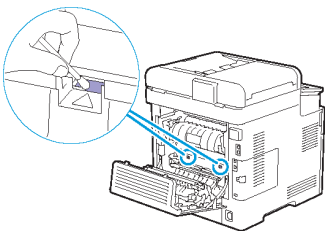
Sample image:



Possible causative parts:

- ITB Unit
- Scanner Unit
- SPDF Feed Unit
- SPDF Unit
- MCU (PCB2)
- Controller Board (PCB1)

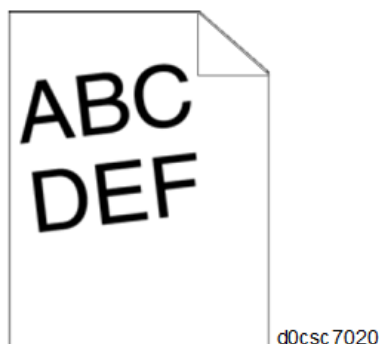
Step	Check	Yes	No
1	Refer to " Determine the Mode when a Print Failure Occurs " and determine the mode when a print failure occurs.	-	-
2	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 3.
3	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.	END	Go to Step 4.

Step	Check	Yes	No
	 <p>Turn the power OFF and ON five times.</p> <p>Note</p> <p>Wait until Ready screen appears after tuning on the power switch.</p> <p>Does this solve your problem?</p>		
4	<p>Make sure that the toner cartridges are correctly installed.</p> <p>Does this solve your problem?</p>	END	Go to Step 5.
5	<p>Check the paper tray guide.</p> <p>Are the end and side fences positioned against the paper correctly?</p>	Go to Step 6.	Align the end and side fences against the paper.
6	<p>Check the paper type.</p> <p>Do you use the recommended paper?</p>	Go to Step 7.	Replace paper to the recommended one.
7	<p>Check the paper condition.</p> <p>Is paper mutilated or damp.</p>	Replace to unwrapped paper.	Go to Step 8.
8	<p>Make sure that the margins are set correctly on the application being used.</p> <p>Does this solve your problem?</p>	END	Go to Step 9.
9	<p>Check the error mode.</p> <p>Does the error occur only during copying?</p>	Go to Step 10.	Go to Step 15.
10	<p>Check the error mode.</p> <p>Does the error occur when feeding the original at the SPDF?</p>	Go to Step 12.	Go to Step 11.
11	<p>Check the original setting.</p> <p>Is the original set to the platen glass correctly?</p>	Replace the Scanner Unit.	Re-seat the original.
12	<p>Check the original setting.</p>	Go to Step 13.	Use the platen mode

Step	Check	Yes	No
	Does the original meet the SPDF specification?		or change the paper type.
13	Check the SPDF guide fences setting. Align the SPDF guide fences against the original. Does the error still occur when copying?	Go to Step 14.	END
14	Check SPDF feed module. Are there any damages or foreign substances on the SPDF feed module?	Remove the foreign substances or replace the SPDF Feed Assy and SPDF Separation Roller.	Replace the SPDF Unit.
15	Print a Color Pattern to check that the color can be printed correctly. <ul style="list-style-type: none"> "Settings" icon > [Printer Settings] > [Lest/Test Print] > [Sample Pages] > [Color Pattern] Is the image printed correctly?	Check the printing data which the problem generated.	Go to Step 16.
16	Replace the ITB Unit. Does the error appear on the printed material when printing?	Replace the printer.	END

Skewed

Sample image:



Possible causative parts:

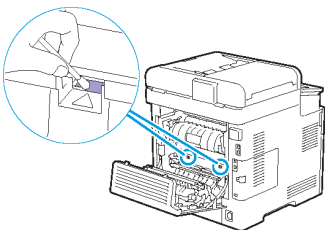

- Paper transfer Roller Unit
- Fusing Unit
- ITB Unit
- Separation Roller Assy

- Paper Feed Roller Assy
- Duplex Registration Roller Assy
- Bypass Roller Assy 1
- Bypass Roller Assy 2
- Paper Exit Assy

CAUTION

- To avoid burns, do not replace the Fusing Unit immediately after printing.

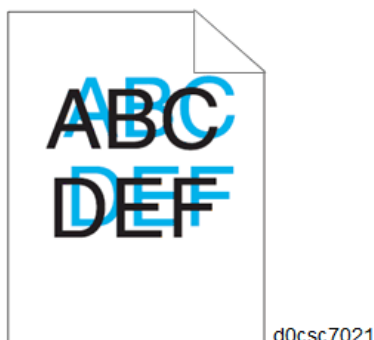
The Fusing Unit becomes extremely hot during use.

Step	Check	Yes	No
1	Refer to " <i>Determine the Mode when a Print Failure Occurs</i> " and determine the mode when a print failure occurs.	-	-
2	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 3.
3	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.  Turn the power OFF and ON five times.  Note Wait until Ready screen appears after tuning on the power switch. Does this solve your problem?	END	Go to Step 4.
4	Make sure that the toner cartridges are correctly installed. Does this solve your problem?	END	Go to Step 5.
5	Check the paper tray guide. Are the end and side fences positioned against the paper correctly?	Go to Step 6.	Align the end and side fences against the paper.
6	Check the paper type.	Go to Step 7.	Replace paper to the

Step	Check	Yes	No
	Do you use the recommended paper?		recommended one.
7	Check the paper condition. Is paper mutilated or damp.	Replace to unwrapped paper.	Go to Step 8.
8	Check the paper feed rollers. Are the rollers on the paper feed path dirty, damaged, worn, or malfunctioning? Also, are the roller installed incorrectly?	Clean or replace the corresponding roller, and reinstall it.	Go to Step 9.
9	Replace the Paper Transfer Roller Unit. Does this solve your problem?	END	Go to Step 10.
10	Check the Fusing Unit. Is the Fusing Unit installed correctly?	Replace the printer.	Reinstall the Fusing Unit.

Color Registration is out of Alignment

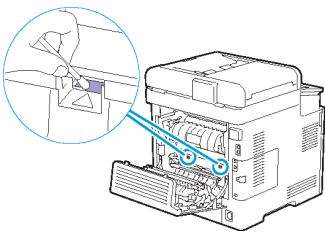
Sample image:



Possible causative parts:

- MUSIC/ID Sensor Assy
- ITB Unit

Step	Check	Yes	No
1	Refer to " Determine the Mode when a Print Failure Occurs " and determine the mode when a print failure occurs.	-	-
2	Cleaning the LED Head. Does this solve your problem?	END	Go to Step 3.
3	Cleaning the ID/MUSIC Sensors with a clean and dry cotton swab.	END	Go to Step 4.

Step	Check	Yes	No
	 <p>Turn the power OFF and ON five times.</p> <p>Note</p> <p>Wait until Ready screen appears after tuning on the power switch.</p> <p>Does this solve your problem?</p>		
4	<p>Make sure that the toner cartridges are correctly installed.</p> <p>Does this solve your problem?</p>	END	Go to Step 5.
5	<p>Check the paper tray guide.</p> <p>Are the end and side fences positioned against the paper correctly?</p>	Go to Step 6.	Align the end and side fences against the paper.
6	<p>Check the paper type.</p> <p>Do you use the recommended paper?</p>	Go to Step 7.	Replace paper to the recommended one.
7	<p>Check the paper condition.</p> <p>Is paper mutilated or damp.</p>	Replace to unwrapped paper.	Go to Step 8.
8	<p>Adjust the settings of the paper type on the print driver to those of the tray.</p> <p>Does this solve your problem?</p>	END	Go to Step 9.
9	<p>Execute the ACC in the operation panel.</p> <ul style="list-style-type: none"> • "Settings" icon > [Maintenance] > [Color Registration] <p>(Refer to ACC (Automatic Color Calibration))</p> <p>Does this solve your problem?</p>	END	Go to Step 10.
10	<p>Remove the PCDUs to check the installation.</p> <p>Are the PCDU ID Chip Connectors deformed or dirty?</p> <p>Are the PCDUs installed incorrectly?</p>	<p>Clean the PCDU ID Chip Connectors.</p> <p>Reinstall the</p>	Go to Step 11.

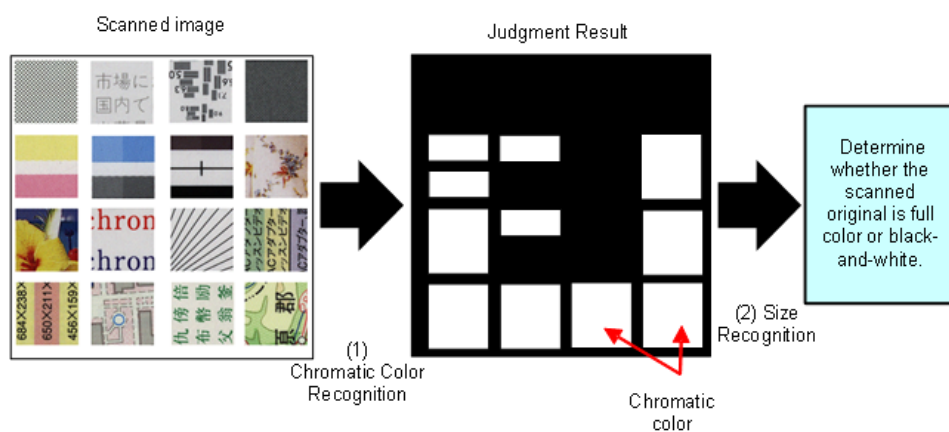
Step	Check	Yes	No
		PCDUs.	
11	Replace the ID/MUSIC Sensor Assy. Does this solve your problem?	END	Go to Step 12.
12	Replace the ITB Unit. Does the problem persist even after the ITB Unit is replaced with a new one?	Replace the printer.	END

6.5 OTHER TROUBLESHOOTING

6.5.1 MISRECOGNITION OF AUTO COLOR SELECTION WHEN SCANNING ORIGINALS

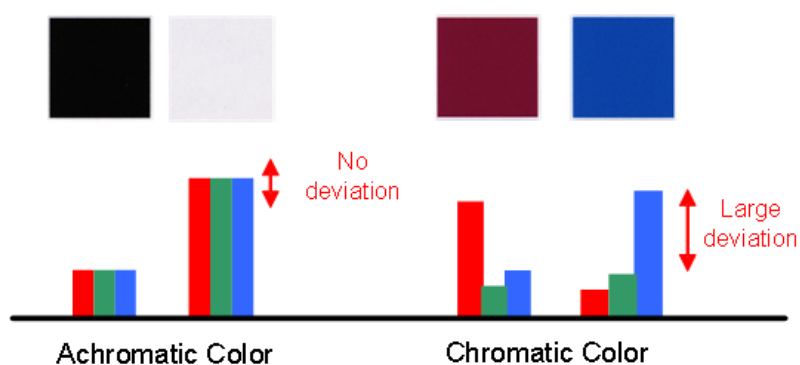
Overview of Auto Color Selection

In Auto Color Selection (ACS) mode, 2 processes are carried out, namely (1) Chromatic Color Recognition and (2) Size Recognition, to determine whether the scanned original is full color or black-and-white.



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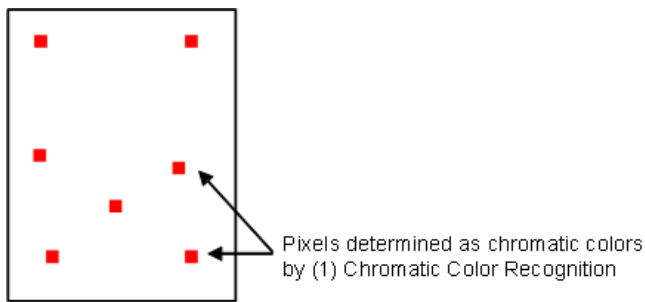
In (1) Chromatic Color Recognition, each pixel is assessed for whether it has a chromatic color or not according to its RGB deviation.



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By (2) Size Recognition, whether the original is recognized as full color or black-and-white depends on the continuity of the chromatic color in (1) Chromatic Color Recognition.

The original is recognized as full color only if chromatic color pixels are detected continually. If interspersed minute chromatic color pixels are detected (as shown below), the original is not recognized as a full color original.



w_d238c9003_en

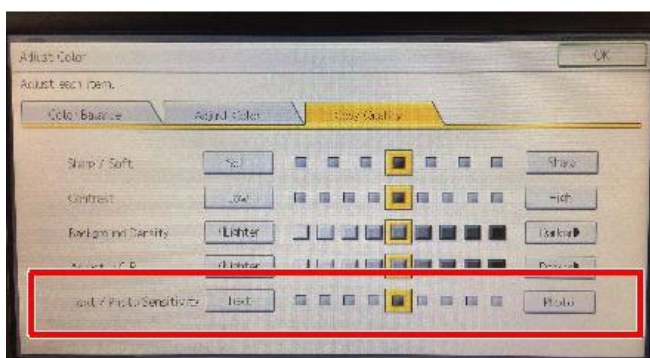
UP Settings: Processed according to the Color Recognition

In “A.C.S. Sensitivity”, you can adjust the level of (2)Size Recognition for recognizing whether the original is full color or black-and-white.

From both Copier or Scanner application, you can specify this setting in the 5-level scale, from 0 (Black & White) to 4 (Full Color).

Note

- Adjust the A.C.S. Sensitivity in Classic (Legacy UI) copier or scanner. There is no 5-level scale in New (Simple UI) Copier or Scanner application.



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SP Mode: Color Recognition: Adjusting the Color Range

Using SP4-939-001 (ACS:Color Range), you can adjust the level of (1) Chromatic Color Recognition for recognizing whether the original is full color or black-and-white.

This is the SP for both copier and scanner settings, and you can adjust this setting with the 5-level scale from -2 to 2 (Default: 0).

If an original with a colored background fails to be recognized as a black-and-white original by ACS, set the value of this SP to “-1” or “-2”.

If an original with a gray or faintly colored background fails to be recognized as a full color original by ACS, set the value of this SP to “1” or “2”.

6.5.2 MISRECOGNITION OF AUTO COLOR SELECTION (COLOR IS PRINTED ONLY ON THE EDGE)

In the Auto Color Selection (hereafter called ACS) mode, if copying or scanning an original on which color is printed only on the edge, the original will be misrecognized as monochrome. If so, color is not printed on the output.

Error Condition

Copy Application

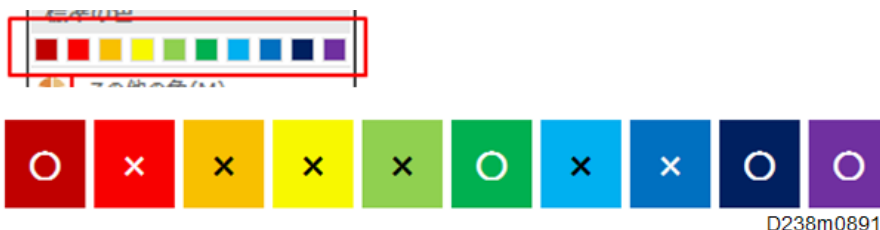
The misrecognition occurs when copying an original which has color only at the edge in the ACS mode.

- ADF front side and platen mode: 10 mm from the edge of the output
- ADF back side: 16 mm from the edge of the output

When using the copy application, if the original is recognized as monochrome, color on the document may not be printed on the output. When printing the standard 10 colors used in Microsoft Office Word 2013 (an example is shown below), the following colors with the "x" mark will disappear if the document is recognized as monochrome in the ACS mode.

Note

- Colors with the "x" mark will not be printed if the document is recognized as monochrome. The result may differ depending on the equipment status or environment.



Scanner Application

The misrecognition occurs when scanning an original which has color only at the edge in the ACS mode.

- ADF front side and platen mode: 15 mm from the edge of the original
- ADF back side: 21 mm from the edge of the original

Cause

In the ACS mode, the edge of the original is not recognized. Only the center part of the original document is the target area to recognize color or monochrome (in order to prevent misrecognition due

to noise).

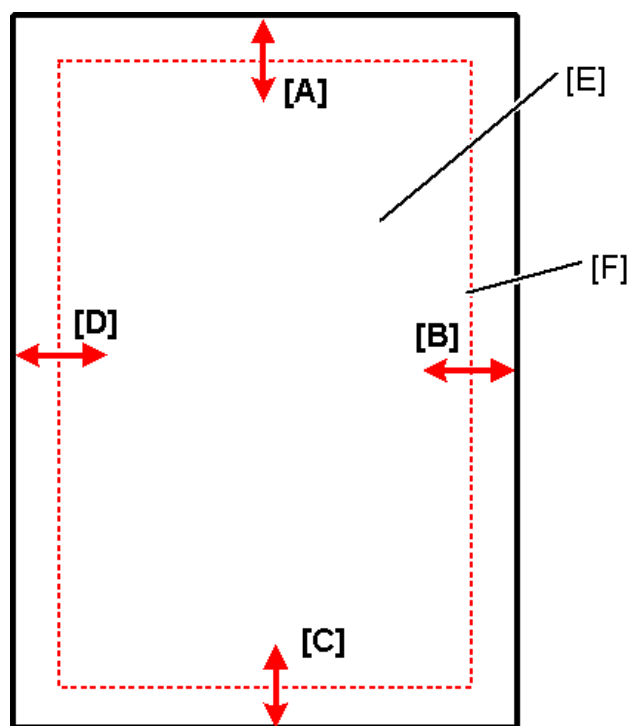
When copying in the ACS mode, ACS recognition and the image processing equivalent to full color is performed simultaneously. If recognized as monochrome in the ACS recognition, color without a K component will not be printed.

Countermeasure

Change the ACS area excluded from recognition with the following SP settings. There are differences in the target values for the Copy application and the Scanner application.

The smaller the value, the smaller the ACS area excluded from recognition becomes, which enables the document to be recognized as color.

SP No.	SP Name	Default	Min.	Max.
4-938-001	ACS:Edge Mask Copy:Sub LEdge	10	0	31
4-938-002	ACS:Edge Mask Copy:Sub TEdge	10	0	31
4-938-003	ACS:Edge Mask Copy:Main LEdge	10	0	31
4-938-004	ACS:Edge Mask Copy:Main TEdge	10	0	31
4-938-005	ACS:Edge Mask Scan:Sub LEdge	15	0	31
4-938-006	ACS:Edge Mask Scan:Sub TEdge	15	0	31
4-938-007	ACS:Edge Mask Scan:Main LEdge	15	0	31
4-938-008	ACS:Edge Mask Scan:Main TEdge	15	0	31



d238m0893

[A]: Sub scan direction: leading edge (left)

[B]: Main scan direction (front)

[C]: Sub scan direction: leading edge (right)

[D]: Main scan direction (rear)

[E]: Paper

[F]: ACS area excluded from recognition

Note

- Because the edge of the original is subject to noise, color misrecognition may occur after setting these SPs smaller than the defaults. In this case, in order to avoid complaints concerning extra cost, be sure to ask the customer for permission before changing these SP settings.

6.5.3 ABNORMAL NOISE

When Power Is Turned On

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> Toner Cartridge (Y, M, C, K) Toner Supply Motor (Y,M,C,K) (M6, M7, M8, M9) [Toner Supply Drive Assy] Main motor (M2) [Motor Drive Assy] 		
1	Checking the Toner Supply Motor operation Execute the SP OUTPUT Check (Y), (M), (C), and (K) to check the Toner Supply Motor (M6, M7, M8, M9) rotation. Is the device making an abnormal noise? Note Stop the motor operation within 3 seconds, or the device will be damaged.	Go to Step 2.	Go to Step 3.
2	Checking the toner cartridge installation Reinstall the toner cartridge. Turn the power off, and then on again. Is the device making an abnormal noise?	Replace the toner cartridge. If the trouble still exists, replace the device.	END
3	Checking the main motor operation Execute the SP OUTPUT Check to check the Main Motor (M2) rotation.	Replace the Motor Drive Assy.	END

Step	Check	Yes	No
	<p>Note</p> <ul style="list-style-type: none"> PCDUs need to be removed during main motor rotation. Stop the motor operation within 3 seconds, or the device will be damaged. <p>Is the device making an abnormal noise?</p>		

During Standby

Step	Check	Yes	No
	<p>Possible causative parts:</p> <ul style="list-style-type: none"> Main Fan (FAN1) 		
1	<p>Checking the Main Fan (FAN1) operation</p> <p>Execute the SP OUTPUT Check to check the Main Fan (FAN1) rotation.</p> <p>Is the device making an abnormal noise?</p> <p>Note</p> <p>Stop the motor operation within 3 seconds, or the device will be damaged.</p>	Replace the Main Fan (FAN1).	END

During Printing

Step	Check	Yes	No
	<p>Possible causative parts:</p> <ul style="list-style-type: none"> Bypass Feed Solenoid (SOL2) Registration Clutch (CL1) 		
1	<p>Checking the Bypass Feed Solenoid (SOL2) operation</p> <p>Execute the SP OUTPUT Check to check the Bypass Feed Solenoid (SOL2) rotation.</p> <p>Is the device making an abnormal noise when feeding paper?</p>	Go to Step 2.	END
2	<p>Checking the Registration Clutch (CL1) operation</p> <p>Execute the SP OUTPUT Check to check the Registration Clutch (CL1) rotation</p> <p>Is the device making an abnormal noise?</p>	Refer to When Power Is Turned On.	END

During SPDF Feeding, Abnormal Noise Occurs

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • SPDF Feed Unit • SPDF Unit 		
1	Wipe the separation pad and rollers with a dampened cloth. Is the device making an abnormal noise?	Go to Step 2.	END
2	Checking after replacing the SPDF Feed Unit Replace the SPDF Feed Unit. Is the device making an abnormal noise?	Replace the SPDF Unit	END

6.5.4 PRINTER NOT TURN ON/ OPERATION PANEL NOT DISPLAY

Step	Check	Yes	No
	Possible causative parts: <ul style="list-style-type: none"> • LVPS (PCB4) • Operation Panel • MCU (PCB2) • Controller Board (PCB1) 		
1	Checking the outlet Connect the power cord with the other outlet. Does the printer is working?	END	Go to Step 2.
2	Checking the power cord connection Reconnect the power cord. Does the printer is working?	END	Go to Step 3.
3	Replace the power cord. Does the printer is working?	END	Go to Step 4.
4	Replace the LVPS (PCB4). Does the printer is working?	END	Go to Step 5.
5	Replace the Operation Panel Does the printer is working?	END	Go to Step 6.
6	Replace the MCU (PCB2).	END	Go to Step 7.

Step	Check	Yes	No
	Does the printer is working?		
7	Replace the Controller Board (PCB1).	END	END

DETAILED DESCRIPTIONS

7. DETAILED DESCRIPTIONS

7.1 PRINTING PROCESS

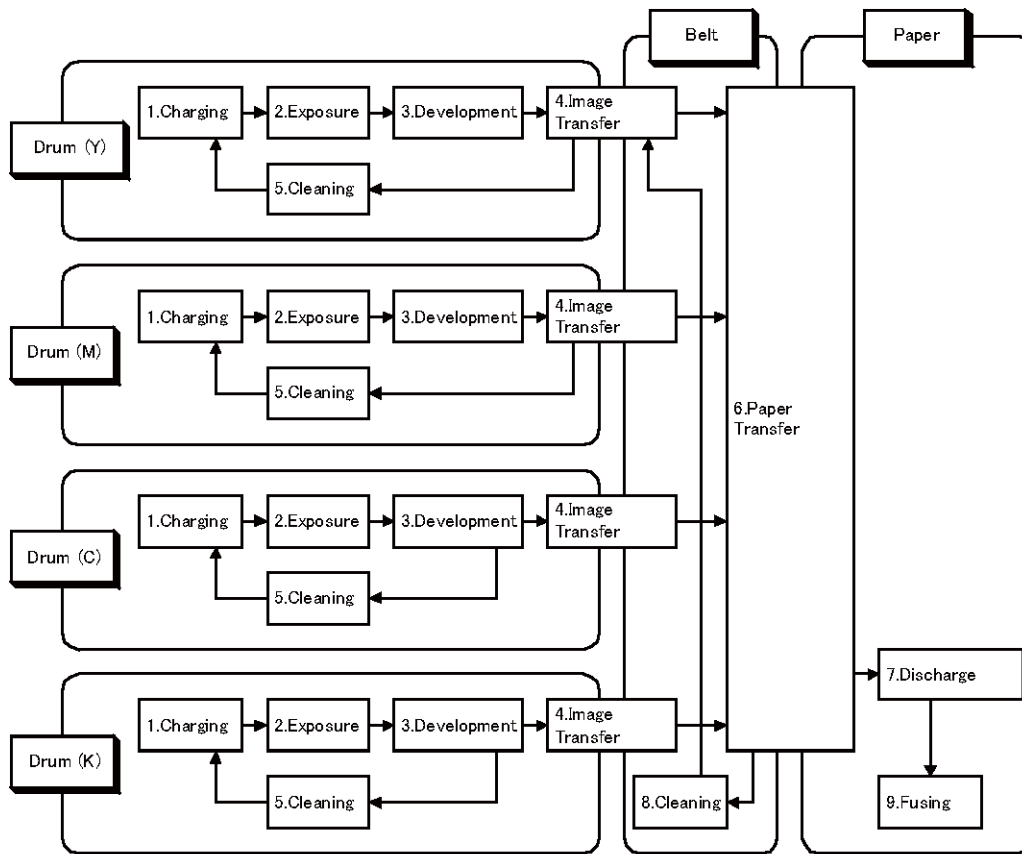
7.1.1 SUMMARY OF PRINTING PROCESS

This device is an LED-based full-color printer operating on a tandem printing system that has four color-specific drum/developer sets for yellow, magenta, cyan, and black (YMCK).

The four color-separated images of the original document are created with toner on the drums and then transferred in registration onto the Image Transfer Belt to reproduce a full color image. The completed toner image is transferred and fixed on the paper, and then output as a print.

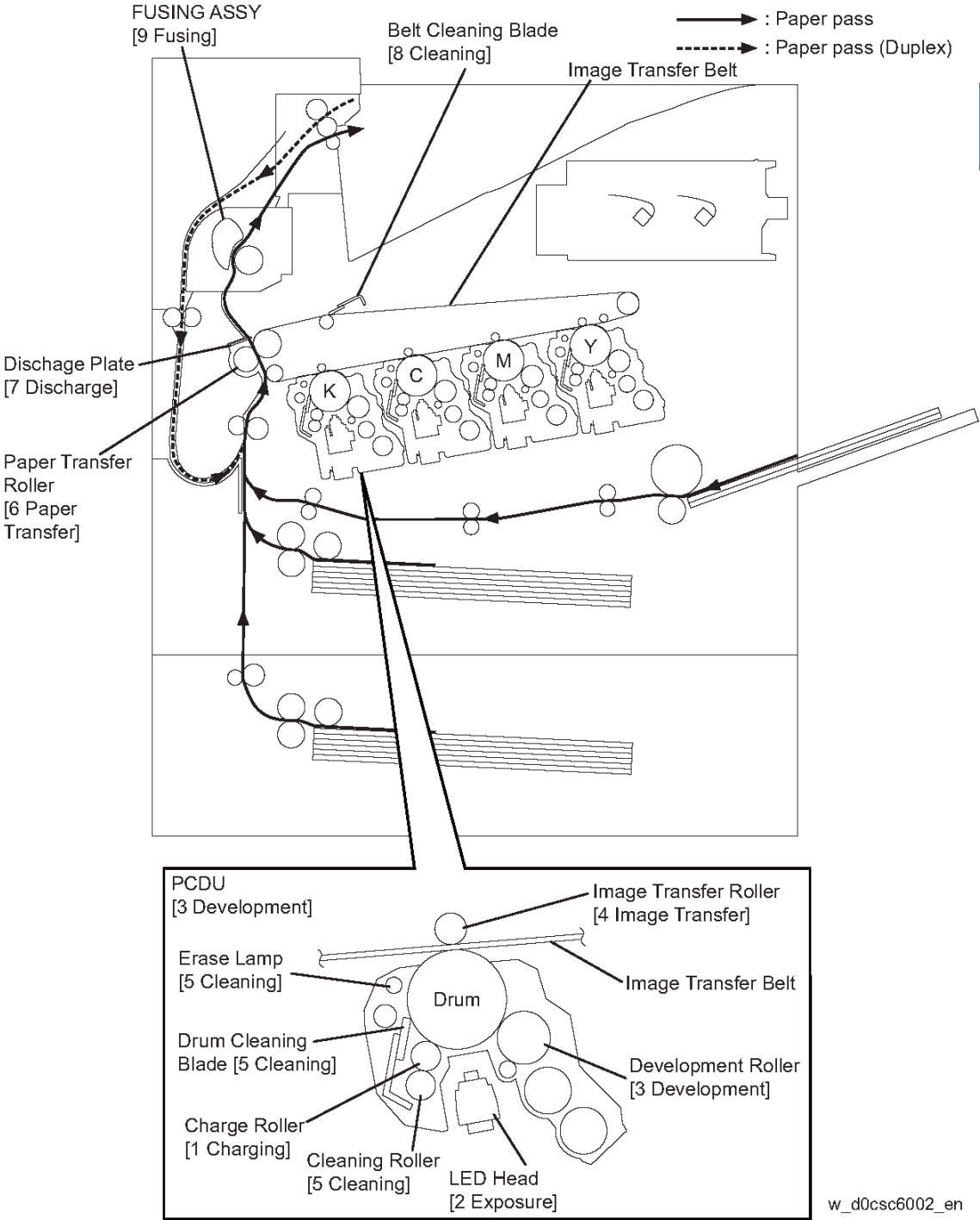
The printing process of this printer is composed of the following basic steps:

1. Charging: The drum surface is electrically charged.
2. Exposure: The image is formed on the drum surface by the light from the LEDs (Light Emitting Diodes).
3. Development: The image is developed with toner.
4. Image Transfer: The four-color separation images on the drums are transferred onto the Image Transfer Belt.
5. Cleaning: The drums are electrically neutralized and the toner remaining on the Drums and Charge Rollers is removed.
6. Paper Transfer: The toner image on the Image Transfer Belt is transferred onto the paper.
7. Discharge: Electric charge of the paper is removed.
8. Cleaning: The toner remaining on the Image Transfer Belt and Paper Transfer Roller is removed.
9. Fusing: The toner is fixed to the paper by heat and pressure.



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The outline of the printing process is shown in the figure below.



7.1.2 CHARGING

In the charging process, the surface of the drum rotating at a constant speed is uniformly charged with negative polarity by the discharge from the Charge Roller.

This process is performed in parallel for yellow, magenta, cyan and black colors.

- Charge Roller

The Charge Roller is kept in contact with the drum and rotates following the rotations of the drum. The Charge Roller is a conductive roll that uniformly and negatively charges the drum surface with the negative voltage applied by the HVPS (PCB5) (High Voltage Power Supply).

- Drum

The drum surface is uniformly and negatively charged with DC bias voltage.

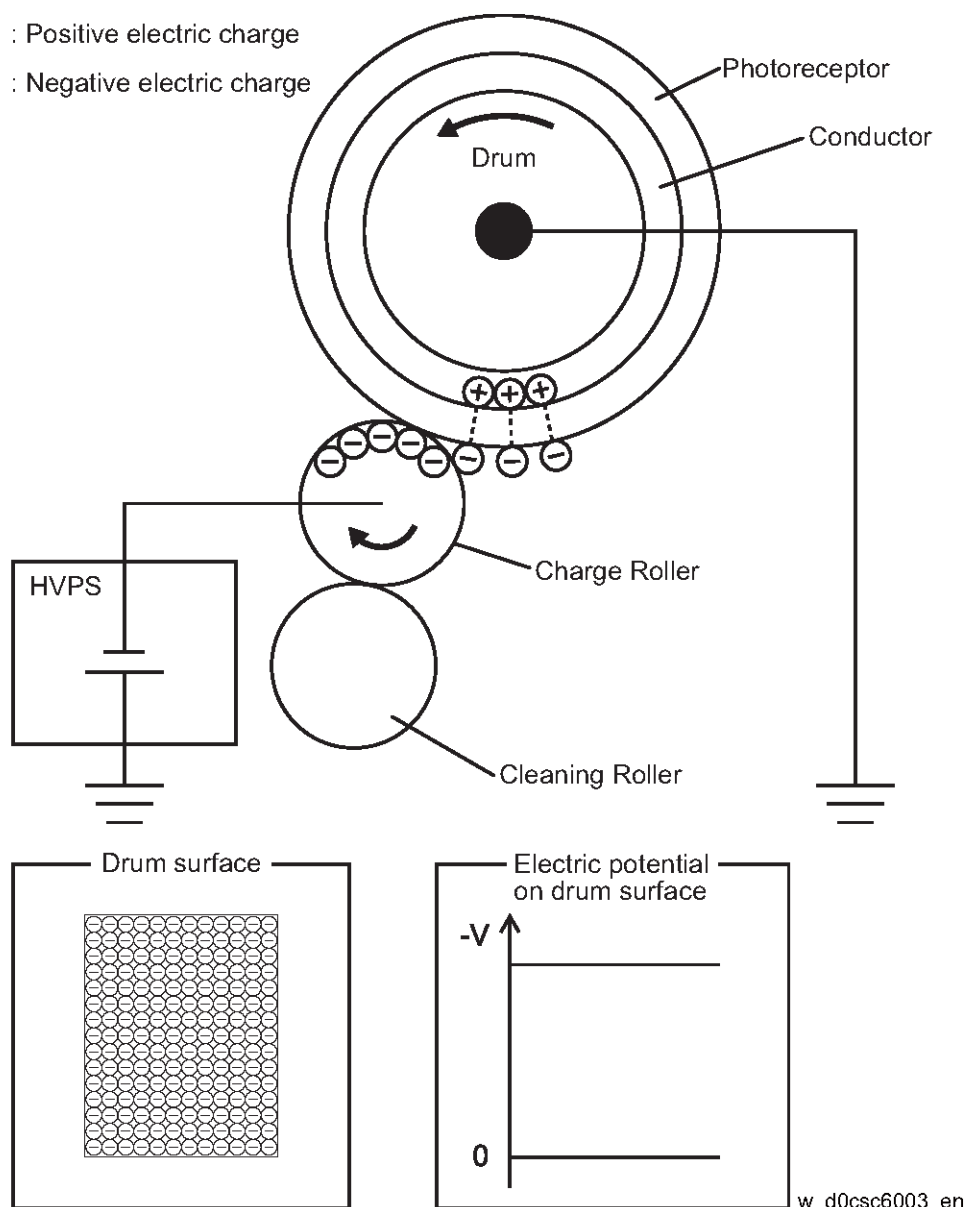
The drum surface consists of a photoreceptor (which is an insulator in the dark and a conductor in the light) backed with a conductor.

- Cleaning Roller

The Cleaning Roller contacts with the Charge Roller to remove the toner from it.

⊕ : Positive electric charge

⊖ : Negative electric charge



w_d0csc6003_en

7.1.3 EXPOSURE

The exposure process forms an invisible electrostatic latent image on the negatively charged drum surface by illuminating it with the LEDs (Light Emitting Diodes).

This process is performed in parallel for yellow, magenta, cyan, and black colors.

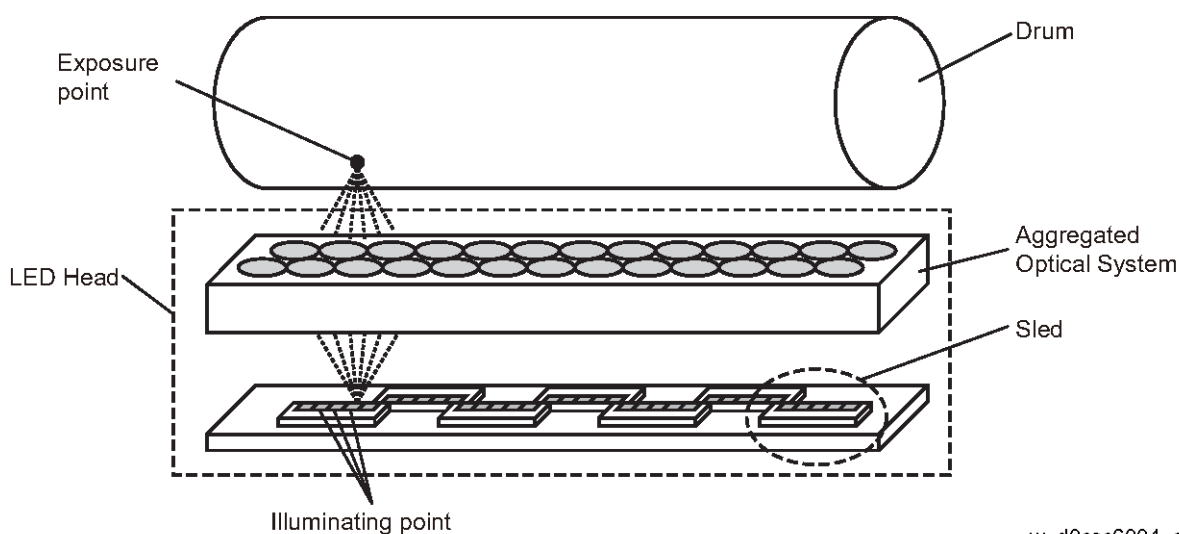
- This device uses the LED Head for the exposure process.

The LED Head consists of numerous illuminating points that are lined in the main scanning direction as shown in the figure below.

The LED Head of this device consists of 21 newly developed sleds (Self-Scanning* Light Emitting Diodes). With 506 illuminating points per sled, the total number of illuminating points on 21 sleds amounts to 10626, achieving a high resolution of 1200 dpi in the main scanning direction.

*Self-Scanning:

Utilizing the switching characteristics of the PNP thyristor, makes the PN junction work as a light emitting diode to provide the scanning function.

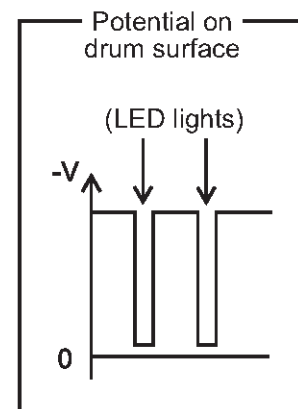
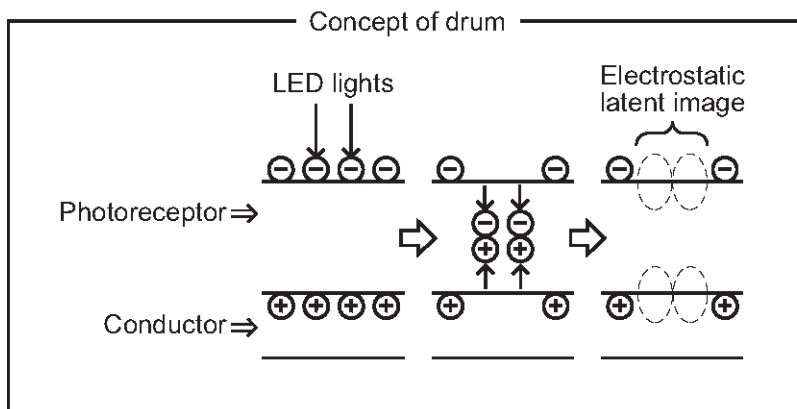
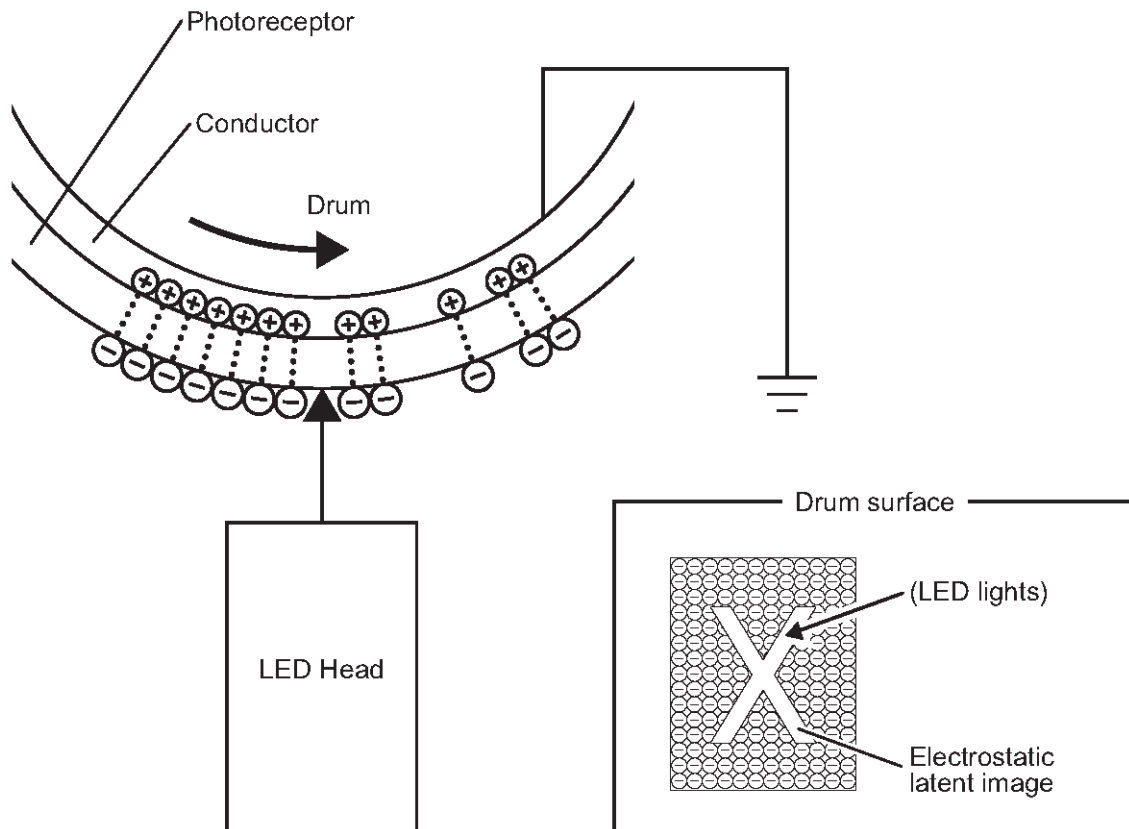


- The LEDs emit lights according to the printing data (image data) output from the printer controller, and the lights pass through the lenses to be converged onto the drum surface.

The LEDs illuminate the points on the drum surface corresponding to the pixels (micro points composing characters or pictures) of the printing data.

When the LEDs illuminate the drum surface, the illuminated area becomes conductive. This allows the negative charge on the drum surface to flow to the positive side and cancel the positive charge, lowering the potential on the drum surface. This low-potential area becomes the electrostatic latent image.

⊕ : Positive electric charge
 ⊖ : Negative electric charge



w_d0csc6005_en

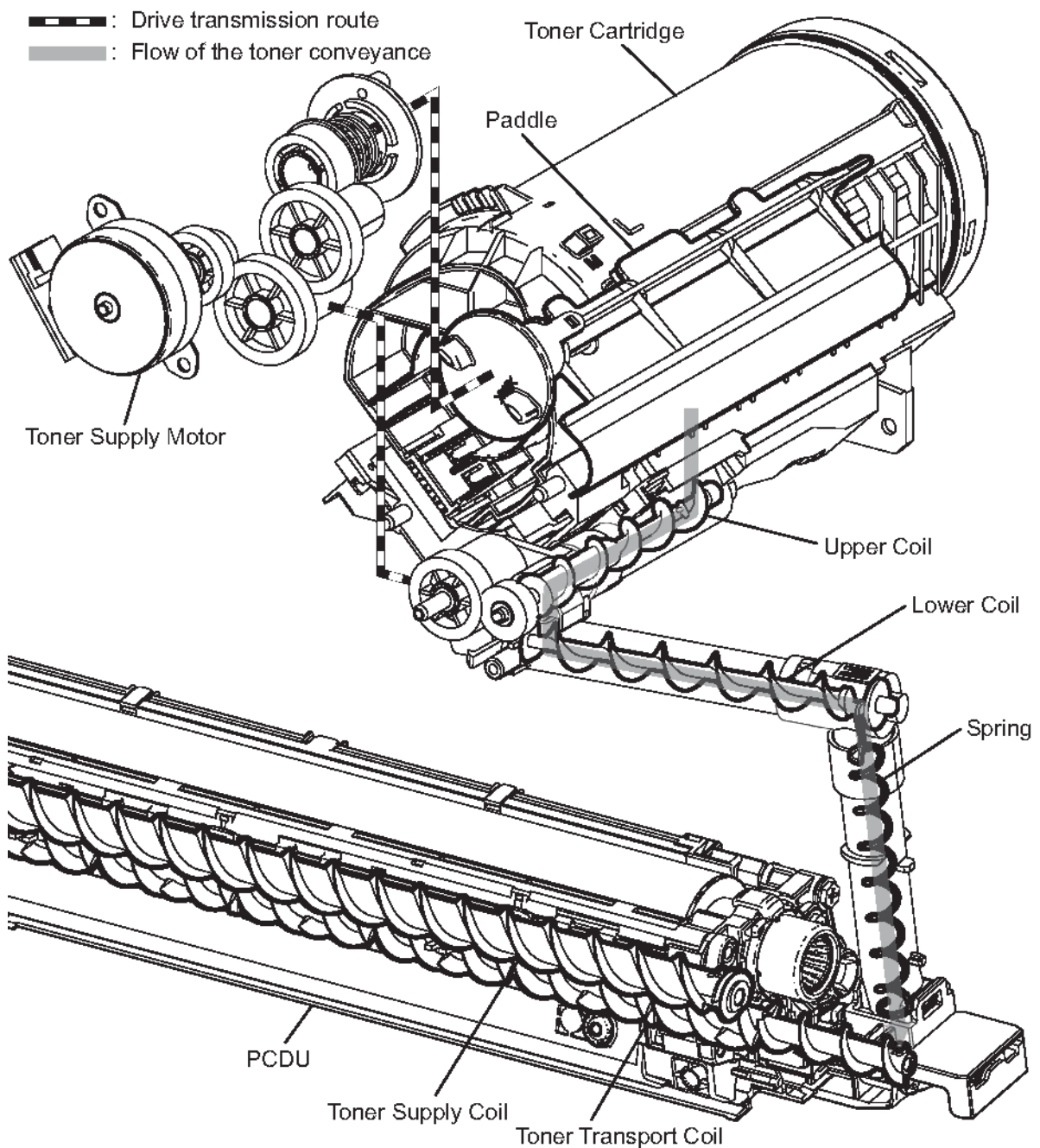
7.1.4 DEVELOPMENT

The development process makes a visible image appear on the drum surface by electrically attracting toner particles to the electrostatic latent image.

This process is performed in parallel for yellow, magenta, cyan and black color independently.

Toner Supply

- The toner supplied from the Toner Cartridge is fed toward the PCDU by the Upper Coil and the Lower Coil in the Toner Supply Assy and the paddle in the Toner Cartridge driven by the Toner Supply Motor (M6, M7, M8, M9).



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Development

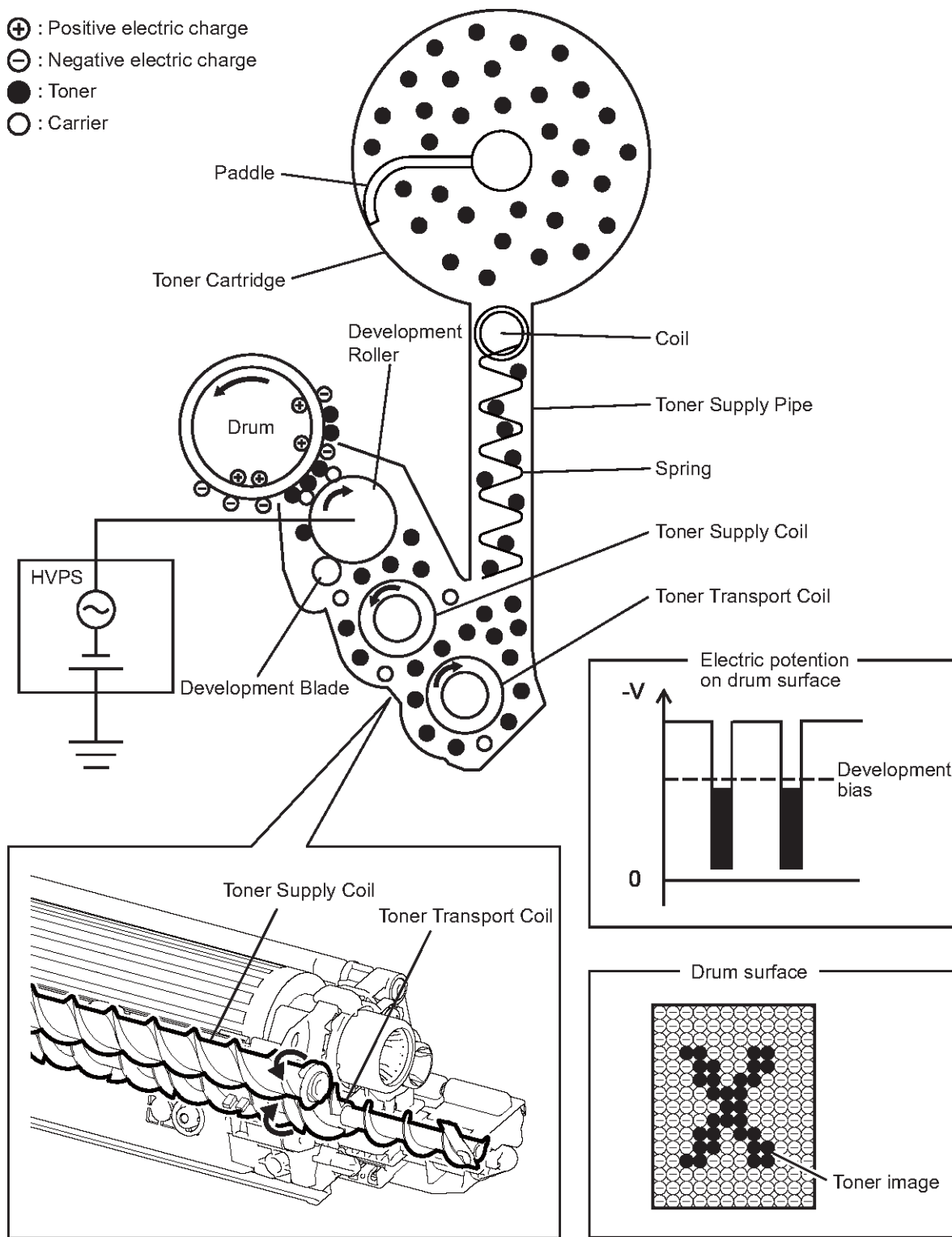
- In the developer section, the incoming toner is mixed with the existing developer (toner/carrier mixture) by the Toner Transport Coil and the Toner Supply Coil, and then supplied to the Development Roller located near the drum surface. The toner and carrier are charged by friction due to agitation (toner in negative, carrier in positive), and they attract each other electrically. The carrier, due to its magnetic properties, is attracted to the Development Roller, and then uniformly leveled by the Development Blade.
- The Development Roller is covered by a thin semi-conductive sleeve all over the surface. The development bias voltage is supplied to this semiconductor sleeve from the HVPS (PCB5) (High Voltage Power Supply). The development bias voltage is negative DC voltage combined with AC voltage. The DC voltage keeps the Development Roller at a constant negative voltage against the photoreceptor layer of the drum.

Therefore, at the area where the negative electric charge on the drum surface does not decrease, the potential is lower than that of the Development Roller, while the potential is higher than that of the Development Roller at the area where the negative charge on the drum surface decreases. The AC voltage shakes the developer on the surface of the Development Roller so that the toner easily flies to the drum.

Thus, only the portions of the drum surface where the negative charge has decreased below that of the Development Roller (electrostatic latent image) attract the toner to form an image on the drum.

Once the toner is deposited on the drum, the potential and the toner-attracting force of the corresponding portion decreases because the increase of negative charge lowers the potential at that portion.

- ⊕ : Positive electric charge
- ⊖ : Negative electric charge
- : Toner
- : Carrier



6B Detailed Descriptions

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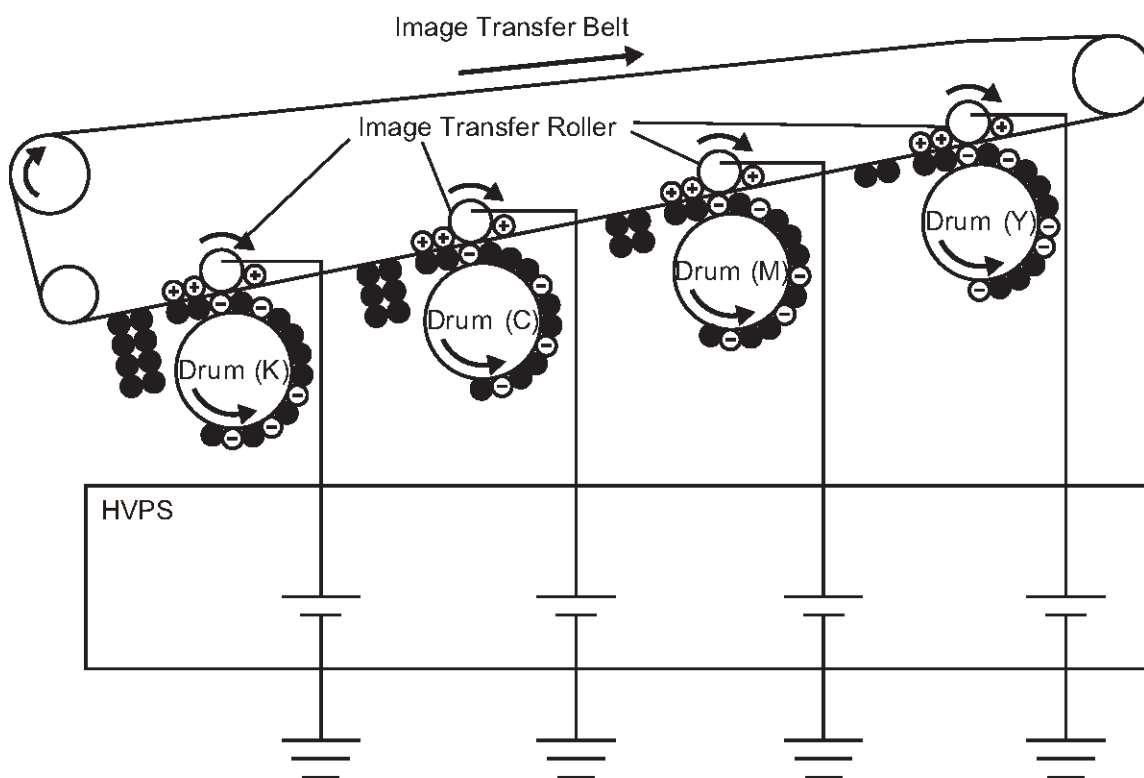
7.1.5 IMAGE TRANSFER

In the Image Transfer process, the toner images formed on the drums are transferred onto the Image Transfer Belt (ITB) via the Image Transfer Roller. The four color separation images are transferred from the drums onto the ITB in the order of Y, M, C, and K.

- Image Transfer

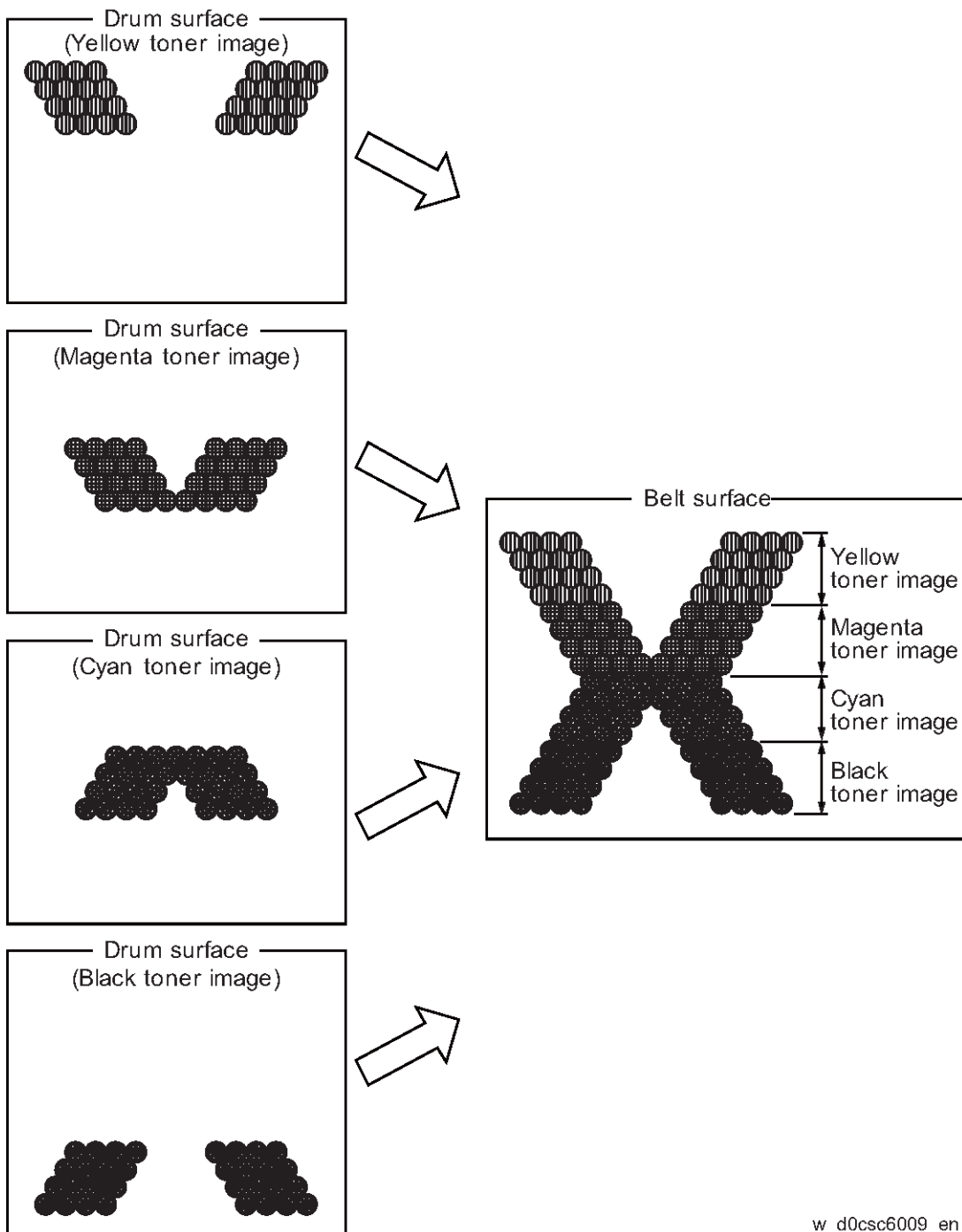
The Image Transfer Roller is a metal roll, to which the positive voltage from the HVPS (PCB5) (High Voltage Power Supply) is applied. The Image Transfer Roller positively charges the backside of the ITB with the voltage generated by the contact resistance with the ITB.

The toner images on the drums are transferred to the ITB due to the attracting force generated between the negative polarity of the toner image and the positive polarity on the ITB.



⊖ : Negative electric charge
 ⊕ : Positive electric charge
 ● : Toner

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w_d0csc6009_en

7.1.6 CLEANING (DRUM)

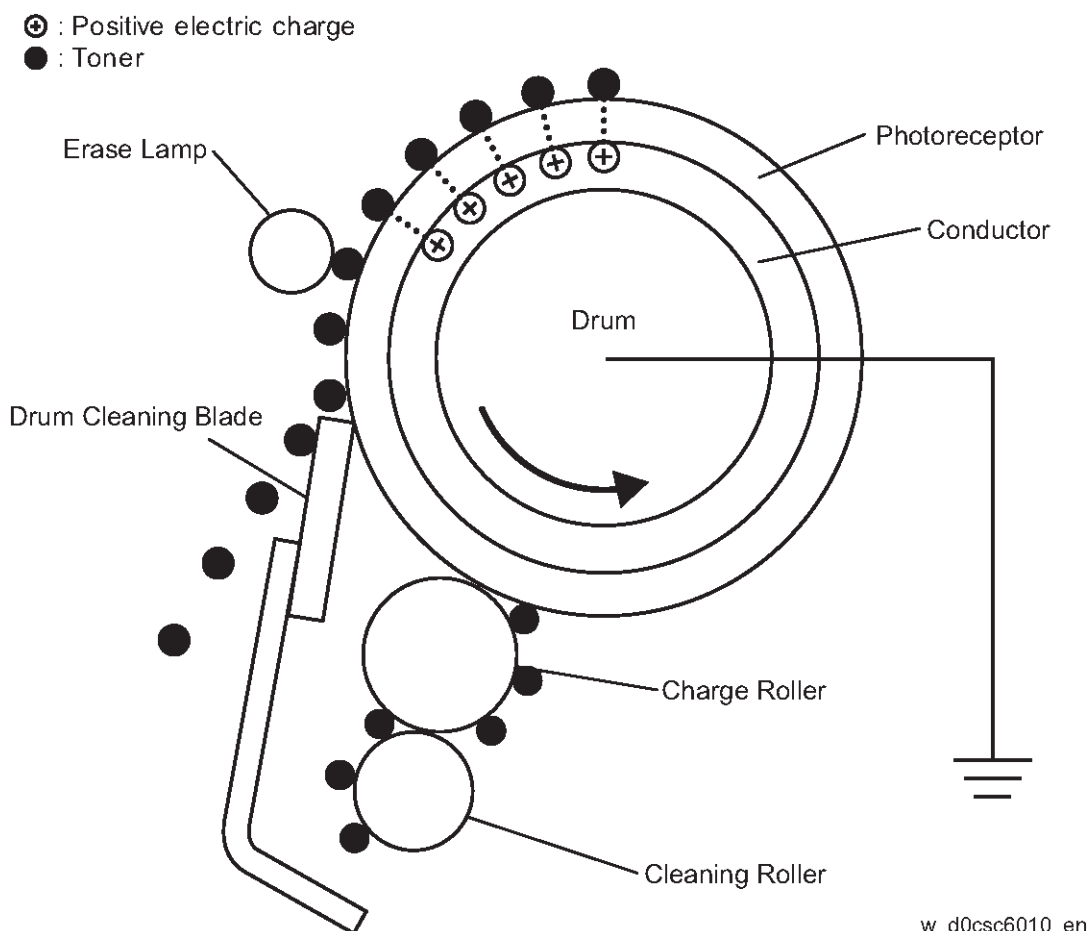
In the cleaning process, excess toner and charge is removed from the Drum and Charge Roller surfaces.

- Drum cleaning

The excess toner that was not transferred to the ITB in the "Image Transfer" process remains on the drum surface. To prevent the excess toner from causing troubles in the subsequent processes, the toner on the drum surface must be removed. First, the Erase Lamp illuminates the Conductor on the Drum surface, which neutralizes the Conductor, to make the toner easy to be removed. Then, the toner is scraped off by the Drum Cleaning Blade in contact with the drum surface, and then is collected into the Waste Toner Bottle (Refer to "**Waste Toner Collection**").

- Charge Roller cleaning

The remaining toner is roiled by the Cleaning Roller made of spongy material in contact with the Charge Roller surface, and then collected to the Drum. The toner returned to the Drum is scraped off by the Drum Cleaning Blade with the transfer remaining toner in the drum cleaning process.

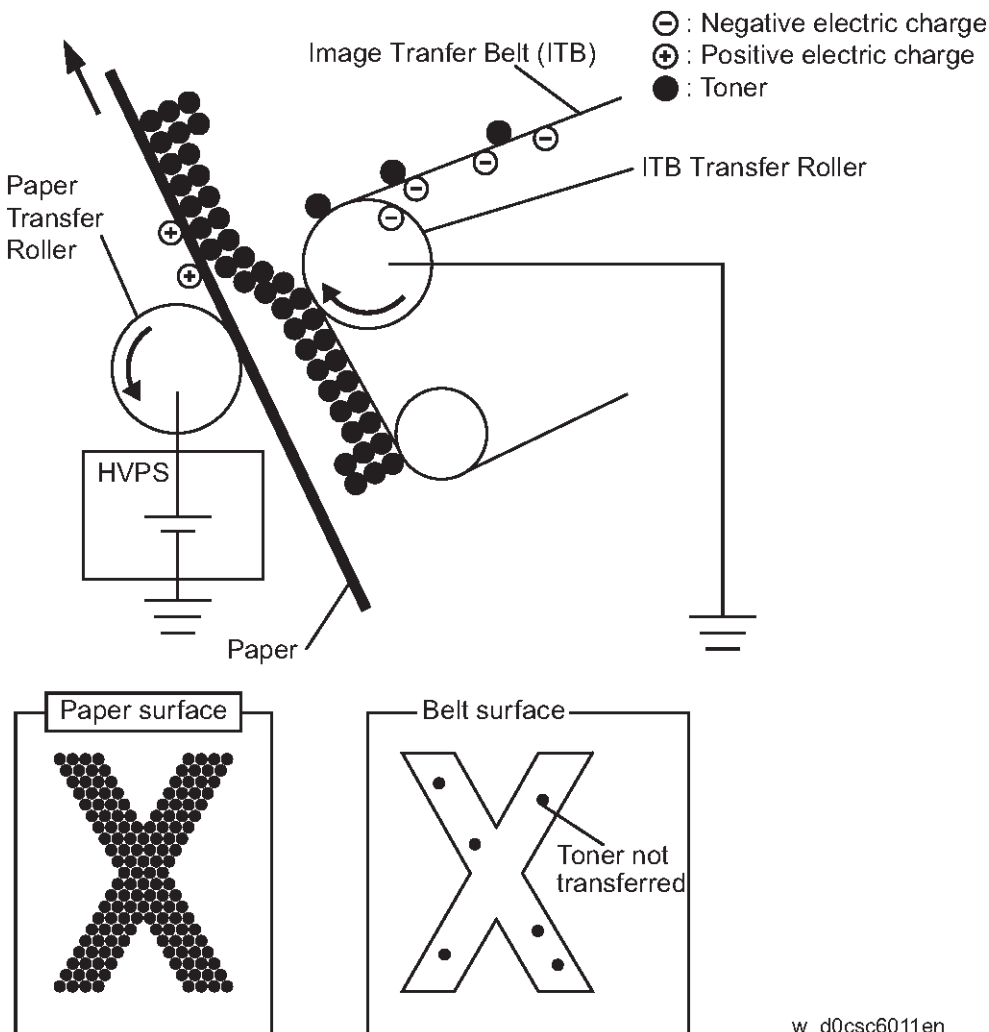


7.1.7 PAPER TRANSFER

In the Paper Transfer process, the toner image completed on the surface of the Image Transfer Belt (ITB) is transferred onto the print medium using the Paper Transfer Roller.

The paper passes between the Paper Transfer Roller and the ITB that runs in contact with the ITB Transfer Roller (conductive roller).

The toner image on the ITB moves onto the paper due to the attracting force generated between the ITB Transfer Roller grounded and the Paper Transfer Roller positively polarized.



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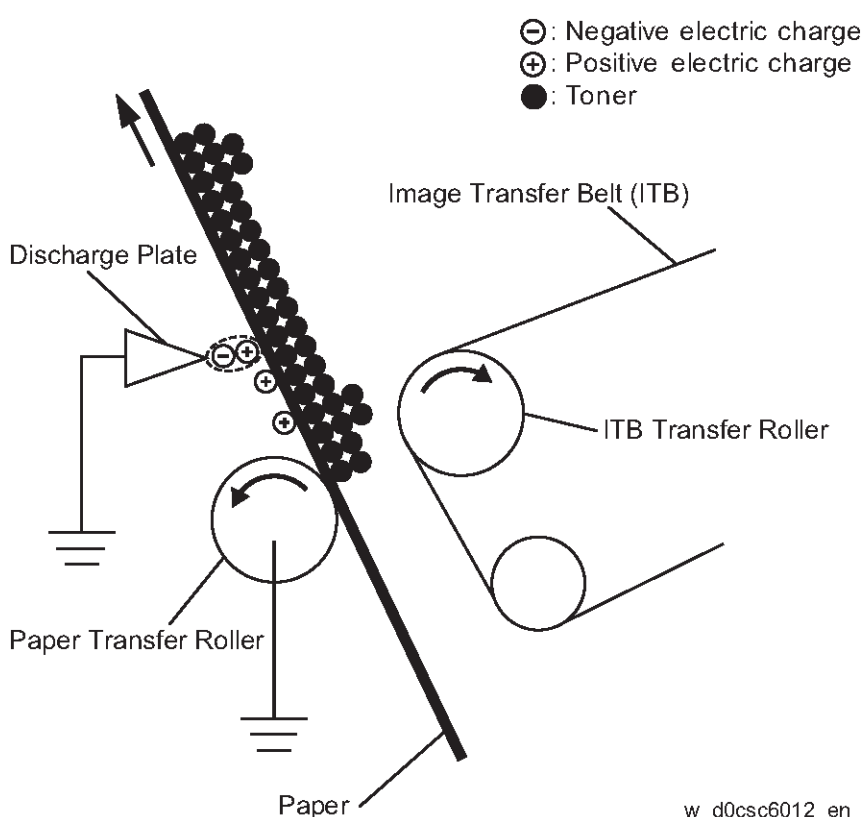
7.1.8 DISCHARGE

In the Discharge process, the Discharge Plate removes charge that was applied to the paper during paper transfer.

- Discharge Plate

The charge is removed because otherwise the toner on the paper will spread over the surrounding metal surfaces.

The Discharge Plate is a metal sheet that is held at the ground level. The Discharge Plate is installed at several millimeters away from the backside of the Image Transfer Belt.



7.1.9 CLEANING (IMAGE TRANSFER BELT, PAPER TRANSFER ROLLER)

In the Cleaning process, the toner and charge remaining on the Image Transfer Belt and the toner remaining on the Paper Transfer Roller are removed after the toner image is transferred onto the print medium.

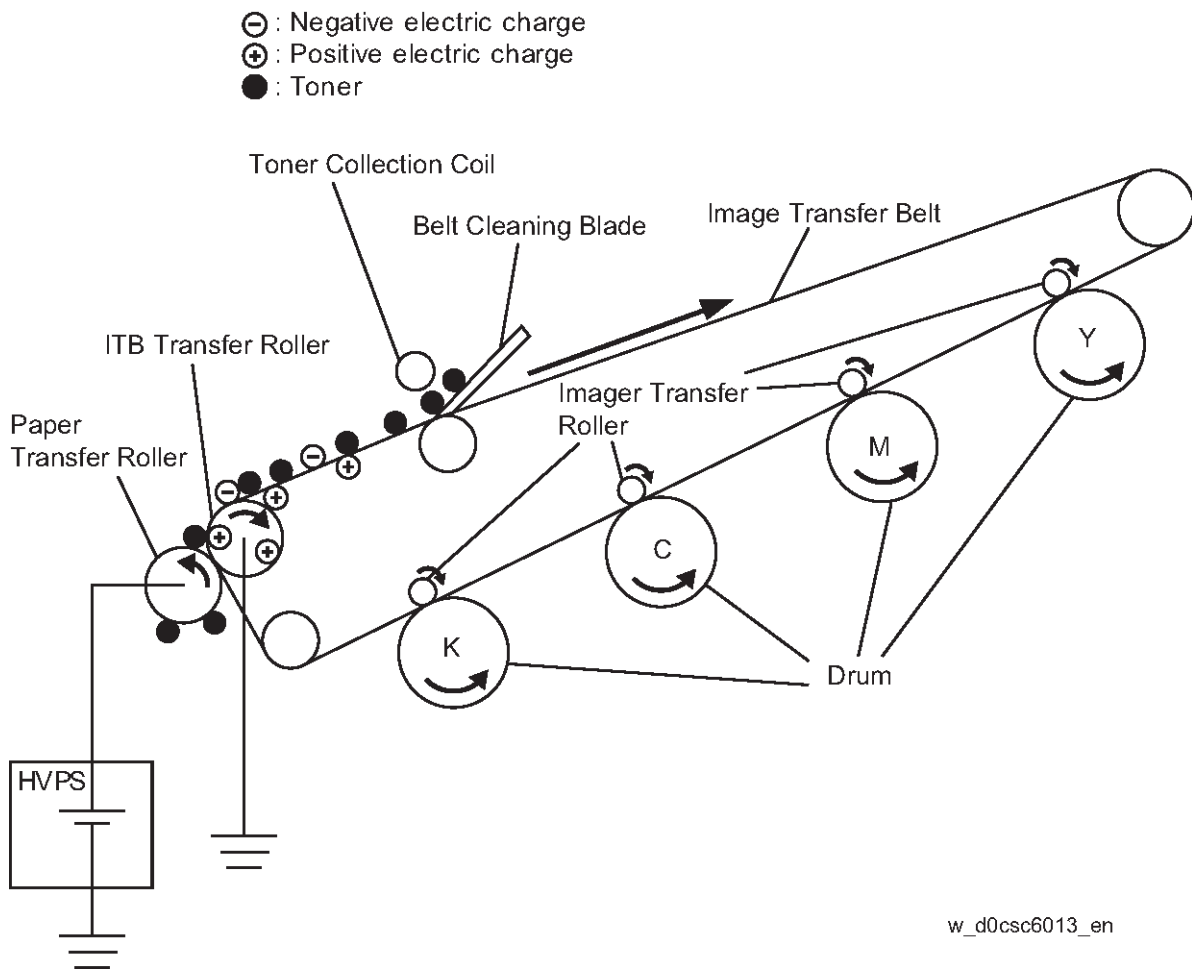
- Image Transfer Belt cleaning

The excess toner that was not transferred to the sheet in the "Paper Transfer" process remains on the ITB surface. To prevent the excess toner from causing troubles in the subsequent processes, the toner is scraped off by the Belt Cleaning Blade in contact with the ITB surface, and then is collected into the Waste Toner Bottle. (Refer to "**Waste Toner Collection**")

- Paper Transfer Roller cleaning

The excess toner deposited on the Paper Transfer Roller in the "Paper Transfer" process soils the backsides of the subsequent sheets. To prevent this trouble, the excess toner on the Paper Transfer Roller is transferred back onto the ITB using the attracting force generated by the ITB Transfer Roller which is positioned opposite to the Paper Transfer Roller and is positively polarized by the DC voltage from the HVPS (PCB5).

The excess toner remaining on the ITB is scraped off by the Belt Cleaning Blade that is in contact with the ITB, and then is collected into the Waste Toner Bottle. (Refer to "**Waste Toner Collection**")

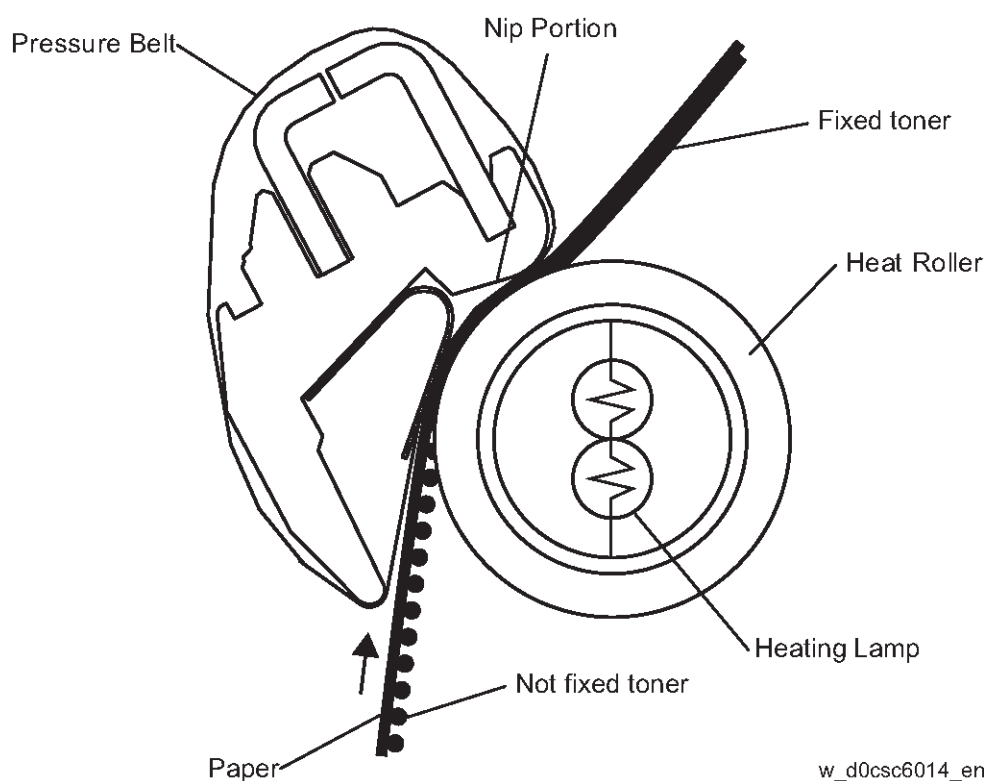


6B Detailed Descriptions

7.1.10 FUSING

In the Fusing process, toner is fixed onto the print medium by heat and pressure.

- The toner particles are melted by the Heat Roller heated by the Heating Lamp, and fused onto the print medium by the pressure between the Heat Roller and the Pressure Belt.
- The Pressure Belt friction-driven by the Heat Roller nips the print media against the Heat Roller using the pressurizing mechanism it contains.



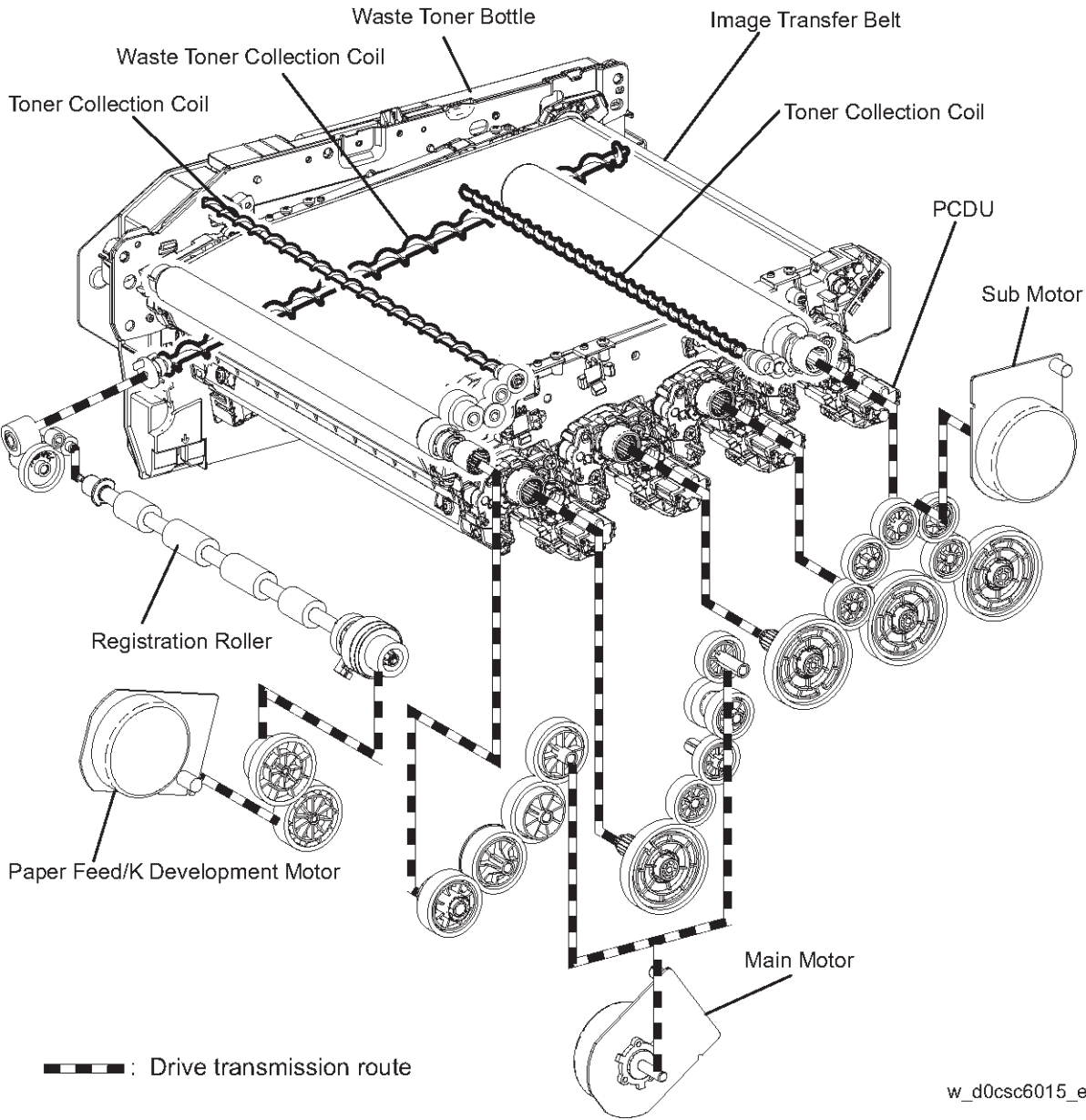
7.1.11 WASTE TONER COLLECTION

The excess toner generated by the Y/M/C/K drum cleaning is fed to the Waste Toner Bottle by the Toner Collection Coil in the PCDU of YMCK.

The excess toner generated by the Image Transfer Belt cleaning is fed to the Waste Toner Bottle by the Toner Collection Coil in the ITB Unit. The Toner Collection Coil (K) and the Toner Collection Coil in the ITB Unit are driven by the Main Motor (M2). The Toner Collection Coil (Y/M/C) are driven by the Sub Motor (M3).

The excess toner fed to the Waste Toner Bottle is collected into the box by the Waste Toner Collection Coil in the Waste Toner Bottle.

The Waste Toner Collection Coil in the Waste Toner Bottle is driven by the Paper Feed/K Development Motor (M1) via the Registration Roller.



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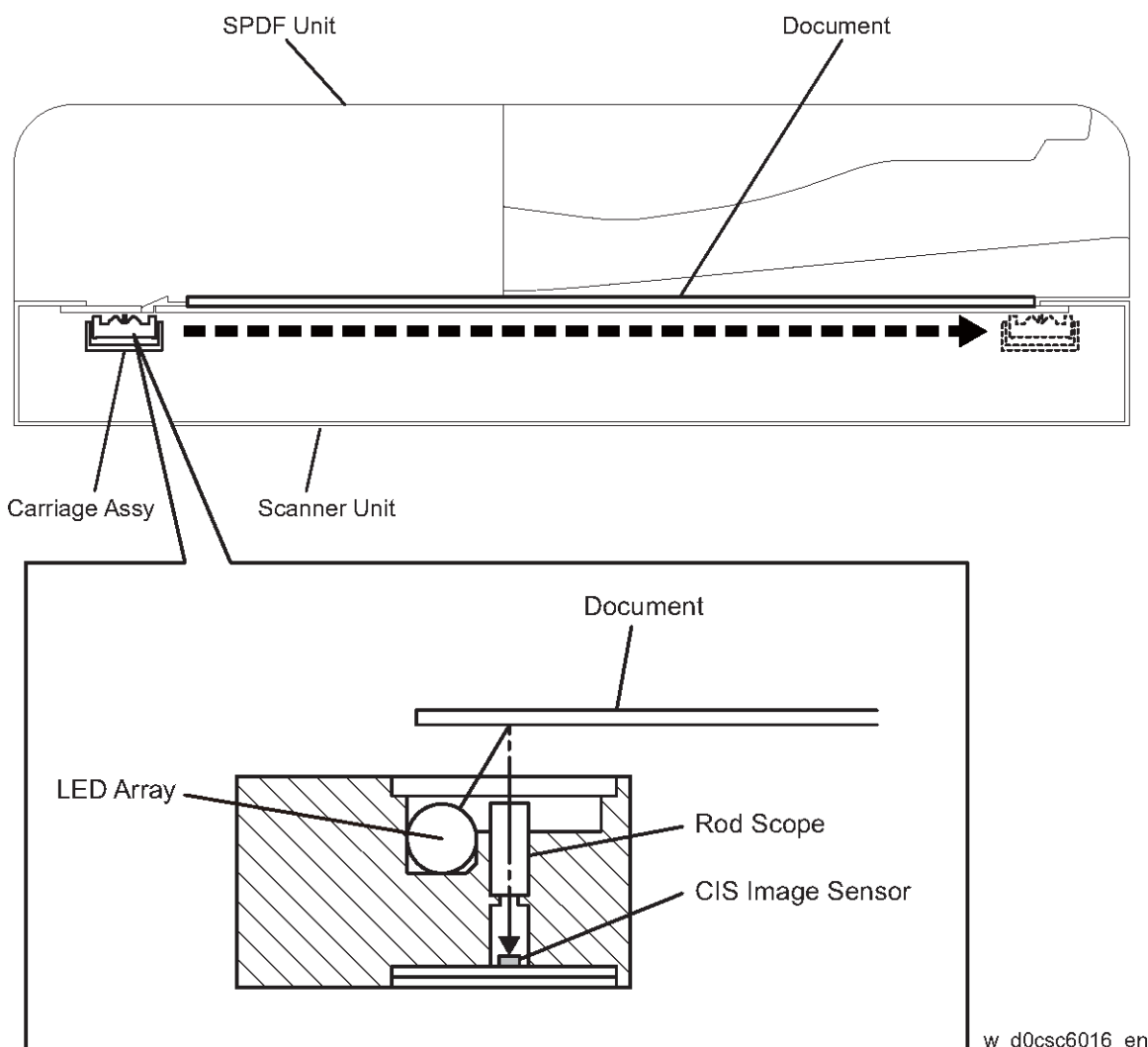
7.2 FUNCTIONS OF SCANNER

7.2.1 DOCUMENT SCANNING

The scanner unit consists of the Scanner Unit and the SPDF Unit. The CIS Assy in the Image Input Terminal scans the front side of the document and the CIS Assy in the SPDF scans the back side of the document.

7.2.2 DOCUMENT SCANNING AT PLATEN

The Carriage Assy consists of components such as the CIS Image Sensor for converting image to data, the LED Array for illuminating the original, and the Rod Scope for converting the original image to a full-size erect image.



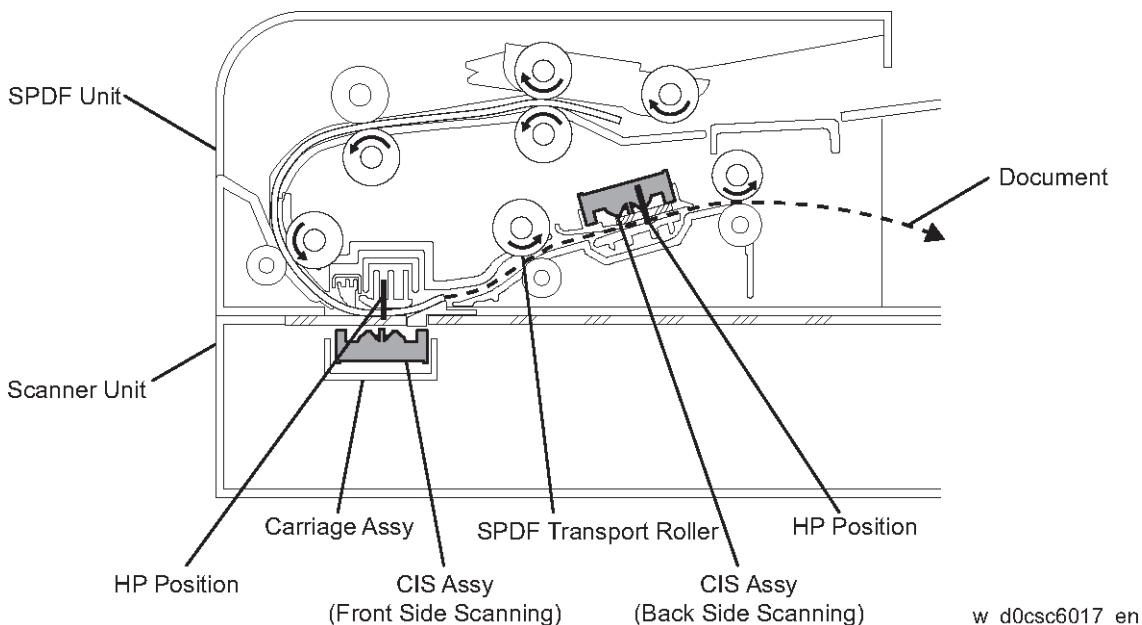
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7.2.3 DOCUMENT SCANNING AT SPDF

This SPDF has a different system from the conventional document feeder, being capable of scanning both the front and back sides of the document during the one-pass conveyance.

The CIS Assy on the Scanner Unit reads the front side of the document, and the CIS Assy on the SPDF Unit reads the back side of the document. These two scanning parts are arranged so as to interpose the paper path from both sides, and this allows both sides of the document to be scanned without rotation.

When the document being fed by the torque from the SPDF Motor (M11) at the speed corresponding to the set magnification passes the Scanner Home Position of the Carriage Assy in the Scanner Unit, allowing the reflected image to be read by the CIS Image Sensor. (For the scanning method, refer to "**Document Scanning at Platen**".

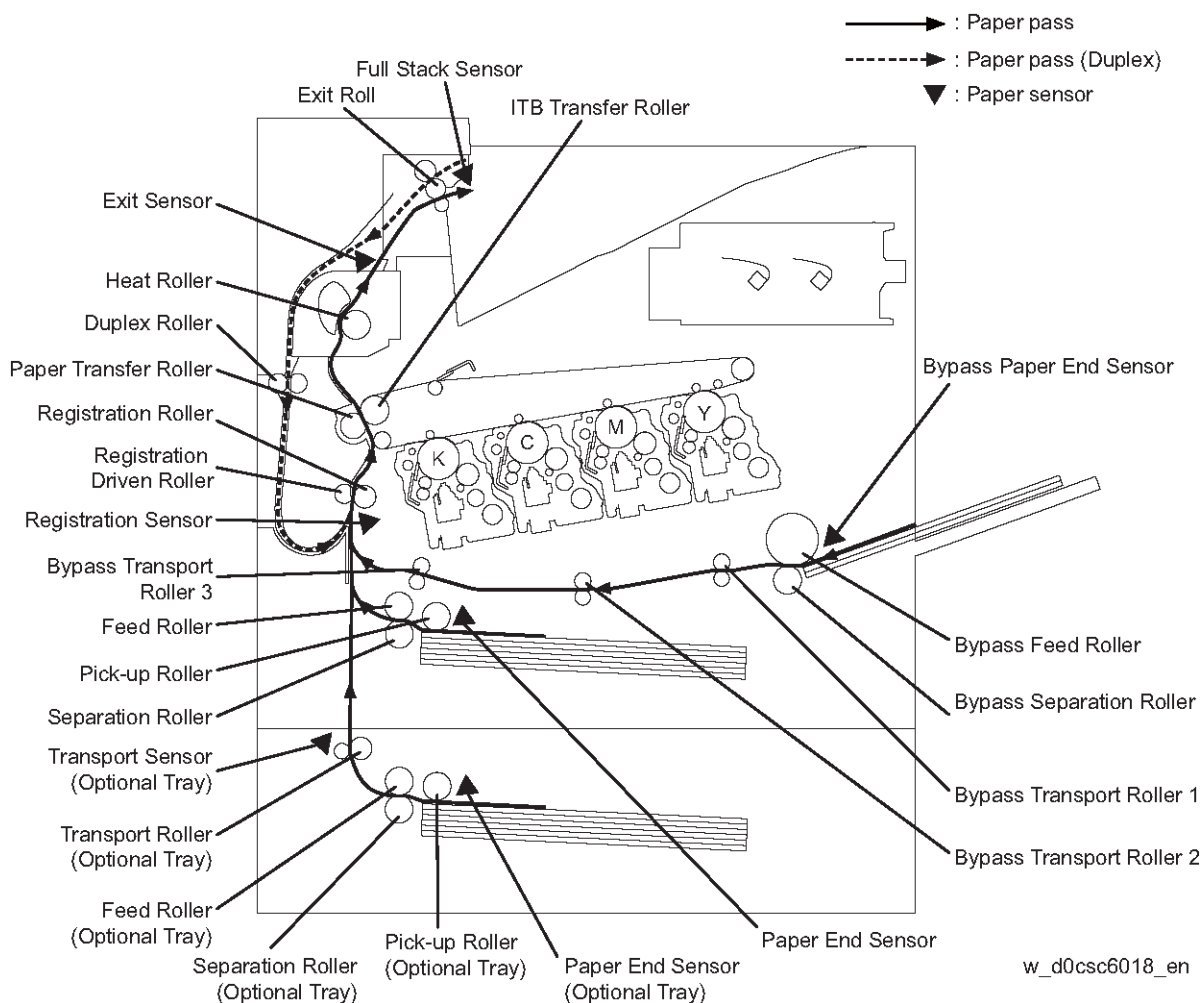


7.3 PAPER PATH

This section describes the paper feed path of the entire device and the paper feed process in the each feed section.

7.3.1 LAYOUT OF PAPER PATH

The following shows the paper feed layout when the tray module is installed, and the components relevant to paper feed.



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7.3.2 FEEDING FROM PAPER TRAY

The paper loaded in the paper cassette is fed between the Feed Roller and the Separation Roller by the Pick-up Roller, and fed farther to the registration section by the rotation of the Feed Roller and the Separation Roller.

The Pick-up Roller and the Feed Roller are rotated by the torque of the Paper Feed/K Development Motor (M1) via the Paper Feed Clutch (CL3).

The Separation Roller, pressed from underneath by the spring pressure and forced to the Feed Roller,

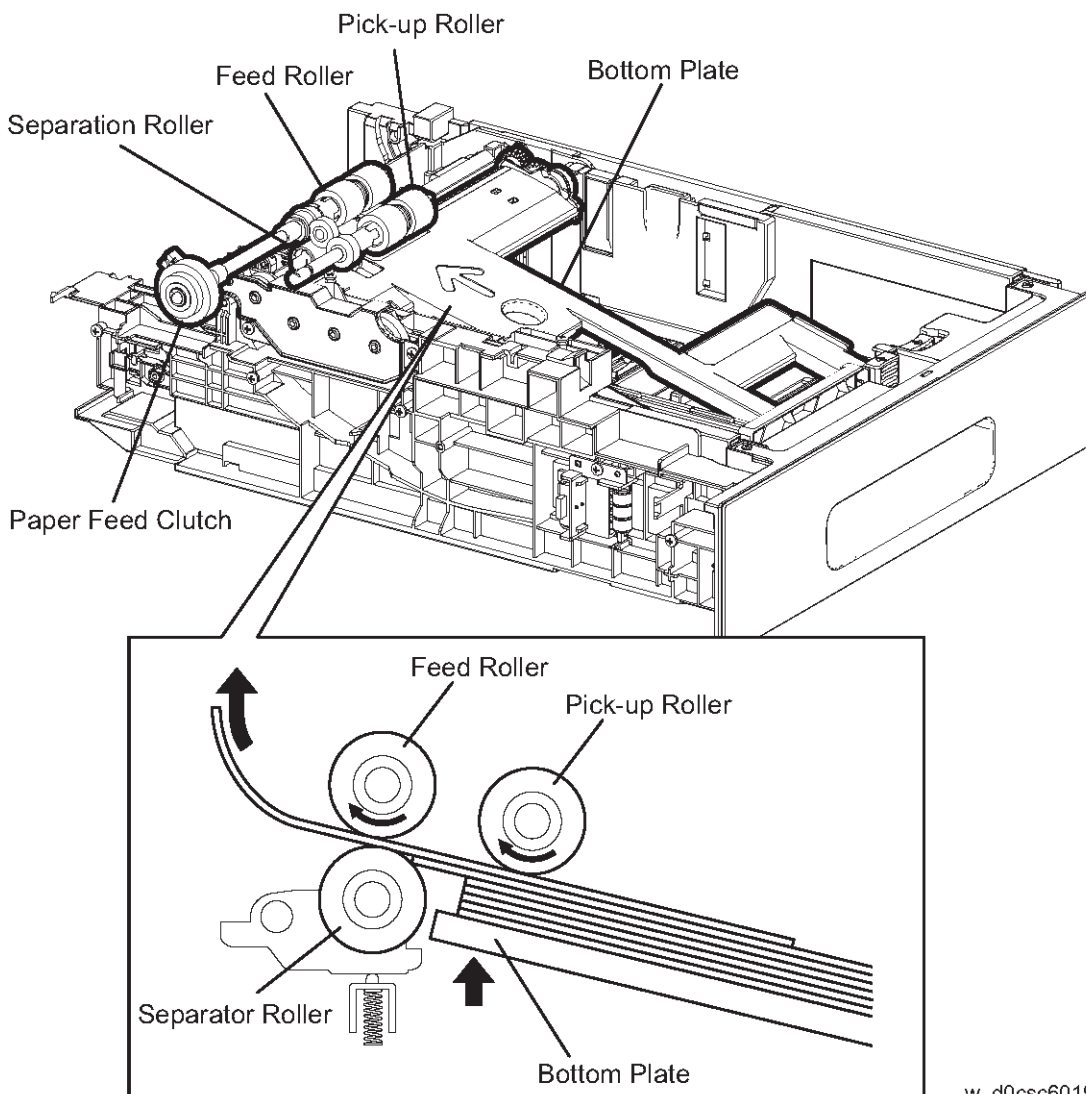
plays a role of fanning a sheet by the rotation friction.

When the sheet is lapped over, the break force of the torque limiter combined with the Separation Roller separates and feeds only the sheet on the top.

The Bottom Plate is the mechanism driven with the gear located on the side of the paper cassette.

Unless the interlock gear is unlocked, the Bottom Plate keeps the state that it is not lowered or elevated from the arbitrary position. The sheet is fed at this position.

As the paper feed is proceeded and several sheets of paper on the top of the paper loaded are decreased, the Pick-up Roller lowers down and the lever unlocks the gear, and then the Bottom Plate is elevated.



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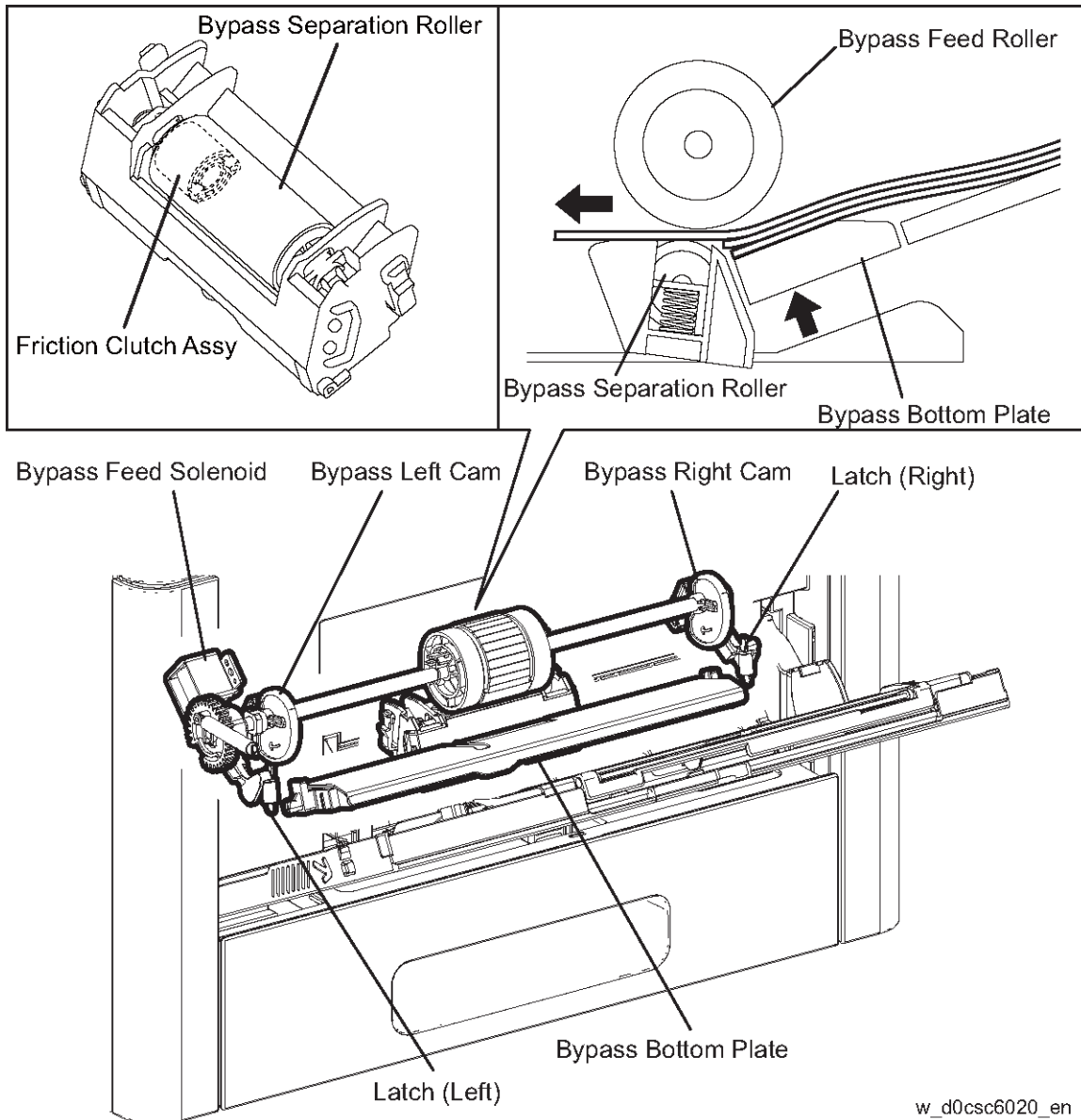
7.3.3 FEEDING FROM BYPASS TRAY

When sheet feeding from the bypass tray starts, the Bypass Feed Roller rotates, driven by the Paper Feed/K Development Motor (M1) and controlled by the Bypass Feed Solenoid (SOL2), to feed the sheet to the position where it is nipped between the Bypass Feed Roller and the Bypass Separation Roller.

As the Bypass Feed Roller rotates, the Bypass Left Cam and Bypass Right Cam also rotate to lift the Bypass Bottom Plate via the Latch (Left) and Latch (Right) to the position for sheet feeding.

Normally, when only one sheet is fed, both the Bypass Feed Roller and Bypass Separation Roller rotate to allow the sheet to pass. However, when two sheets are fed concurrently, only the Bypass Feed Roller rotates and the Bypass Separation Roller is locked thereby allowing the upper sheet to pass by being separated from the lower sheet that is stopped by the friction with the Bypass Separation Roller at rest.

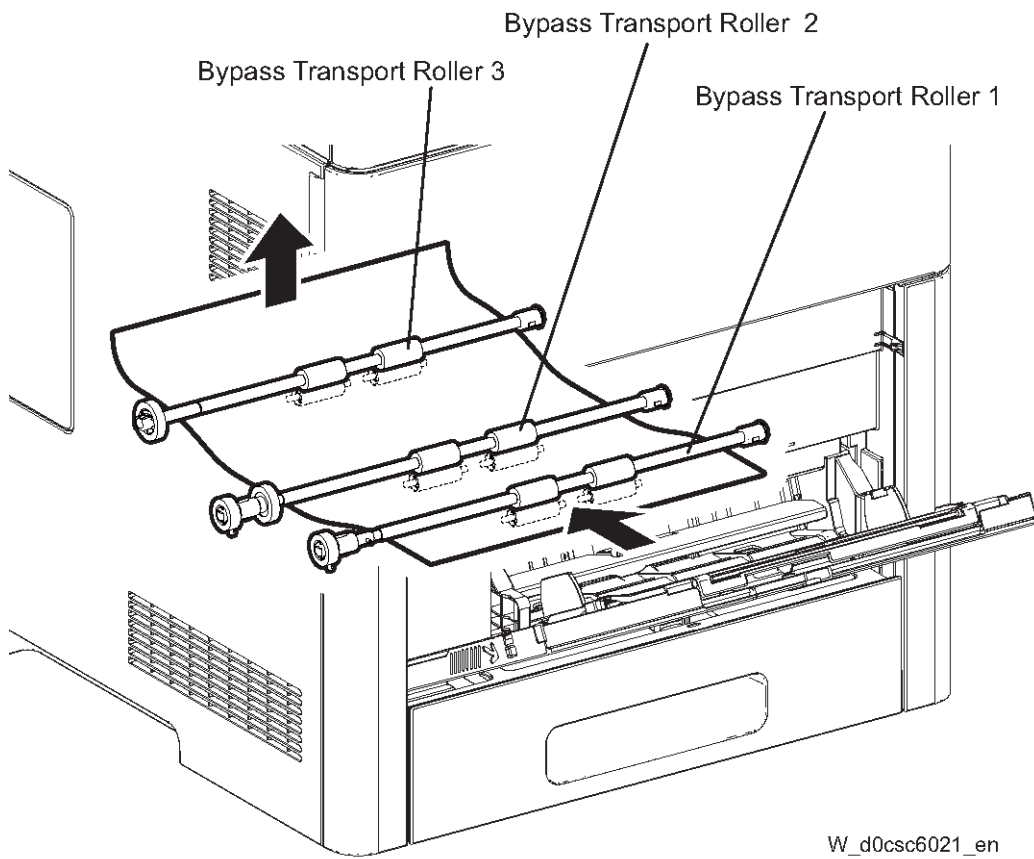
The Bypass Separation Roller is being pushed toward the Bypass Feed Roller by spring pressure, and controlled by the torque limiter (Friction Clutch Assy) with which it is coupled.



7.3.4 FEEDING IN REGISTRATION SECTION

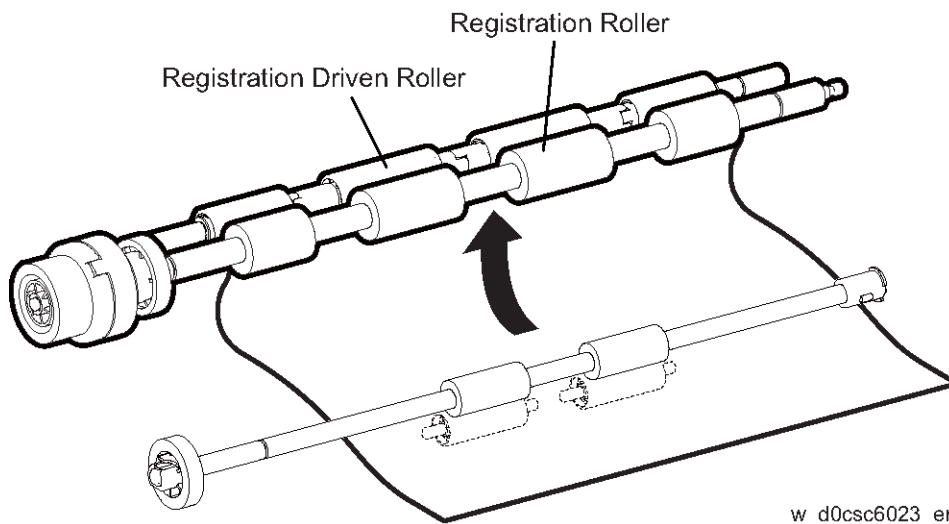
Feeding to Registration Section

The sheet fed from the Bypass Tray is fed to the registration section by the Bypass Transport Roller 1, Bypass Transport Roller 2, and Bypass Transport Roller 3 driven by the Paper Feed/K Development Motor (M1).



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The sheet fed from the paper cassette is passed through the chute directly and fed to the registration section.



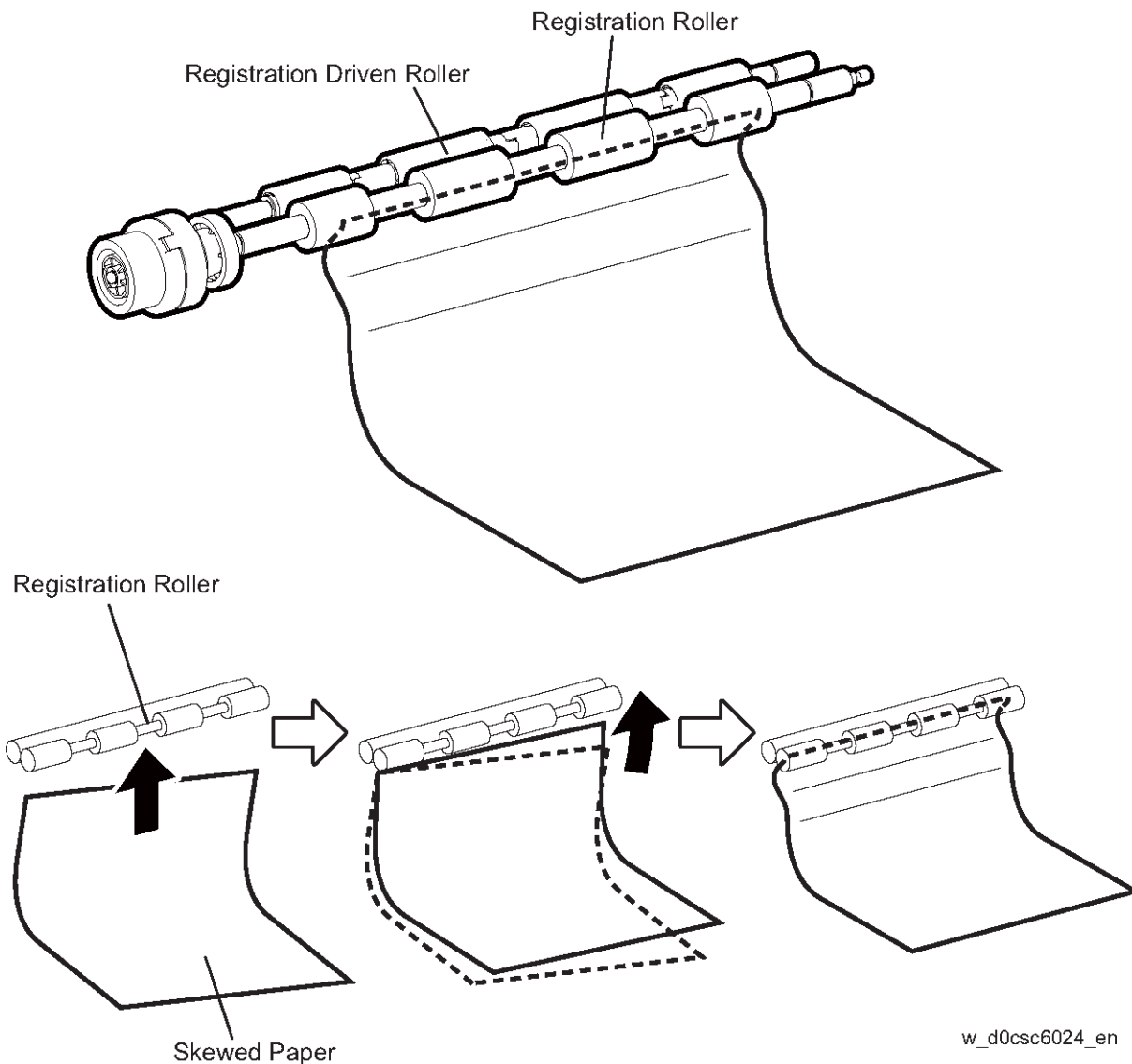
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Paper Skew Correction

When a sheet fed out of the Tray or Bypass Tray directly reaches the toner transfer section, the toner image may not be transferred at the correct position on the sheet due to misalignment of lead edges in the Tray or Bypass Tray.

To avoid this problem, the lead edge position of the sheet needs to be corrected at the registration section before the sheet is forwarded to the toner transfer section.

By thrusting the edge of the sheet fed out of the Tray or Bypass Tray against the Registration Roller that is locked, the lead edge position of the sheet is corrected.



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Feeding From Registration Section

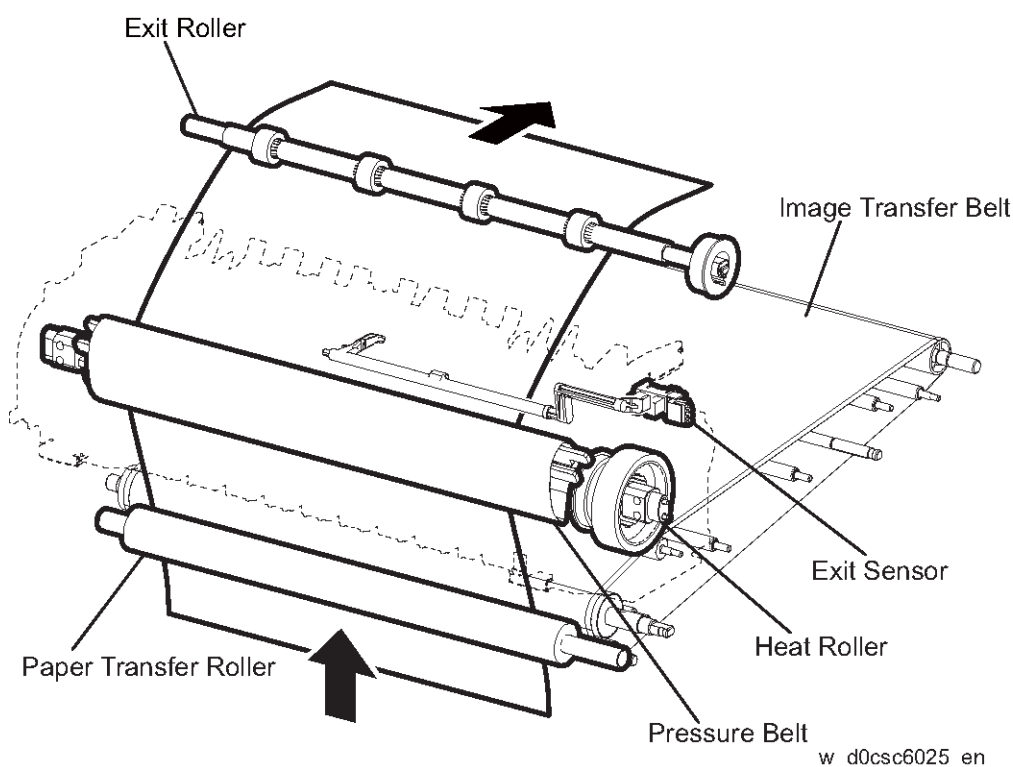
The sheet is fed to the toner transfer section by the rotation of the Registration Roller at the proper timing, after the lead edge position of the sheet fed is corrected in the registration section.

The Registration Roller is rotated by the drive from the Paper Feed/K Development Motor (M1) via the

Registration Clutch (CL1).

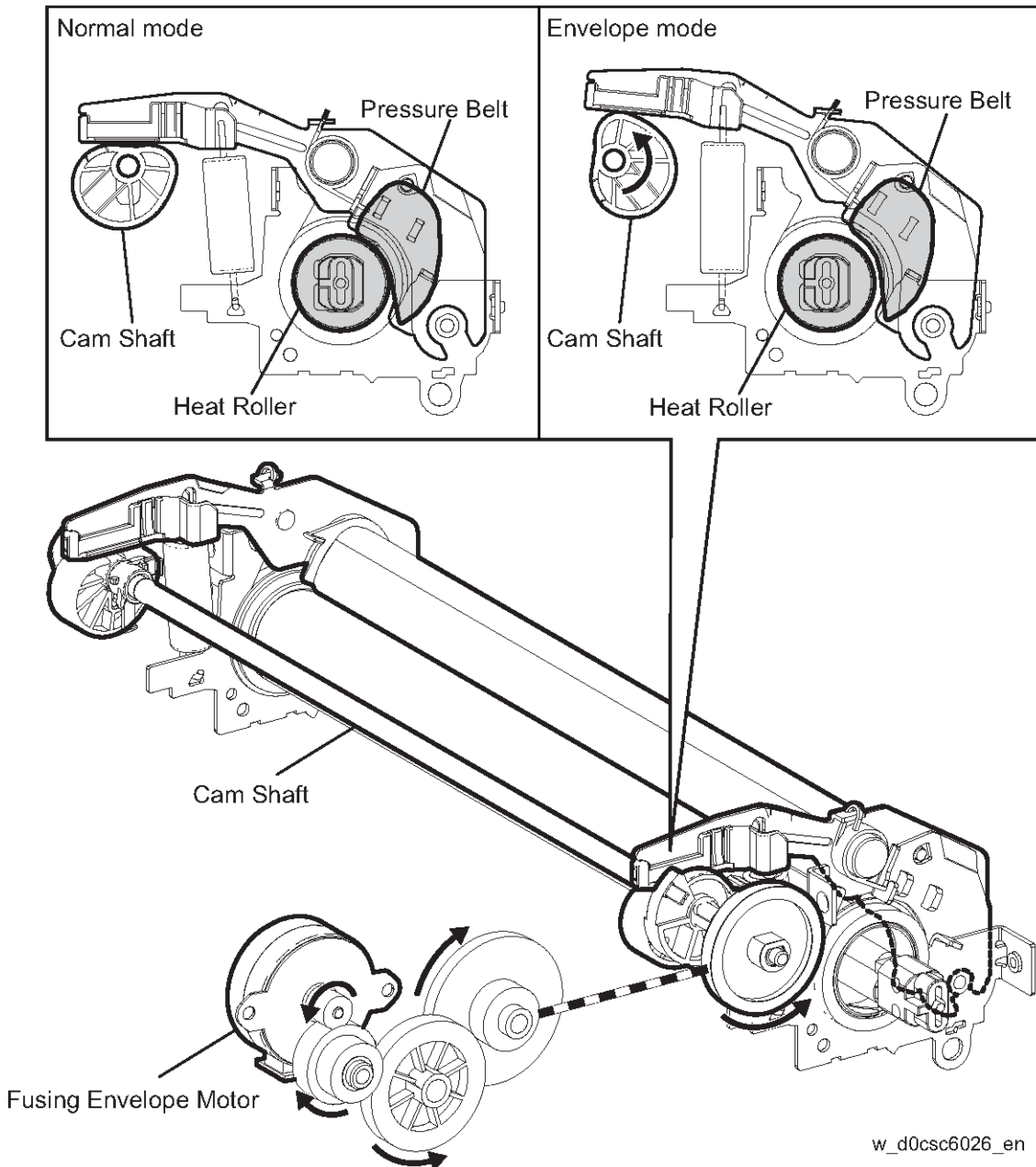
7.3.5 TRANSFER/FUSING/EXIT

On the sheet passed through the registration section, the toner image on the Image transfer Belt is transferred by the Image transfer Belt and the Paper Transfer Roller rotated by the drive of the Main Motor (M2). Then, the sheet is fed to the exit section while its toner image is being fused by the Heat Roller that rotated by the drive of the Main Motor (M2). Also, the drive of the Main Motor (M2) is transmitted to the Exit Clutch (CL5), and the Exit Roller is rotated in the sheet exit direction, and the print completed sheet is ejected from the printer. The completion of the sheet exit is detected by the Exit Sensor (S5).



Envelope Mode Mechanism

For printing envelopes, the drive of the Fusing Envelope Motor (M5) rotates the Cam Shaft, and it switches to the envelope mode. In the envelope mode, the Pressure Belt moves away from the Heat Roller, which reduces the pressure.



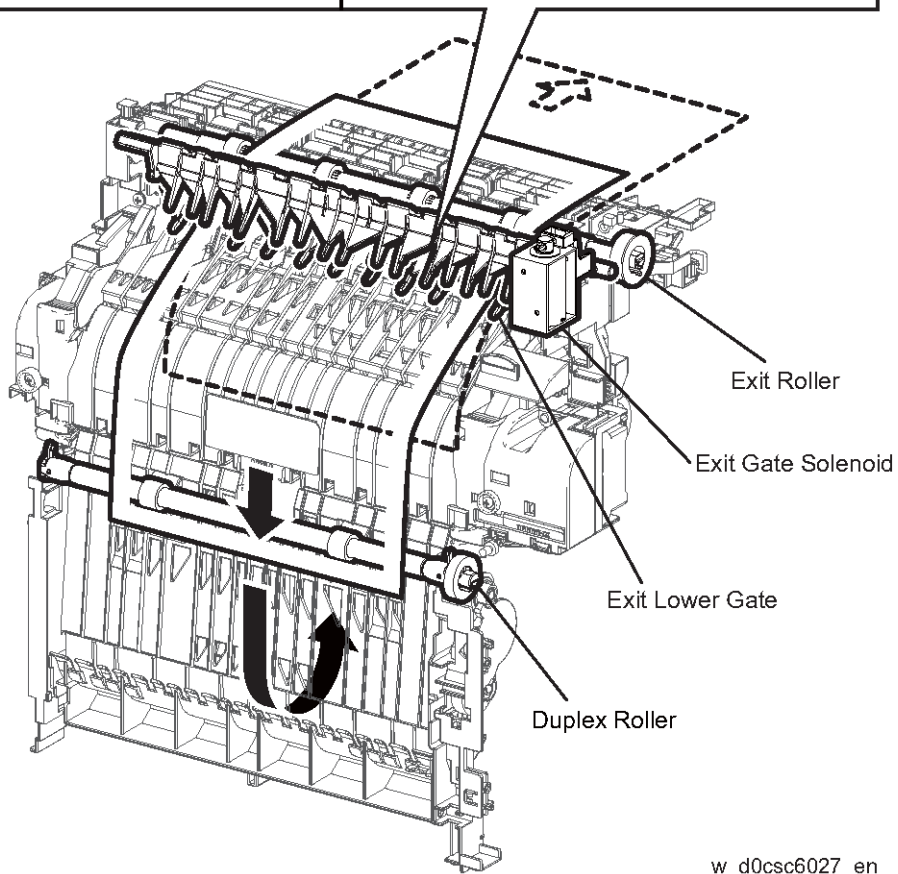
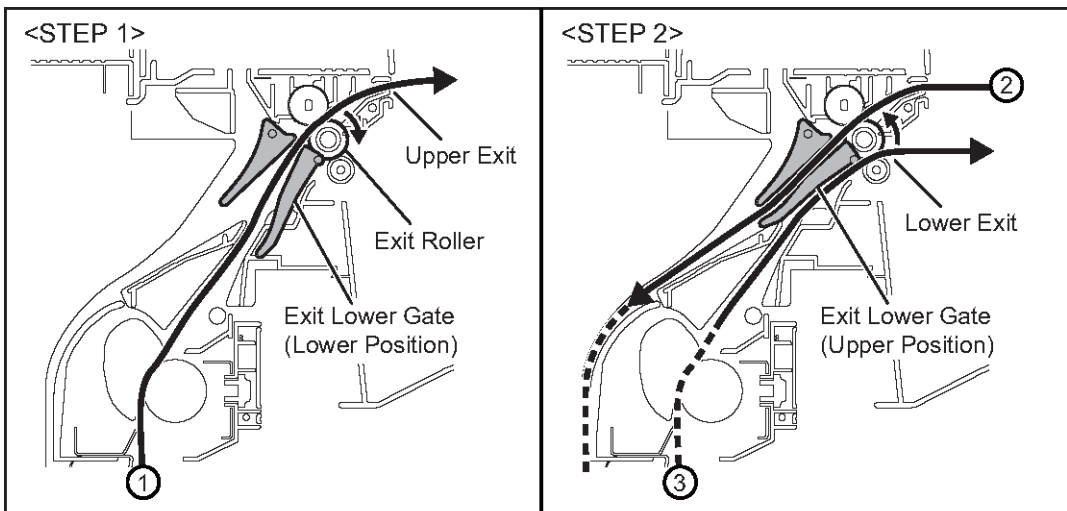
7.3.6 DUPLEX FEEDING

After the sheet is passed through the Heat Roller and the printing on the side 1 is completed, the sheet is output to the Upper Exit along the Exit Lower Gate at the Lower Position. At this time, the drive of the Main Motor (M2) is transferred to the Invert Clutch (CL4), which rotates the Exit Roller in reverse.

Then, the drive of the Main Motor (M2) is transferred to the Exit Clutch (CL5), which rotates the Exit Roller forward, and the sheet is fed to the Duplex Assy along the Exit Lower Gate shifted to the Upper Position by the Exit Gate Solenoid (SOL1).

The Duplex Roller is rotated by the drive of the Paper Feed/K Development Motor (M1), and the sheet is fed to the registration position. After the sheet is passed through the Heat Roller and the printing on the side 2 is completed, the sheet is output to the Lower Exit. At this time, the Exit Roller rotates

forward and the Exit Lower Gate is at the Upper Position.



7.3.7 PAPER PATH OF SPDF

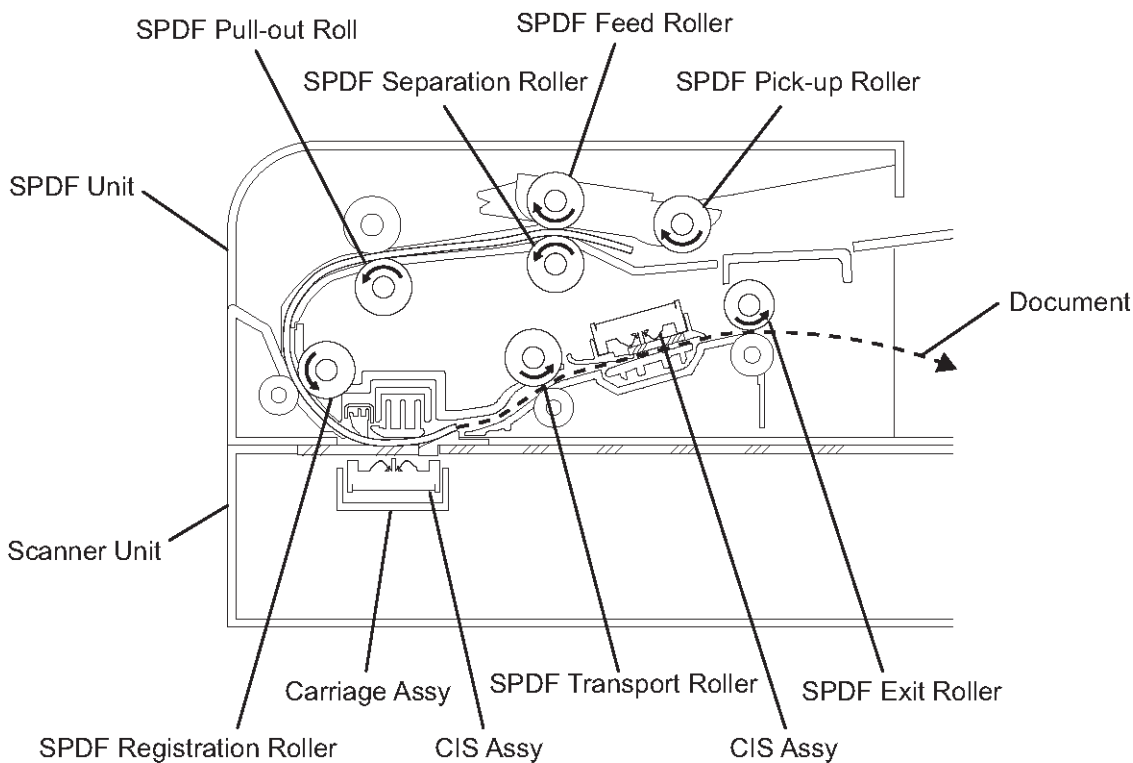
When the sheet feeding from the Document Feeder Tray of the SPDF starts, the SPDF Pick-up Roller and the SPDF Feed Roller that rotate driven by the torque from the SPDF Motor (M11).

Normally, when only one sheet is fed, both the SPDF Feed Roller and SPDF Separation Roller rotate to allow the sheet to pass. However, when two sheets are fed concurrently, only the SPDF Feed Roller rotates and the SPDF Separation Roller is locked thereby allowing the upper sheet to pass by being separated from the lower sheet that is stopped by the friction with the SPDF Separation Roller at rest.

Inside the SPDF, the sheet is fed by the SPDF Pull-out Roller that rotates by the torque from the SPDF Motor (M11), aligned by the SPDF Registration Roller that rotates by the torque from the SPDF Motor (M11), and fed to the Scanner Home Position in the Carriage Assy, and is scanned (Simplex).

Then, the sheet is fed by the SPDF Transport Roller that rotates by the torque from the SPDF Motor (M11) to the Home Position in the CIS Assy, and is scanned (Duplex).

After being scanned, the sheet is ejected by the SPDF Exit Roller that rotates by the torque from the SPDF Motor (M11) to the Document Output Tray.



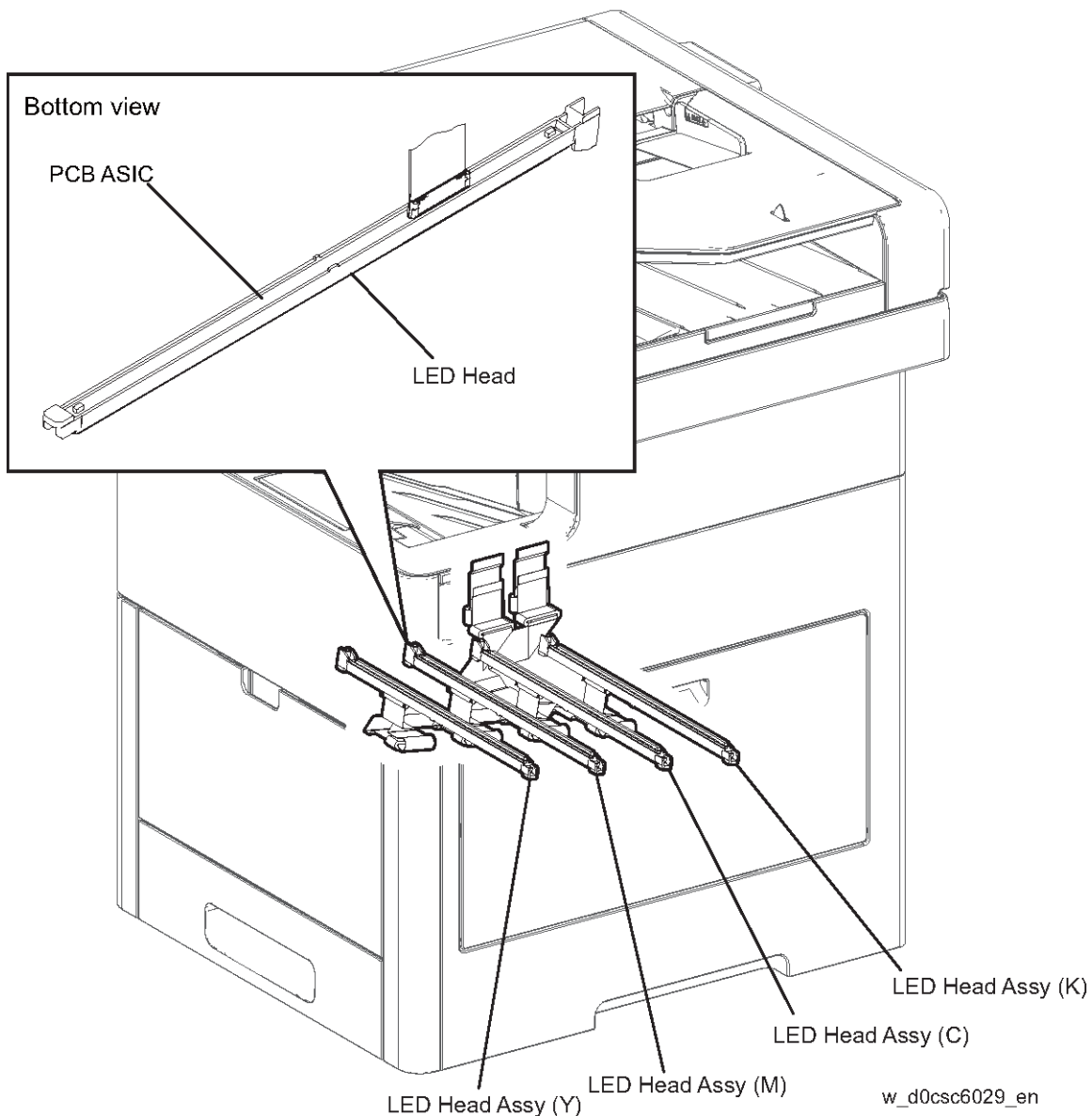
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7.4 FUNCTIONS OF MAJOR COMPONENTS

This section describes the major functional components of the printer and the scanner with corresponding illustrations. These components are classified into the following blocks based on the configuration of the printer and the scanner.

- LED Head
- Drive
- Air Flow
- Waste Toner Collection
- Toner Supply
- Image and Transfer
- Fusing
- Paper Transport
- Bypass Feed
- Exit
- Electrical
- Interlock
- Scanner and SPDF

7.4.1 LED HEAD



- **LED Head Assy**

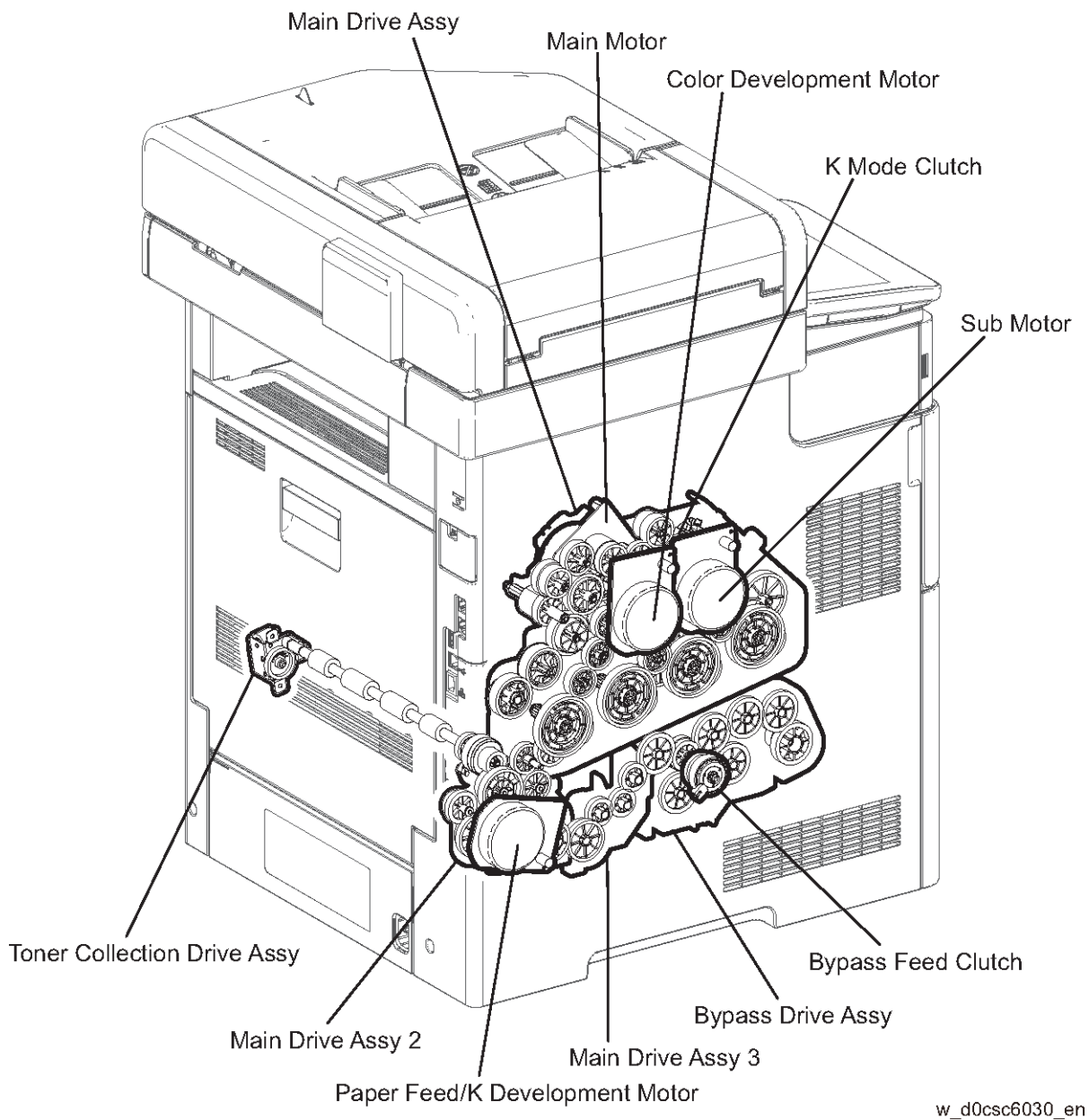
An exposure device for creating an electrostatic latent image on the drum surface. One unit is provided for each of yellow, magenta, cyan, and black.

The LED Head Assy mainly consists of the following part.

- PCB ASIC

A PCB that bridges between the IPU (PCB3) and the LED Head.

7.4.2 DRIVE



- **Main Drive Assy**

The Main Drive Assy mainly consists of the following parts.

- Sub Motor (M3)

The DC motor that drives the Drum in the PCPU (Y/M/C).

- Color Development Motor (M4)

The DC motor that drives the Development Roller in the PCPU (Y/M/C.)

- K Mode Clutch (CL6)

Transfers the drive from the Main Motor (M2) to the Switching Camshaft in the ITB Unit and switches the contact/retract of the Image Transfer Roller.

- **Main Drive Assy 2**

Transfers the drive to the Toner Collection Drive Assy via the ROLL ASSY REGI.

- Paper Feed/K Development Motor (M1)

The DC motor that drives each roller of the paper feed section (feed from the Tray/Bypass Tray, registration, and duplex feed), the Waste Toner Collection Coil in the Waste Toner Bottle, and the Development Roller in the PCDU (K).

- **Main Drive Assy 3**

Transfers the drive from Main Drive Assy 2 to the Bypass Drive Assy.

- **Bypass Drive Assy**

- Bypass Feed Clutch (CL7)

Transfers the drive from the Paper Feed/K Development Motor (M1) to the Bypass Transport Roller 1, the Bypass Transport Roller 2, and the Bypass Transport Roller 3.

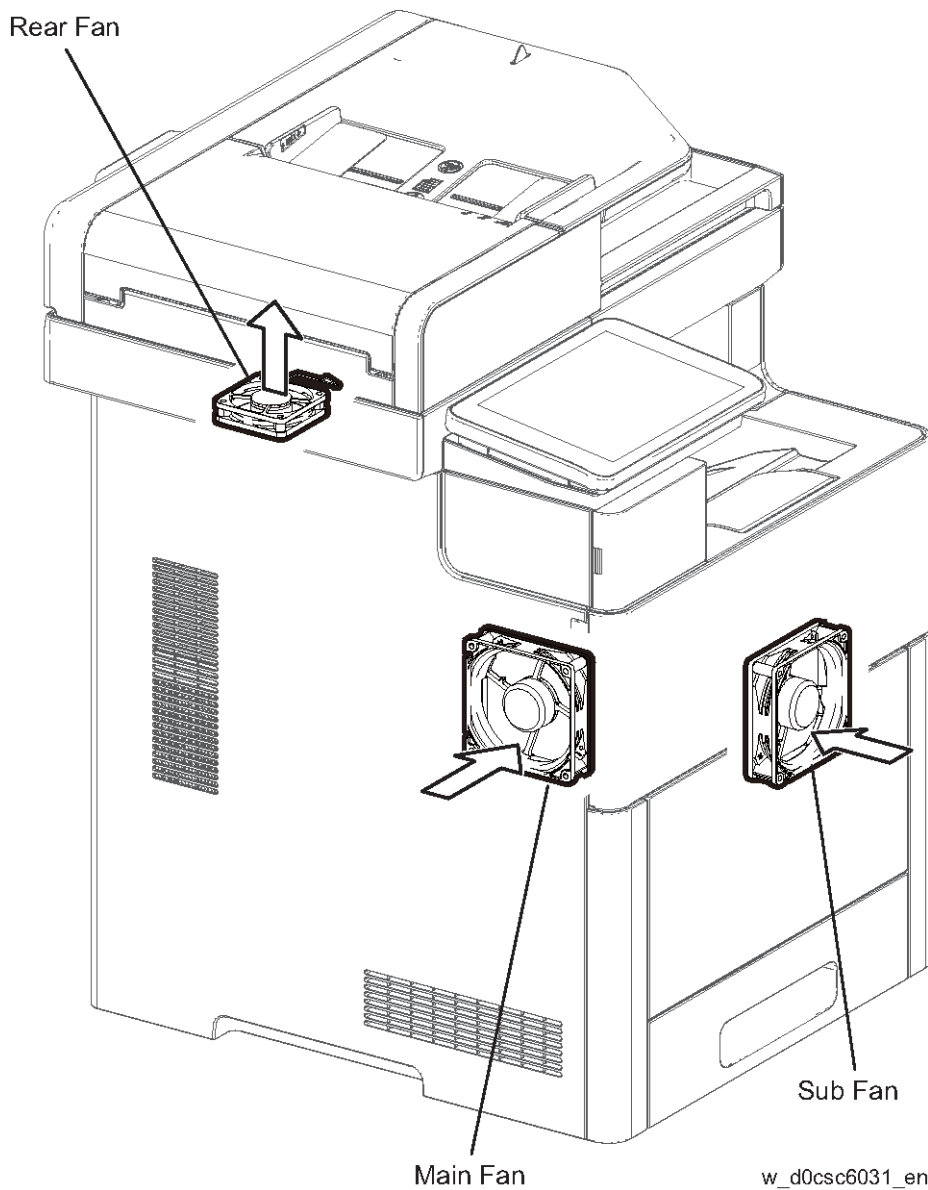
- **Motor Drive Assy**

The Motor Drive Assy mainly consists of the following parts.

- Main Motor (M2)

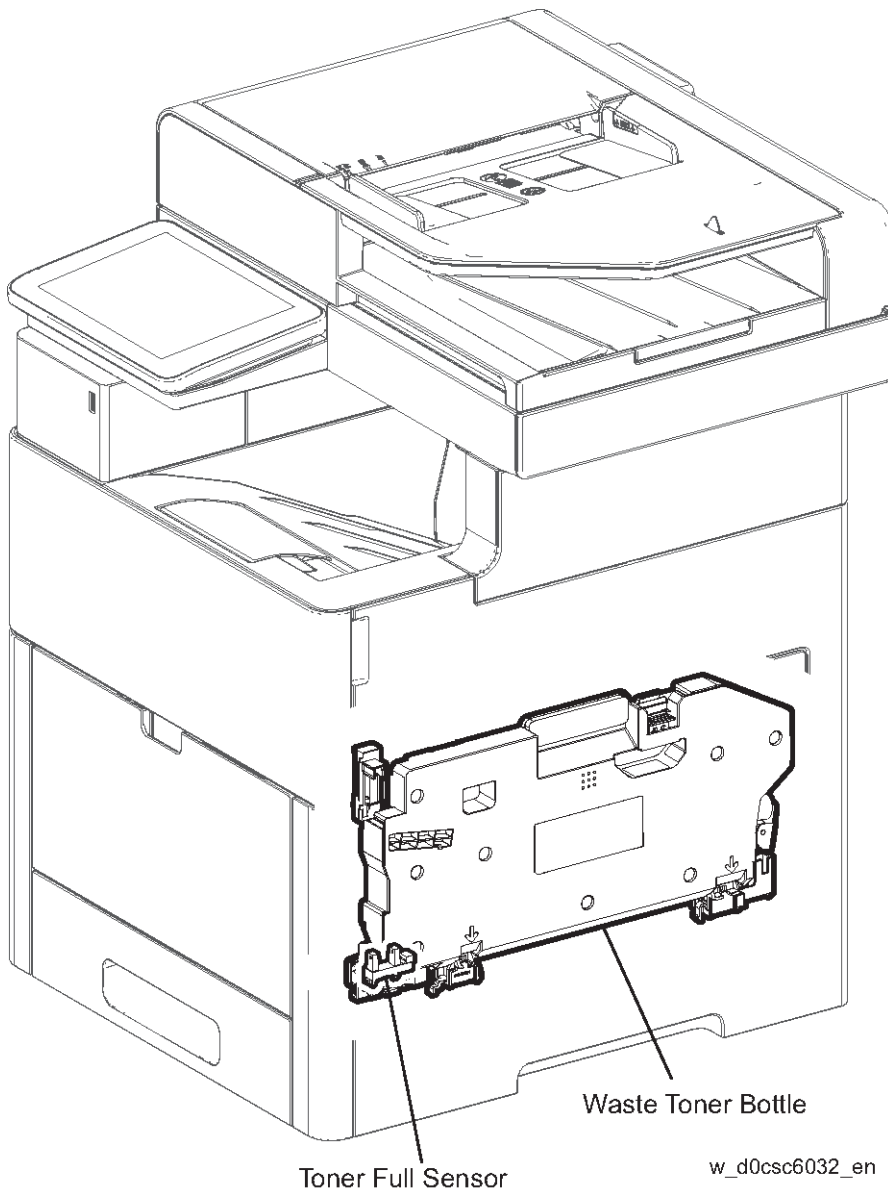
The DC motor that drives the Heat Roller in the Fusing Unit, the Exit Roller in the exit section, the Drum in the PCDU (K), the Image Transfer Belt, and Toner Collection Coil in the ITB Unit.

7.4.3 AIR FLOW



- **Main Fan (FAN1)**
Intakes the air from outside of the machine, and prevents temperature rise inside the machine.
- **Sub Fan (FAN2)**
Intakes the air from outside of the machine, and prevents temperature rise inside the machine.
- **Rear Fan (FAN3)**
Intakes the air from outside of the machine, and prevents temperature rise inside the machine.

7.4.4 WASTE TONER COLLECTION



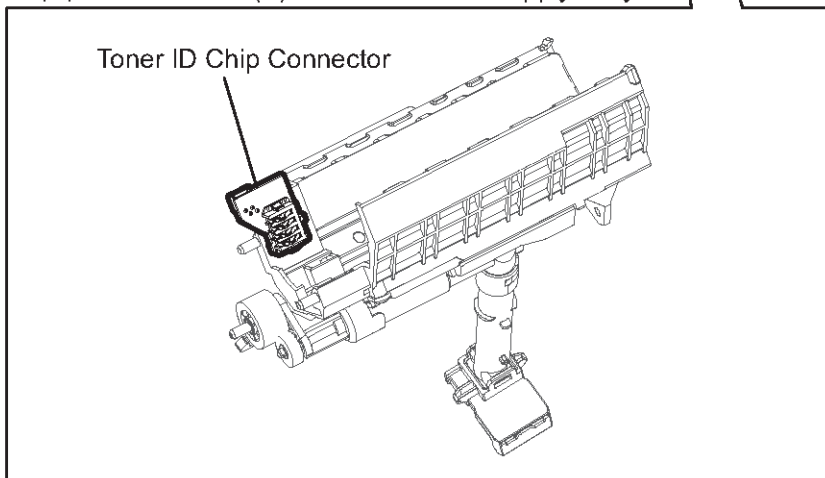
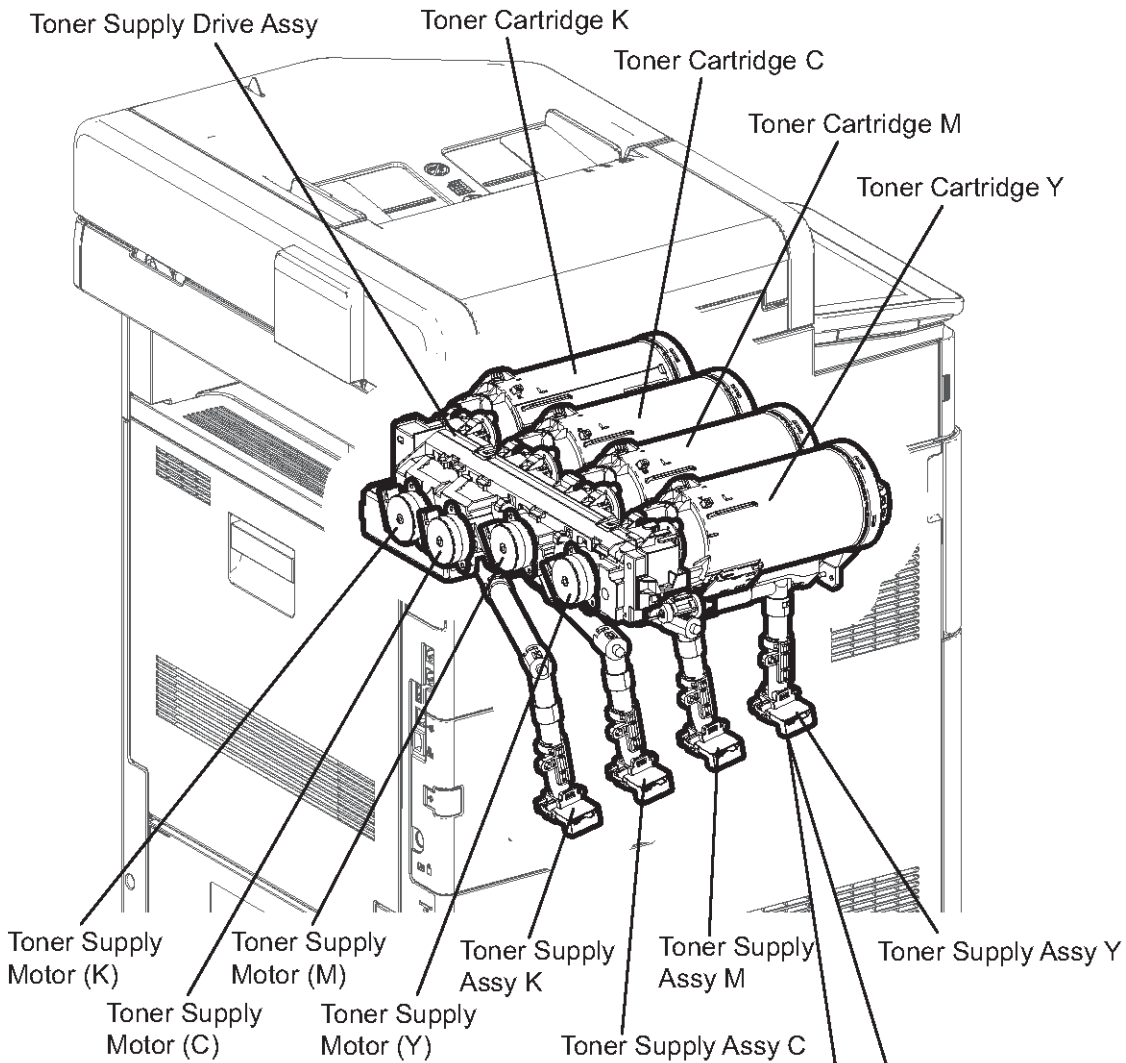
- **Toner Full Sensor (S7)**

Detects the state that the Waste Toner Bottle is full.

- **Waste Toner Bottle**

Stores the waste toner conveyed from the Image Transfer Belt and the PCPU (Y)/(M)/(C)/(K) via the Toner Collection Coil.

7.4.5 TONER SUPPLY



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- **Toner Supply Drive Assy**

Drives the paddle in the Toner Cartridge and the Upper/Lower Coil of the Toner Supply Assy, and feeds toner to the development section in the PCDU.

The Toner Supply Drive Assy mainly consists of the following parts.

- Toner Supply Motor (Y) (M8)
Drives the Toner Cartridge for the Y toner and the Toner Supply Assy via the gear.
- Toner Supply Motor (M) (M6)
Drives the Toner Cartridge for the M toner and the Toner Supply Assy via the gear.
- Toner Supply Motor (C) (M9)
Drives the Toner Cartridge for the C toner and the Toner Supply Assy via the gear.
- Toner Supply Motor (K) (M7)
Drives the Toner Cartridge for the K toner and the Toner Supply Assy via the gear.

- **Toner Cartridge Y**

- **Toner Cartridge M**

- **Toner Cartridge C**

- **Toner Cartridge K**

Stores toner and a small amount of carriers. Also, installs the ID Chip, which is an involatile memory to store the machine information.

- **Toner Supply Assy Y**

- **Toner Supply Assy M**

- **Toner Supply Assy C**

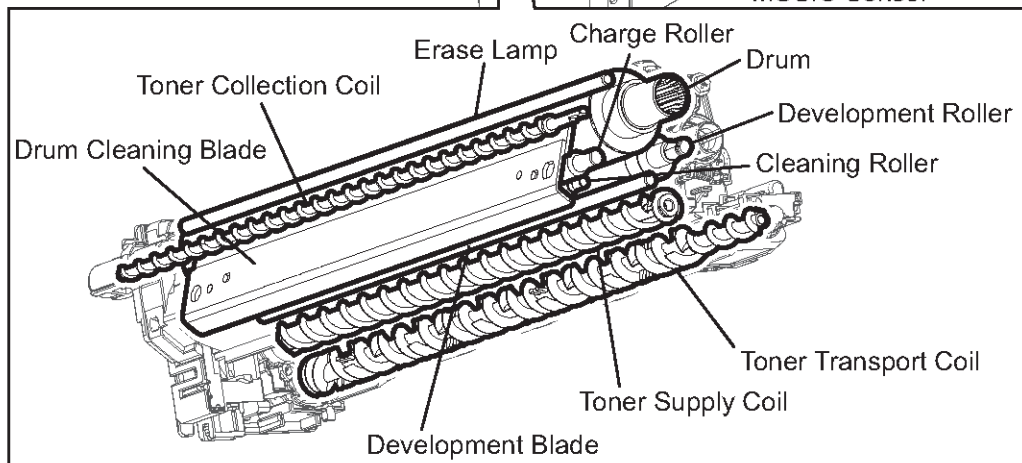
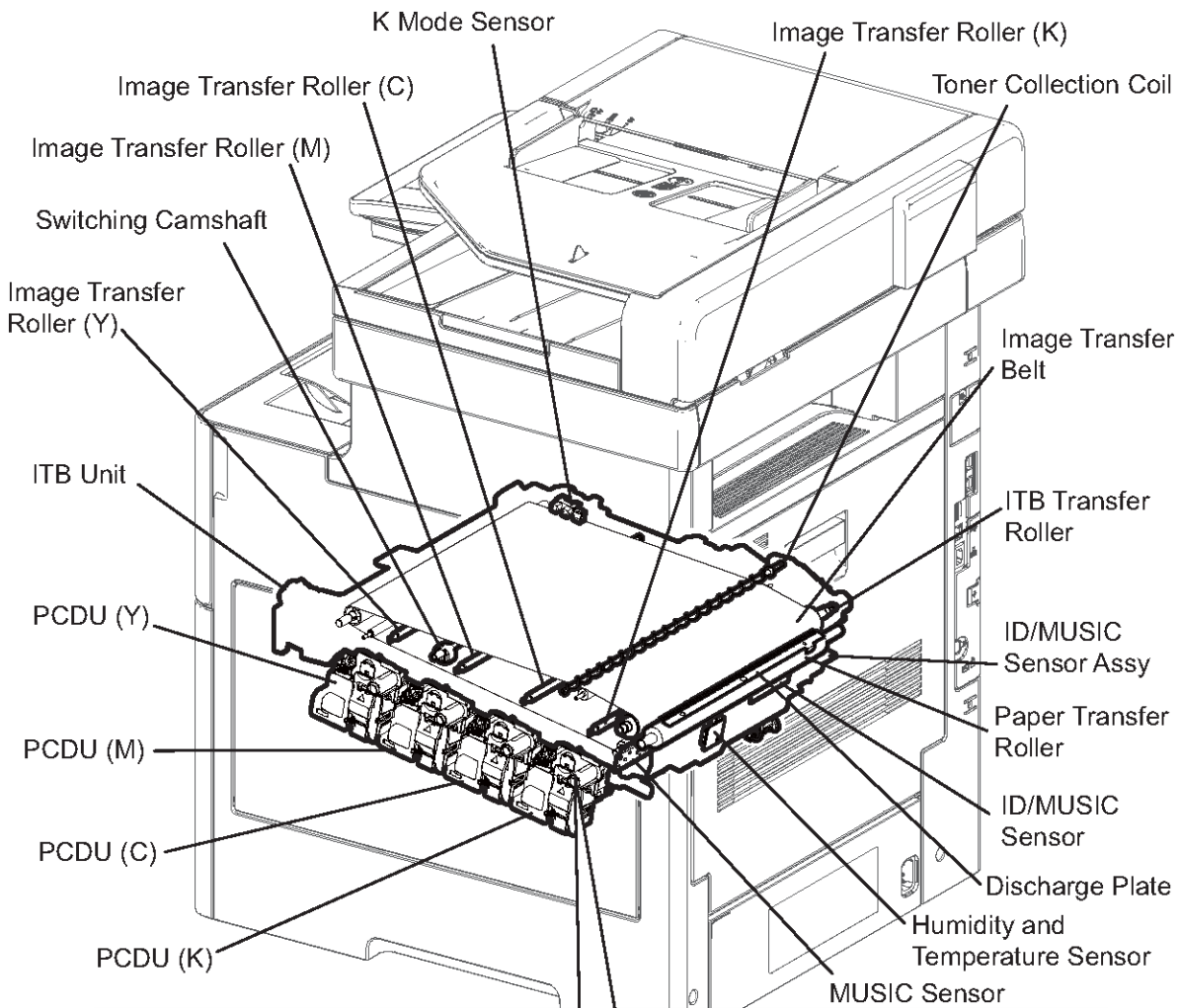
- **Toner Supply Assy K**

Feeds toner in the Toner Cartridge to the PCDU.

The Toner Supply Assy Y/M/C/K mainly consists of the following parts.

- Toner ID Chip Connector
Detects whether the Toner Cartridge being connected is a regular part.

7.4.6 IMAGE TRANSFER



w_d0csc6034_en

- **ID/MUSIC Sensor Assy**

The ID/MUSIC Sensor Assy consists of the following parts.

- **MUSIC Sensor (S11)**

Irradiates light from the LED in the sensor to the Image Transfer Belt (ITB) and the toner patch on the ITB, detects the reflected light from the ITB with the light receiving element, and outputs the electric signal. The output value is used to control the image position.

- **ID/MUSIC Sensor (S10)**

Irradiates light from the LED in the sensor to the ITB and the toner patch on the ITB, detects the reflected light from the ITB with the light receiving element, and outputs the electric signal. The output value is used to control the toner density, the image density, and the image position.

- **Humidity and Temperature Sensor (S12)**

Detects the humidity and the temperature.

- **PCDU (Y)**

- **PCDU (M)**

- **PCDU (C)**

- **PCDU (K)**

A unit that consists of the Drum to form the static latent image and toner image, and the developer to develop toner to the Drum. Placed in yellow, magenta, cyan, and black color each.

- **Drum**

Forms the static latent image and the toner image.

- **Charge Roller**

Charges the Drum.

- **Cleaning Roller**

Cleans toner on the Charge Roller surface.

- **Drum Cleaning Blade**

Cleans the remaining toner in the Drum after the toner image is transferred on the sheet.

- **Development Roller**

Contacts with the Drum and forms the toner image on the Drum.

- **Toner Transport Coil, Toner Supply Coil**

Stirs toner.

- **Development Blade**

Equalizes toner and carriers on the Development Roller.

- **ITB Unit**

The primary transfer unit that transfers the toner image on the drum surface of each color to the Image Transfer Belt (ITB).

The ITB Unit mainly consists of the following components.

- **Image Transfer Roller (Y/M/C/K)**
Impresses the positive electric charge on the reverse side of the ITB in printing, and transfers the toner image formed in the Drum to the ITB.
- **Image Transfer Belt (ITB)**
Reduplicates and transfers the toner image formed in the Drums of each color.
- **ITB Transfer Roller**
Contacts with the Paper Transfer Roller via the ITB in the paper transfer, and transfers the toner image on the ITB to the sheet.
- **Toner Collection Coil**
After the toner image is transferred on the sheet, cleans the remaining toner on the ITB.
- **Switching Camshaft**
Switches the contact/retract of the Image Transfer Roller (Y/M/C) to the ITB.

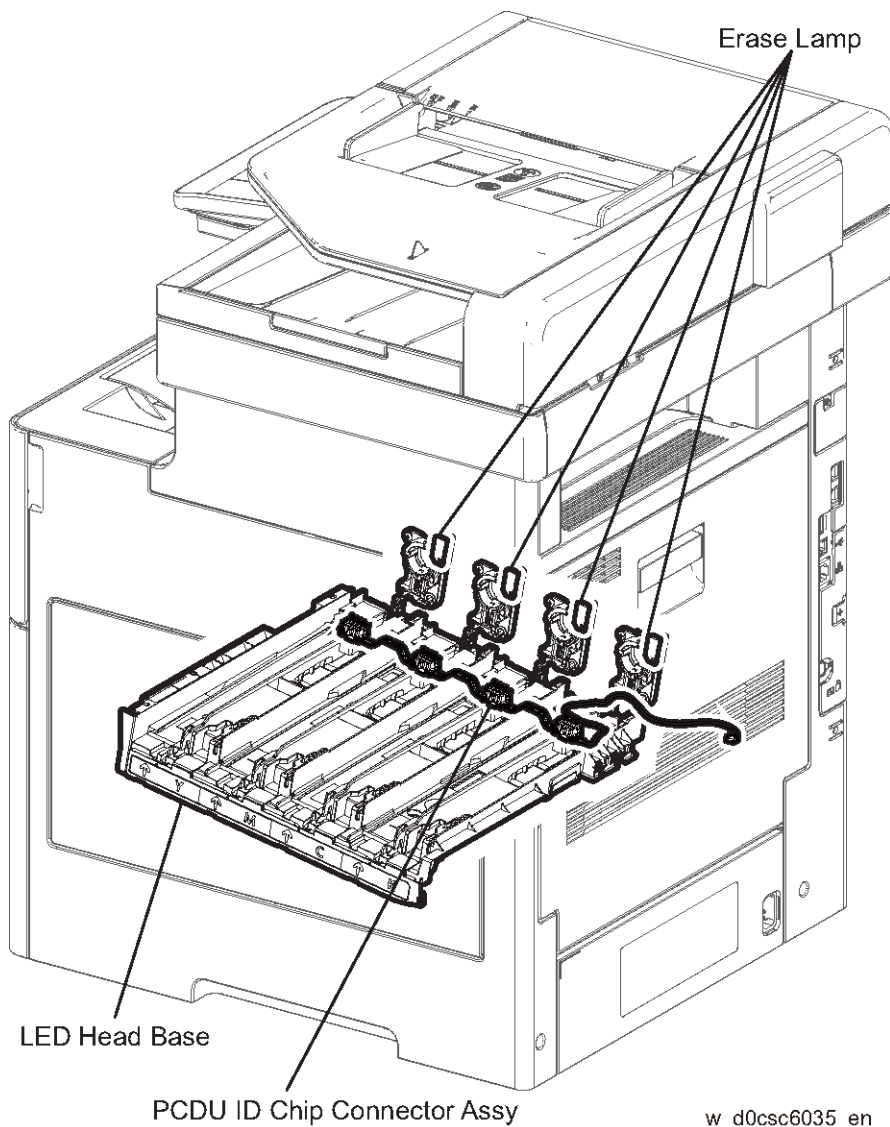
- **K Mode Sensor (S3)**

Detects the contact/retract of the Image Transfer Roller (Y/M/C) to the ITB.

- **Paper Transfer Roller Unit**

The Paper Transfer Unit mainly consists of the following components.

- **Paper Transfer Roller**
Contacts with the reverse side of the toner transfer face on the sheet, and transfers the toner image formed in the ITB to the sheet.
- **Discharge Plate**
Removes charge that was applied to the paper during paper transfer.



- **LED Head Base**

The LED Head Base mainly consists of the following parts.

- PCDU ID Chip Connector

Detects whether the correct PCDU (Y)/(M)/(C)/(K) is set to the LED Head Base.

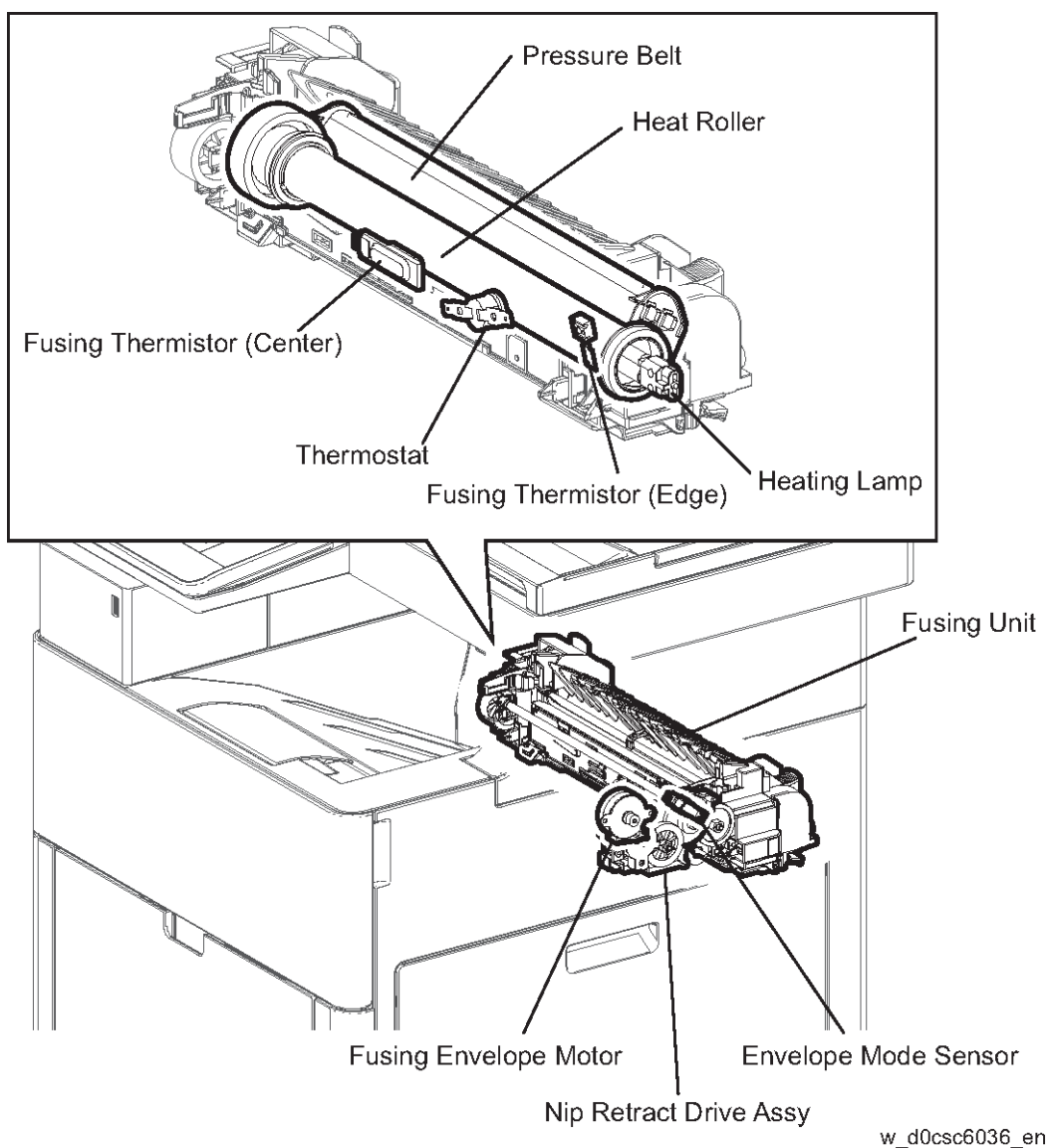
- **Erase Lamp (PCB8, PCB9, PCB10, PCB11)**

Illuminates the LED from the Erase Lamp on the PCB to the Drum surface and removes the electric charge on the Drum surface.

7.4.7 FUSING

★ Important

- If the machine loses power while printing envelopes in the envelope mode, the fusing unit will remain in envelope mode. If the fusing unit is removed while it is locked in envelope mode after a power outage, the cam that adjusts fusing pressure inside the fusing unit will spring out of position and block re-insertion of the fusing unit.
- If the fusing unit has been locked in envelope mode due to loss of power to the machine, cycle the machine OFF/ON to initialize and restore the normal printing mode before you try to remove and re-install the fusing unit.



- **Fusing Unit**

The Fusing Unit is a unit that fuses the complete toner image transferred on the sheet with the sheet by heat and pressure. The Fusing Unit mainly consists of the following components.

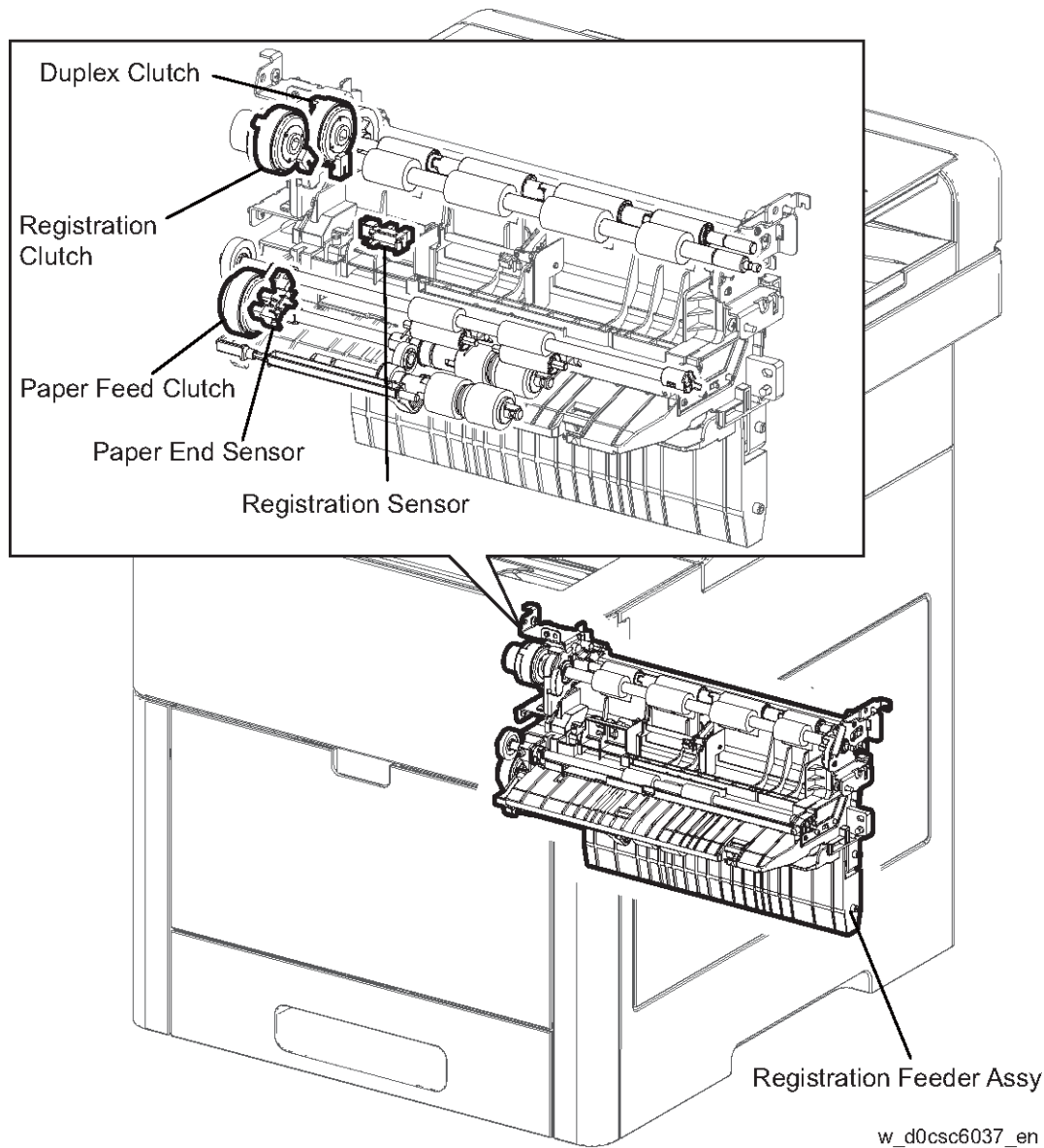
- **Heat Roller**
A spouted metal roller, which has the surface for giving heat to fuse toner on a sheet covered by the tube.
- **Pressure Belt**
A belt contains the pressurization system inside. Paired up with the Heat Roller, impresses toner on the sheet.
- **Heating Lamp**
A lamp that seals the heat coil as a heat source in the Heat Roller and that is stored inside the Heat Roller. A heating element that heats up the Heat Roller.
- **Thermostat (TH1)**
Located in series with the power source of the Heating Lamp, and prevents the secondary excess rise of temperature by the open interface when the temperature excess rise preventions (primary) by Fusing Thermistor fails and temperature on the interface part reaches to a certain level.
- **Fusing Thermistor (Center) (TH2)**
A thermistor as an electric resistor that reacts corresponding with temperature changes, located in non-contact with the Heat Roller, and detects the surface temperature on the Heat Roller. Prevents the abnormally high temperature of the Heat Roller.
- **Fusing Thermistor (Edge) (TH3)**
A thermistor as an electric resistor that reacts corresponding with temperature changes, located in contact with the Heat Roller, and detects the surface temperature on the Heat Roller. Prevents the abnormally high temperature of the Heat Roller.

- **Nip Retract Drive Assy**

The Nip Retract Drive Assy transmits the drive of the Fusing Envelope Motor (M5) to the Nip Retract Shaft Assy and switches the position of the Pressure Roller to the one for the Envelope Mode. The Nip Retract Drive Assy mainly consists of the following components.

- **Fusing Envelope Motor (M5)**
A motor that rotates the Nip Retract Shaft Assy and switches the position of the Pressure Roller to the one for the Envelope Mode.
- **Envelope Mode Sensor (S9)**
A sensor that detects the state that the Envelope Mode is on/off.

7.4.8 PAPER TRANSPORT



- **Registration Clutch (CL1)**

Transfers the drive of the Paper Feed/K Development Motor (M1) to the Registration Roller.

- **Registration Feeder Assy**

The Registration Feeder Assy mainly consists of the following components.

- Paper End Sensor (S2)

By change of the feeler, detects presence or absence of paper in the Main Tray.

- Registration Sensor (S1)

Detects that a lead edge of a sheet is reached to the registration section.

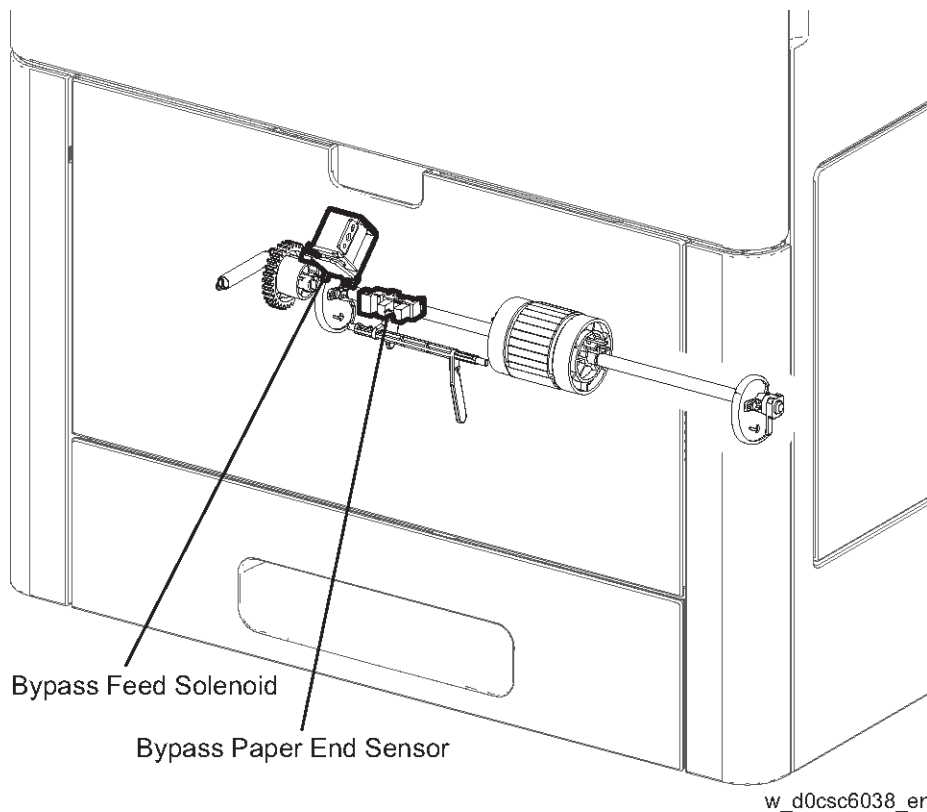
- **Paper Feed Clutch (CL3)**

Transfers the drive of the Paper Feed/K Development Motor (M1) to the Feed Roller.

- **Duplex Clutch (CL2)**

Transfers the drive of the Paper Feed/K Development Motor (M1) to the Duplex Roller inside the Duplex Assy.

7.4.9 BYPASS FEED



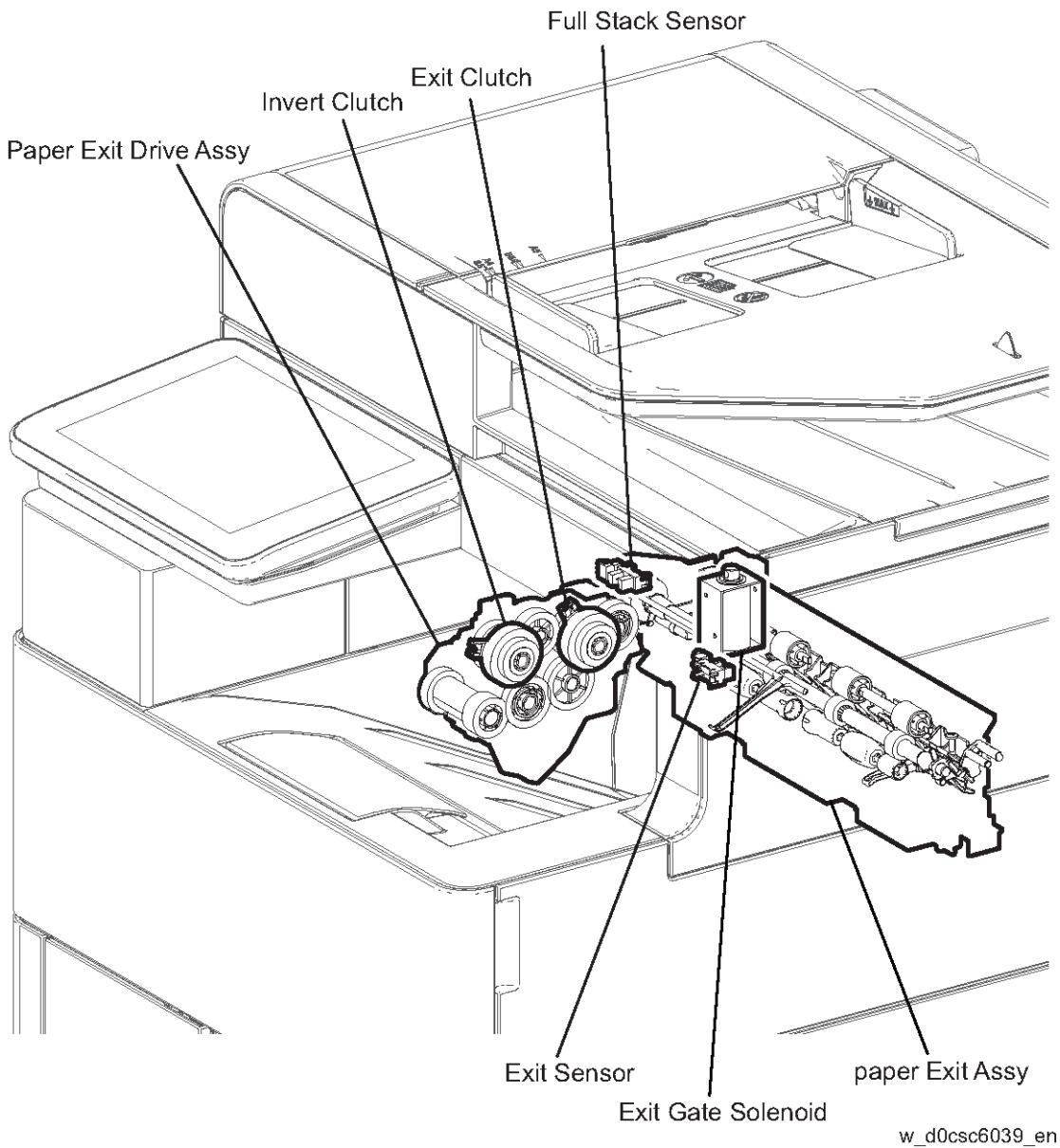
- **Bypass Paper End Sensor (S6)**

By change of the feeler, detects presence or absence of paper in the Bypass Tray.

- **Bypass Feed Solenoid (SOL2)**

Transfers the drive of the Paper Feed/K Development Motor (M1) to the Bypass Feed Roller.

7.4.10 EXIT



- **Paper Exit Assy**

The Paper Exit Assy mainly consists of the following components.

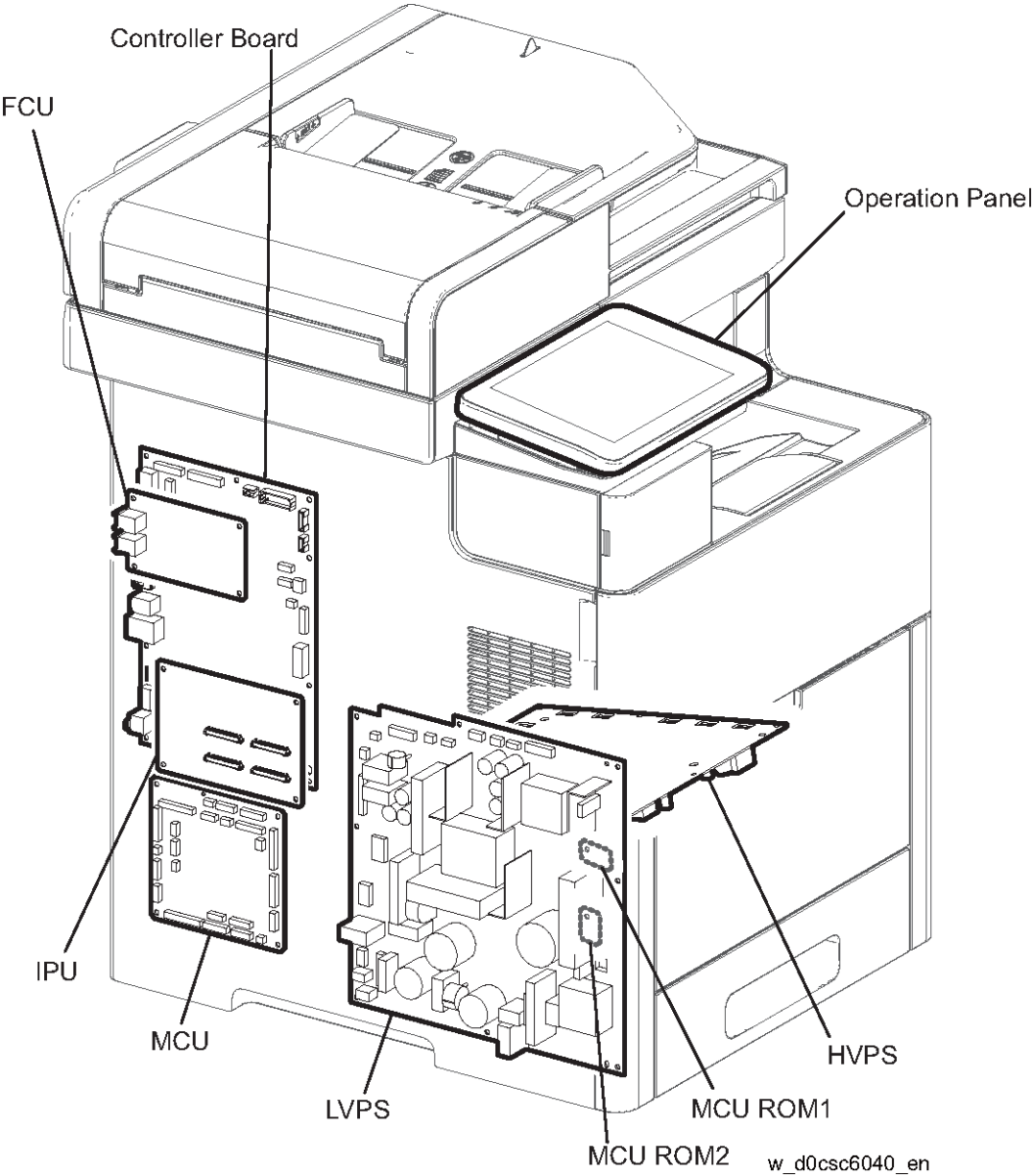
- **Exit Sensor (S5)**
Detects the state that a sheet is passed through the fusing unit.
- **Full Stack Sensor (S4)**
Detects the state that [the exit tray] is full.
- **Exit Gate Solenoid (SOL1)**
A solenoid that moves the Gate that switches [the paper exit].

- **Paper Exit Drive Assy**

The Paper Exit Drive Assy mainly consists of the following components.

- Exit Clutch (CL5)
Transfers the drive of the Main Motor (M2) to the Exit Roller. The Exit Roller rotates in the paper exit direction.
- Invert Clutch (CL4)
Transfers the drive of the Main Motor (M2) to the Exit Roller. The Exit Roller rotates in the duplex feed direction.

7.4.11 ELECTRICAL



- **Controller Board (PCB1)**

A printer controller. Controls printing by communicating with the MCU (PCB2), IPU (PCB3), and Operation panel.
- **MCU (PCB2)**

Performs communication with the printer controller and controls each component in printing.
- **IPU (PCB3)**

Controls printing by communicating with the MCU (PCB2) and LED Head Assy.
- **LVPS (PCB4)**

Generates each voltage of +24VDC and +5VDC from the AC power source to provide each component.
- **HVPS (PCB5)**

Provides high voltage to the Image Transfer Roller consisted in the ITB Unit and the Development Roller and Charge Roller consisted in the PCDU of each color.
- **FCU (PCB6)**

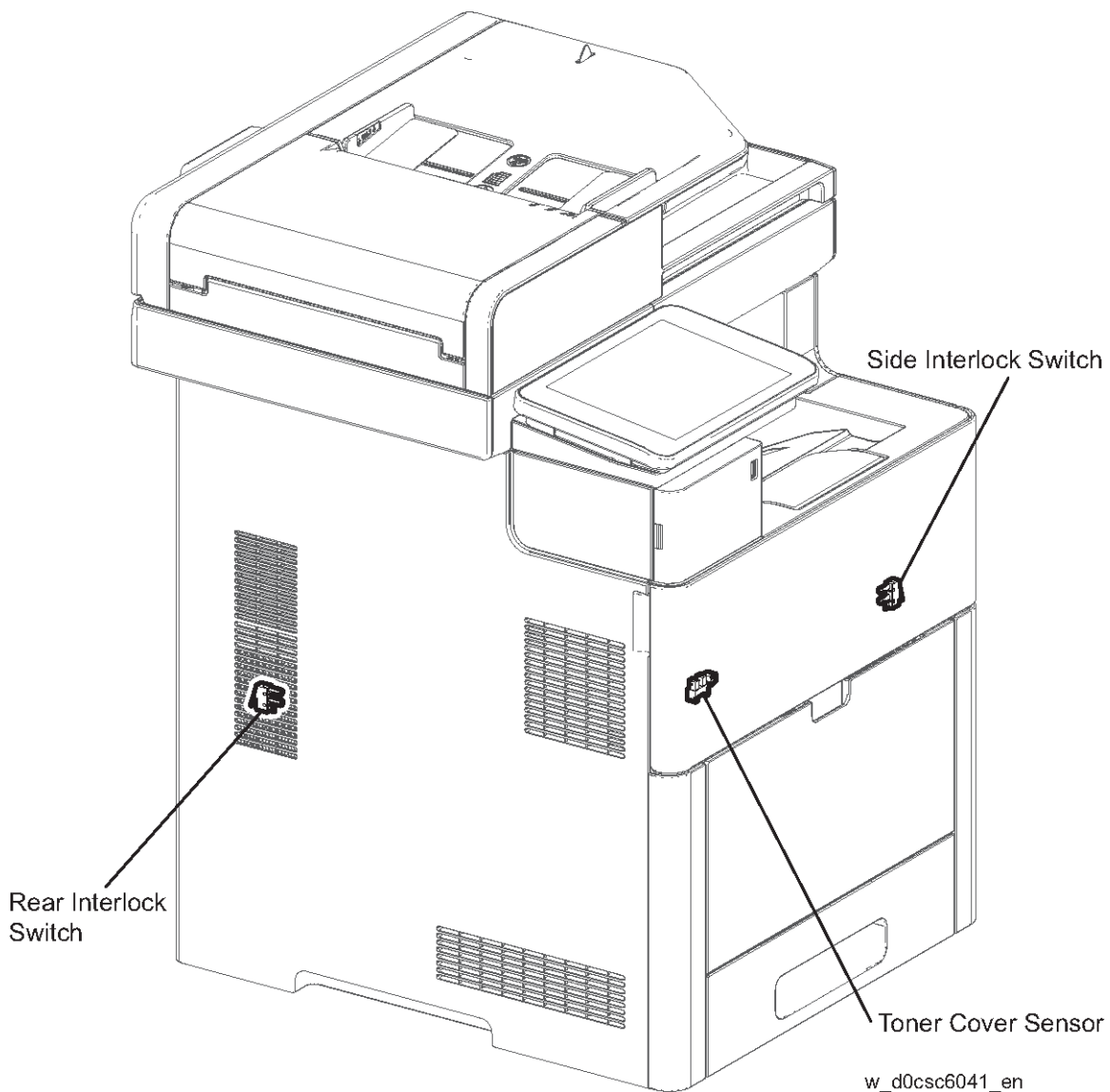
Controls the fax communication.
- **Operation Panel**

The Operation Panel displays the state of the printer and fax using LCD, and operate the printer and fax.
- **MCU ROM1 (PWB EEPROM) (PCB12)**

Stores the values used by the engine board (MCU). **Non-replaceable**
- **MCU ROM2 (PWB ASSY NVM) (PCB13)**

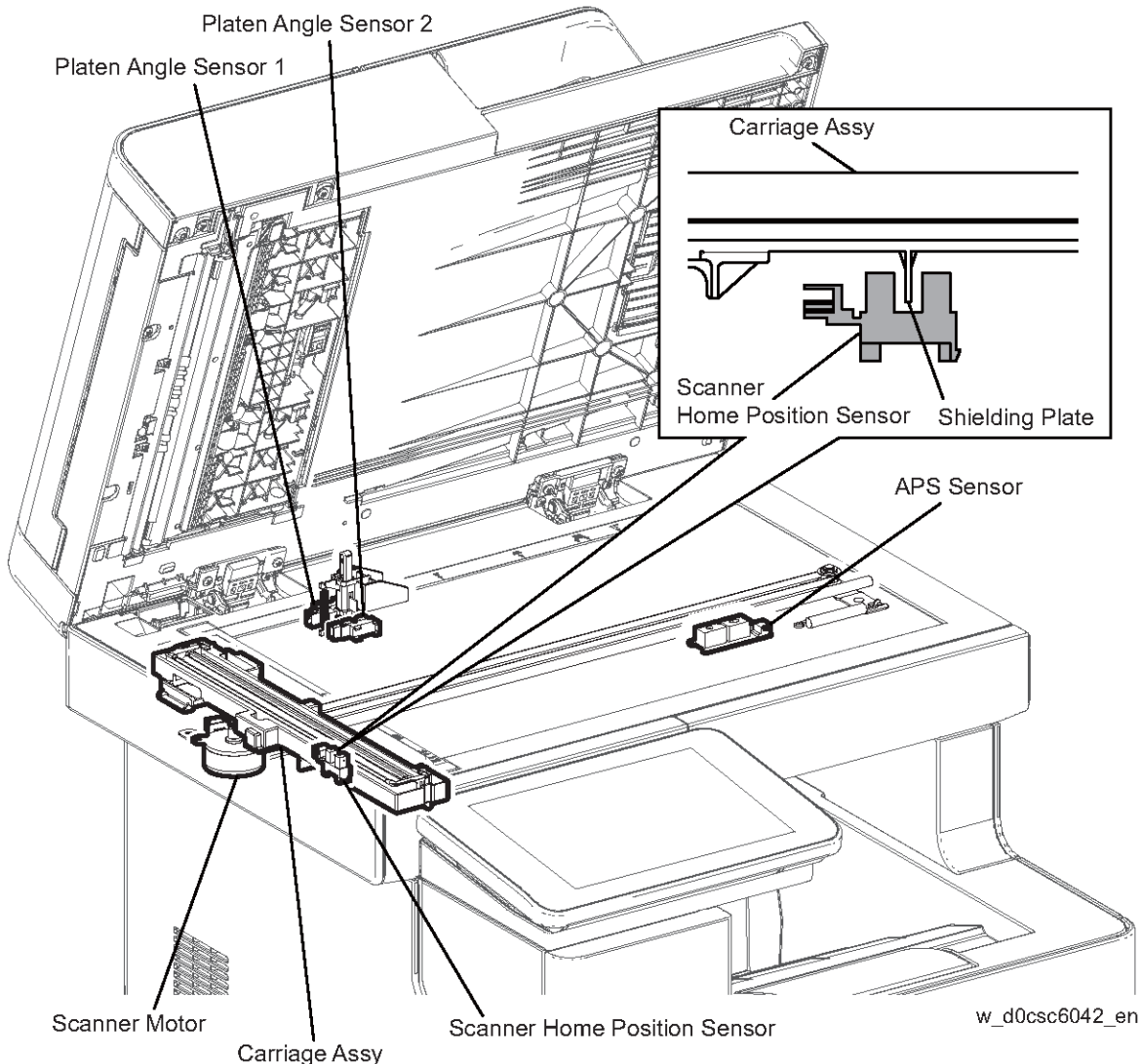
Stores the values used by the engine board (MCU). **Non-replaceable**

7.4.12 INTERLOCK



- **Rear Interlock Switch (SW1)**
 Detects the opening/closing of the rear cover.
- **Side Interlock Switch (SW2)**
 Detects the opening/closing of the waste toner bottle cover. The waste toner bottle cover does not close when the the Waste Toner Bottle is not set.
- **Toner Cover Sensor (S8)**
 Detects the opening/closing of the toner cover.

7.4.13 SCANNER AND SPDF



- **Scanner Unit**

- Scanner Motor (M10)

The stepping motor that drives the Carriage Assy.

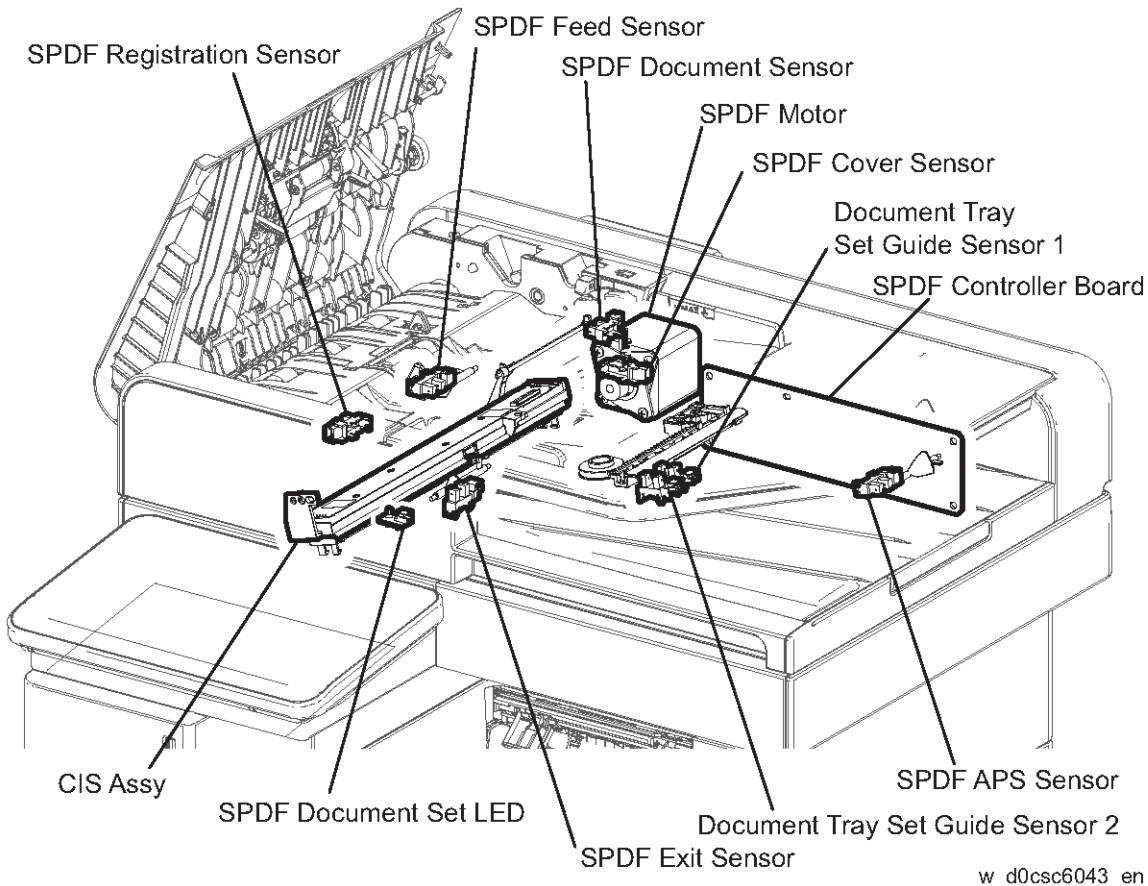
- Scanner Home Position Sensor (S13)

The part of the rear side of the Carriage Assy frame functions as an actuator and blocks the light of the Scanner Home Position Sensor, thus detecting the registration position.

This sensor detects the home position of the Carriage Assy. When the Carriage Assy is at the home position, the light is shielded, and when being not at the home position, the light is received.

When the Carriage Assy is at the center of the platen, the sensor receives the light to detect that the Carriage Assy is not at the home position.

- Platen Angle Sensor 1/2 (S14, S15)
Detects the open/close of the platen.
- APS Sensor (S16)
Detects the document size on the exposure glass.



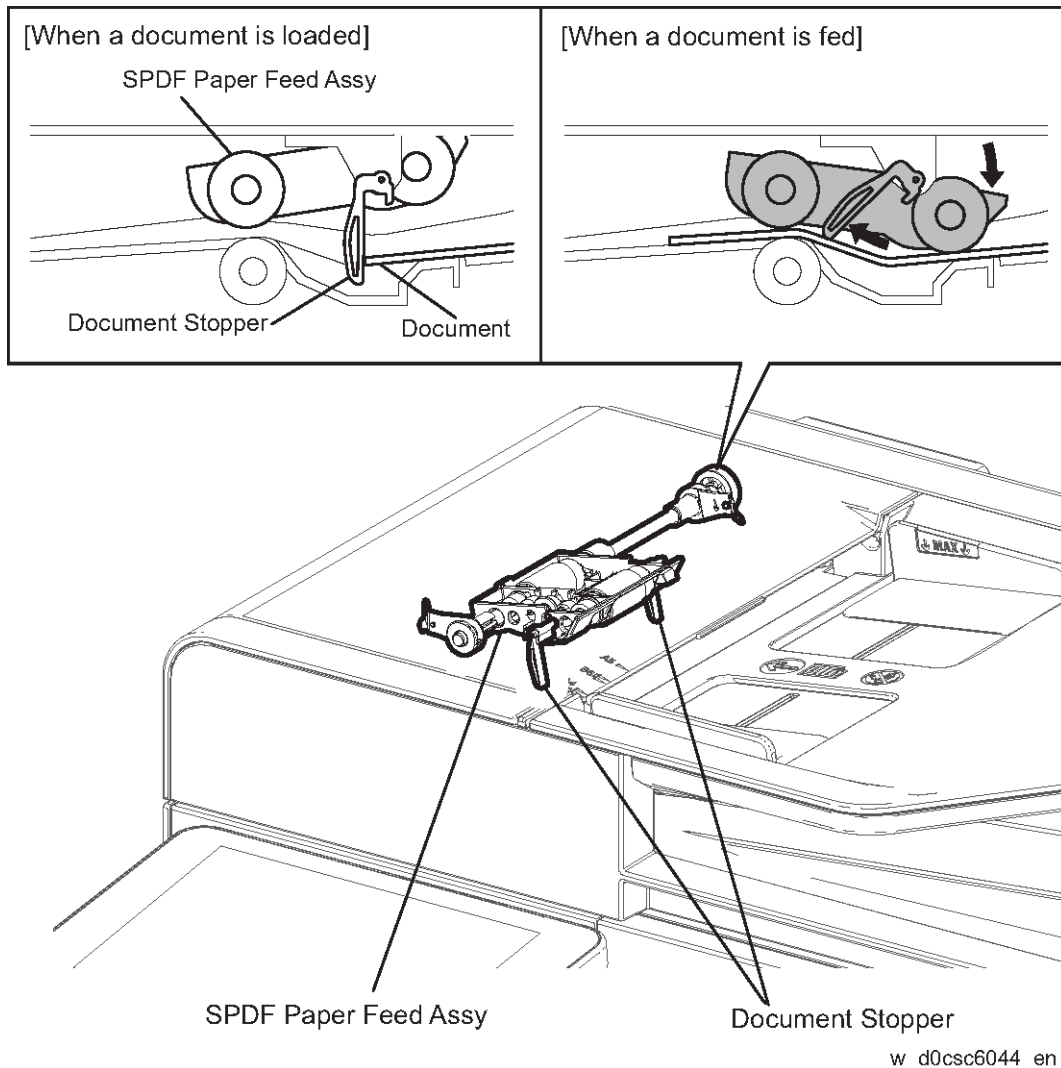
- **SPDF Unit**

- SPDF Document Sensor (S17)
A sensor that detects the presence or absence of a document on the SPDF Feeder Tray.
- SPDF Cover Sensor (S18)
A sensor that detects whether or not the SPDF Top Cover is open.
- SPDF Feed Sensor (S19)
Located near side of the SPDF Feed Roller and detects the paper passing.
- SPDF Registration Sensor (S20)
Located near side of the SPDF Registration Roller and detects the paper passing.
- SPDF Motor (M11)
The SPDF Motor (M11) rotates the SPDF Pick-up Roller, SPDF Feed Roller, SPDF Pull-out Roller, SPDF Registration Roller, SPDF Transport Roller, and SPDF Exit Roller.

- CIS Assy
Scans the image on the back side of the document in the duplex mode.
- SPDF Controller Board (PCB17)
Controls the whole SPDF system.
- SPDF Exit Sensor (S21)
Detects the paper passing the paper path around the exit.
- SPDF Document Set LED
Turns on when the document is placed on the tray. Turns off when the document is removed.
- Document Tray Set Guide Sensor 1/2 (S22, S23)
Detects the paper width set on the SPDF feeder. Turns on and off depending on [the side guide] position.
- SPDF APS Sensor (S24)
Detects the paper length set on the SPDF feeder in the paper feed direction. Turns off when the LG size sheet is set.
- Document Stopper
When a document is loaded in the SPDF, the Document Stopper is locked to prevent the document from being moved forward.

When the SPDF starts feeding, the front portion of the Pickup Assy is lowered. This unlocks the Document Stopper that blocks the document, and the Document Stopper is pressed by the lead edge of the document in the feed direction and the document is fed.

When the paper feed is completed, the Pickup Assy returns to its original position.



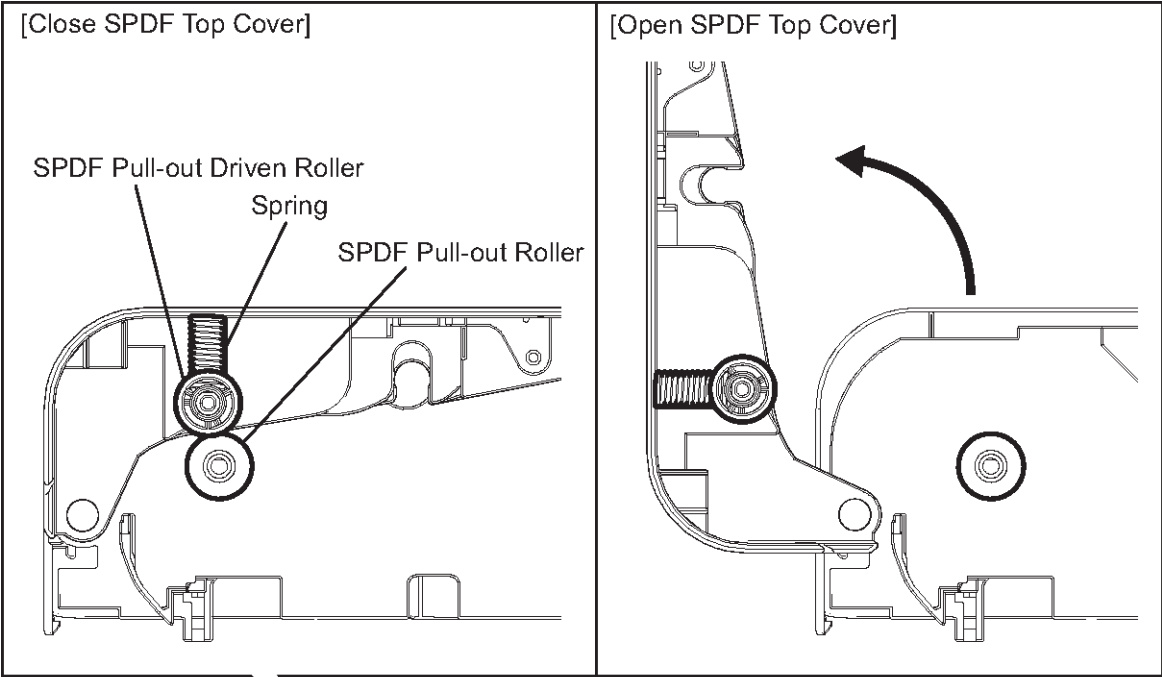
- SPDF Pull-out Driven Roller

The SPDF Pull-out Driven Roller is normally pressed against the direction of the SPDF Pull-out Roller by the spring pressure.

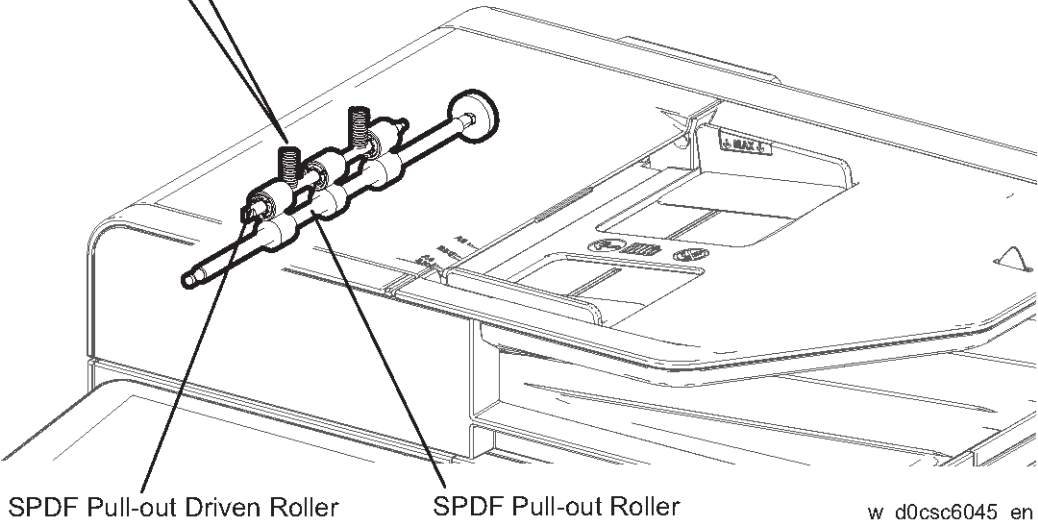
Documents are fed through between the SPDF Pull-out Driven Roller and the SPDF Pull-out Roller to the Scanner Home Position by the rotation of the SPDF Pull-out Roller.

If a jam occurs between the SPDF Pull-out Driven Roller and the SPDF Pull-out Roller, it is hard to retrieve documents due to the high spring pressure of SPDF Pull-out Driven Roller.

In order to retrieve jammed documents, open the SPDF Top Cover to release the spring pressure, and make enough clearance between the SPDF Pull-out Driven Roller and the SPDF Pull-out Roller.



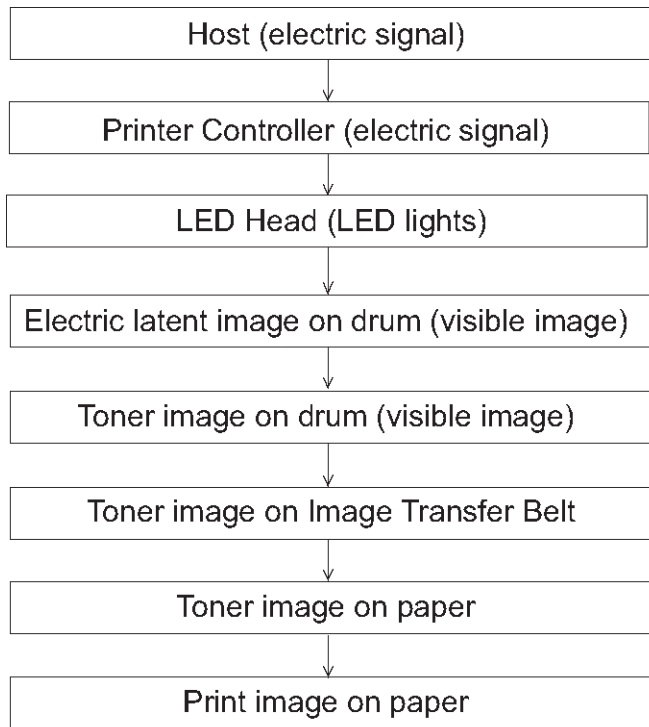
6B Detailed Descriptions



7.5 DATA FLOW

7.5.1 DATA FLOW

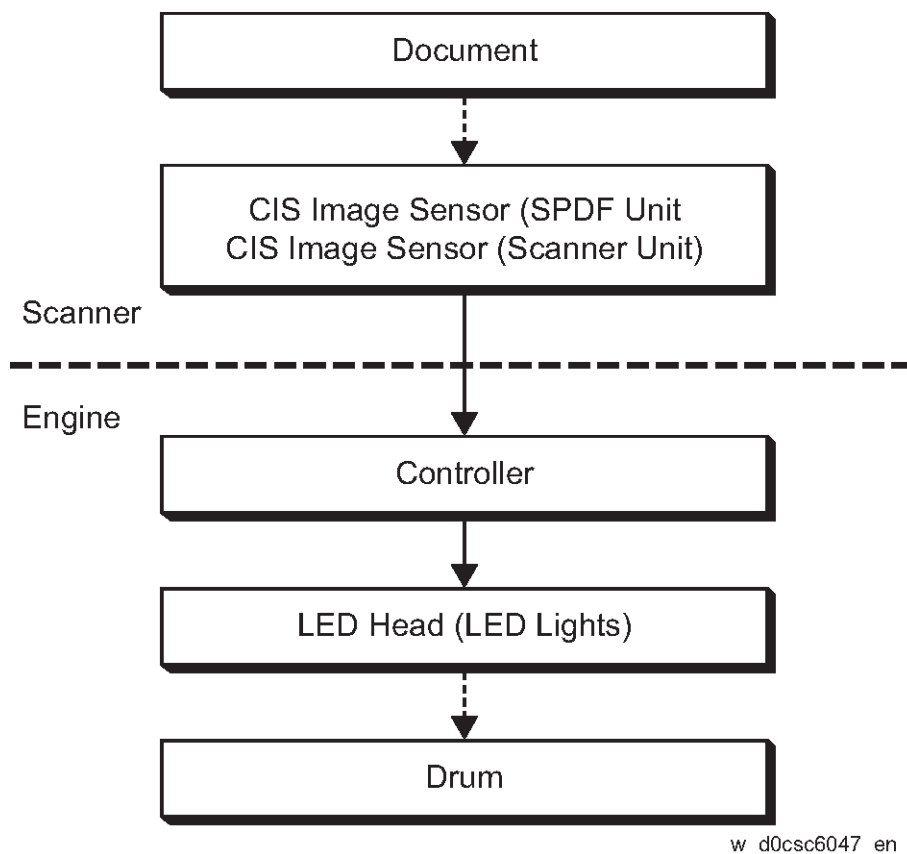
The print data (electric signal) from the printer controller flows as shown below before it is turned into a print.



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7.5.2 DATA FLOW (SCANNER)

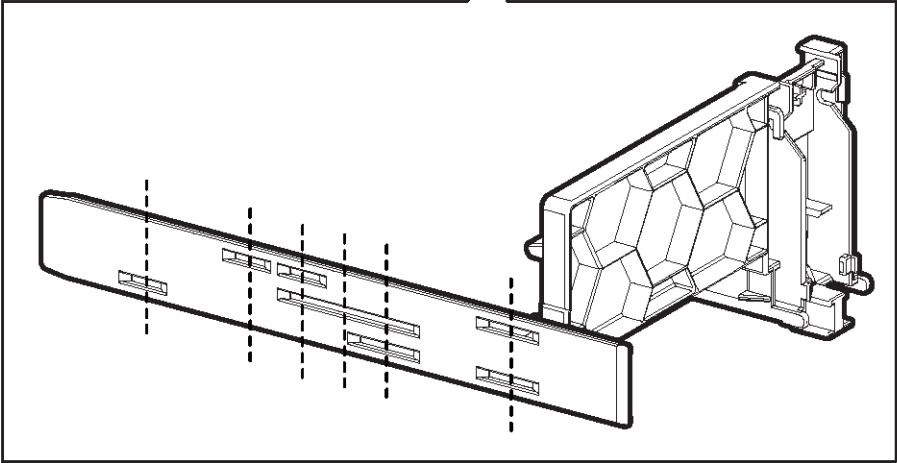
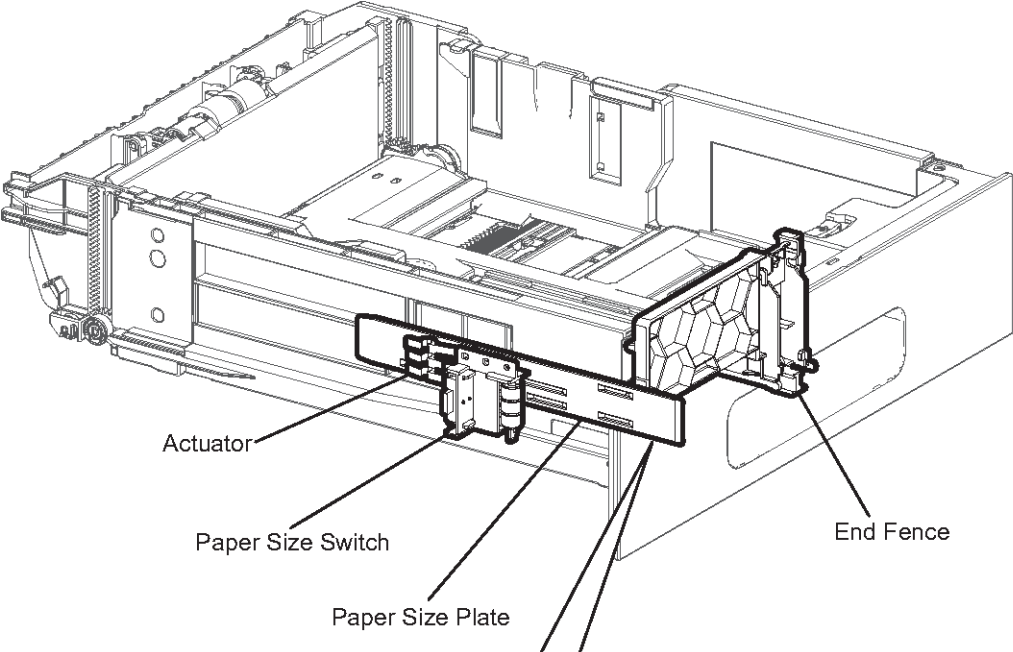
The image data from the document set on the scanner or SPDF goes through the following components before it is printed at the Engine section.



7.6 CONTROL

7.6.1 PAPER SIZE DETECT

Load paper in the paper cassette, and adjust the Left Side Fence, Right Side Fence, and End Fence to the paper size. Linked with the End Fence, the position of the Paper Size Plate is changed, and the three actuators on the side of the tray press the Paper Size Switch (SW3) in. The paper size is determined corresponding with a combination of how the Paper Size Switch (SW3) is pressed in.



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7.6.2 PROCESS CONTROL

Process Control

The parameters related to image formation must be corrected to stabilize printing. The control of the entire printing process including the parameter correction control is called "process control".

The process control is performed by the following two methods after every 30 cumulative prints upon termination of a print run or during a continuous run:

- Potential Control
- Toner Density Control

To supplement these two controls, the following controls are provided:

- High Area Coverage Mode
- Admix Mode

Potential Control

To stabilize the print image density, the drum charging voltage, the developing DC voltage, and the LED light amount of the LED Head are adjusted according to the ever-changing developing capability of each color developer.

The adjusted drum charging voltage, the developing DC voltage, and the LED light amount of the LED Head are fed back to keep the print image density constant.

The outline of control is as follows:

1. SENSOR HUM AND TEMP (Humidity and Temperature Sensor) detects the temperature and humidity.
2. The patches of respective colors (yellow, magenta, cyan, and black) for the potential control are generated and transferred onto the Image Transfer Belt.
3. The ID Sensor detects the density of the patches on the Image Transfer Belt.
4. The drum charging voltage, the developing DC voltage, and the LED light amount of the LED Head are adjusted for each color according to the detected patch density.

Toner Density Control

The toner density must be kept constant to stabilize the print image quality. The control system for this purpose is called toner density control.

1. Image Count Dispense Control

The quantity of the toner to be consumed in the developing process is calculated in terms of toner-dispensing time based on the quantity of the video signals that have been input to the LED Head.

The amount of the toner to be fed to the developer section is controlled by turning on the Toner

Motor for the toner-dispensing time thus calculated.

2. Auto Density Control

The patches of respective colors (yellow, magenta, cyan, and black) for the toner density control are generated under the specified potential condition, and then transferred onto the Image Transfer Belt. The ID Sensor measures the densities of these patches and compares them with the reference value. If the toner density is lower than the reference value, the toner dispense quantity is increased at the next printing. If the toner density is higher than the reference value, the toner dispense quantity is reduced at the next printing. The toner dispense quantity is calculated in terms of the toner-dispensing time on a color-by-color basis.

High Area Coverage Mode

A continuous printing of a high area coverage data that exceeds the extra toner dispense capability causes the toner density in the developer to be lowered.

The High Area Coverage Mode postpones the next page feed and dispenses the toner during this time if the toner dispense time has reached the specified value during a continuous printing.

Admix Mode

This mode executes extra toner dispensation to prevent the toner density from being lowered whenever the value of the toner density control patch measured by the ID Sensor falls far below the reference value. If the toner density level cannot be recovered even after this operation, it is determined that the toner has run out.

ID Sensor Adjustment

The ID Sensor is a reflection type sensor that irradiates the light from its LED onto the target and detects the reflected light at its photoreceptor and outputs electric signals responsive to the amount of the detected light. To ensure an accurate patch density measurement, the surfaces of the ID Sensor is cleaned to remove soil due to toner, etc., and the light quantity adjustment is made so that the reflected light quantity satisfies the predetermined value when the patch for potential control and toner density control are created.

7.6.3 COLOR REGISTRATION CONTROL

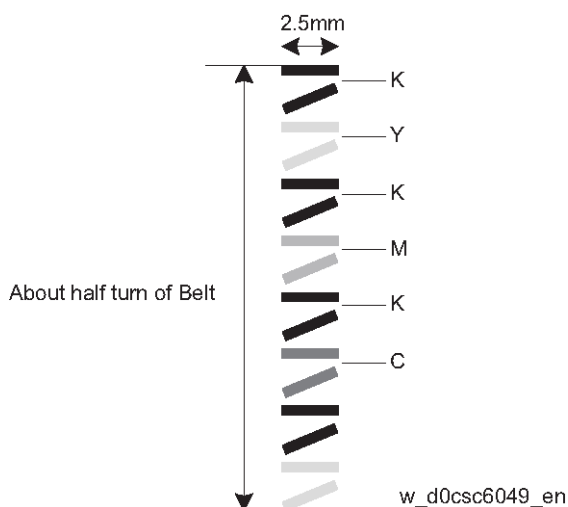
The printer uses a tandem system where the drums and developers are arranged respectively for each of yellow, magenta, cyan, and black colors. Since the four color-separated images are overlaid one another onto the print medium, a color shift may occur. The color registration control calculates how much the registration is shifted, and adjusts the LED Head write timing.

The lateral registration control adjusts all of the four colors in lateral directions.

The color registration control is executed during a process control based on the change in the internal temperature and the print count.

The control is outlined below:

1. With no toner except for K toner patch on the Belt, the output values of the MUSIC Sensor and the ID/MUSIC Sensor are measured to determine the threshold value and the light intensity value.
2. The patch for color registration control is generated on the Image Transfer Belt. This patch is composed of four cycles of a color pattern, each containing 2.5mm wide color horizontal lines and diagonal lines followed by K, Y, K, M, K, and C (in this order).



3. The density of the patch is measured by the MUSIC Sensor and the ID/MUSIC Sensor.
4. The shift correction amount is calculated from the threshold value determined in 1) and the patch density measured in 3).
5. The LED Head write timing is changed according to the shift correction amount.

7.6.4 FUSING ASSY CONTROL

Fusing Assy Temperature Control

To control the Fusing Assy temperature, the target temperature is set, and then the Heating Lamp is turned on/off so that the surface temperature of the Heat Roller satisfies the target value.

The surface temperature of the Heat Roller is detected by the Fusing Thermistor (NC Sensor = Non Contact Sensor) at the center of the Heat Roller and the Fusing Thermistor at the end section. When the temperature detected is higher than the target value, the Heating Lamp will be turned OFF. When the temperature is below the target value, the Heating Lamp will be turned ON.

However, the Fusing Thermistors may detect a temperature lower than the actual value when an error occurs during the temperature detection. To prevent, in such a case, the Heating Lamp from activating for too long a duration until it melts or burns the Fusing Assy, the Heating Lamp is turned off unless Warm-up is completed within the specified time.

The target temperature varies depending on the printer status such as Warm-up, Printing, or Process Control, and is calibrated according to the interior temperature detected by the Humidity and Temperature Sensor, the temperature difference between the middle and the ends of the Heat Roller, the printing mode, and the input power supply voltage.

Cooling Down

As the printing continues, the temperature of the Heat Roller becomes nonuniform between the area that contacts the sheet and the area that does not. In such a case, the paper feeding is suspended for a certain duration to compensate for the temperature nonuniformity of the Heat Roller. This is called "Cooling Down".

When the temperature of the Heat Roller end is high, cooling down is performed to lower the temperature to the target value.

7.6.5 DOCUMENT SCANNING STEPS

A CIS Image Sensor is used to read image data from the document. To ensure stabilized image reading, the CIS Image Sensor output is adjusted. Adjustment includes Automatic Gain Control (AGC) and Automatic Offset Control.

Reference data for adjustment is collected and used to perform compensation on the read image data. Compensation includes shading compensation, white variation compensation, and black variation compensation.

These adjustment and compensation steps are described below.

Reference data is obtained by reading image data from a white reference plate via the CIS image sensor.

AGC (Auto Gain Control): White Level Variation Adjustment

During AGC, the Scanner ASSY is moved to the position of the white reference plate, and the Exposure Lamp is illuminated. The light reflected from the white reference plate is read by the CMOS Image Sensor as the white reference value, which is used to adjust CMOS Image Sensor output.

Auto Offset Control

Auto Offset Control is performed by turning off the Exposure Lamp after AGC. This state is read by the CMOS Image Sensor as the black reference value, which is used to adjust CMOS Image Sensor output. (The order of AGC and Auto Offset Control adjustment depends on the model.)

Shading Compensation

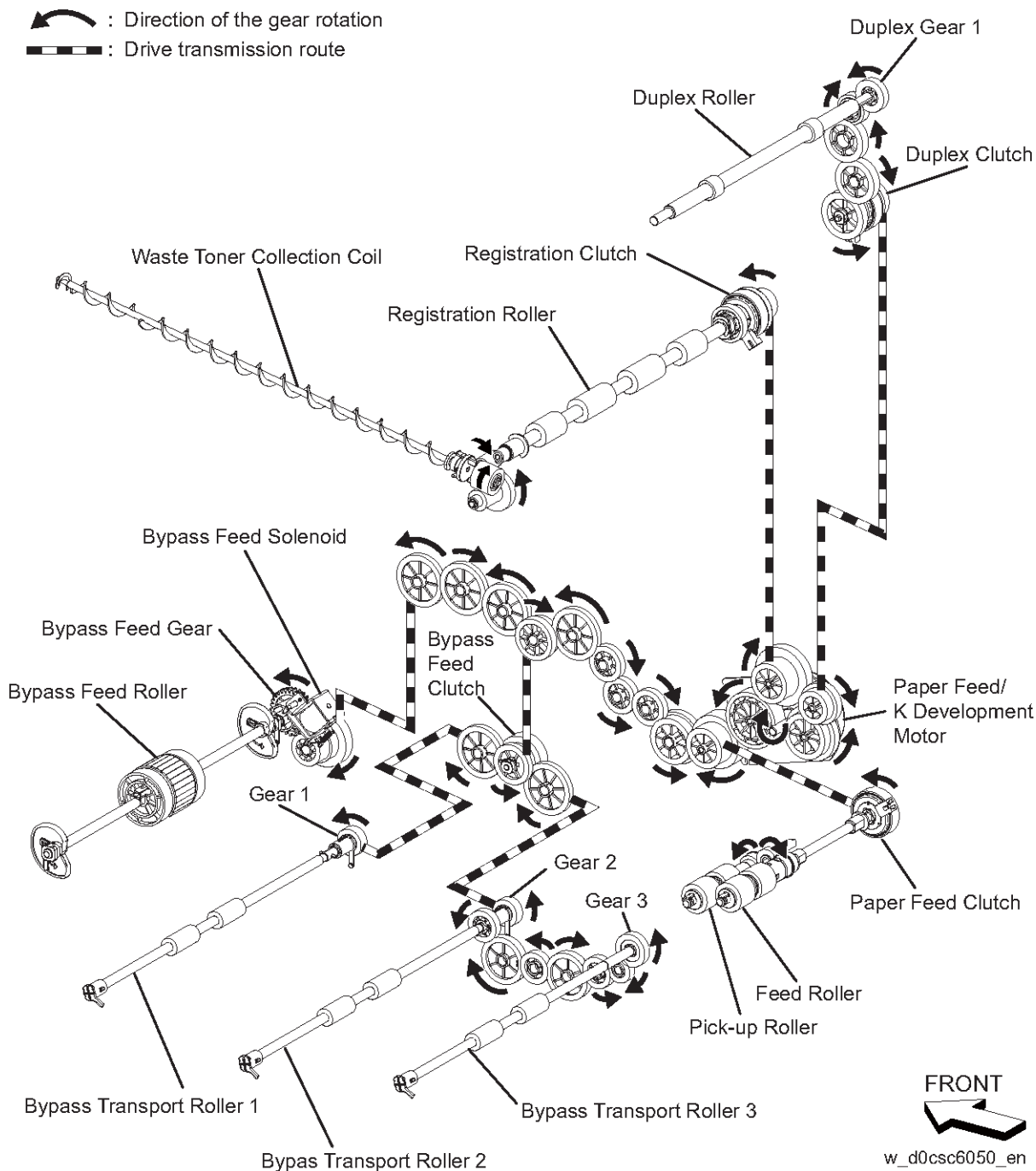
Shading compensation compensates for pixel-by-pixel sensitivity variations and the nonuniformity of lamp light in the fast scanning direction. The AGC and Auto Offset Control adjustment values are used to compensate for the image data read by the CIS Image Sensor.

7.7 DRIVE TRANSMISSION ROUTE

This section describes the drive transmission between the motors and gears.



7.7.1 PAPER FEED (BYPASS FEED TO REGISTRATION)

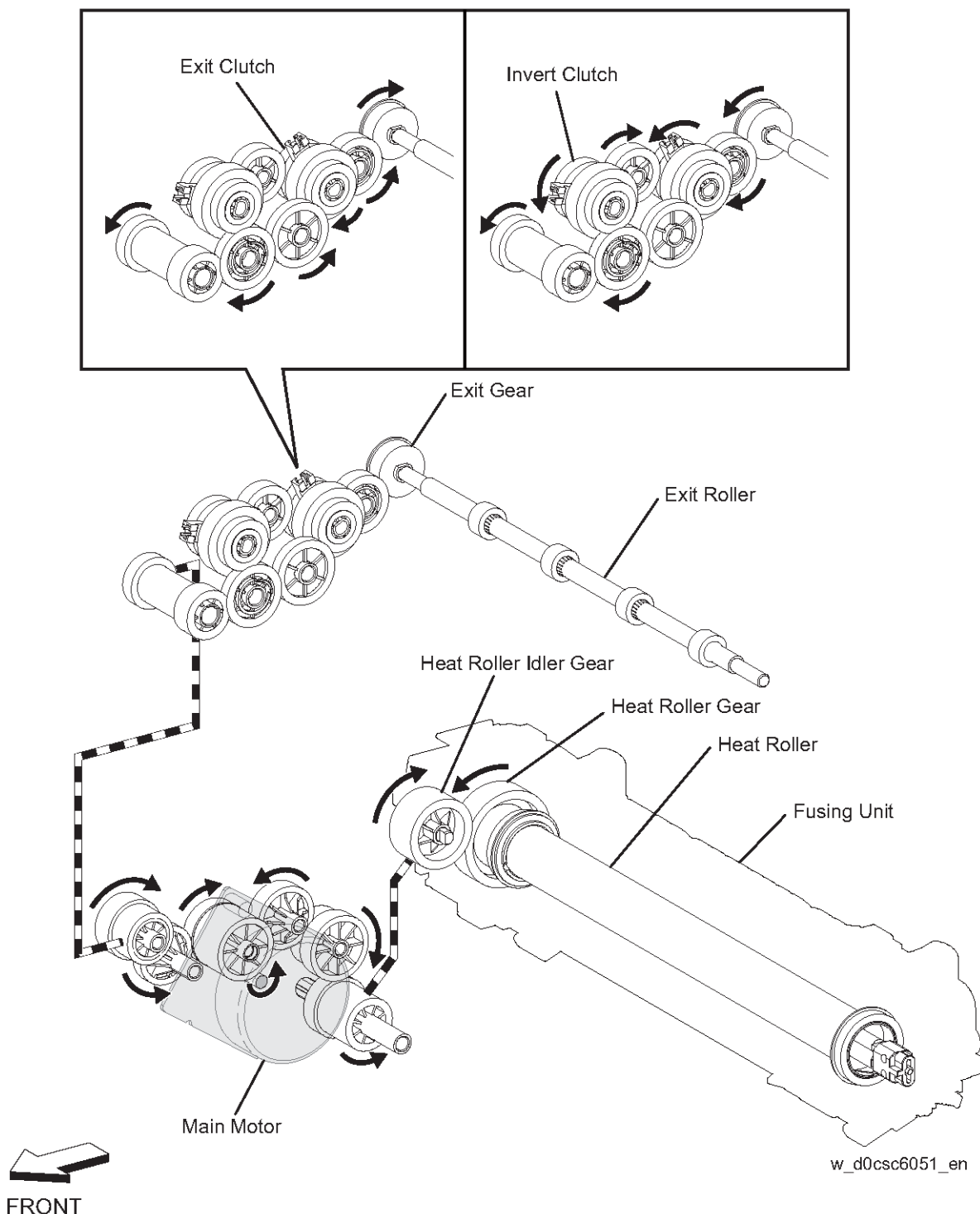
The illustration describes the drive transmission from the Bypass Feed section to the registration section, where the rolls and gears are driven by the Paper Feed/K Development Motor (M1).



7.7.2 PAPER FEED (FUSING TO EXIT)

The illustration describes the drive transmission from the fusing section to the exit section, where the rolls and gears are driven by the Main Motor (M2).



-  : Direction of the gear rotation
-  : Drive transmission route

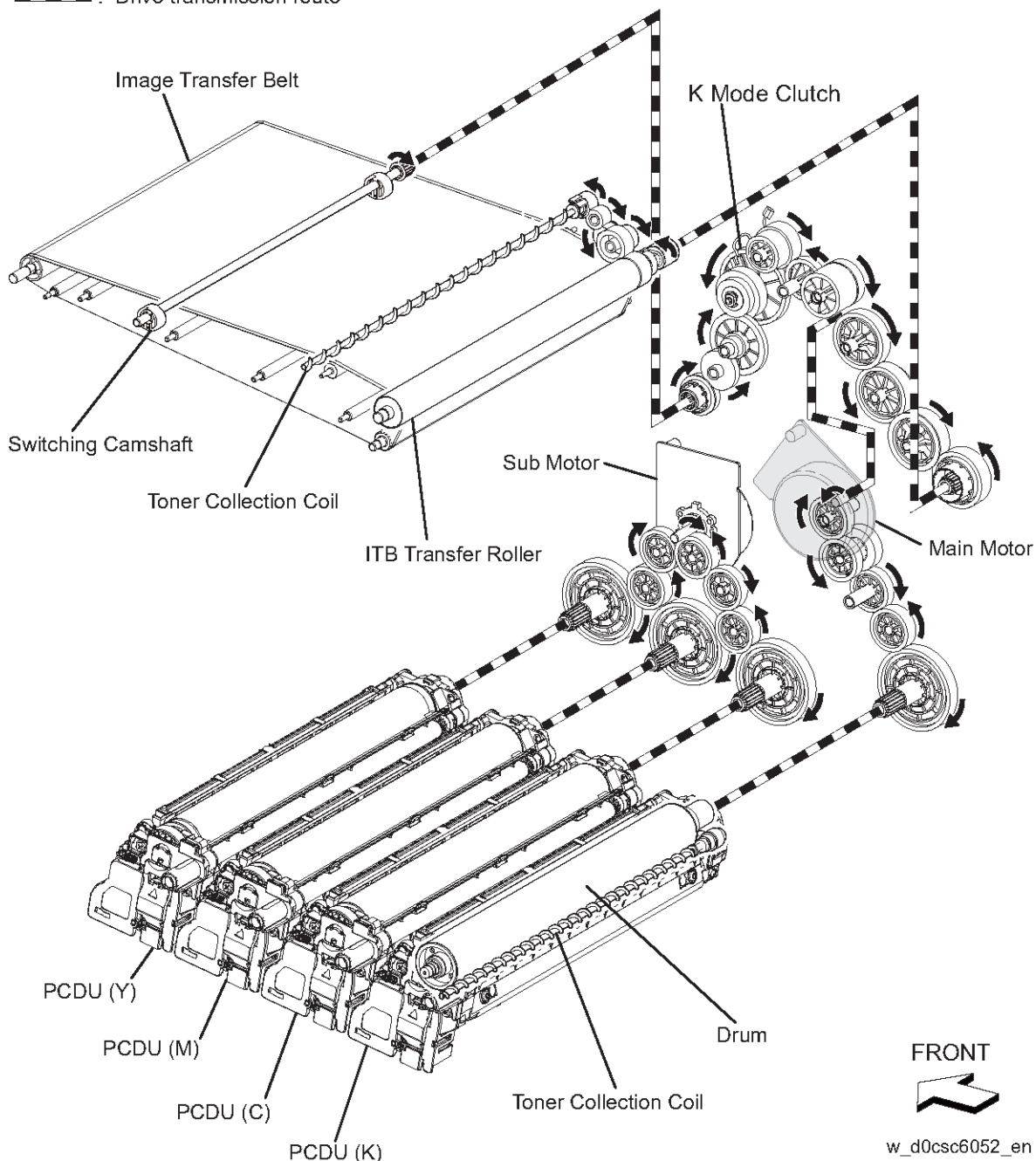


7.7.3 DRUM AND IMAGE TRANSFER BELT

The illustration describes the drive transmission of the Drum and the Image Transfer Belt.

The Main Motor (M2) drives the rolls and gears of the Drum (K) and the Image Transfer Belt. The Sub Motor (M3) drives the rolls and gears of the Drums (Y/M/C).

-  : Direction of the gear rotation
-  : Drive transmission route



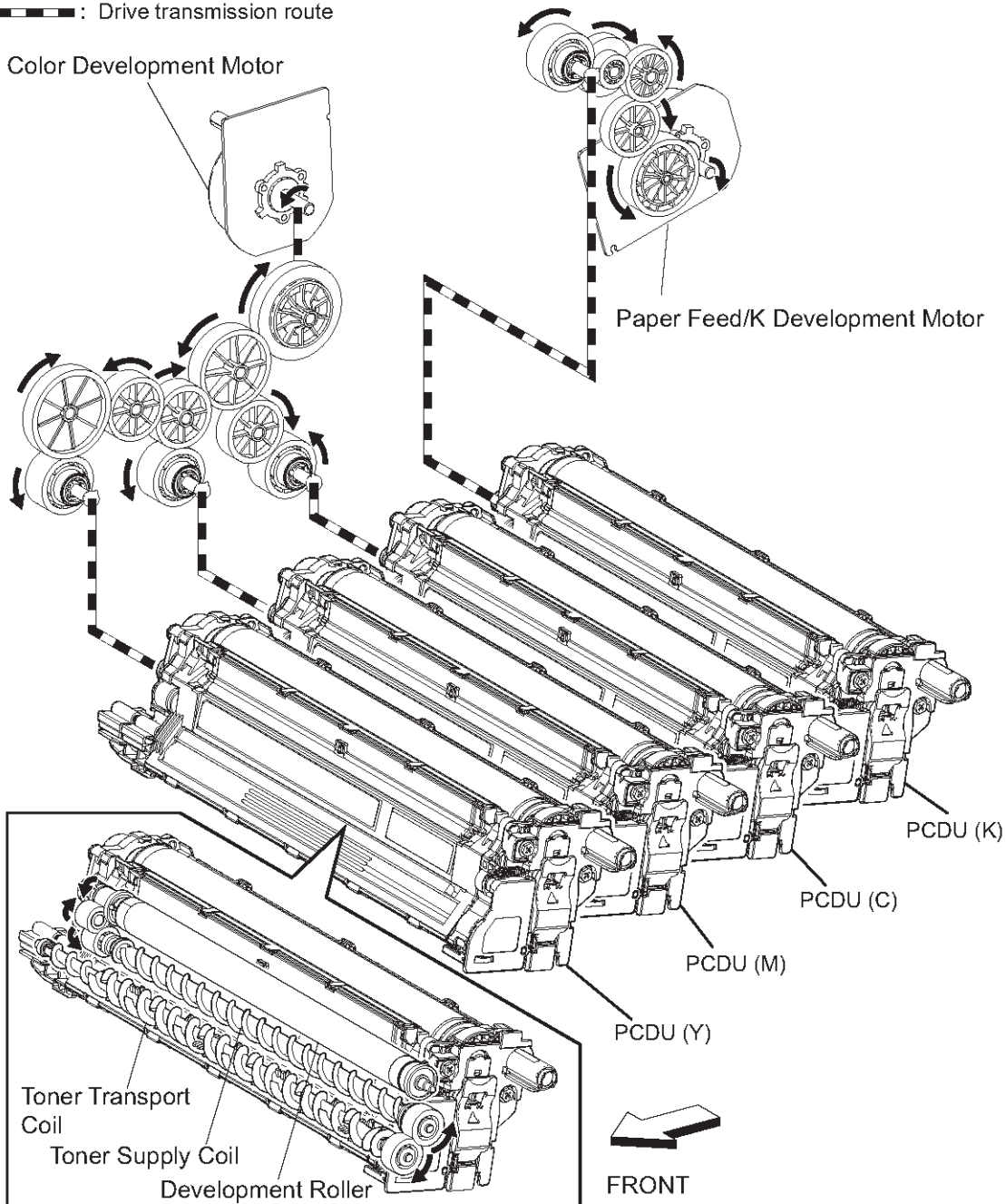
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7.7.4 DEVELOPMENT

The illustration describes the drive transmission of the development components.

The Paper Feed/K Development Motor (M1) drives the rolls and gears of the development components (K). The Color Development Motor (M4) drives the rolls and gears of the development components (Y/M/C).

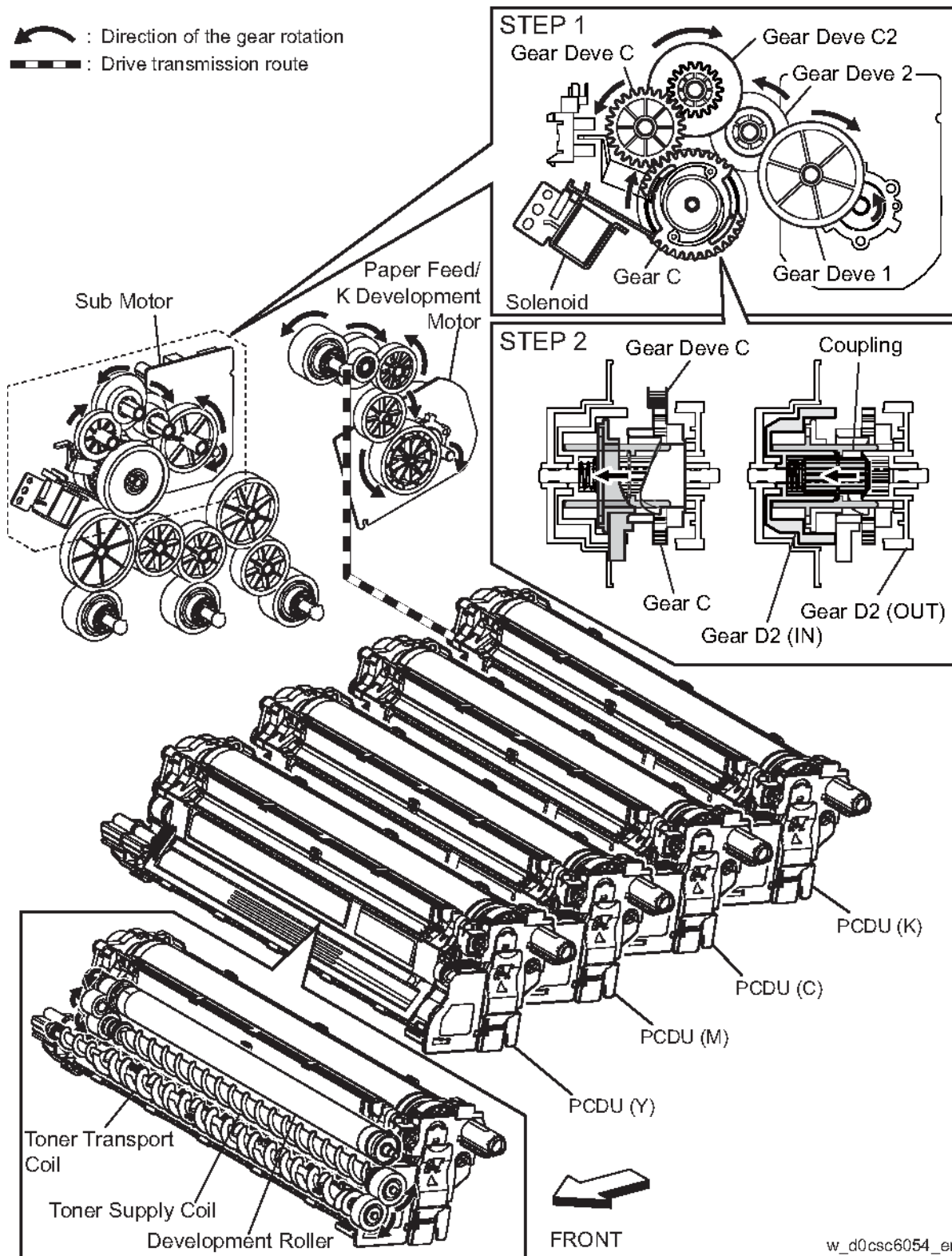
↻ : Direction of the gear rotation
 - - - : Drive transmission route



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When the drive of the Sub Motor (M3) is not transmitted to the Development Roller (Y/M/C)



↻ : Direction of the gear rotation
 ─── : Drive transmission route

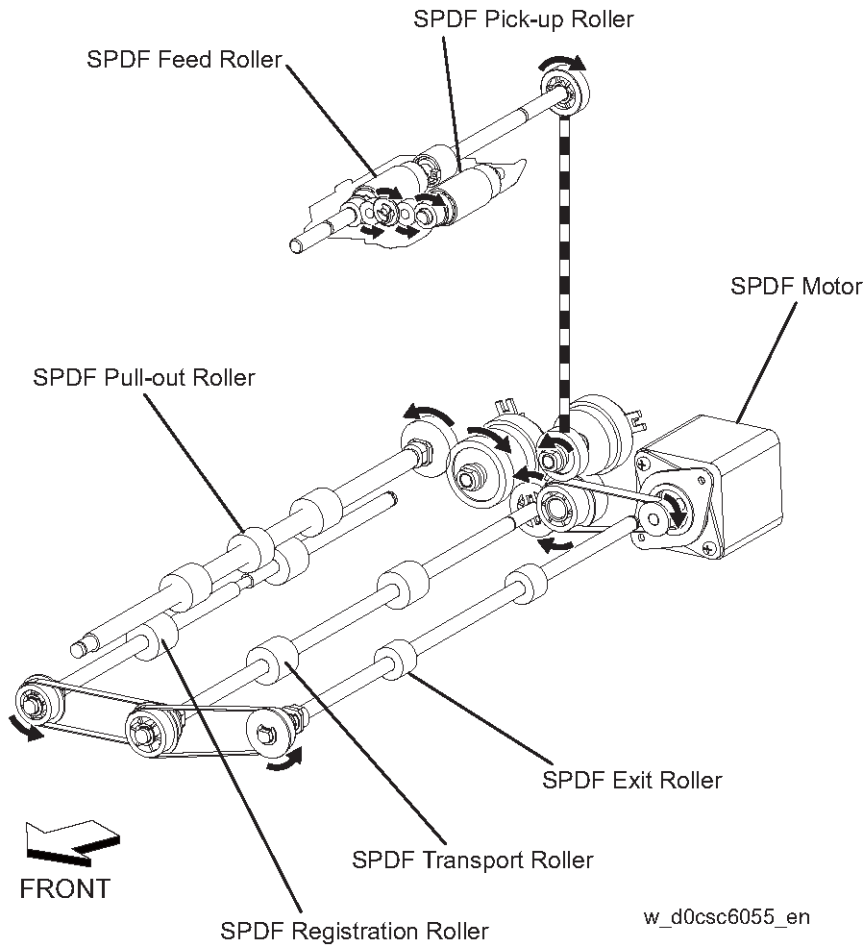


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7.7.5 SPDF

This section describes the drive transmission route from the SPDF Motor (M11) to each roller.

-  : Direction of the gear rotation
-  : Drive transmission route



6B Detailed Descriptions

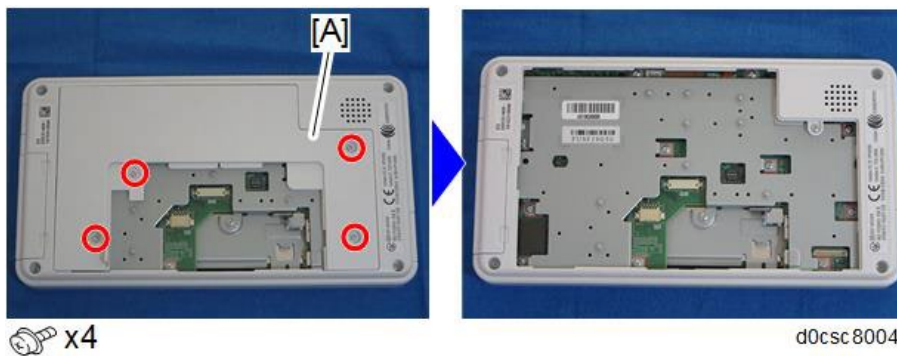
SMART OPERATION PANEL

8. SMART OPERATION PANEL

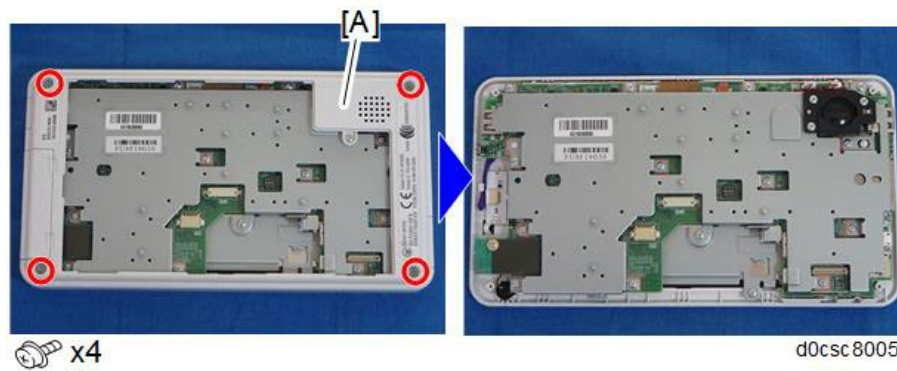
8.1 REPLACEMENT AND ADJUSTMENT

8.1.1 SPEAKER

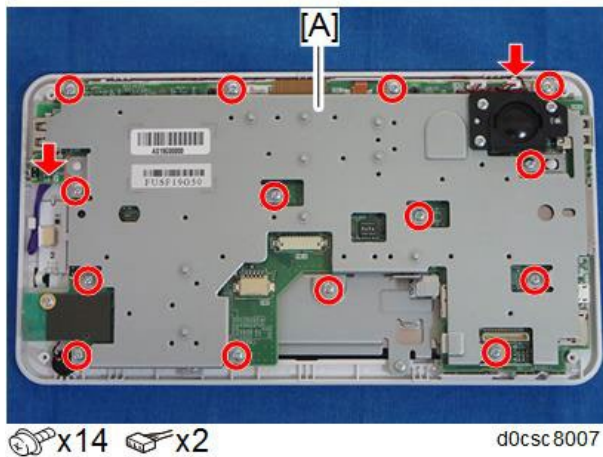
1. Remove the Operation Panel. (*Operation Panel (IM C530FB: Short Model)*, *Operation Panel (IM C530F: Tall Model)*)
2. Remove the cover [A].



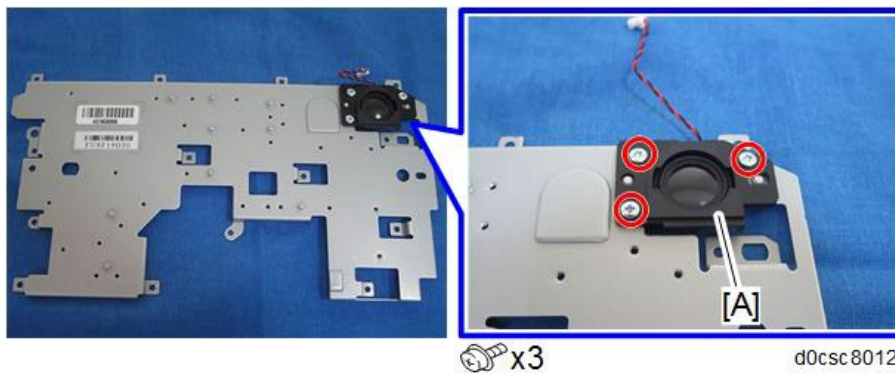
3. Remove the bottom cover [A].



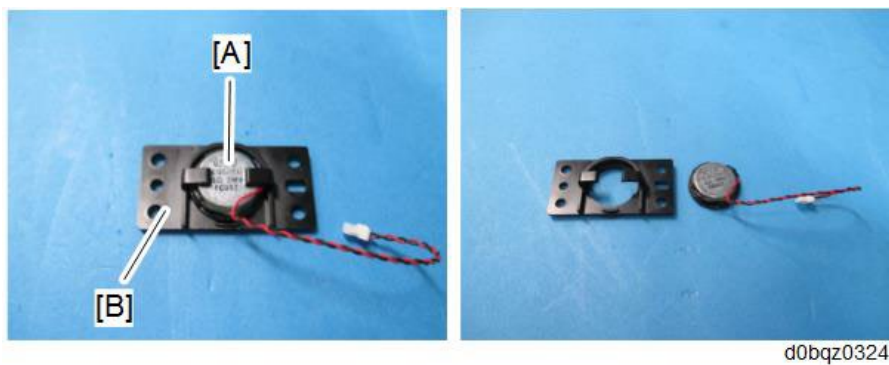
4. Remove the base bracket [A].



5. Remove the speaker [A] with the speaker holder.



6. Remove the speaker [A] from the speaker holder [B].

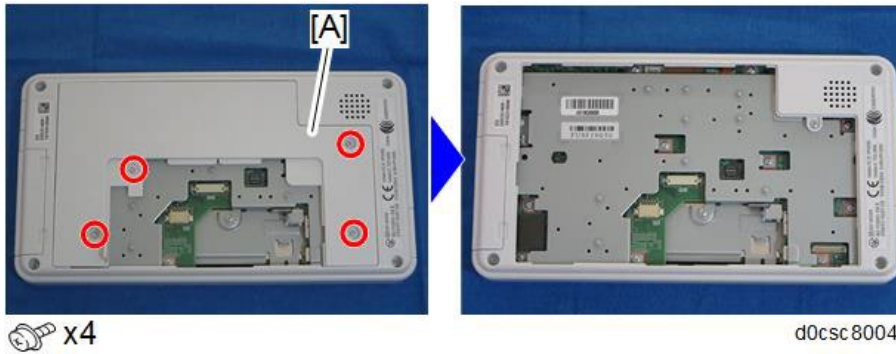


Note

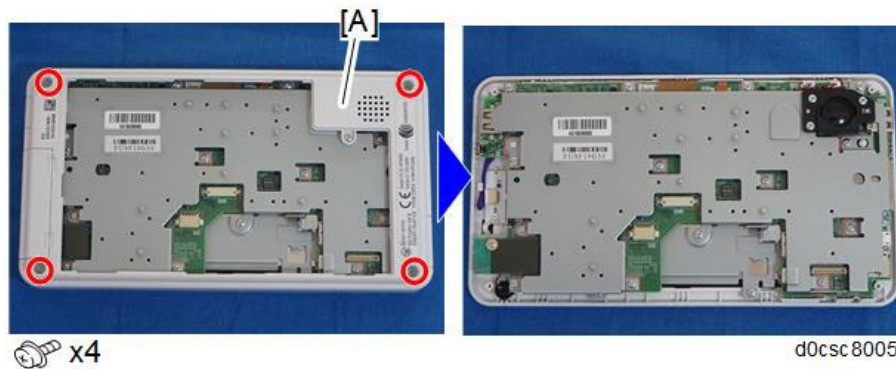
- After replacing the speaker, perform the following check.
 - Speaker Check (**Speaker Check**)

8.1.2 OPU CONTROLLER BOARD (PCB14)

1. Remove the Operation Panel. (*Operation Panel (IM C530FB: Short Model)*, *Operation Panel (IM C530F: Tall Model)*)
2. Remove the cover [A].

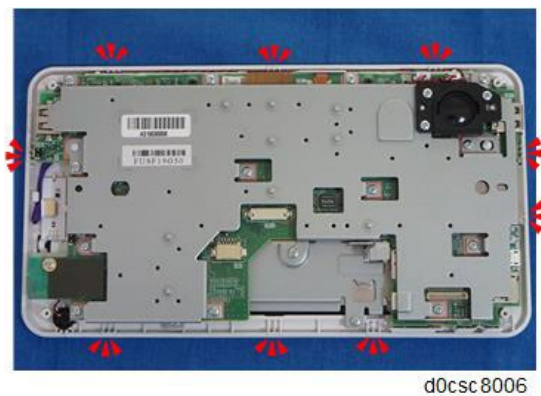


3. Remove the bottom cover [A].

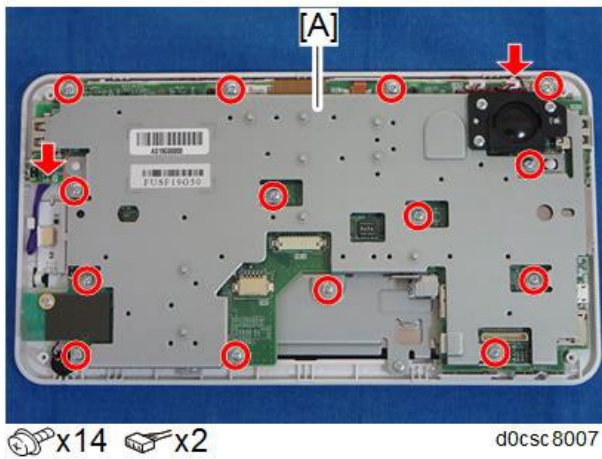


Note

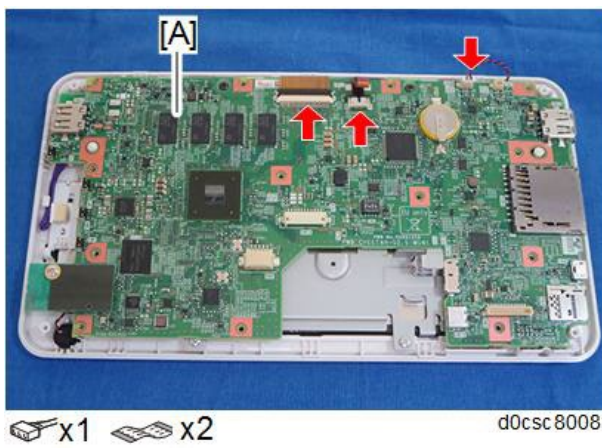
- There are nine hooks inside the operation panel unit. Before removing the operation panel bottom cover, check the photos below.



4. Remove the base bracket [A].

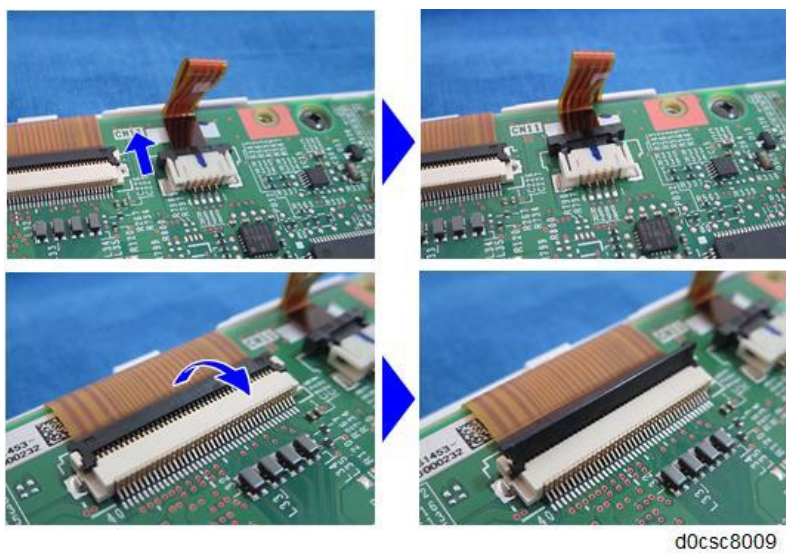


5. Remove the OPU controller board (PCB14) [A].



Note

- Release the lock of the LCD I/F cable [A] on the OPU controller board side.



↓ Note

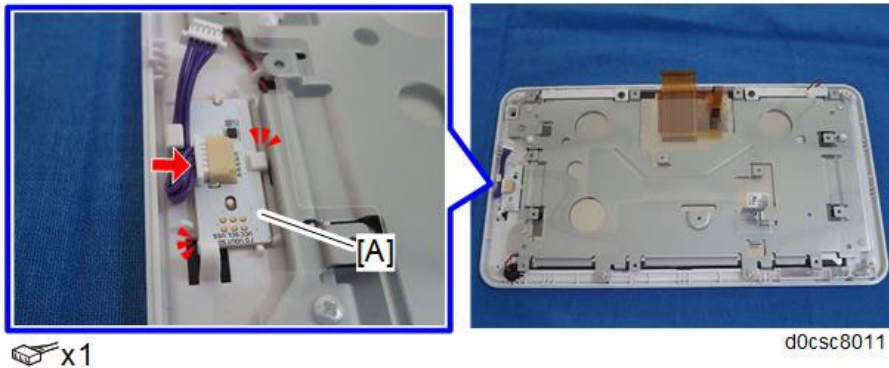
- By factory default, the following switches of the DIP switch [A] on the OPU controller board are set to ON: No.1 and No.3. When installing the operation panel unit, make sure that the DIP switch setting is correct for the MFP on which you are installing the panel.



- 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 operation panel.
- If the DIP switch setting is wrong, SC672 will be displayed.
- 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 a software defect when SC672/SC673 occur, automatically reboot is performed and the SC is reset. If the error is caused by a hardware defect when SC672/SC673 occur, the SC is displayed on the operation panel.
- After replacing the main controller board, perform the following checks:
 - LED Check (**LED Check**)
 - Key Check (**Key Check**)

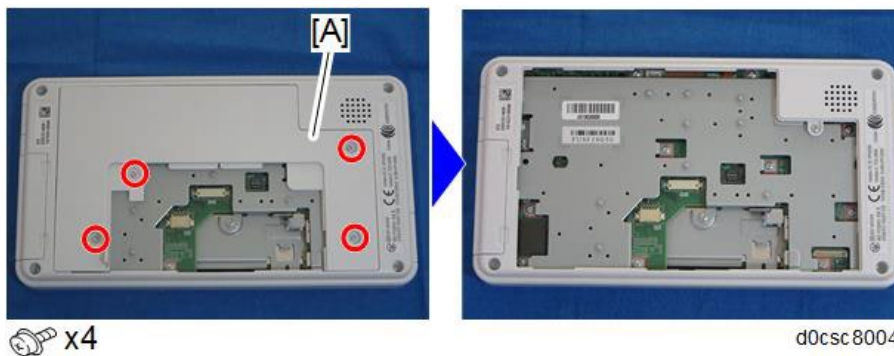
8.1.3 NFC BOARD (PCB15)

1. Remove the Operation Panel. (*Operation Panel (IM C530FB: Short Model)*, *Operation Panel (IM C530F: Tall Model)*)
2. Remove the OPU Controller Board. (*OPU Controller Board (PCB14)*)
3. Remove the NFC board (PCB15) [A].

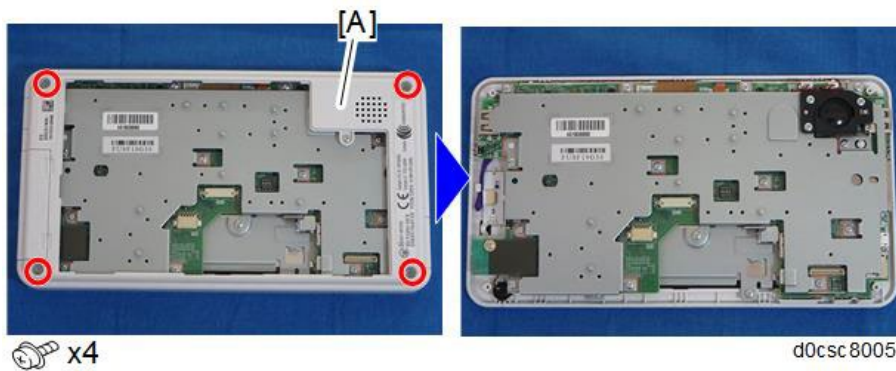


8.1.4 WI-FI MODULE (PCB16)

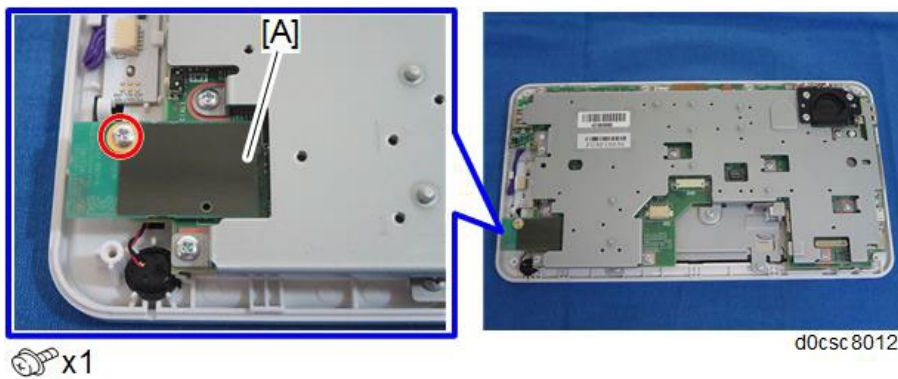
1. Remove the Operation Panel. (*Operation Panel (IM C530FB: Short Model)*, *Operation Panel (IM C530F: Tall Model)*)
2. Remove the cover [A].



3. Remove the bottom cover [A].



4. Remove the Wi-Fi module (PCB16) [A].



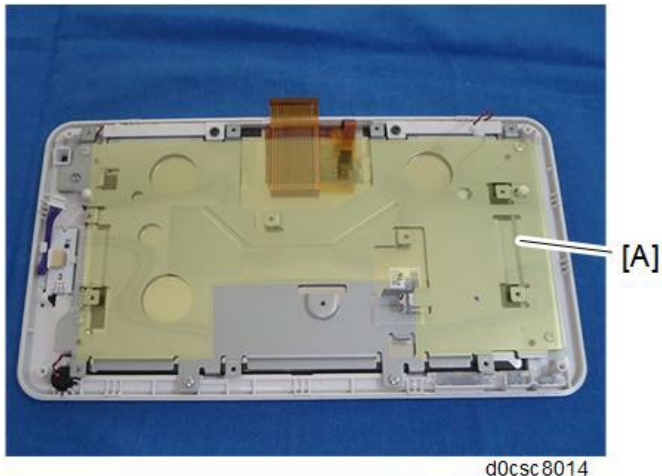
Note

- After replacing the Wi-Fi module, perform the following checks:
 - Wireless LAN Check (**Wireless LAN Check**)
 - Bluetooth Check (**Bluetooth Check**)

8.1.5 LCD UNIT

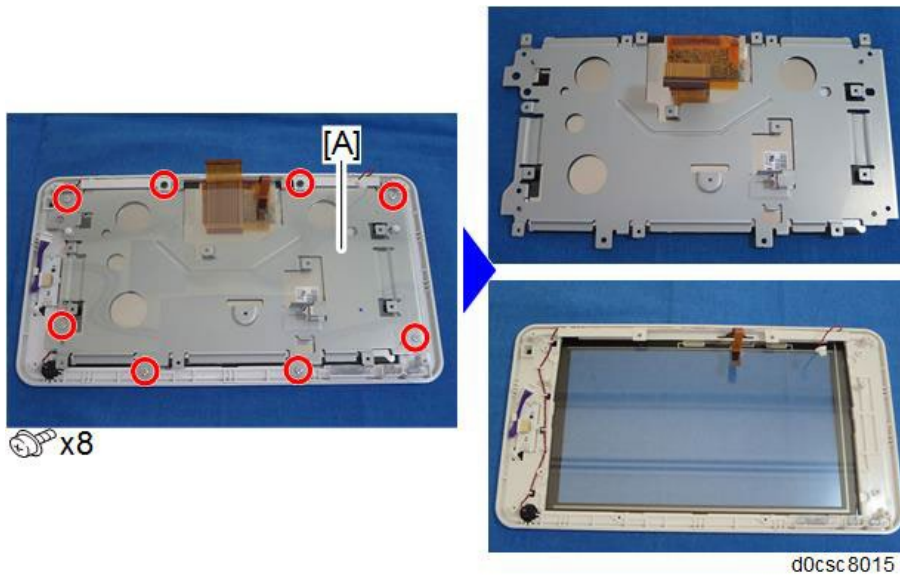
1. Remove the Operation Panel. (**Operation Panel (IM C530FB: Short Model)**, **Operation Panel (IM C530F: Tall Model)**)
2. Remove the OPU Controller Board. (**OPU Controller Board (PCB14)**)

3. Remove the protection sheet [A] attached to the surface of the LCD unit .



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4. Remove the LCD unit [A].



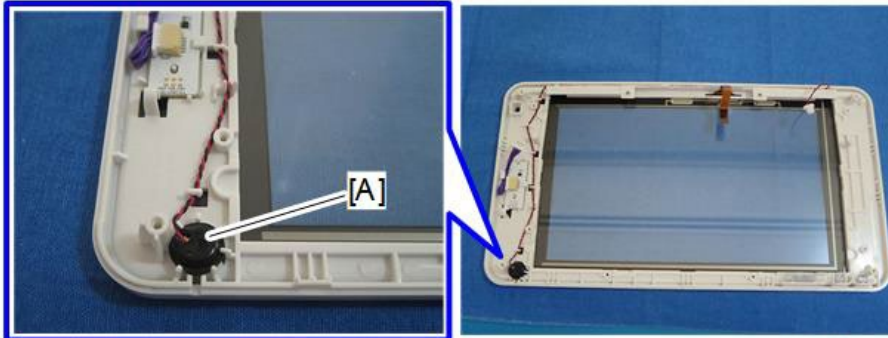
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↓ Note

- After replacing the LCD unit, 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.

8.1.6 MICROPHONE

1. Remove the Operation Panel. (*Operation Panel (IM C530FB: Short Model)*, *Operation Panel (IM C530F: Tall Model)*)
2. Remove the OPU Controller Board (*OPU Controller Board (PCB14)*).
3. Remove the LCD unit (*LCD Unit*).
4. Remove the microphone [A].



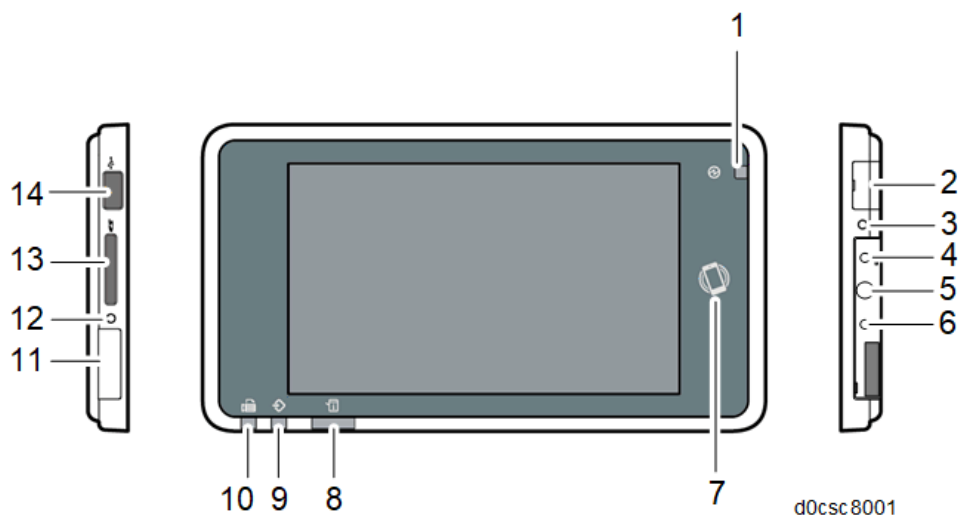
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8.2 MECHANISM

8.2.1 SYSTEM COMPONENTS

Hardware Specifications

Components



No.	Name	No.	Name
1	Main power indicator	8	[Check Status] indicator
2	USB slot for digital cameras	9	Data In indicator (facsimile and printer modes)
3	Operation panel reboot key	10	Fax indicator
4	Extended Feature key (EX1)	11	microSD card slot
5	Extended Feature key (EX2)	12	Media access lamp
6	Extended Feature key (EX3)	13	SD card slot
7	NFC tag	14	USB slot

Basic Specifications

Category	Specification
LCD panel	<ul style="list-style-type: none"> • Size 7 inch panel • Resolution WSVGA (1024x600) • Bit width

Category	Specification
	RGB666 (18 bit color) <ul style="list-style-type: none"> • Brightness 250cd/m² (typ.) • Backlight LED Backlight (life: 15,000 hours)
CPU	ARM Cortex-A9 Quad Core 1GHz (SoC: MCIMX6Q5EYM10AD)
Touch panel	Low load touch panel (recognizes touches to two points)
Memory	<ul style="list-style-type: none"> • Volatile Memory RAM (DDR3L-1066), 2GB • Non-Volatile Memory eMMC NAND, 8GB <div style="border: 1px solid #ccc; border-radius: 10px; padding: 2px; margin: 5px 0;"> ↓ Note </div> <ul style="list-style-type: none"> • Uses a 16GB product in SLC Mode. • Program area and data area for the operating system and applications.
External interfaces	<ul style="list-style-type: none"> • 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)
Network	<ul style="list-style-type: none"> • Wireless LAN 802.11ac/a/b/g/n (for Taiwan/China/Asia) 802.11b/g/n (2.4GHz only) (for North America/EU/Korea) • Bluetooth

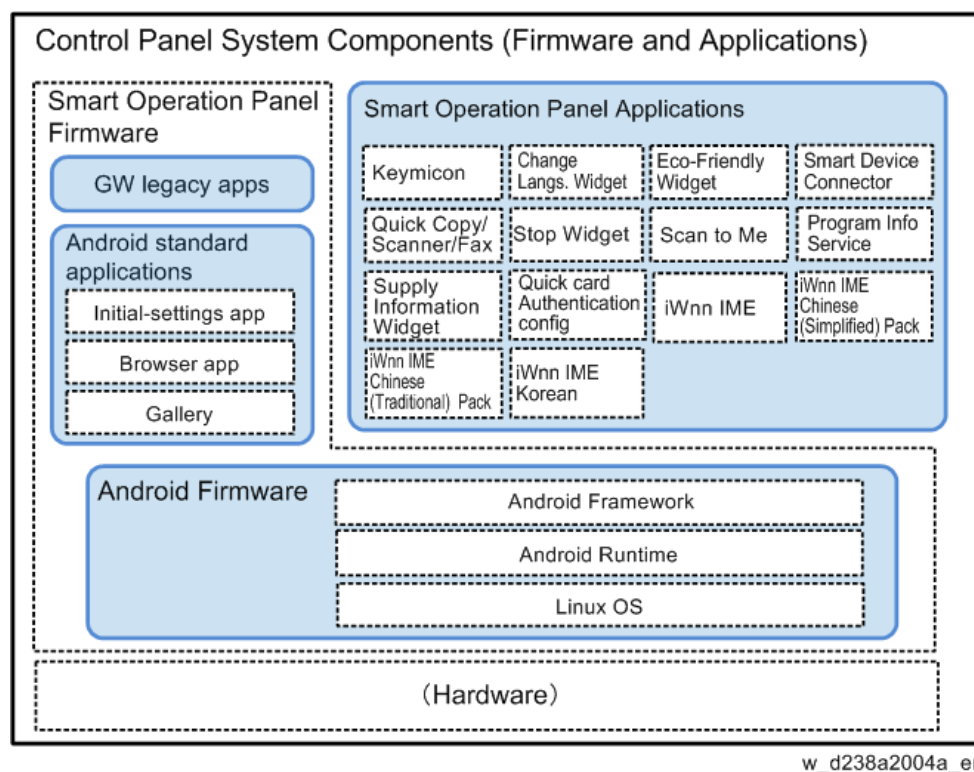
Category	Specification
	Bluetooth4.2
Audio input/output	Monaural speaker 1ch (output: 1 to 2 W), Microphone
RTC accuracy	±52.56 seconds per month (using external crystal oscillator, 20 ppm)
Hard keys	<ul style="list-style-type: none"> Extended Feature keys (EX1, EX2, and EX3) Use for startup in extended mode etc. Operation panel reboot key Use to reboot the operation panel when it freezes.
LED types	<ul style="list-style-type: none"> Main power indicator (blue) Lights when the power is ON. Flashes slowly in Sleep mode. Flashes gradually in Energy Saver 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	<p>4.5 W or less in standby mode (excluding external interfaces and internal feature expansions)</p> <p>6 W or less when using wireless LAN (during high-load operation)</p>
NFC	<p>Built-in NFC tag</p> <ul style="list-style-type: none"> Made by Vanskee Enterprise RCH-NTI2CP1K-BSA-PCB-CE-1128 Made by SAG SCTNX1128250R
Power consumption in Sleep mode	<p>0.18 W or less</p> <p>(When in Sleep mode, power is not supplied to USB devices connected to the USB slots except when the IC card R / W (NFC) is connected.)</p>
Tilt function	Equipped with an angle-adjustable hinge. Clicks at the standard position.

Available languages

Japanese, English, French, German, Italian, Spanish, Dutch, Norwegian, Danish, Swedish, Polish, Portuguese, Hungarian, Czech, Finnish, Simplified Chinese, Traditional Chinese, Thai, Russian, Arabic, 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.



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 main 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 operation panel firmware together with the Android firmware. When you update the operation 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.

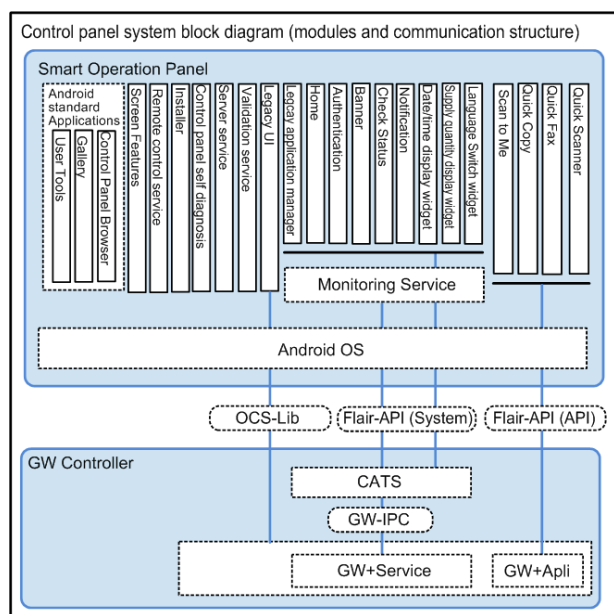
Applications that can be installed include optional applications that customers can purchase, applications that are installed only on machines sold in specific regions, and custom-made applications.

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 2.0/3.0 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

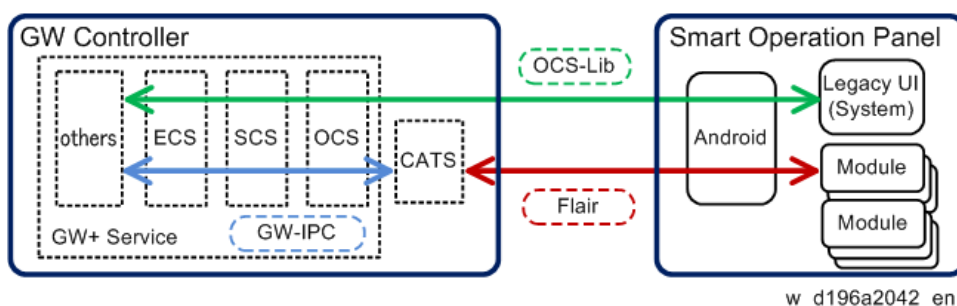


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Overview of Components

Communication module/signal name	Details
OCS Library	<p>OSC stands for Operating Control Service. It is a module that controls the operation panel. The set of signals used by this module to control the operation panel are called the OCS Library.</p> <p>It is used during communication between the Legacy UI (system) module on the Smart Operation Panel and the GW module for the following processes.</p> <ul style="list-style-type: none"> Deciding on the display format suitable for a particular model of the operation panel, so that the intended image data can be converted to actual image data. Converting touch panel operations to commands.
Flair-API (System/Application)	<p>Flair is the manufacturer's own communication interface between software modules. The interface uses a generic WebAPI.</p> <p>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.</p>
CATS	<p>CATS stands for Cheetah Application Total System. It is a module in the GW controller.</p> <p>Because the Smart Operation Panel uses the Android OS, the contents and protocols of communication are not the same as those of the conventional operation panel. CATS serves as an intermediary between the GW controller and the Smart Operation Panel.</p> <p>It also controls the power status of the operation panel.</p> <p>CATS communicates with the Smart Operation Panel using the Flair-API, and communicates with the GW module using the GW-API.</p>
GW-IPC	<p>The name of the interface used among modules in the GW controller. The role is the same as that of the Flair-API.</p>

7B Smart Operation Panel

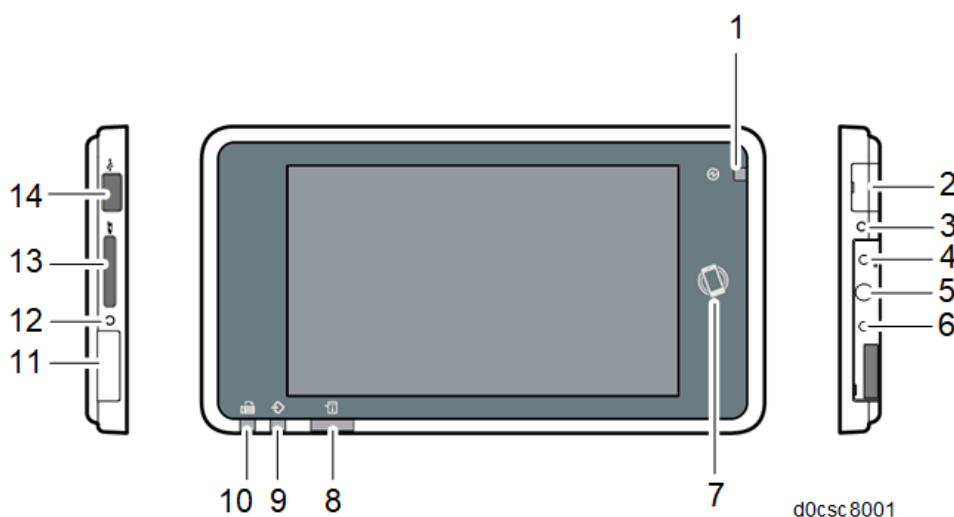


Note

- API stands for Application Programming Interface. An API is an interface that software modules use in order to communicate with each other.

8.2.2 PANEL COMPONENTS/SCREEN LAYOUT

Components of the Operation Panel

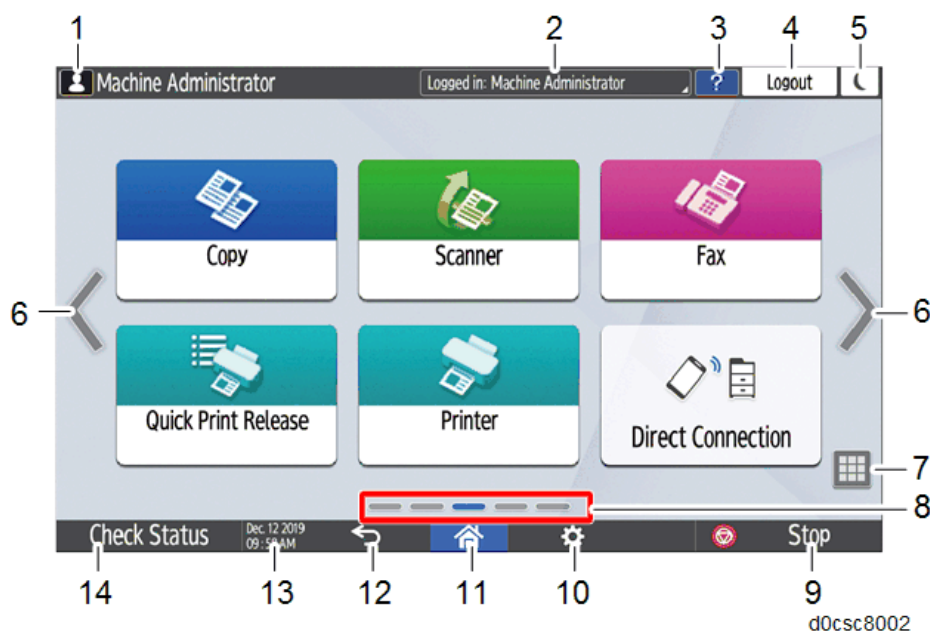


No.	Name	Description
1	Main power indicator	Indicates power OFF/ON, and energy saving status.
2	USB slot for digital cameras	You can connect the optional numeric keypad and digital cameras.
3	Operation panel reboot key	Used when rebooting the operation panel.
4	Extended Feature key (EX1)	Used for system maintenance, such as operation panel self-check.
5	Extended Feature key (EX2)	
6	Extended Feature key (EX3)	
7	NFC tag	Used to connect the machine and a smart device with the RICOH simple input and output.
8	[Check Status] indicator	Indicates system status.
9	Data In indicator (facsimile and printer modes)	Flashes when the machine receives data from a printer driver or LAN-Fax driver.
10	Fax indicator	Indicates fax status. <ul style="list-style-type: none"> • During communication: Flashes • When fax documents have been received using Substitute

No.	Name	Description
		Reception: Lights <ul style="list-style-type: none"> When the machine has received a confidential fax document: Lights
11	microSD card slot	Insert a microSD card here (only customized model).
12	Media access lamp	Lights when an external media is inserted into the SD card slot or the USB slot.
13	SD card slot	Insert an SD card here.
14	USB slot	Insert a USB memory device here.

Panel Display

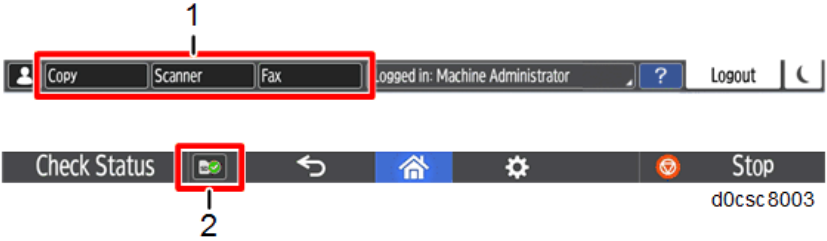
Soft keys displayed on the screen



No.	Name	Description
1	[User icon] key	You can configure the authentication setting. This key appears when someone is logging in. If pressed after logging in, the login user name appears for a while in the login user information display area.
2	[System messages] key	System messages are displayed in this area. If there are multiple messages to be displayed, they are displayed alternately. Tapping the message opens a dialog which shows all the messages.
3	[Help] key	This icon is displayed when Help is available for the displayed screen or errors occurring when the machine is connected to the Internet. Specify [Cookie] in the operation panel browser to [ON] to display Help properly.

No.	Name	Description
4	[Login/Logout] key	This key is displayed if the authentication function is enabled. By pressing [Login], the login menu appears. If you have already logged in, [Logout] appears. By pressing [Logout], you can log out.
5	[Energy Saver] key	Enters Sleep mode.
6	[Switch Screens] key	Press to scroll the screens right and left. The Home screen has 5 screens. You can switch between the screens by flicking.
7	[Application List] key	Displays the list of installed applications.
8	[Current display position] key	Shows which of the five screens is currently displayed.
9	[Stop] key	Stops the scanning of a document, fax transmission, or printing to paper.
10	[Menu] key	Displays the menu screen of the application in use. May not be available depending on the application.
11	[Home] key	Displays the Home screen.
12	[Back] key	Use this to go back to the previous screen when the Settings screen or the screen of an application is displayed.
13	Date/Time and Toner remaining	The current date and time is displayed. To display the information about Toner remaining, set [System Settings] > [Display/Input] > [Display] > [System Bar Settings] > [Display Time/Remaining Toner] to [Remaining Toner].
14	[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.

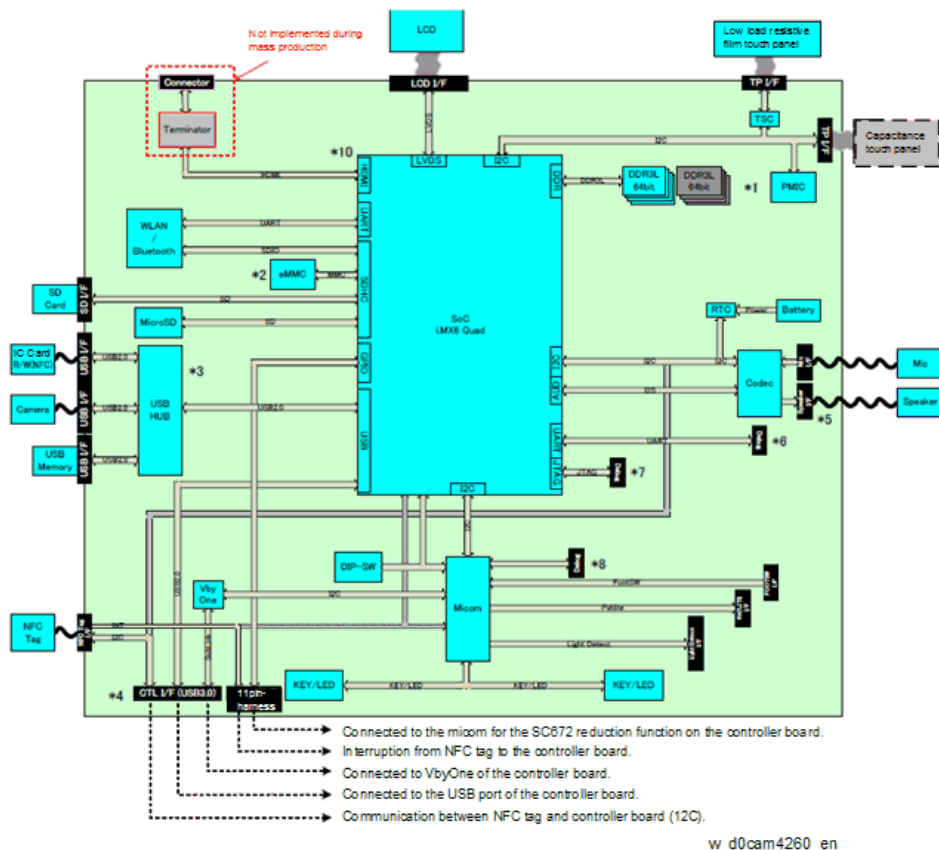
Items that Appear when the Function Keys are Enabled



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. Users can assign the application to each function key at [Settings] > [System Settings] > [Display/Input] > [Key/Keyboard/Input Assistance] > [Function Key Settings].						
2	[Media] key	<p>Displays icons when a USB flash drive or SD card is inserted.</p> <p>By pressing this key, you can choose the media to remove and use.</p> <p>Depending on the media, one of the following icons appear.</p> <table border="1"> <tbody> <tr> <td></td> <td>USB icon (key)</td> </tr> <tr> <td></td> <td>SD card icon (key)</td> </tr> <tr> <td></td> <td>USB/SD icon (key)</td> </tr> </tbody> </table>		USB icon (key)		SD card icon (key)		USB/SD icon (key)
	USB icon (key)							
	SD card icon (key)							
	USB/SD icon (key)							

8.2.3 ELECTRICAL COMPONENTS

Operation Panel Unit



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.

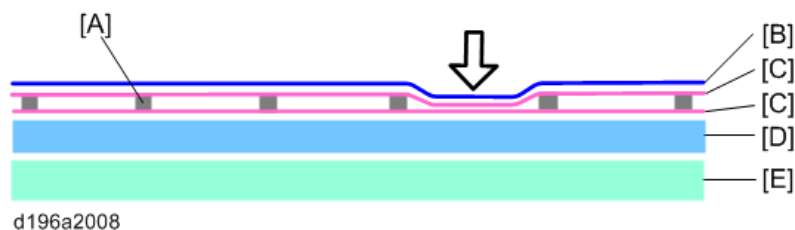
Basic Structure

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 [C] contact each other and the touch panel operation is recognized.

Insulators (spacing dots [A]) secure space between the two transparent conductive film layers to prevent short-circuiting.

Because the transparent conductive film [C] has a uniform resistance characteristic, the resistance value reflects the distance of contact.



[A]: Spacing dot

[B]: PET film

[C]: Transparent conductive film

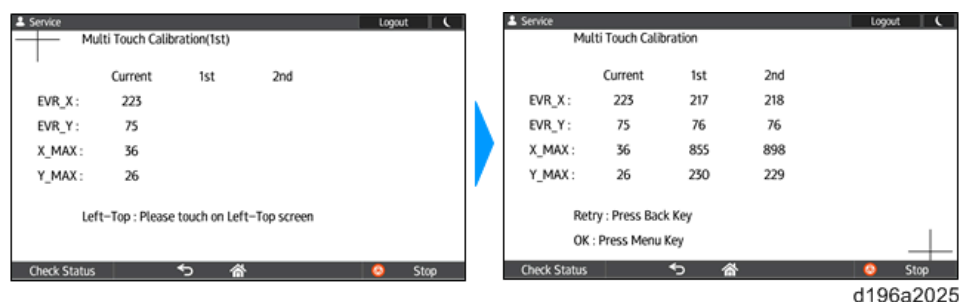
[D]: Base glass

[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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8.2.4 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 operation panel starts up using less power compared to Quick mode.

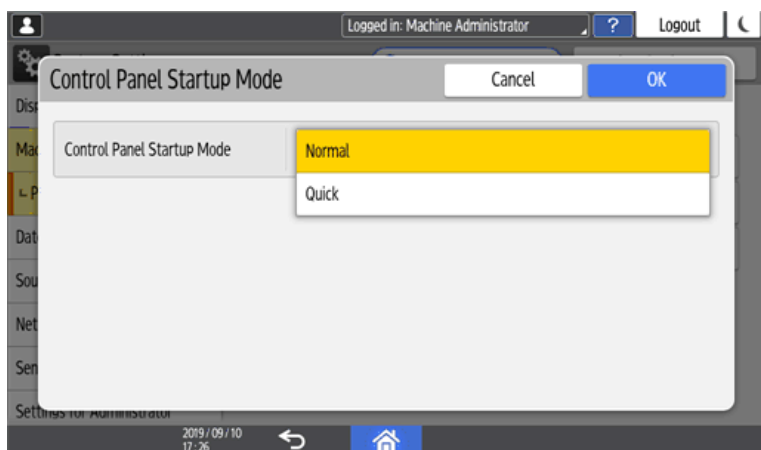
2. Quick

By preparing for the next startup when the machine shuts down, the operation panel starts up faster than in Normal mode.

Changing the Screen Startup Mode

Screen Startup Mode can be changed in Screen Features Settings.

Select [Settings] > [System Settings] > [Machine] > [Power/Energy Saving] > [Control Panel Startup Mode], and then select [Normal] or [Quick].



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Note

- In the following cases, the operation 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

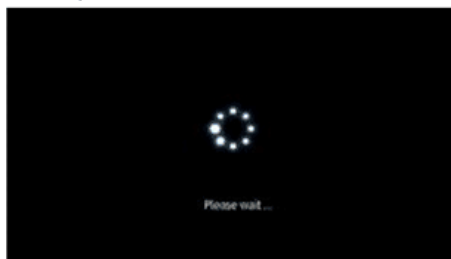
In Normal mode

The startup screen is displayed on the display panel, followed by the startup animation.

Startup screen



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.



If the MFP is turned ON during shutdown, the preparation for the next startup continues. When preparation for the next startup is completed, the operation panel starts up in Quick mode.

Note

- When Quick mode is selected, the operation 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	<ul style="list-style-type: none"> 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 [Control Panel Startup Mode]. (For updating operation panel firmware) 	Turn the main power switch OFF while holding down [Stop]. Continue to hold down the [Stop] key until the shutdown screen is displayed.
Shutdown for software update	<p>When you are going to turn ON the MFP within 5 minutes for updating the MFP firmware or package.</p> <p>(Use shutdown for parts replacement if you are updating the operation panel firmware.)</p>	Turn the main power switch OFF while holding down the [EX1] key. Continue to hold down the [Stop] key until the shutdown screen is displayed.

Normal Shutdown

The MFP is equipped with a function to shut down safely in order to:

- Prevent damage to the file systems.
- Prevent paper from being left inside the body of the MFP (except when paper is jammed).

The shutdown process begins when the main power switch is pressed. To make a forced shutdown, press and hold the main power 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 operation 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 operation 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 operation 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.

8.2.5 NFC (NEAR FIELD COMMUNICATION)

Overview of NFC

NFC is a standard for short distance radio communication using the radio frequency band of 13.56 MHz.

The device is provided with a user authentication feature using MIFARE cards, contactless smart cards supporting NFC.

A smart card reader/writer is installed at the “NFC”-marked portion of the operation panel.

NFC is defined as a set of internationally certified radio communication technology standards for existing smart cards and radio-frequency identification (RFID) system including ISO/IEC18092 (NFC IP-1) and ISO/IEC21418 (NFC IP-2).

Refer to each component standard for further details on NFC.

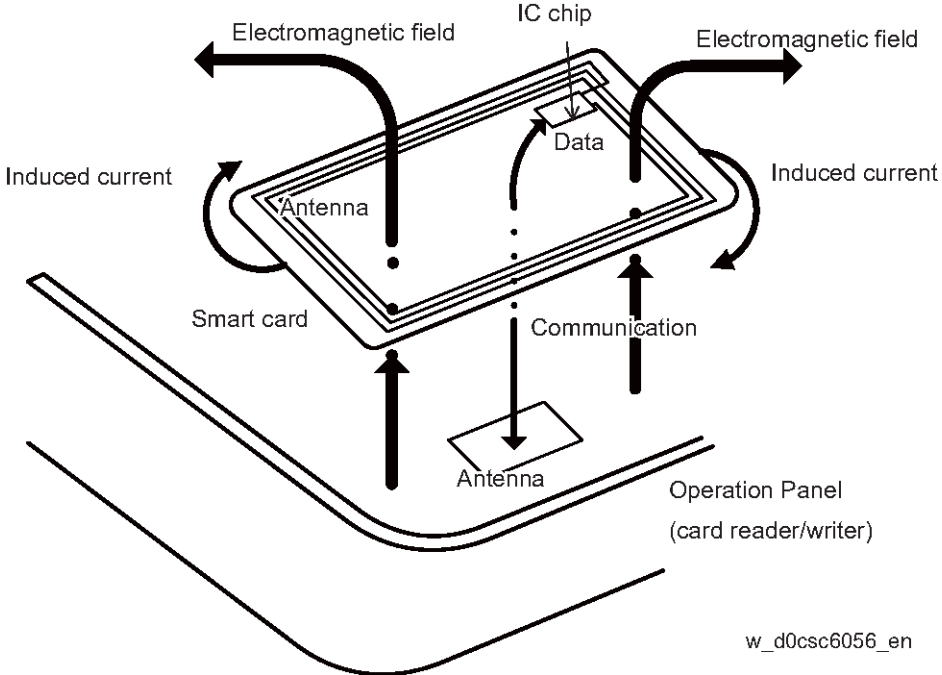
Basic Principle of Operation of NFC

A smart card contains an IC chip and an antenna that allow the data stored in the IC chip to be read when brought into the close proximity of a card reader/writer.

Data communication using a smart card consists of the following steps:

1. The user brings a smart card into the close proximity of the card reader/writer.
2. The card reader/writer generates an electromagnetic field.
3. Induced current flows in the antenna, allowing the IC chip to operate.

4. The smart card and the card reader/writer perform bidirectional authentication and communication (read/write of data).



8.3 SYSTEM MAINTENANCE

8.3.1 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 application where soft keys are displayed or the soft keys of the SP mode.
Service mode (operation panel)	SP modes for the Smart Operation Panel. <ul style="list-style-type: none"> • Changing SP mode settings in the Screen Features Settings menu. • Installing and updating applications that can be installed 	Same as above
Recovery mode	Maintenance modes for the Android OS <ul style="list-style-type: none"> • Updating firmware • Initializing all data 	-

8.3.2 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 operation panel.

Note

- You cannot log in to the service mode of the operation panel when one of the following screens is displayed.
 - Stop All Jobs
 - Settings
 - Address Book Management

Use the numeric keys on one of the following screens.

- Soft keys on the application screen where soft keys appear
- Soft keys for the operation 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.

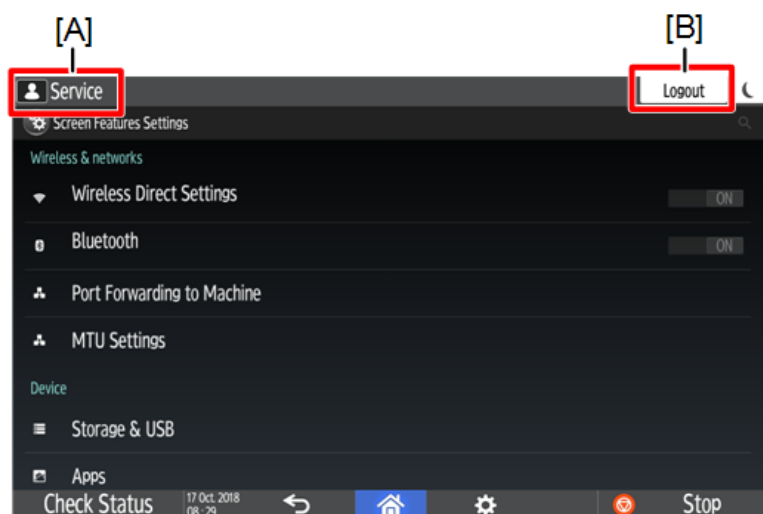


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Login Status Indicator

When you log in to the operation panel's service mode, the Screen Features Settings 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.



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Logout

Press [Logout] to log out from the operation 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 operation panel's service mode by enabling [Settings] > [System Settings] > [Settings for Administrator] > [Security] > [Service Mode Lock].

When [Service Mode Lock] is enabled, the machine does not enter the service mode even if you enter the number combination for the operation panel's service mode. There will be beeping sounds to indicate login failure.

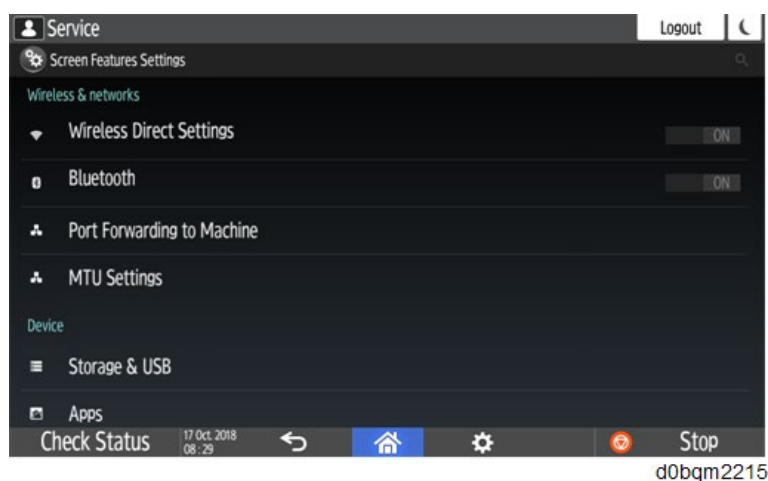
Note

- The machine can enter the recovery mode even if [Service Mode Lock] is enabled.

8.3.3 SERVICE MODE MENU

There are four menus of settings.

- Wireless & networks
- Device
- Personal
- 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.
	Fix SSID		You can only view the setting.
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	Port Forwarding Settings	Port	Requests sent to the wireless LAN unit of

Menu level			Description
1st level	2nd level	3rd level	
Forwarding to Machine		Forwarding Config 1-20	the Smart Operation Panel can be forwarded to the controller of the MFP. You can enable or 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 operation panel restarts.
	MTU Size		Sets the size of PathMTU. Default: 1500.

Device

Menu level			Description
1st level	2nd level	3rd level	
Storage & USB	Internal storage	Used and Total Storage Capacity	Displays the used size and total size of the internal storage.
	SD CARD* ¹	Used and Total SD Card Capacity Safely Remove Hardware icon (▲)	Displays the used size and total size of the SD card. *To remove the SD card, click the  or  icon instead of the Safely Remove Hardware icon (▲).
	USB STORAGE* ²	Used and Total USB Storage Capacity Safely Remove Hardware icon (▲)	Displays the used size and total size of the USB storage device. *To remove the USB flash drive, click the  or  icon instead of the Safely Remove Hardware icon (▲).
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.
		Application Site	Start up Application Site.
		Activate Applications	Activate applications that have been installed from the server.
		Update Applications	Update applications that have been installed.
		Uninstall	Uninstall applications.
		Install From Internal	Install applications from internal storage.

Menu level			Description
1st level	2nd level	3rd level	
		Storage	
		Check Server Connect	Check if you can connect to the Server.
		Firmware update	Update the firmware from the SD card set in the operation panel slot. If the SD card is not inserted, an error message is displayed.

*1 Displayed only when an SD card is inserted into the SD card slot of the operation panel.

*2 Displayed only when an USB storage device is inserted into the USB slot of the operation panel.

Personal

Menu level			Description
1st level	2nd level	3rd level	
Language & input	Registration Keyboard	-	You can register the external keyboard, display the connected keyboard, or remove the external keyboard.

System

Menu level				Description
1st level	2nd level	3rd level	4th level	
Screen Device Settings Information	Status			Displays the following: <ul style="list-style-type: none"> • Wireless LAN MAC address • Interface Settings • Wi-Fi settings (ON/OFF) • IP address
	Legal information	Open source licenses		Displays the open source license information.
		System WebView Licences		Displays the license of the system used in this machine.
		Wallpapers		Displays the copy light of the picture of the wallpaper.
	Software Version List	Version List Record		Displays the versions of operation panel firmware and installed applications.
Save to SD Card*1				

Menu level				Description
1st level	2nd level	3rd level	4th level	
				When saving the software version list on an SD card, insert an SD card into the SD card slot of the operation panel, and then press [Save to SD Card].
	Operation Panel Kind			Displays the hardware information of the operation panel with a 4-digit code.
				1st digit: LCD size <ul style="list-style-type: none"> • 1: 10.1" • 2: 7" (Default) • 3: 17"
				2nd digit: LCD vendor <ul style="list-style-type: none"> • 0: AUO • 1: INNOLUX • 2: Dongbond • 5: AUO (Default) • 6: Giantplus
				3rd digit: eMMC version <ul style="list-style-type: none"> • 5: Version 4.41 • 7: Version 5.00 • 8: Version 5.10 (Default)
				4th digit: PCB vendor <ul style="list-style-type: none"> • N: NEC • R: RICOH (Default)
Screen Device Settings	Use of External Interface	Screen SD Card slot		Specify the SD card slot availability on the Smart Operation Panel. When [Inactive] is selected, no power is available because the hardware is deactivated.
		Screen USB Port		Specify the USB port availability on the Smart Operation Panel for each USB port. When [Inactive] is selected, no power is

Menu level				Description
1st level	2nd level	3rd level	4th level	
				available because the hardware is deactivated.
		Prohibit Use of External Interface	Wi-Fi (Do not Prohibit / Prohibit)	<p>If you select [Prohibit] for this setting, the Wi-Fi function is automatically set to [OFF] and the Wi-Fi function setting is hidden at [Settings] > [System Settings] > [Network/Interface] > [Control Panel: Wireless LAN].</p> <p>If you select [Do not prohibit] for this setting, the Wi-Fi function setting in [Control Panel: Wireless LAN] is displayed. The setting remains unchanged.</p>
			Wireless Direct (Do not Prohibit / Prohibit)	<p>If you select [Prohibit] for this setting, the Wireless Direct function is automatically set to [OFF] and the Wireless Direct function setting is hidden at [Settings] > [System Settings] > [Network/Interface] > [Control Panel: Wireless LAN].</p> <p>If you select [Do not prohibit] for this setting, the Wireless Direct function setting in [Control Panel: Wireless LAN] is displayed. The setting remains unchanged.</p>
			Bluetooth (Do not Prohibit / Prohibit)	<p>If you select [Prohibit] for this setting, the Bluetooth function is automatically set to [OFF] and the Bluetooth function setting is hidden at [Settings] > [System Settings] > [Network/Interface] > [Bluetooth].</p> <p>If you select [Do not prohibit] for this setting, the Bluetooth function setting in [Bluetooth] is displayed. The setting remains unchanged.</p>
			Screen SD	If you select [Prohibit] for this setting, the

Menu level				Description
1st level	2nd level	3rd level	4th level	
			Card Slot (Do not Prohibit / Prohibit)	Screen SD Card Slot function is automatically set to [OFF] and [Control Panel SD Card Slot] is hidden at [Settings] > [System Settings] > [Machine] > [External Device]. If you select [Do not prohibit] for this setting, [Control Panel SD Card Slot] is displayed. The setting remains unchanged.
			Screen USB Memory Slot (Do not Prohibit / Prohibit)	If you select [Prohibit] for this setting, the Screen USB Memory Slot function is automatically set to [OFF] and [Control Panel USB Memory Slot] is hidden at [Settings] > [System Settings] > [Machine] > [External Device]. If you select [Do not prohibit] for this setting, [Control Panel USB Memory Slot] is displayed. The setting remains unchanged.
	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.)
	Home Key Settings	Home Key Settings		You can change the transition destination except for the Home screen when pushing the [Home] icon.
		Home Key Assignment Mode		Normal mode: In addition to pressing the [Home] icon, in all statuses such as logout and restoring from lower power display mode, the screen transitions to the destination which the user set with [Home Key Application].

Menu level				Description
1st level	2nd level	3rd level	4th level	
				<p>UI change mode:</p> <p>The screen transitions to the destination which the user set with [Home Key Application] only when you press the [Home] icon.</p>
		Home Key Application		You can set the application of the transition destination when pressing the [Home] icon.
		Show default Home for unauthenticated user		You can specify whether the guest user can access the application selected in [Home Key Application] when user authentication is set to ON.
		System Home Key Icon Settings		<p>You can use this setting only when [Home Key Assignment Mode] is [ON] and [UI Change Mode] is selected in [Home Key Assignment Mode].</p> <p>You cannot set other than the above because of high brightness.</p>
	Application Settings			<p>Displays a list of installed applications.</p> <p>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.</p>
	Recovery by Authentication Priority	Recovery by Authentication Priority		<p>This setting gives priority to the recovery time from energy saving modes when an IC card authentication device is connected.</p> <p>When this setting is selected, the MFP does not enter Engine OFF mode, and always recovers from Silent mode.</p>
		Start Time (hh:mm)		<p>You can specify the start time of Authentication priority mode.</p> <p>Note: This can be changed only when [Recovery by Authentication Priority] is</p>

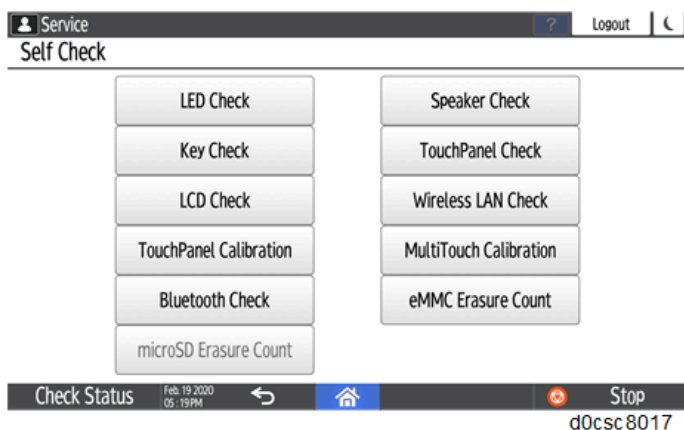
Menu level				Description
1st level	2nd level	3rd level	4th level	
				deselected.
		Period (Hours)		You can specify the period of validity of Authentication priority mode. Note: This can be changed only when [Recovery by Authentication Priority] is deselected.
	Backup/Restore Settings			Specify whether to enable or disable backups and restore backup data.
	Screen device always-connection Setting			This setting prevents the operation panel from entering Sleep mode, so that Bluetooth and other communication devices remain connected. When this setting is selected, the operation panel does not enter Sleep mode. Only the LCD (display panel) turns OFF.
	Panel Self Check			Starts self-diagnosis of the operation panel. (Panel Self Check)

*1 This can be pressed only when an SD card is inserted to the SD card slot of the operation panel.

8.3.4 PANEL SELF CHECK

The following are available as self-diagnostics functions of the operation panel:

- LED Check
- Key Check
- LCD Check
- TouchPanel Calibration
- Bluetooth Check
- Speaker Check
- TouchPanel Check
- Wireless LAN Check
- MultiTouch Calibration
- eMMC Erasure Count



*The [microSD Erasure Count] menu can not be used with this machine.

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)
- Operation call light (if attached) (lights in red/blue)

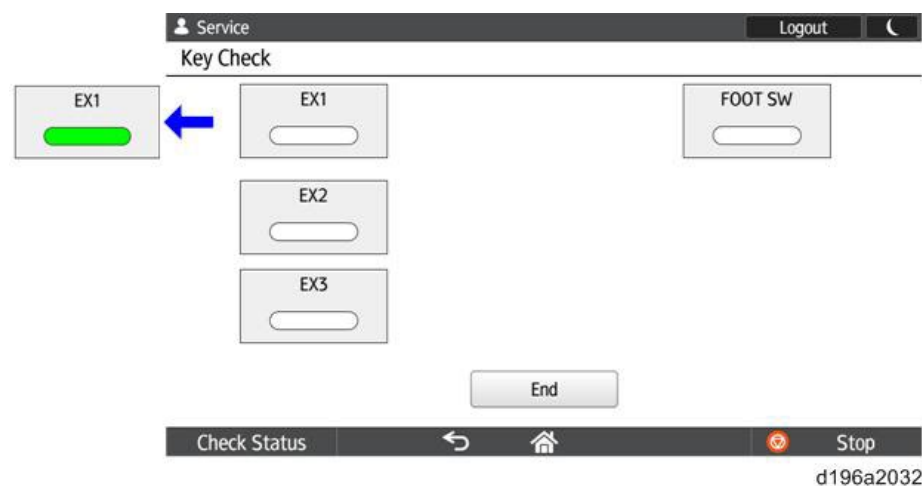


When the check is completed, press [Back] to return to the top menu of [Self Check].

Key Check

Check if the Extended Feature keys on the left side of the operation panel (EX1, EX2, EX3 from top to bottom) are functioning normally. If they are functioning normally, the key will turn green when pressed.

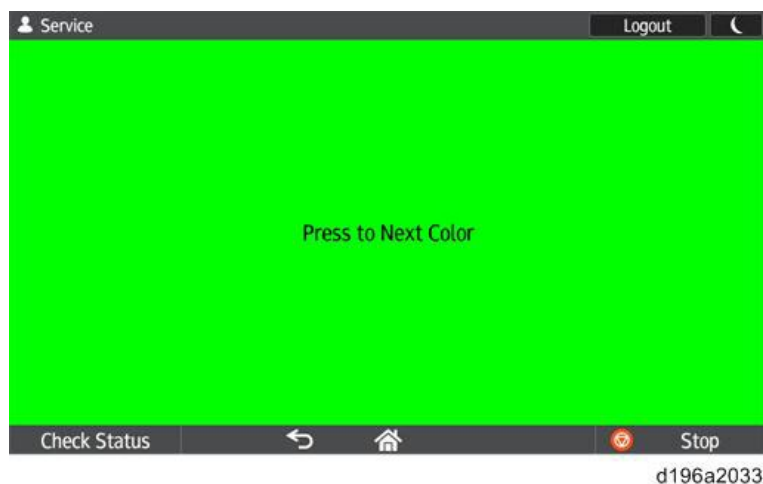
[FOOT SW] is not used.



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.



The check is completed when all colors have been displayed. The screen returns 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].



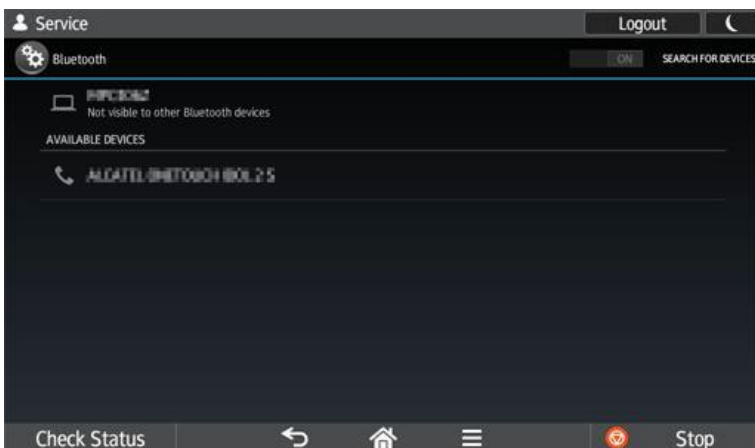
Retry : Press EX1 key
OK : Press EX3 key



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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].

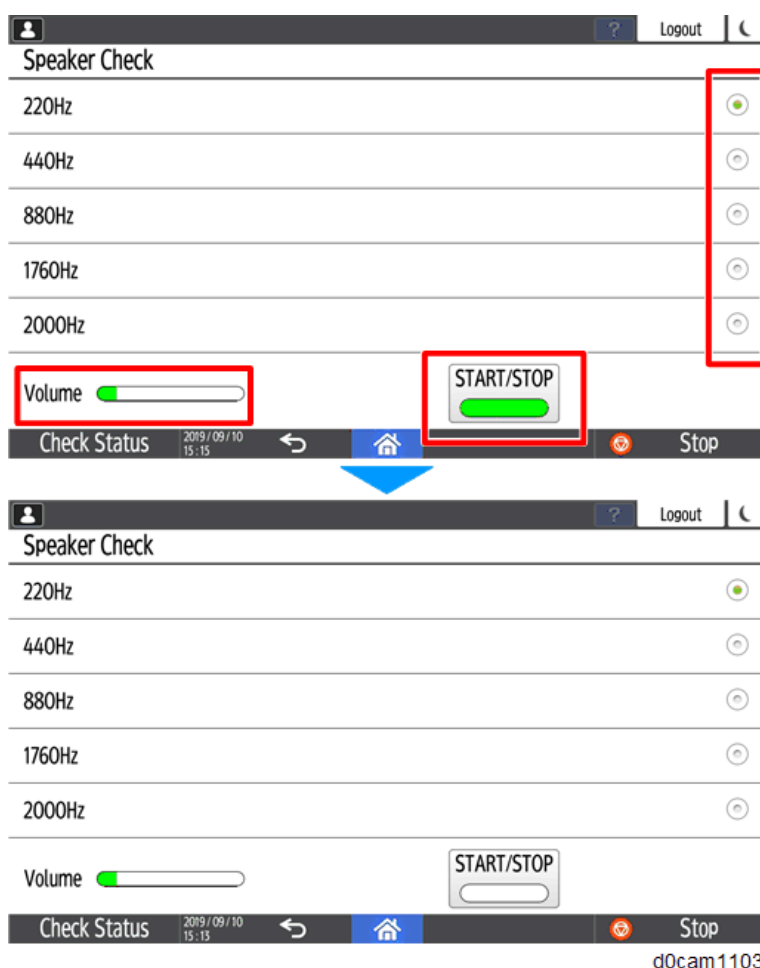
Note

- You cannot switch Bluetooth to [ON] or [OFF] from the [Self Check] menu. Before checking the Bluetooth device connection, specify [ON] for [Bluetooth] in [Settings] > [System Settings] > [Network/Interface] > [Bluetooth].

Speaker Check

Tests the speaker by playing the reference sound.

- Select the frequency (220Hz, 440Hz, 880Hz, 1760Hz, or 2000Hz).
- Press [START/STOP] to play the sound.
- Touch the volume bar, and play the sound at minimum and maximum volumes.
- Press [START/STOP] to stop the sound.

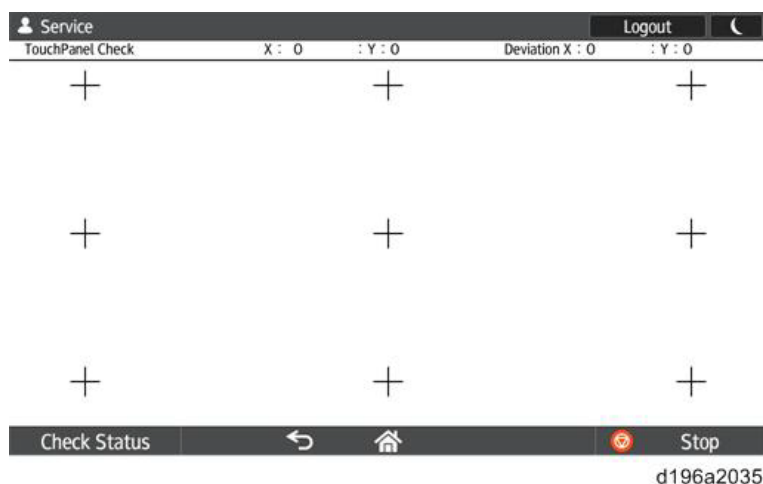


When the check is completed, press [Back] to return to the top menu of [Self Check].

TouchPanel Check

For each of the nine reference points on the screen, the distance between the detected pressed position and the nearest reference point is displayed. The distance is displayed continually near each reference point.

If all the distances between each detected pressed position and the nearest of the five reference points on the screen (at the four corners and the center) are within $\pm 12\text{px}$, the [OK] button appears. (However, even when the [OK] button is being displayed, if you press the screen again and the distance exceeds $\pm 12\text{px}$, the [OK] button disappears.)



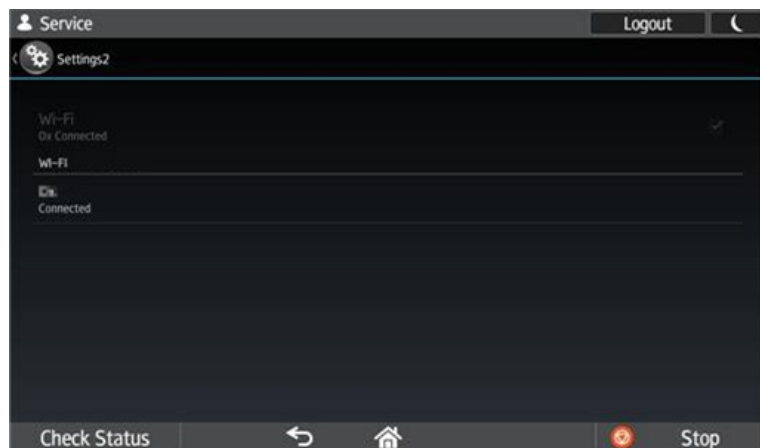
If you press the [OK] button, the inspection implementation status switches to “Adjusted” and the screen returns to the self-inspection menu.

If you press the [Back] key, the inspection implementation status does not switch and the screen returns to the self-inspection menu.

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].

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].

	Current	1st	2nd
EVR_X :	223		
EVR_Y :	75		
X_MAX :	36		
Y_MAX :	26		

Left-Top : Please touch on Left-Top screen

	Current	1st	2nd
EVR_X :	223	217	218
EVR_Y :	75	76	76
X_MAX :	36	855	898
Y_MAX :	26	230	229

Retry : Press Back Key
OK : Press Menu Key

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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.

eMMC Erasure Count

Displays the status of the eMMC Erasure Count and the current number of times of rewriting.



8.3.5 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 operation panel firmware by specifying the folder path.
wipe data/factory reset	Do not use. Deletes all installed applications and all settings on the Smart Operation Panel.
wipe cache partition	Deletes all data that is stored on the cache partition. Currently, Smart Operation Panel 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. Smart Operation Panel 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.
view recovery	Displays the recovery log.

Menu	Description
logs	

Note

- If [Settings] > [System Settings] > [Settings for Administrator] > [Security] > [Extended Security Settings] > [Update Firmware] is set to [Prohibit], the operation panel cannot enter the recovery mode.
- Ask your manager for information on how to enter the recovery mode.

8.3.6 SPECIAL KEY COMBINATIONS

Function	Operation for Smart Operation Panel
Resetting Settings	In the Settings screen, press a Settings category while holding down the EX3 key. Available for: System Settings, Copier/Document Server Settings, and Scanner Settings.
System Reset	Hold down the EX3 key and [#] simultaneously for 10 seconds. Resets the controller software of the main machine.
Application Reset	Hold down the EX3 key and [9] simultaneously for 10 seconds. Resets a single application.
Resetting User Code Authentication	Hold down [Reset] for 2 seconds. Returns to the User Code entry screen.

8.3.7 BACKUP/RESTORE FOR SMART OPERATION PANEL APPLICATION/SETTINGS FUNCTION

Overview

Application settings and additional applications installed on the Smart Operation Panel can be backed up automatically and can be restored, e.g. after Smart Operation Panel replacement.

In operation panel SP mode, select [Screen Device Settings]> [Backup / Restore Settings].

Data that can be backed up and restored

- System application settings*¹
- Standard application settings*¹
- Pre-install application settings*¹
- Add-on applications (including hybrids)*²

*1: The system application, standard installed application, and pre-installed application are installed in Smart Operation Panel, so the application itself is not backed up or restored after replacement.

*2: Add-on applications settings are not backed up or restored.

Backup

Note

- After replacing the smart operation panel, if the version of the cheetah system firmware is older than a certain version, update it to a later version.
- Backup cannot be performed manually by the user or the technician.
- During the backup, the message being backed up is displayed and other operations cannot be performed.
- A backup is performed 24 hours after the last backup. If the machine doesn't have backup data, the first backup is performed at 2:00AM.
- A backup cannot be performed under any of the conditions below. Backup will retry 1 hour later.
 - During ARFU, firmware updating from download site, etc
 - LCD on the operation panel: ON.
- If the backup data has not changed, no backup will be performed. (Maximum - 7 days)
- During the backup, the LCD is off.
- Backup data is stored on the memory.
- The amount of time for the backup is as follows:

Example:

	Data	Backup time
Additional applications	106MB	1m 6s
Application settings	0.2MB	36s
Total	106.2MB	1m 42s

Disabling the Backup setting

The default setting is "Enabled". To change it to "Disabled", uncheck "Enabled". Restarting the machine is not necessary.

In operation panel SP mode, select [Screen Device Settings] > [Backup/Restore Settings].

Restore

Note

- After replacing the smart operation panel, if the version of the cheetah system firmware is older than a certain version, update it to a later version.
- If the machine doesn't have any backup data, the restore function cannot be used.

1. Execute [Screen Device Settings] > [Backup/Restore Settings] > [Start Restore] in the operation

panel SP mode.

2. After a message indicating that restoration takes several minutes is displayed, touch "execute".

A message saying please wait for a while is displayed. Time is about 10 minutes.

3. After a message indicating that the next message is displayed, touch [Close].

A message that the restoration was successful is displayed.

4. Turn the main switch OFF/ON.

Restore Error Codes

If restore fails, an error code appears on the operation panel.

Code	Cause	Solution
1	Failed to restore additionally installed application data	Retry the Restore procedure.
3	Failed to restore application setting data	Retry the Restore procedure.

8.3.8 SOFTWARE UPDATE

Updating the Smart Operation Panel

★ Important

- In the case of models provided with package firmware only, updates for the Smart Operation Panel and applications are also provided via package firmware. For details, see "**Firmware Update by SD Card**".

There are three methods to update the Smart Operation Panel. The method is different depending on what you want to update.

1. Installation/update from a media
2. Installation/update from the eDC Server
3. Installation/update from Application Site

Update method	Features	Operation panel firmware	Applications
Installation/update from a media	<p>Installation or update is possible in the following two ways.</p> <ol style="list-style-type: none"> 1. Applications <ul style="list-style-type: none"> • Use the installation screen in the operation panel's service mode to update applications. • You can install or update multiple applications at once. 	Yes	Yes

Update method	Features	Operation panel firmware	Applications
	<ul style="list-style-type: none"> You can also uninstall an application. 2. Package firmware (SD card) Refer to " Firmware Update by SD Card ".		
Installation/update from the eDC Server	Install or update applications directly from the eDC Server. This method is mainly for paid applications. A product key is required when an application is installed for the first time. *The update procedure is the same as when updating the Smart Operation Panel application already released.	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 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.	Yes*1	Yes

*1 Update can only be done by using a package file.

The following two methods can be used for updating the firmware.

- Update from a media
- Installation/update from Application Site

The following three methods can be used for updating an application.

- Installation/update from a media
- Installation/update from the eDC Server
- Installation/update from Application Site

Installation/Update from a Media

Installing/Updating an Application

Creating a media card for update

1. Download the update modules from the Firmware Download Center.

2. Create a folder named "romdata" in the root directory of the media.
3. Put the application zip file in the "romdata" folder.

 **Note**

Do not unzip the zip file.

Update procedure

1. Log in to the operation panel in service mode.
2. Insert the SD card into the SD card slot of the operation 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 operation 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. Operation panel firmware

If the operation panel firmware has to be updated, the operation panel starts in the recovery mode and the firmware is automatically updated.

The operation panel restarts when updating is completed. The result notification is processed after the operation panel restarts.

Refer to "***Updating Procedure***" for details.

When Installation/Update Is Prohibited

If "Settings" icon > [System Settings] > [Settings for Administrator] > [Security] > [Extended Security Settings] > [Update Firmware] is set to [Prohibit], 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

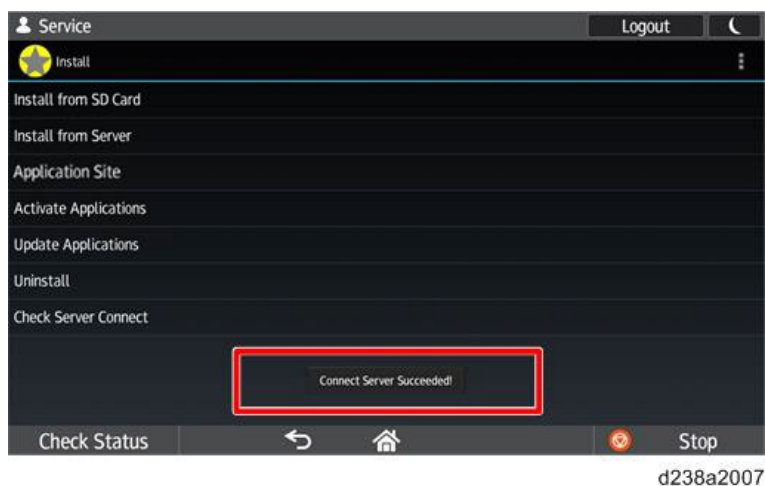
Downloads applications from the eDC Server, and installs or updates them.

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 operation 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 operation panel's service mode.
2. Select [Apps] > [Install].
3. Select [Install from Server].

- Enter the product key and press [Execute].



- Follow the instructions shown on the screen.

Note

- An application cannot be installed unless it is digitally signed by Ricoh.

Activation

- Log in to the operation panel's service mode.
- Select [Apps] > [Install].
- Select [Activate Applications].
- Select the application to be activated, and then enter the activation key and press [Execute].



- Follow the instructions shown on the screen.

Note

- Only charged applications have to be activated.

Update

- Log in to the operation panel's service mode.
- 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.

Forced Uninstallation

If you try to uninstall an activated application without first deactivating it, the uninstallation will fail. However, the application can be uninstalled without deactivation (forced uninstallation) in the following circumstances:

- Uninstallation using the service login uninstallation menu
- Deactivation failure due to the license information stored in the operation panel not matching the license information published by the server

Note

- Forced uninstallation cannot be performed if deactivation fails because of other factors (such as failure to connect to the server because of temporary network disconnection or server maintenance).

During forced uninstallation, the message indicating that deactivation failed appears.

If [OK] of the message is selected, uninstallation is executed forcibly without deactivation.

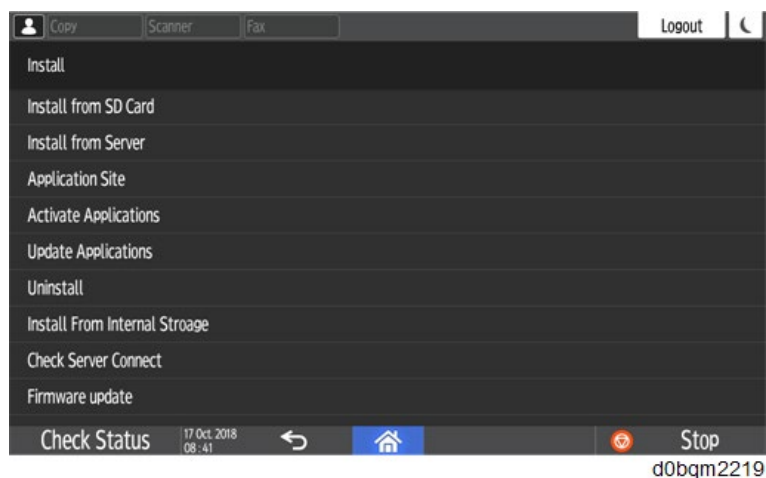
If [Cancel] of the message is selected, uninstallation is not executed.

Note

- If executing forced uninstallation, forced deactivation must also be executed on the eDC server. Accordingly, check whether the license has been published for the eDC server.

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.



This menu item opens Application Site by using the Web Browser NX app.

8.4 TROUBLESHOOTING

8.4.1 PROBLEMS AND ERRORS RELATED TO HARDWARE

Symptom	Solution
The touch panel is damaged (broken, dented, etc.) and cannot be operated.	<ul style="list-style-type: none"> • Connecting a commercially available USB mouse enables the same operation as the touch panel. • Replace the LCD. • Replace the operation panel unit (you need to transfer user information, and reinstall the applications, etc.).
The touch panel does not respond.	<ul style="list-style-type: none"> • Connecting a commercially available USB mouse enables the same operation as the touch panel. • Execute the Panel Self Check. • Check the operations other than that of the touch panel. • Replace the LCD. • Replace the operation panel unit (you need to transfer user information, and reinstall the applications, etc.).
The touch panel's coordinates have shifted substantially, resulting in not being able to execute its calibration.	<ul style="list-style-type: none"> • Connecting a commercially available USB mouse enables the same operation as the touch panel. So you can execute the calibration • Execute the Panel Self Check, or the TouchPanel Calibration • Execute the MultiTouch Calibration. • If the shift occurs even after turning the power and then back ON, check the battery voltage of the operation panel's main controller board. • Replace the main controller board. • Replace the operation panel unit (you need to transfer user information, and reinstall the applications, etc.).
Cannot enter the SSP mode.	<p>If using the screen in a Classic Application, it does not support multitouch, so you cannot enter the SSP mode by the normal operation.</p> <p>Instead, use the EX3 key. Press and hold the EX3 key, and then press the "System/Copy" button in the SP mode</p>

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Symptom	Solution
	menu.
SC672-11 appears.	<p>Cause</p> <p>Communication between the controller and the operation panel was not established after a normal startup.</p> <p>USB cable between the operation panel and the MFP is disconnected, damaged or defective.</p> <p>Solution</p> <p>Reconnect or replace the USB cable. For details about how to replace the USB cable, refer to the service manual for the MFP.</p> <p>Reference</p> <p>For details about SC672, refer to the service manual for the MFP.</p>
SC672-12 appears.	<p>Cause</p> <p>Communication between the controller and the operation panel was interrupted after a normal startup.</p> <p>USB cable between the operation panel and the MFP is disconnected, damaged or defective.</p> <p>Solution</p> <p>Reconnect or replace the USB cable. For details about how to replace the USB cable, refer to the service manual for the MFP.</p> <p>Reference</p> <p>For details about SC672, refer to the service manual for the MFP.</p>



8.4.2 ERRORS RELATED TO APPLICATIONS

Pre-installed Applications

Applicable applications

Copy (Classic) / Scanner (Classic) / Printer (Classic) / Document Server / Quick Copy / Quick Fax / Quick Scanner / Web Browser
/ Quick ID Card Authentication Config*

*Depends on the model whether it is a pre-installed application

If an error related to the application occurs, the operation panel's operating system automatically restarts the application (with a confirmation dialog box).

Third-Party Application

If using a third-party application, the error message, code and solution may vary depending on the application. Follow the third-party vendor's instructions.

8.4.3 ERRORS THAT OCCUR DURING APPLICATION UPDATE FROM AN SD CARD

Error Messages

Error message	Explanation	Solution
Insert a correct SD card.	-	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> You attempted to update a 	Restart the operation panel and repeat the update procedure.

Error message	Explanation	Solution
	module (application) in use. <ul style="list-style-type: none"> The application is corrupted. 	
- (The application you want to update is not displayed in the list of applications.)	-	<ul style="list-style-type: none"> 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.

Error Codes

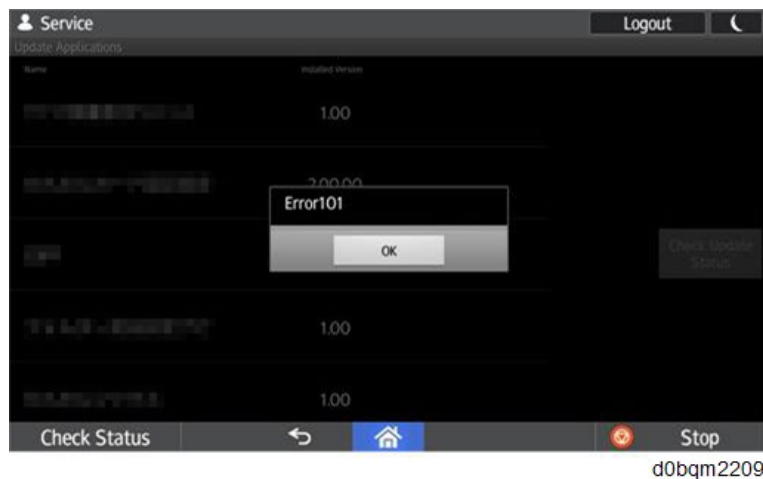
Error codes may appear along with the message reporting the installation failure.

Error Code	Explanation
215-01	Installation of an application that cannot be used according to the system configuration was attempted. (Example: This occurs when installing an application with the copier, scanner and fax functions on a non-MFP printer. However, if any of these functions can be used, the application with such multiple functions can be installed.)
215-02	This occurs if the hard disk cannot be used.
215-03	An application that does not match the type (LP/MFP) or model has been installed. *
215-04	Installation of an application that cannot be installed for Basic model was attempted.
221	The system cannot stop the application for the update or uninstallation.
222	The signature is not authentic.
235	The signature is not authentic.

* If the model information (type or model) does not match, even if SC215-03 does light up at the time of installation, the error message may appear the next time the machine is started. The message shows the model information of the correct firmware and installed firmware. This can be restored by updating the firmware to the version with the correct model information.

8.4.4 ERRORS THAT OCCUR DURING UPDATE FROM THE EDC SERVER

Example of an error code display



XXX (3 digit error)

Error code	Explanation
101	Server connection error
102	Signature verification error
103	License error (for example, the product key was keyed in wrongly)
215	Dependency check error Displayed when the operation panel firmware version does not meet the installation requirement of the application. Example: The firmware version of the operation panel is 1.02 and you attempted to install an application that requires firmware version 1.03.
20X	Other errors

Note

- An additional 3-digit code may be displayed to indicate the details.

Example: 101-805

XXX -XXX (3 digit-3 digit error)




Error code	Explanation	Solution
101-801	Connection Timeout	Check the network settings of the device.

Error code	Explanation	Solution
		<ul style="list-style-type: none"> • Network selection (MFP / Operation Panel) • IP address • Default gateway • Check DNS etc.
101-802	SSL communication failed	Check the network settings of the device.
101-803	Proxy authentication failed	Check the proxy settings of the device.
101-804	Proxy Connection Timeout	Check the proxy settings of the device.
101-805	<p>The server is under maintenance. Connection timeout. (An incorrect network was selected on the operation panel.)</p>	<p>Resume the operation after completing the server maintenance. Check the machine's network settings.</p>
103-705	Executed activation for an already-activated machine with a different product key.	Execute the update, not activation.
201-700	Activation is being attempted from a device with an unauthorized serial number.	Check the machine's network settings.
203-706	<p>License update has been executed using a deactivated product key. => User operation is required because the settings remain even after deactivation.</p>	Execute activation, not license update.

8.4.5 OTHER TROUBLESHOOTING

Operation Panel Unit

HW: Hardware issue, SW: Software issue

No.	Symptom	Cause		Solution
1	<p>Both the Smart Operation Panel and the blue LED on the operation panel do not turn ON.</p> 	HW	<p>The Smart Operation Panel cannot be supplied with electrical power.</p>	<ol style="list-style-type: none"> 1. Reconnect the USB cable between the Smart Operation Panel and the controller board. 2. Replace the USB cable. 3. Replace the OPU controller board. 4. Replace the controller board.
2	<p>The Smart Operation Panel does not turn ON, but the blue LED on the operation panel turns ON.</p> 	HW	<p>The Smart Operation Panel can be supplied with electrical power (blue LED lamp), but nothing can be displayed on the LCD.</p>	<ol style="list-style-type: none"> 1. Reconnect the LCD I/F cable. 2. Replace the LCD. 3. Replace the OPU controller board. 4. Replace the LCD I/F cable.
3	<p>A splash (blue) screen or “Please wait” message stays on the display.</p> 	SW HW	<p>The Smart Operation Panel and LCD can be supplied with electrical power, but software issues occur during the boot-up sequence. Firmware or eMMC data on the OPU controller board is defective.</p>	<ol style="list-style-type: none"> 1. Update the operation panel firmware in recovery mode. 2. Do a factory reset. 3. Replace the OPU controller board.

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D0CS/D0CT

APPENDIX SERVICE MANUAL

Ver. 1.0

Latest Release: December, 2018
Initial Release: December, 2018
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Rev. 02/02/2022

D0CS/D0CT

APPENDIX SERVICE MANUAL

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GENERAL SPECIFICATIONS

1. GENERAL SPECIFICATIONS

1.1 SPECIFICATIONS

1.1.1 MAINFRAME

Items	Specifications
Configuration	Desktop
Memory	2 GB
Copy process	LED alley and electro-photographic printing
Scan method	<ul style="list-style-type: none">• Main scanning: CIS sensor• Sub-scanning: Exposure glass: CIS sensor ADF: Original feed image scanning by CIS sensor
Warm-up time (23°C (73.4°F), rated voltage)	<ul style="list-style-type: none">• Normal mode: 50 seconds• Quick mode: 39 seconds
First copy time	<ul style="list-style-type: none">• Full color: 8.3 seconds• B&W: 7.0 seconds (A4/LT SEF, Tray 1, exposure glass)
Copy/print speed (per minute)	<ul style="list-style-type: none">• A4 (60-105 g/m²), One-sided printing: 53 sheets/minute• A4 (60-105 g/m²), 2-sided printing: 50 sheets/minute• A4 (106-220 g/m²), One-sided printing: 26 sheets/minute• A4 (106-220 g/m²), 2-sided printing: 25 sheets/minute• LT (60-105 g/m²), One-sided printing: 55 sheets/minute• LT (60-105 g/m²), 2-sided printing: 52 sheets/minute• LT (106-220 g/m²), One-sided printing: 8 sheets/minute• LT (106-220 g/m²), 2-sided printing: 7 sheets/minute
Maximum original size	A4, LT, Legal (ADF only)
Original scanning area	<ul style="list-style-type: none">• Exposure Glass Vertical: Up to 220 mm (8.7 inches) Horizontal: Up to 360 mm (14. 2 inches)• ADF Vertical:<ul style="list-style-type: none">• Copy function: 85 to 355.6 mm (3.35 to 14.0 inches)• Scanner function: 85 to 405.6 mm (3.35 to 16.0 inches)• Facsimile function: 85 to 297 mm (3.35 to 11.7 inches)

Items	Specifications
	Horizontal: <ul style="list-style-type: none"> • Copy function: 120 to 215.9 mm (4.72 to 8.5 inches) • Scanner function: 120 to 356 mm (4.72 to 14.0 inches) • Facsimile function: 120 to 215.9 mm (4.72 to 8.5 inches)
Originals	Sheet, book, three-dimensional object
Copy size	<ul style="list-style-type: none"> • Tray 1: A4 SEF, A5 SEF, B5(ISO) SEF, Legal SEF, Foolscap SEF, Letter SEF, Executive SEF, Half Letter SEF, B5 SEF, Com10 SEF, Monarch SEF, C5 Env SEF, DL Env SEF Custom size: <ul style="list-style-type: none"> • Vertical: 190.5–355.6 mm (7.50–14.00 inches) • Horizontal: 76.2–215.9 mm (3.00–8.50 inches) • Bypass Tray: A4 SEF, A5 SEF, A6 SEF, B5(ISO) SEF, Legal SEF, Foolscap SEF, Letter SEF, Executive SEF, Half Letter SEF, B5 SEF, Com10 SEF, Monarch SEF, C5 Env SEF, DL Env SEF Custom size: <ul style="list-style-type: none"> • Vertical: 127.0–355.6 mm (5.00–14.00 inches) • Horizontal: 76.2–215.9 mm (3.00–8.50 inches) • Paper Tray Unit (Trays 2-5): A4 SEF, A5 SEF, B5(ISO) SEF, Legal SEF, Foolscap SEF, Letter SEF, Executive SEF, Half Letter SEF, B5 SEF Custom size: <ul style="list-style-type: none"> • Vertical: 190.5–355.6 mm (7.50–14.00 inches) • Horizontal: 76.2–215.9 mm (3.00–8.50 inches) • LCT: A4 SEF, LT SEF
Paper weight	<ul style="list-style-type: none"> • Tray 1, Paper Tray Unit (Trays 2-5), Bypass Tray: 60–220 g/m² (16 lb. Bond–80 lb. Cover) • Duplex, LCT: 60–176 g/m² (16 lb. Bond–65 lb. Index)
Missing image area (Copy)	<ul style="list-style-type: none"> • Leading edge: 4.0 ± 2.7 mm (0.16 ± 0.11 inches) • Trailing edge: 4.0 ± 2.7 mm (0.16 ± 0.11 inches) • Left edge: 4.0 ± 2.3 mm (0.16 ± 0.09 inches) • Right edge: 4.0 ± 2.3 mm (0.16 ± 0.09 inches)
Preset reproduction ratio	<ul style="list-style-type: none"> • Europe/Asia 200, 141, 100, 93, 71, 50 (%) • North America

Items	Specifications
	155, 129, 100, 93, 78, 65 (%)
Reproduction ratio (zoom)	From 25–400% in increments of 1%
Resolution (scanning originals)	600 × 600 dpi, 600 × 400 dpi
Resolution (copying)	1200 × 2400 dpi
Tone	256 tones
Paper capacity (80 g/m ² , 20 lb. Bond)	<ul style="list-style-type: none"> • Tray1, Paper Tray Unit (Trays 2-5): 550 sheets (up to 59.4 mm (2.3 inches) in height) • Bypass Tray: 150 sheets (up to 16.5 mm (0.6 inches) in height) • LCT: 2,000 sheets (up to 218 mm (8.6 inches) in height)
Continuous copy run	1–999 sheets
Power requirements	<ul style="list-style-type: none"> • Europe/Asia IM C530FB: 220–240 V, 8 A, 50/60 Hz IM C530F: 220–240 V, 8 A, 50/60 Hz • North America IM C530FB: 120–127 V, 12 A, 60 Hz IM C530F: 120–127 V, 12 A, 60 Hz
Power consumption (Main unit only)	<ul style="list-style-type: none"> • Europe/Asia Ready: 99.8 W During printing: B&W: 578 W / Color: 633 W Maximum: 1,650 W or less • North America Ready: 101 W During printing: B&W: 620 W / Color: 658 W Maximum: 1,600 W or less <p>* The power level when the main switch is turned off and the power cord is plugged into an outlet: 1 W or less.</p>
Power consumption (Complete system)	<ul style="list-style-type: none"> • Europe/Asia Maximum: 1,650 W or less • North America Maximum: 1,600 W or less
Dimensions (W × D × H up to ADF)	<ul style="list-style-type: none"> • IM C530FB 470 × 502.8 × 643.7 mm (18.5 × 19.8 × 25.3 inches) • IM C530F

Items	Specifications
	470 × 502.8 × 843.7 mm (18.5 × 19.8 × 33.2 inches)
Space for main unit (W × D)	870 × 1322 mm (34.3 × 52 inches) (including the bypass tray)
Noise emission (Sound power level: Main unit only)	<ul style="list-style-type: none"> IM C530FB Stand-by: 30.0 dB (A) Copying: B&W: 67.5 dB (A) / Color: 68.0 dB (A) IM C530F Stand-by: 30.4 dB (A) Copying: B&W: 67.7 dB (A) / Color: 68.8 dB (A)
Noise emission (Sound power level: Complete system)	<ul style="list-style-type: none"> IM C530FB Stand-by: 31.2 dB (A) Copying: B&W: 73.6 dB (A) / Color: 73.3 dB (A) IM C530F Stand-by: 31.2 dB (A) Copying: B&W: 73.8 dB (A) / Color: 73.6 dB (A)
Noise emission (Sound pressure level: Main unit only)	<ul style="list-style-type: none"> IM C530FB Stand-by: 19.5 dB (A) Copying: B&W: 57.5 dB (A) / Color: 57.7 dB (A) IM C530F Stand-by: 18.5 dB (A) Copying: B&W: 57.2 dB (A) / Color: 57.6 dB (A)
Noise emission (Sound pressure level: Complete system)	<ul style="list-style-type: none"> IM C530FB Stand-by: 19.3 dB (A) Copying: B&W: 61.1 dB (A) / Color: 61.0 dB (A) IM C530F Stand-by: 18.7 dB (A) Copying: B&W: 60.7 dB (A) / Color: 60.5 dB (A)
Weight	<ul style="list-style-type: none"> IM C530FB Approx. 38 kg (83.8 lb.) IM C530F Approx. 42 kg (92.6 lb.)

 **Note**

- Sound power levels and sound pressure levels are actual values measured in accordance with ISO 7779.
- Sound pressure levels are measured from the position of the bystander.
- The complete system of the IM C530FB consists of the main unit, four paper tray units, and caster table.
- The complete system of the IM C530F consists of the main unit, internal finisher, four paper

tray units, and caster table.

1.1.2 PRINTER

Items	Specifications
Printing speed	<ul style="list-style-type: none"> One-sided printed paper A4 SEF: 53 sheets/minute LT SEF: 55 sheets/minute Two-sided printed paper A4 SEF: 50 sheets/minute LT SEF: 52 sheets/minute
Resolution	200 dpi, 400 dpi, 600 dpi, 1,200 dpi
Printer language	Standard: PJL, PCL 5c/6, PostScript 3 Emulation, PDF Emulation, MediaPrint (TIFF)
Interface	<ul style="list-style-type: none"> Standard: <ul style="list-style-type: none"> Ethernet (10BASE-T/100BASE-TX/1000BASE-T) USB2.0 (Type B) port USB2.0 (Type A) port (on the control panel) SD card slot (on the control panel) Option: <ul style="list-style-type: none"> IEEE 802.11a/b/g/n wireless LAN interface
Network protocol	TCP/IP (IPv4, IPv6)
USB interface	<ul style="list-style-type: none"> Transmission spec: USB 2.0 Standard Connectable device: Devices corresponding to USB 2.0 Standard
Operating system	<ul style="list-style-type: none"> Windows 7/8.1/10 Windows Server 2008/2008 R2/2012/2012 R2/2016/2019 macOS 10.12 or later
Fonts	PCL/PostScript 3/PDF: 93 Roman fonts Summary: Nimbus Sans 4 fonts, HGPA Gothic 1 font

1.1.3 SCANNER

Scanning

Items	Specifications
Type	Full-color scanner
Scan method	Flatbed scanning
Image sensor type	CIS sensor
Scan type	Sheet, book, three-dimensional object

Items	Specifications
Original sizes that can be scanned	<ul style="list-style-type: none"> • Length: 10–216 mm (0.4–8.5 inches) • Width: 10-356 mm (0.4–14.0 inches)
Scan speed	<ul style="list-style-type: none"> • When scanning one-sided originals (black and white, LT) 49 pages/minute • When scanning one-sided originals (black and white, A4) 46 pages/minute • When scanning one-sided originals (full color, LT) 47 pages/minute • When scanning one-sided originals (full color, A4) 46 pages/minute • When scanning two-sided originals (black and white, LT) 75 pages/minute • When scanning two-sided originals (black and white, A4) 71 pages/minute • When scanning two-sided originals (full color, LT) 55 pages/minute • When scanning two-sided originals (full color, A4) 52 pages/minute <p>When using the E-mail, Scan to Folder, WSD (Push Type), or Scan to Removable device (Original size: A4/LT SEF, Resolution: 200 dpi)</p> <ul style="list-style-type: none"> • Black and white Original Type: B&W two-value, Compression: MH • Full Color Original type: Text/Photo, Compression: JPEG Standard <p>Scanning speed differs depending on the operating environment of the machine and computer, scan settings, and the content of originals.</p>
Tone	<ul style="list-style-type: none"> • Black & White: 2 tones • Full Color/Gray Scale: 256 tones
Basic scanning resolution	200 dpi
Image compression type for black and white (two-value)	TIFF (MH, MR, MMR)
Image compression type for gray scale/full color	JPEG
Interface	<ul style="list-style-type: none"> • Standard: <ul style="list-style-type: none"> • Ethernet (10BASE-T/100BASE-TX/1000BASE-T) • USB 2.0 (Type A) port (on the control panel) • SD card slot (on the control panel)

Items	Specifications
	<ul style="list-style-type: none"> Option: <ul style="list-style-type: none"> IEEE 802.11a/b/g/n wireless LAN interface
Network protocol	TCP/IP

E-mail transmission

Items	Specifications
Scanning resolution	100 dpi, 200 dpi, 300 dpi, 400 dpi, 600 dpi
Protocol*1	POP, SMTP*2
Output format	TIFF, JPEG, PDF, High Compression PDF, PDF/A

*1 Supporting Web mail transmission

*2 Supporting SMTP over SSL

Scan to Folder

Items	Specifications
Scanning resolution	100 dpi, 200 dpi, 300 dpi, 400 dpi, 600 dpi
Protocol	<p>SMB</p> <ul style="list-style-type: none"> You can use SMB protocol (139/TCP, 137/UDP) or CIFS protocol (445/TCP) for sending folders with SMB. The Scan to Folder function with SMB protocol (139/TCP, 137/UDP) is enabled under NetBIOS over TCP/IP environment only. You cannot use the Scan to Folder function with SMB under NetBEUI.
Output format	TIFF, JPEG, PDF, High Compression PDF, PDF/A

Network TWAIN Scanner

Items	Specifications
Scanning resolution	<ul style="list-style-type: none"> When using the exposure glass: 100–1,200 dpi*1 When using the ADF: 100–600 dpi*1
Protocol	TCP/IP
Operating system	<ul style="list-style-type: none"> Windows 7/8.1/10 Windows Server 2008/2008 R2/2012/2012 R2/2016/2019 <p>(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 32-bit applications. IC card Authentication System is not compatible with 64-bit operating system.)</p>

*1 The maximum resolution depends on the scan size.

WIA scanner

Items	Specifications
Scanning resolution (Main scanning × Sub-scanning)	100–1,200 dpi* ¹
Protocol	TCP/IP
Operating system	<ul style="list-style-type: none"> • Windows 7/8.1/10 • Windows Server 2008/2008 R2/2012/2012 R2/2016/2019 (WIA scanner can function under both 32- and 64-bit operating systems.)

*1 The maximum resolution depends on the scan size.

1.1.4 ADF

Items	Specifications
Original size	A4 to A6, 8 ¹ / ₂ × 14 to 5 ¹ / ₂ × 8 ¹ / ₂
Original weight	60-128 g/m ² (16-34 lb. Bond)
Number of originals to be set	13 mm or less
Power requirements	Power is supplied from the main unit.

1.2 SUPPORTED PAPER SIZE

1.2.1 PAPER FEED

Paper	Size	Tray 1	Paper Feed Unit (Tray 2-5)	LCT	Bypass Tray
A4 SEF	210 x 297 mm	✓	✓	✓	✓
A5 SEF	148 x 210 mm	✓	✓	-	✓
A5 LEF	210 x 148 mm	-	-	-	-
A6 SEF	105 x 148 mm	-	-	-	✓
B5 SEF	182 x 257 mm	✓	✓	-	✓
B6 SEF	128 x 182 mm	-	-	-	-
Legal SEF	8.5 x 14 inches	✓	✓	-	✓
Foolscap SEF	8.5 x 13 inches	✓	✓	-	✓
Letter SEF	8.5 x 11 inches	✓	✓	✓	✓
GovernmentLG SEF	8.25 x 14 inches	-	-	-	-
Folio SEF	8.25 x 13 inches	-	-	-	-
F/GL SEF	8 x 13 inches	-	-	-	-
Eng Quatro SEF	8 x 10 inches	-	-	-	-
Executive SEF	7.25 x 10.5 inches	✓	✓	-	✓
Half Letter SEF	5.5 x 8.5 inches	✓	✓	-	✓
Half Letter LEF	8.5 x 5.5 inches	-	-	-	-
Com10 Env. SEF	4.125 x 9.5 inches	-	-	-	✓
Monarch Env. SEF	3.875 x 7.5 inches	-	-	-	✓
C5 Env. SEF	162 x 229 mm	-	-	-	✓
C6 Env. SEF	114 x 162 mm	-	-	-	-
DL Env. SEF	110 x 220 mm	-	-	-	✓
16K SEF	195 x 267 mm	-	-	-	-

Custom:

-	Tray1	Paper Feed Unit (Tray 2-5)	Bypass Tray
Width	76.2–215.9 mm 3.00–8.50 inches	76.2–215.9 mm 3.00–8.50 inches	76.2–215.9 mm 3.00–8.50 inches
Length	190.5–355.6 mm 7.50–14.00 inches	190.5–355.6 mm 7.50–14.00 inches	127.0–355.6 mm 5.00–14.00 inches

Remarks

✓: Supported

1.2.2 PAPER EXIT

Paper	Size	Main Tray	Finisher
A4 SEF	210 x 297 mm	✓	✓
A5 SEF	148 x 210 mm	✓	-
A5 LEF	210 x 148 mm	-	-
A6 SEF	105 x 148 mm	✓	-
B5 SEF	182 x 257 mm	✓	✓
B6 SEF	128 x 182 mm	-	-
Legal SEF	8.5 x 14 inches	✓	✓
Foolscap SEF	8.5 x 13 inches	✓	-
Letter SEF	8.5 x 11 inches	✓	✓
GovernmentLG SEF	8.25 x 14 inches	-	-
Folio SEF	8.25 x 13 inches	-	-
F/GL SEF	8 x 13 inches	-	-
Eng Quatro SEF	8 x 10 inches	-	-
Executive SEF	7.25 x 10.5 inches	✓	✓
Half Letter SEF	5.5 x 8.5 inches	✓	-
Half Letter LEF	8.5 x 5.5 inches	-	-
Com10 Env. SEF	4.125 x 9.5 inches	✓	-
Monarch Env. SEF	3.875 x 7.5 inches	✓	-
C5 Env. SEF	162 x 229 mm	✓	-
C6 Env. SEF	114 x 162 mm	-	-
DL Env. SEF	110 x 220 mm	✓	-
16K SEF	195 x 267 mm	-	-

Custom:

-	Main Tray	Finisher
Width	76.2–215.9 mm 3.00–8.50 inches	176.0–215.9 mm 6.93–8.50 inches
Length	127.0–355.6 mm 5.00–14.00 inches	250.0–355.6 mm 10.04–14.00 inches

Remarks

✓: Supported

1.3 SOFTWARE ACCESSORIES

The CD-ROM provided with the machine contains various drivers to use with the machine, along with a utility application that allows you to install the printer driver easily.

1.3.1 PRINTER DRIVERS

Windows

Type of Printer Driver

- PCL 6
With this driver, you can use the machine as a PCL 6 printer.
- PostScript 3
With this driver, you can use the machine as a PostScript printer.

Supported Operating Systems

The printer drivers support the following 32-/64-bit Windows operating systems.

- Windows 7 Home Premium/Professional/Ultimate/Enterprise
- Windows 8.1/Pro/Enterprise
- Windows 10 Home/Pro/Enterprise/Education
- Windows Server 2008 Standard/Enterprise, Windows Server 2008 R2 Standard/Enterprise
- Windows Server 2012 Foundation/Essentials/Standard, Windows Server 2012 R2 Foundation/Essentials/Standard
- Windows Server 2016 Standard/Essentials/Datacenter/MultiPoint Premium Server
- Windows Server 2019 Standard/Essentials/Datacenter

macOS

Type of Printer Driver

- PostScript 3
To print from macOS, install the PPD file and use the Adobe PostScript driver.

Supported Operating Systems

- macOS 10.12 Sierra
- macOS 10.13 High Sierra
- macOS 10.14 Mojave
- macOS 10.15 Catalina

1.3.2 SCANNER AND LAN-FAX DRIVERS

TWAIN/WIA Driver

Supported Operating Systems

For the 64-bit version of Windows, the driver operates in 32-bit compatibility mode.

- Microsoft Windows 7/8.1/10
- Microsoft Windows Server 2008/2008 R2/2012/2012 R2/2016/2019

LAN-Fax Driver

Supported Operating Systems

- Microsoft Windows 7/8.1/10
- Microsoft Windows Server 2008/2008 R2/2012/2012 R2/2016/2019

1.4 OPTIONAL EQUIPMENT

1.4.1 PAPE FEED UNIT PB1080 (D3GX)

Items	Specifications
Page size	A4 SEF, A5 SEF, B5(ISO) SEF, Legal SEF, Foolscap SEF, Letter SEF, Executive SEF, Half Letter SEF, B5 SEF Custom size: <ul style="list-style-type: none"> Vertical: 190.5–355.6 mm (7.50–14.00 inches) Horizontal: 76.2–215.9 mm (3.00–8.50 inches)
Paper capacity (80 g/m ² , 20 lb. Bond)	550 sheets (up to 59.4 mm (2.3 inches) in height)
Paper weight	60–220 g/m ² (16 lb. Bond–80 lb. Cover)
Power requirements	Power is supplied from the main unit.
Maximum power consumption	17 W or less
Dimensions (W × D × H)	420 × 465 × 123 mm (16.5 × 18.3 × 4.8 inches)
Weight	Approx. 6.6 kg (14.6 lb.)

1.4.2 LCIT PB1090 (D3GY)

Items	Specifications
Page size	A4 SEF, LT SEF
Paper capacity (80 g/m ² , 20 lb. Bond)	2,000 sheets (up to 218 mm (8.6 inches) in height)
Paper weight	60–176 g/m ² (16 lb. Bond–65 lb. Cover)
Power requirements	Power is supplied from the main unit.
Maximum power consumption	18 W or less
Dimensions (W × D × H)	724 × 772 × 459 mm (28.5 × 30.4 × 18.1 inches)
Weight	Approx. 19.7 kg (43.5 lb.)

1.4.3 INTERNAL FINISHER SR1020 (D3H0)

Items	Specifications
Paper size	A4 SEF, B5 SEF, LT SEF, LG SEF, Exective SEF, Custom size: <ul style="list-style-type: none"> Vertical: 250.0–355.6 mm (10.04–14.00 inches) Horizontal: 176.0–215.9 mm (6.93–8.50 inches)
Paper weight	60–220 g/m ² (16 lb. Bond–80 lb. Cover)
Stack capacity (80 g/m ² , 20 lb. Bond)	500 sheets
Staple paper size	A4 SEF, B5 SEF, LT SEF, LG SEF, Exective SEF,

Items	Specifications
	Custom size: <ul style="list-style-type: none"> • Vertical: 250.0–355.6 mm (10.04–14.00 inches) • Horizontal: 176.0–215.9 mm (6.93–8.50 inches)
Staple paper weight	60–220 g/m ² (16 lb. Bond–80 lb. Cover)
Staple capacity	Staple capacity depends on the paper thickness you are using, as shown below. <ul style="list-style-type: none"> • When using Plain Paper 1, Plain Paper 2: 50 sheets • When using Middle Thick: 30 sheets • When using Thick Paper 1: 15 sheets • When using Thick Paper 2: 10 sheets
Stack capacity after stapling (80 g/m ² , 20 lb. Bond)	2 sheets: 60 sets
Staple position	Slant
Power requirements	Power is supplied from the main unit.
Maximum power consumption	77 W or less
Dimensions (W × D × H)	451 × 478 × 248 mm (17.8 × 18.8 × 9.8 inches)
Weight	Approx. 6.8 kg (15.0 lb.)

PM TABLES

2. PM TABLES

2.1 MAINTENANCE TABLES

Symbol keys: C: Clean, R: Replace

Note

- (R): Yield Parts
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, and P/J). 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.
- The yield figures in the above table are based on the following conditions:
 - A4(LT) short-edge feed
 - 5% image coverage ratio
 - 3 print/job

PCDU/LED Optics/Transfer/Fusing

Item	30K	60K	240K	EM	Remarks
LED Head lens				C	Clean with the cleaning rod in the printer.
PCDU (YMCK)		R			Printer STOPs when the counter reaches 72K.
Waste Toner Bottle	R				
Fusing unit			(R)		
ITB Unit			(R)		Printer STOPs when the counter reaches 260K.
Paper Transfer Roller Unit			(R)		

Paper Feed

Item	200K	EM	Remarks
Paper feed module	R	C	Replace with a set at the same time.
<ul style="list-style-type: none"> • Paper Feed Roller Assy • Separation Roller Assy 			Wipe with a damp cloth when cleaning.
Other rollers		C	Wipe with a damp cloth

SPDF/Scanner

The PM count for the following items is based on the number of originals fed:

Item	200K	EM	Remarks
SPDF feed module <ul style="list-style-type: none"> • SPDF Feed Assy • SPDF Separation Roller 	R	C	Replace with a set at the same time. Wipe with a damp cloth when cleaning.
Other rollers		C	Wipe with a damp cloth.
Platen		C	Wipe with a dry cloth.
Exposure glass		C	Wipe with a cleaning cloth.
Exposure glass (for SPDF)		C	Wipe with a cleaning cloth.

SP MODE TABLES

3. SP MODE TABLES

3.1 SERVICE TABLE KEY

Notation	What it means
ENG	Engine SP
CTL	Controller SP
[Min to Max/Init./Step]	Example: [-9 to 9 / 0 / 0.1mm]. The setting can be adjusted in the range ± 9 , value reset to 0 after an NVRAM reset, and the value can be changed in 0.1 mm steps with each key press.
*	Value stored in NVRAM. After a RAM reset, this default value (factory setting) is restored.

3.2 SP1-XXX

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
1-001-001	Sub Scan Reistration Correct	Front Main	ENG	[-2 to 2 / 0 / 0.1mm]
1-001-002	Sub Scan Reistration Correct	Front Option Tray 1	ENG	[-2 to 2 / 0 / 0.1mm]
1-001-003	Sub Scan Reistration Correct	Front Option Tray 2	ENG	[-2 to 2 / 0 / 0.1mm]
1-001-004	Sub Scan Reistration Correct	Front Option Tray 3	ENG	[-2 to 2 / 0 / 0.1mm]
1-001-005	Sub Scan Reistration Correct	Front Option Tray 4	ENG	[-2 to 2 / 0 / 0.1mm]
1-001-006	Sub Scan Reistration Correct	Front By-Pass Tray	ENG	[-2 to 2 / 0 / 0.1mm]
1-001-011	Sub Scan Reistration Correct	Rear Main	ENG	[-2 to 2 / 0 / 0.1mm]
1-001-012	Sub Scan Reistration Correct	Rear Option Tray 1	ENG	[-2 to 2 / 0 / 0.1mm]
1-001-013	Sub Scan Reistration Correct	Rear Option Tray 2	ENG	[-2 to 2 / 0 / 0.1mm]
1-001-014	Sub Scan Reistration Correct	Rear Option Tray 3	ENG	[-2 to 2 / 0 / 0.1mm]
1-001-015	Sub Scan Reistration Correct	Rear Option Tray 4	ENG	[-2 to 2 / 0 / 0.1mm]
1-001-016	Sub Scan Reistration Correct	Rear By-Pass Tray	ENG	[-2 to 2 / 0 / 0.1mm]
1-002-001	Main Scan Reistration Correct	Front Main	ENG	[-2 to 2 / 0 / 0.1mm]
1-002-002	Main Scan Reistration Correct	Front Option Tray 1	ENG	[-2 to 2 / 0 / 0.1mm]
1-002-003	Main Scan Reistration Correct	Front Option Tray 2	ENG	[-2 to 2 / 0 / 0.1mm]
1-002-004	Main Scan Reistration Correct	Front Option Tray 3	ENG	[-2 to 2 / 0 / 0.1mm]
1-002-005	Main Scan Reistration Correct	Front Option Tray 4	ENG	[-2 to 2 / 0 / 0.1mm]
1-002-006	Main Scan Reistration	Front By-Pass Tray	ENG	[-2 to 2 / 0 / 0.1mm]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
	Correct			
1-002-011	Main Scan Reistration Correct	Rear Main	ENG	[-2 to 2 / 0 / 0.1mm]
1-002-012	Main Scan Reistration Correct	Rear Option Tray 1	ENG	[-2 to 2 / 0 / 0.1mm]
1-002-013	Main Scan Reistration Correct	Rear Option Tray 2	ENG	[-2 to 2 / 0 / 0.1mm]
1-002-014	Main Scan Reistration Correct	Rear Option Tray 3	ENG	[-2 to 2 / 0 / 0.1mm]
1-002-015	Main Scan Reistration Correct	Rear Option Tray 4	ENG	[-2 to 2 / 0 / 0.1mm]
1-002-016	Main Scan Reistration Correct	Rear By-Pass Tray	ENG	[-2 to 2 / 0 / 0.1mm]
1-105-001	Fuser Temp Correct	Plain1	ENG	[-6 to 6 / 0 / 1deg]
1-105-002	Fuser Temp Correct	Plain1: Recycled	ENG	[-6 to 6 / 0 / 1deg]
1-105-003	Fuser Temp Correct	Plain2	ENG	[-6 to 6 / 0 / 1deg]
1-105-004	Fuser Temp Correct	Mid Thick	ENG	[-6 to 6 / 0 / 1deg]
1-105-005	Fuser Temp Correct	Thick1	ENG	[-6 to 6 / 0 / 1deg]
1-105-006	Fuser Temp Correct	Thick2	ENG	[-6 to 6 / 0 / 1deg]
1-105-007	Fuser Temp Correct	Envelope	ENG	[-6 to 6 / 0 / 1deg]
1-105-008	Fuser Temp Correct	Label	ENG	[-6 to 6 / 0 / 1deg]
1-105-009	Fuser Temp Correct	CoatedPaper: Thick1	ENG	[-6 to 6 / 0 / 1deg]
1-105-010	Fuser Temp Correct	CoatedPaper: Thick2	ENG	[-6 to 6 / 0 / 1deg]
1-998-001	Reserve SP	reserve01	ENG*	[0 to 255 / 0 / 1]
1-998-002	Reserve SP	reserve02	ENG*	[0 to 255 / 0 / 1]
1-998-003	Reserve SP	reserve03	ENG*	[0 to 255 / 0 / 1]
1-998-004	Reserve SP	reserve04	ENG*	[0 to 255 / 0 / 1]
1-998-005	Reserve SP	reserve05	ENG*	[0 to 255 / 0 / 1]
1-998-006	Reserve SP	reserve06	ENG*	[0 to 255 / 0 / 1]
1-998-007	Reserve SP	reserve07	ENG*	[0 to 255 / 0 / 1]
1-998-008	Reserve SP	reserve08	ENG*	[0 to 255 / 0 / 1]
1-998-009	Reserve SP	reserve09	ENG*	[0 to 255 / 0 / 1]
1-998-010	Reserve SP	reserve10	ENG*	[0 to 255 / 0 / 1]
1-998-011	Reserve SP	reserve11	ENG*	[0 to 255 / 0 / 1]
1-998-012	Reserve SP	reserve12	ENG*	[0 to 255 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
1-998-013	Reserve SP	reserve13	ENG*	[0 to 255 / 0 / 1]
1-998-014	Reserve SP	reserve14	ENG*	[0 to 255 / 0 / 1]
1-998-015	Reserve SP	reserve15	ENG*	[0 to 255 / 0 / 1]
1-998-016	Reserve SP	reserve16	ENG*	[0 to 255 / 0 / 1]
1-998-017	Reserve SP	reserve17	ENG*	[0 to 65535 / 0 / 1]
1-998-018	Reserve SP	reserve18	ENG*	[0 to 65535 / 0 / 1]
1-998-019	Reserve SP	reserve19	ENG*	[0 to 65535 / 0 / 1]
1-998-020	Reserve SP	reserve20	ENG*	[0 to 65535 / 0 / 1]
1-998-021	Reserve SP	reserve21	ENG*	[0 to 65535 / 0 / 1]
1-998-022	Reserve SP	reserve22	ENG*	[0 to 65535 / 0 / 1]
1-998-023	Reserve SP	reserve23	ENG*	[0 to 65535 / 0 / 1]
1-998-024	Reserve SP	reserve24	ENG*	[0 to 65535 / 0 / 1]
1-998-025	Reserve SP	reserve25	ENG*	[0 to 0xFFFFFFFF / 0 / 1]
1-998-026	Reserve SP	reserve26	ENG*	[0 to 0xFFFFFFFF / 0 / 1]
1-998-027	Reserve SP	reserve27	ENG*	[0 to 0xFFFFFFFF / 0 / 1]
1-998-028	Reserve SP	reserve28	ENG*	[0 to 0xFFFFFFFF / 0 / 1]
1-998-029	Reserve SP	reserve29	ENG*	[0 to 0xFFFFFFFF / 0 / 1]
1-998-030	Reserve SP	reserve30	ENG*	[0 to 0xFFFFFFFF / 0 / 1]
1-998-031	Reserve SP	reserve31	ENG*	[0 to 0xFFFFFFFF / 0 / 1]
1-998-032	Reserve SP	reserve32	ENG*	[0 to 0xFFFFFFFF / 0 / 1]
1-998-033	Reserve SP	reserve33	ENG*	[0 to 255 / 0 / 1]
1-998-034	Reserve SP	reserve34	ENG*	[0 to 255 / 0 / 1]

3.3 SP2-XXX

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
2-103-001	Erase Margin Adjustment	Lead Edge Width	ENG	[4 to 9.9 / 4 / 0.1mm]
2-103-002	Erase Margin Adjustment	Trail Edge Width	ENG	[4 to 9.9 / 4 / 0.1mm]
2-103-003	Erase Margin Adjustment	Left Edge Width	ENG	[4 to 9.9 / 4 / 0.1mm]
2-103-004	Erase Margin Adjustment	Right Edge Width	ENG	[4 to 9.9 / 4 / 0.1mm]
2-103-005	Erase Margin Adjustment	Duplex Left Edge	ENG	[0 to 1.5 / 0 / 0.1mm]
2-103-006	Erase Margin Adjustment	Duplex Right Edge	ENG	[0 to 1.5 / 0 / 0.1mm]
2-109-003	Test Pattern	Pattern Selection	ENG	[0 to 19 / 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 12: 2dot Ind 13: 4dot Ind 14: Trimming Area 15: Black Band H 16: Black Band V 17: Checker Flag Pattern 18: Full Dot Pattern 19: Mushi Pattern
2-109-005	Test Pattern	Color Selection	ENG	[0 to 4 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				0: All Color 1: Bk 2: Cy 3: Ma 4: Ye
2-110-001	IOT Test Pattern	Pattern Selection	ENG	[0 to 25 / 0 / 1] 0: None 1: Grid 14: LPH Chart LM YMCK 15: LPH Chart IBY 21: Blank Sheet 22: LPH Chart LM Y 23: LPH Chart LM M 24: LPH Chart LM C 25: LPH Chart LM K/BW
2-111-004	Forced Line Position Adj.	Mode d	ENG	[0 to 1 / 0 / 1]
2-311-001	Trans Correct	Plain1	ENG	[1 to 16 / 6 / 1Step]
2-311-002	Trans Correct	Plain1:Recycled	ENG	[1 to 16 / 6 / 1Step]
2-311-003	Trans Correct	Plain2	ENG	[1 to 16 / 6 / 1Step]
2-311-004	Trans Correct	Mid Thick	ENG	[1 to 16 / 6 / 1Step]
2-311-005	Trans Correct	Thick1	ENG	[1 to 16 / 6 / 1Step]
2-311-006	Trans Correct	Thick2	ENG	[1 to 16 / 6 / 1Step]
2-311-007	Trans Correct	Envelope	ENG	[1 to 16 / 6 / 1Step]
2-311-008	Trans Correct	Label	ENG	[1 to 16 / 6 / 1Step]
2-311-009	Trans Correct	CoatedPaper: Thick1	ENG	[1 to 16 / 6 / 1Step]
2-311-010	Trans Correct	CoatedPaper: Thick2	ENG	[1 to 16 / 6 / 1Step]
2-785-001	Deve Refresh & BTR CLN	Exec	ENG	[0 to 1 / 0 / 1]
2-786-002	IBT Reverse	Exec	ENG	[0 to 1 / 0 / 1]
2-960-001	Process Interval	Additional Time	ENG	[0 to 10 / 1 / 1sec]

3.4 SP3-XXX

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]
3-011-003	Manual ProCon :Exe	ACC RunTime ProCon	ENG	[0 to 1 / 0 / 1]
3-014-001	IBACC OK?	History:Last	ENG	[0 to 9999 / 0 / 1]
3-014-002	IBACC OK?	History:Last 2	ENG	[0 to 9999 / 0 / 1]
3-014-003	IBACC OK?	History:Last 3	ENG	[0 to 9999 / 0 / 1]
3-014-004	IBACC OK?	History:Last 4	ENG	[0 to 9999 / 0 / 1]
3-014-005	IBACC OK?	History:Last 5	ENG	[0 to 9999 / 0 / 1]
3-014-006	IBACC OK?	History:Last 6	ENG	[0 to 9999 / 0 / 1]
3-014-007	IBACC OK?	History:Last 7	ENG	[0 to 9999 / 0 / 1]
3-014-008	IBACC OK?	History:Last 8	ENG	[0 to 9999 / 0 / 1]
3-014-009	IBACC OK?	History:Last 9	ENG	[0 to 9999 / 0 / 1]
3-014-010	IBACC OK?	History:Last 10	ENG	[0 to 9999 / 0 / 1]
3-110-001	Near End Thresh	Toner:K:Supply	ENG	[0 to 255 / 10 / 1%]
3-110-002	Near End Thresh	Toner:C:Supply	ENG	[0 to 255 / 10 / 1%]
3-110-003	Near End Thresh	Toner:M:Supply	ENG	[0 to 255 / 10 / 1%]
3-110-004	Near End Thresh	Toner:Y:Supply	ENG	[0 to 255 / 10 / 1%]
3-110-011	Near End Thresh	Toner:K:Start	ENG	[0 to 255 / 30 / 1%]
3-110-012	Near End Thresh	Toner:C:Start	ENG	[0 to 255 / 50 / 1%]
3-110-013	Near End Thresh	Toner:M:Start	ENG	[0 to 255 / 50 / 1%]
3-110-014	Near End Thresh	Toner:Y:Start	ENG	[0 to 255 / 50 / 1%]
3-260-001	Current Temperature	Temperature Range	ENG	[0 to 1 / 0 / 1]
3-600-004	Select ProCon	ACC Before ProCon	ENG	[0 to 1 / 1 / 1]
3-600-030	Select ProCon	IBACC:ON/OFF	ENG	[0 to 1 / 1 / 1]
3-900-001	NVM Read	Exec	ENG	[0 to 1 / 0 / 1]
3-900-002	NVM Read	Chain No	ENG	[1 to 999 / 1 / 1]
3-900-003	NVM Read	Link No	ENG	[1 to 999 / 1 / 1]
3-900-004	NVM Read	Result	ENG	[0 to 10 / 0 / 1]
3-900-005	NVM Read	Result Data Type	ENG	[0 to 2 / 0 / 1]
3-900-006	NVM Read	Result Data Length	ENG	[0 to 4 / 0 / 1]
3-900-007	NVM Read	Result Access Privilege	ENG	[0 to 13 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
3-900-008	NVM Read	Result Current Value	ENG	[0 to 0xFFFFFFFF / 0 / 1]
3-900-009	NVM Read	Result Minimum Value	ENG	[0 to 0xFFFFFFFF / 0 / 1]
3-900-010	NVM Read	Result Maximum Value	ENG	[0 to 0xFFFFFFFF / 0 / 1]
3-901-001	NVM Write	Exec	ENG	[0 to 1 / 0 / 1]
3-901-002	NVM Write	Chain No	ENG	[1 to 999 / 1 / 1]
3-901-003	NVM Write	Link No	ENG	[1 to 999 / 1 / 1]
3-901-004	NVM Write	Data Type	ENG	[1 to 2 / 1 / 1]
3-901-005	NVM Write	Data Length	ENG	[1 to 4 / 1 / 1]
3-901-006	NVM Write	Data Value	ENG	[0 to 0xFFFFFFFF / 0 / 1]
3-901-007	NVM Write	Diag Result	ENG	[0 to 0x0E / 0 / 1]
3-901-008	NVM Write	Update Result	ENG	[0 to 9 / 0 / 1]
3-902-001	HFSI Counter Read	Exec	ENG	[0 to 1 / 0 / 1]
3-902-002	HFSI Counter Read	Chain No	ENG	[1 to 999 / 1 / 1]
3-902-003	HFSI Counter Read	Link No	ENG	[1 to 999 / 1 / 1]
3-902-004	HFSI Counter Read	Result	ENG	[0 to 10 / 0 / 1]
3-902-005	HFSI Counter Read	Result Current Value	ENG	[0 to 0xFFFFFFFF / 0 / 1]
3-902-006	HFSI Counter Read	Result Spec Value	ENG	[0 to 0xFFFFFFFF / 0 / 1]
3-903-001	HFSI Counter Reset	Exec	ENG	[0 to 1 / 0 / 1]
3-903-002	HFSI Counter Reset	Chain No	ENG	[1 to 999 / 1 / 1]
3-903-003	HFSI Counter Reset	Link No	ENG	[1 to 999 / 1 / 1]
3-903-004	HFSI Counter Reset	Result	ENG	[0 to 10 / 0 / 1]
3-904-001	NVM Initialize	Exec	ENG	[0 to 1 / 0 / 1]
3-904-002	NVM Initialize	SubSystem	ENG	[0x02 to 0xFF / 2 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
3-905-002	Highland Mode	Read Result	ENG	[0 to 10 / 0 / 1]
3-905-003	Highland Mode	Read Result Correct Val	ENG	[0 to 3 / 0 / 1]
3-905-005	Highland Mode	Correct Val	ENG	[0 to 3 / 0 / 1]
3-905-006	Highland Mode	Write Result	ENG	[0 to 10 / 0 / 1]
3-906-003	Trans Correct	Read Result	ENG	[0 to 10 / 0 / 1]
3-906-004	Trans Correct	Read Result Correct Val	ENG	[0 to 16 / 6 / 1Step]
3-906-007	Trans Correct	Write Correct Val	ENG	[1 to 16 / 1 / 1Step]
3-906-008	Trans Correct	Write Result	ENG	[0 to 10 / 0 / 1]
3-907-004	Fuser Temp Control	Read Result	ENG	[0 to 10 / 0 / 1]
3-907-005	Fuser Temp Control	Read Result Correct Val	ENG	[-6 to 6 / 0 / 1Step]
3-907-009	Fuser Temp Control	Write Correct Val	ENG	[-6 to 6 / 0 / 1Step]
3-907-010	Fuser Temp Control	Write Result	ENG	[0 to 10 / 0 / 1]
3-908-002	Paper Blocking Mode	Read Result	ENG	[0 to 10 / 0 / 1]
3-908-003	Paper Blocking Mode	Read Result Setting Val	ENG	[0 to 3 / 0 / 1]
3-908-005	Paper Blocking Mode	Setting Val	ENG	[1 to 3 / 1 / 1]
3-908-006	Paper Blocking Mode	Write Result	ENG	[0 to 10 / 0 / 1]
3-909-002	Adjust Density	Read Result	ENG	[0 to 10 / 0 / 1]
3-909-003	Adjust Density	Read Result Correct Val	ENG	[-3 to 3 / 0 / 1Step]
3-909-005	Adjust Density	Correct Val	ENG	[-3 to 3 / 0 / 1Step]
3-909-006	Adjust Density	Result	ENG	[0 to 10 / 0 / 1]
3-910-001	IOT Dubug Write	Exec	ENG	[0 to 1 / 0 / 1]
3-910-002	IOT Dubug Write	Sub No	ENG	[0 to 255 / 0 / 1]
3-910-003	IOT Dubug Write	Data Length	ENG	[1 to 100 / 1 / 1]
3-910-004	IOT Dubug Write	Data 1	ENG	[0 to 255 / 0 / 1]
3-910-005	IOT Dubug Write	Data 2	ENG	[0 to 255 / 0 / 1]
3-910-006	IOT Dubug Write	Data 3	ENG	[0 to 255 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
3-910-007	IOT Dubug Write	Data 4	ENG	[0 to 255 / 0 / 1]
3-910-008	IOT Dubug Write	Data 5	ENG	[0 to 255 / 0 / 1]
3-910-009	IOT Dubug Write	Data 6	ENG	[0 to 255 / 0 / 1]
3-910-010	IOT Dubug Write	Data 7	ENG	[0 to 255 / 0 / 1]
3-910-011	IOT Dubug Write	Data 8	ENG	[0 to 255 / 0 / 1]
3-910-012	IOT Dubug Write	Data 9	ENG	[0 to 255 / 0 / 1]
3-910-013	IOT Dubug Write	Data 10	ENG	[0 to 255 / 0 / 1]
3-910-014	IOT Dubug Write	Data 11	ENG	[0 to 255 / 0 / 1]
3-910-015	IOT Dubug Write	Data 12	ENG	[0 to 255 / 0 / 1]
3-910-016	IOT Dubug Write	Data 13	ENG	[0 to 255 / 0 / 1]
3-910-017	IOT Dubug Write	Data 14	ENG	[0 to 255 / 0 / 1]
3-910-018	IOT Dubug Write	Data 15	ENG	[0 to 255 / 0 / 1]
3-910-019	IOT Dubug Write	Data 16	ENG	[0 to 255 / 0 / 1]
3-910-020	IOT Dubug Write	Data 17	ENG	[0 to 255 / 0 / 1]
3-910-021	IOT Dubug Write	Data 18	ENG	[0 to 255 / 0 / 1]
3-910-022	IOT Dubug Write	Data 19	ENG	[0 to 255 / 0 / 1]
3-910-023	IOT Dubug Write	Data 20	ENG	[0 to 255 / 0 / 1]
3-910-024	IOT Dubug Write	Data 21	ENG	[0 to 255 / 0 / 1]
3-910-025	IOT Dubug Write	Data 22	ENG	[0 to 255 / 0 / 1]
3-910-026	IOT Dubug Write	Data 23	ENG	[0 to 255 / 0 / 1]
3-910-027	IOT Dubug Write	Data 24	ENG	[0 to 255 / 0 / 1]
3-910-028	IOT Dubug Write	Data 25	ENG	[0 to 255 / 0 / 1]
3-910-029	IOT Dubug Write	Data 26	ENG	[0 to 255 / 0 / 1]
3-910-030	IOT Dubug Write	Data 27	ENG	[0 to 255 / 0 / 1]
3-910-031	IOT Dubug Write	Data 28	ENG	[0 to 255 / 0 / 1]
3-910-032	IOT Dubug Write	Data 29	ENG	[0 to 255 / 0 / 1]
3-910-033	IOT Dubug Write	Data 30	ENG	[0 to 255 / 0 / 1]
3-910-034	IOT Dubug Write	Data 31	ENG	[0 to 255 / 0 / 1]
3-910-035	IOT Dubug Write	Data 32	ENG	[0 to 255 / 0 / 1]
3-910-036	IOT Dubug Write	Data 33	ENG	[0 to 255 / 0 / 1]
3-910-037	IOT Dubug Write	Data 34	ENG	[0 to 255 / 0 / 1]
3-910-038	IOT Dubug Write	Data 35	ENG	[0 to 255 / 0 / 1]
3-910-039	IOT Dubug Write	Data 36	ENG	[0 to 255 / 0 / 1]
3-910-040	IOT Dubug Write	Data 37	ENG	[0 to 255 / 0 / 1]
3-910-041	IOT Dubug Write	Data 38	ENG	[0 to 255 / 0 / 1]
3-910-042	IOT Dubug Write	Data 39	ENG	[0 to 255 / 0 / 1]
3-910-043	IOT Dubug Write	Data 40	ENG	[0 to 255 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
3-910-044	IOT Dubug Write	Data 41	ENG	[0 to 255 / 0 / 1]
3-910-045	IOT Dubug Write	Data 42	ENG	[0 to 255 / 0 / 1]
3-910-046	IOT Dubug Write	Data 43	ENG	[0 to 255 / 0 / 1]
3-910-047	IOT Dubug Write	Data 44	ENG	[0 to 255 / 0 / 1]
3-910-048	IOT Dubug Write	Data 45	ENG	[0 to 255 / 0 / 1]
3-910-049	IOT Dubug Write	Data 46	ENG	[0 to 255 / 0 / 1]
3-910-050	IOT Dubug Write	Data 47	ENG	[0 to 255 / 0 / 1]
3-910-051	IOT Dubug Write	Data 48	ENG	[0 to 255 / 0 / 1]
3-910-052	IOT Dubug Write	Data 49	ENG	[0 to 255 / 0 / 1]
3-910-053	IOT Dubug Write	Data 50	ENG	[0 to 255 / 0 / 1]
3-910-054	IOT Dubug Write	Data 51	ENG	[0 to 255 / 0 / 1]
3-910-055	IOT Dubug Write	Data 52	ENG	[0 to 255 / 0 / 1]
3-910-056	IOT Dubug Write	Data 53	ENG	[0 to 255 / 0 / 1]
3-910-057	IOT Dubug Write	Data 54	ENG	[0 to 255 / 0 / 1]
3-910-058	IOT Dubug Write	Data 55	ENG	[0 to 255 / 0 / 1]
3-910-059	IOT Dubug Write	Data 56	ENG	[0 to 255 / 0 / 1]
3-910-060	IOT Dubug Write	Data 57	ENG	[0 to 255 / 0 / 1]
3-910-061	IOT Dubug Write	Data 58	ENG	[0 to 255 / 0 / 1]
3-910-062	IOT Dubug Write	Data 59	ENG	[0 to 255 / 0 / 1]
3-910-063	IOT Dubug Write	Data 60	ENG	[0 to 255 / 0 / 1]
3-910-064	IOT Dubug Write	Data 61	ENG	[0 to 255 / 0 / 1]
3-910-065	IOT Dubug Write	Data 62	ENG	[0 to 255 / 0 / 1]
3-910-066	IOT Dubug Write	Data 63	ENG	[0 to 255 / 0 / 1]
3-910-067	IOT Dubug Write	Data 64	ENG	[0 to 255 / 0 / 1]
3-910-068	IOT Dubug Write	Data 65	ENG	[0 to 255 / 0 / 1]
3-910-069	IOT Dubug Write	Data 66	ENG	[0 to 255 / 0 / 1]
3-910-070	IOT Dubug Write	Data 67	ENG	[0 to 255 / 0 / 1]
3-910-071	IOT Dubug Write	Data 68	ENG	[0 to 255 / 0 / 1]
3-910-072	IOT Dubug Write	Data 69	ENG	[0 to 255 / 0 / 1]
3-910-073	IOT Dubug Write	Data 70	ENG	[0 to 255 / 0 / 1]
3-910-074	IOT Dubug Write	Data 71	ENG	[0 to 255 / 0 / 1]
3-910-075	IOT Dubug Write	Data 72	ENG	[0 to 255 / 0 / 1]
3-910-076	IOT Dubug Write	Data 73	ENG	[0 to 255 / 0 / 1]
3-910-077	IOT Dubug Write	Data 74	ENG	[0 to 255 / 0 / 1]
3-910-078	IOT Dubug Write	Data 75	ENG	[0 to 255 / 0 / 1]
3-910-079	IOT Dubug Write	Data 76	ENG	[0 to 255 / 0 / 1]
3-910-080	IOT Dubug Write	Data 77	ENG	[0 to 255 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
3-910-081	IOT Dubug Write	Data 78	ENG	[0 to 255 / 0 / 1]
3-910-082	IOT Dubug Write	Data 79	ENG	[0 to 255 / 0 / 1]
3-910-083	IOT Dubug Write	Data 80	ENG	[0 to 255 / 0 / 1]
3-910-084	IOT Dubug Write	Data 81	ENG	[0 to 255 / 0 / 1]
3-910-085	IOT Dubug Write	Data 82	ENG	[0 to 255 / 0 / 1]
3-910-086	IOT Dubug Write	Data 83	ENG	[0 to 255 / 0 / 1]
3-910-087	IOT Dubug Write	Data 84	ENG	[0 to 255 / 0 / 1]
3-910-088	IOT Dubug Write	Data 85	ENG	[0 to 255 / 0 / 1]
3-910-089	IOT Dubug Write	Data 86	ENG	[0 to 255 / 0 / 1]
3-910-090	IOT Dubug Write	Data 87	ENG	[0 to 255 / 0 / 1]
3-910-091	IOT Dubug Write	Data 88	ENG	[0 to 255 / 0 / 1]
3-910-092	IOT Dubug Write	Data 89	ENG	[0 to 255 / 0 / 1]
3-910-093	IOT Dubug Write	Data 90	ENG	[0 to 255 / 0 / 1]
3-910-094	IOT Dubug Write	Data 91	ENG	[0 to 255 / 0 / 1]
3-910-095	IOT Dubug Write	Data 92	ENG	[0 to 255 / 0 / 1]
3-910-096	IOT Dubug Write	Data 93	ENG	[0 to 255 / 0 / 1]
3-910-097	IOT Dubug Write	Data 94	ENG	[0 to 255 / 0 / 1]
3-910-098	IOT Dubug Write	Data 95	ENG	[0 to 255 / 0 / 1]
3-910-099	IOT Dubug Write	Data 96	ENG	[0 to 255 / 0 / 1]
3-910-100	IOT Dubug Write	Data 97	ENG	[0 to 255 / 0 / 1]
3-910-101	IOT Dubug Write	Data 98	ENG	[0 to 255 / 0 / 1]
3-910-102	IOT Dubug Write	Data 99	ENG	[0 to 255 / 0 / 1]
3-910-103	IOT Dubug Write	Data 100	ENG	[0 to 255 / 0 / 1]

3.5 SP4-XXX

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
4-008-001	Sub Scan Mag.Adjustment		ENG*	[-0.6 to 0.6 / 0 / 0.1%]
4-008-002	Sub Scan Mag.Adjustment	Fact	ENG	[44 to 56 / 50 / 1]
4-010-001	L-Edge Regist Adjustment		ENG*	[-1 to 1 / 0 / 0.1mm]
4-010-002	Home Position Adjustment	Fact	ENG	[16 to 184 / 100 / 1]
4-011-001	S-to-S Regist Adjustment		ENG*	[-10 to 10 / 0 / 0.1mm]
4-011-002	S-to-S Regist Adjustment	Fact	ENG	[0 to 240 / 120 / 1]
4-012-001	Scanner Erase Margin: Scale	Book: Leading Edge	ENG*	[0 to 3 / 1 / 0.1mm]
4-012-002	Scanner Erase Margin: Scale	Book: Trailing Edge	ENG*	[0 to 3 / 0 / 0.1mm]
4-012-003	Scanner Erase Margin: Scale	Book: Left	ENG*	[0 to 3 / 1 / 0.1mm]
4-012-004	Scanner Erase Margin: Scale	Book: Right	ENG*	[0 to 3 / 0 / 0.1mm]
4-013-001	Scanner Free run	Lamp OFF	ENG	[0 to 1 / 0 / 1]
4-013-002	Scanner Free run	Lamp ON	ENG	[0 to 1 / 0 / 1]
4-016-001	DF Scan	Bk 300x600Duplex	ENG	[0 to 1 / 0 / 1STEP]
4-016-002	DF Scan	FC 300x300Duplex	ENG	[0 to 1 / 0 / 1STEP]
4-016-003	DF Scan	Bk 300x600Duplex	ENG	[0 to 1 / 0 / 1STEP]
4-016-004	DF Scan	FC 300x300Duplex	ENG	[0 to 1 / 0 / 1STEP]
4-016-005	DF Scan	Bk 300x600Duplex	ENG	[0 to 1 / 0 / 1STEP]
4-016-006	DF Scan	FC 300x300Duplex	ENG	[0 to 1 / 0 / 1STEP]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
4-016-007	DF Scan	Bk 300x600Duplex	ENG	[0 to 1 / 0 / 1STEP]
4-016-008	DF Scan	FC 300x300Duplex	ENG	[0 to 1 / 0 / 1STEP]
4-017-001	ADF ScanPojsion Adjustment		ENG*	[-10 to 10 / 0 / 0.1mm]
4-017-002	ADF ScanPojsion Adjustment	Fact	ENG	[0 to 2000 / 1000 / 1]
4-020-001	Dust Check	Dust Detect:On/Off	ENG	[0 to 1 / 0 / 1]
4-020-002	Dust Check	Dust Detect:Lvl	ENG	[0 to 8 / 4 / 1]
4-020-003	Dust Check	Dust Reject:Lvl	ENG	[0 to 4 / 0 / 1]
4-020-011	Dust Check	Dust Detect Level:Rear	ENG	[0 to 1 / 0 / 1]
4-020-012	Dust Check	Correction Level:Rear	ENG	[0 to 8 / 4 / 1]
4-201-001	LoCPP edge lv:K	600dpi 1bit edge1	ENG	[0 to 15 / 15 / 1]
4-201-002	LoCPP edge lv:K	600dpi 1bit edge2	ENG	[0 to 15 / 8 / 1]
4-201-003	LoCPP edge lv:K	600dpi 1bit edge3	ENG	[0 to 15 / 10 / 1]
4-201-004	LoCPP edge lv:K	600dpi 1bit edge4	ENG	[0 to 15 / 10 / 1]
4-201-005	LoCPP edge lv:K	600dpi 1bit run-edge	ENG	[0 to 15 / 15 / 1]
4-201-011	LoCPP edge lv:K	600dpi 2bit edge1	ENG	[0 to 15 / 15 / 1]
4-201-012	LoCPP edge lv:K	600dpi 2bit edge2	ENG	[0 to 15 / 8 / 1]
4-201-013	LoCPP edge lv:K	600dpi 2bit edge3	ENG	[0 to 15 / 10 / 1]
4-201-014	LoCPP edge lv:K	600dpi 2bit edge4	ENG	[0 to 15 / 10 / 1]
4-201-015	LoCPP edge lv:K	600dpi 2bit run-edge	ENG	[0 to 15 / 15 / 1]
4-201-021	LoCPP edge lv:K	600dpi 4bit edge1	ENG	[0 to 15 / 15 / 1]
4-201-022	LoCPP edge lv:K	600dpi 4bit edge2	ENG	[0 to 15 / 8 / 1]
4-201-023	LoCPP edge lv:K	600dpi 4bit edge3	ENG	[0 to 15 / 10 / 1]
4-201-024	LoCPP edge lv:K	600dpi 4bit edge4	ENG	[0 to 15 / 10 / 1]
4-201-025	LoCPP edge lv:K	600dpi 4bit run-edge	ENG	[0 to 15 / 15 / 1]
4-202-001	LoCPP edge lv:C	600dpi 1bit edge1	ENG	[0 to 15 / 15 / 1]
4-202-002	LoCPP edge lv:C	600dpi 1bit edge2	ENG	[0 to 15 / 15 / 1]
4-202-011	LoCPP edge lv:C	600dpi 2bit edge1	ENG	[0 to 15 / 15 / 1]
4-202-012	LoCPP edge lv:C	600dpi 2bit edge2	ENG	[0 to 15 / 15 / 1]
4-202-021	LoCPP edge lv:C	600dpi 4bit edge1	ENG	[0 to 15 / 15 / 1]
4-202-022	LoCPP edge lv:C	600dpi 4bit edge2	ENG	[0 to 15 / 15 / 1]
4-203-001	LoCPP edge lv:M	600dpi 1bit edge1	ENG	[0 to 15 / 15 / 1]
4-203-002	LoCPP edge lv:M	600dpi 1bit edge2	ENG	[0 to 15 / 15 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
4-203-011	LoCPP edge lv:M	600dpi 2bit edge1	ENG	[0 to 15 / 15 / 1]
4-203-012	LoCPP edge lv:M	600dpi 2bit edge2	ENG	[0 to 15 / 15 / 1]
4-203-021	LoCPP edge lv:M	600dpi 4bit edge1	ENG	[0 to 15 / 15 / 1]
4-203-022	LoCPP edge lv:M	600dpi 4bit edge2	ENG	[0 to 15 / 15 / 1]
4-204-001	LoCPP edge lv:Y	600dpi 1bit edge1	ENG	[0 to 15 / 15 / 1]
4-204-002	LoCPP edge lv:Y	600dpi 1bit edge2	ENG	[0 to 15 / 15 / 1]
4-204-011	LoCPP edge lv:Y	600dpi 2bit edge1	ENG	[0 to 15 / 15 / 1]
4-204-012	LoCPP edge lv:Y	600dpi 2bit edge2	ENG	[0 to 15 / 15 / 1]
4-204-021	LoCPP edge lv:Y	600dpi 4bit edge1	ENG	[0 to 15 / 15 / 1]
4-204-022	LoCPP edge lv:Y	600dpi 4bit edge2	ENG	[0 to 15 / 15 / 1]
4-305-001	Document Size Select	LGSEF/FoolscapeSEF/OficioSEF	ENG*	[0 to 2 / * / 1] *NA: 1 *EU: 0
4-305-002	FB Size Detection Setting	SEF:A4/LT/HLT/B5/A5/8*10 , Custom	ENG*	[0 to 6 / * / 1] *NA: 1 *EU: 0
4-308-001	Size Setting	Enabled/disabled (FB)	ENG*	[0 to 1 / 1 / 1]
4-350-001	SH Mode	BK	ENG	[0 to 2 / 1 / 1]
4-350-002	SH Interval Time	BK	ENG	[0 to 255 / 13 / 1sec]
4-351-001	SH Mode	FC	ENG	[0 to 2 / 1 / 1]
4-351-002	SH Interval Time	FC	ENG	[0 to 255 / 13 / 1sec]
4-400-001	Scanner Erase Margin	Book: Leading Edge	ENG*	[0 to 3 / 0 / 0.1mm]
4-400-002	Scanner Erase Margin	Book: Trailing Edge	ENG*	[0 to 3 / 0 / 0.1mm]
4-400-003	Scanner Erase Margin	Book: Left	ENG*	[0 to 3 / 0 / 0.1mm]
4-400-004	Scanner Erase Margin	Book: Right	ENG*	[0 to 3 / 0 / 0.1mm]
4-400-005	Scan Erase Margin	ADF:Sub:L-Edge	ENG*	[0 to 3 / 1.6 / 0.1mm]
4-400-007	Scan Erase Margin	ADF:Main:Edge	ENG*	[0 to 3 / 1.6 / 0.1mm]
4-400-008	Scan Erase Margin	ADF:Main:T-Edge	ENG*	[0 to 3 / 1.6 /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				0.1mm]
4-417-001	IPU Test Pattern	Test Pattern	ENG	[0 to 14 / 0 / 1] 0: Scanned image 1: Gradation main scan A 2: Patch 16C 3: K Patch 256C 4: C Patch 256C 5: M Patch 256C 6: Y Patch 256C 7: Slant grid pattern A 8: Slant grid pattern B 9: Slant grid pattern C 10: Slant grid pattern D 11: Scanned+Slant Grid A 12: Scanned+Slant Grid B 13: Scanned+Slant Grid C 14: Scanned+Slant Grid D
4-417-002	IPU Test Pattern	Test Pattern 2	ENG	[0 to 8 / 0 / 1] 0: Scanned image 1: 5C Checkered1:A3/A 4 LEF 2: 5C Checkered2:A4

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				SEF 3: Halftone1:A3/A4 LEF 4: Halftone2:A4 SEF 5: 7C Belt1:A4 LEF 6: 7C Belt2:A4 SEF 7: 7C Belt3:A3 8: Gray Checkered
4-429-001	Select Copy Data Security	Copying	ENG	[0 to 3 / 3 / 1]
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]
4-460-001	Digital AE	Low Limit Value	ENG	[0 to 1023 / 364 / 1]
4-460-002	Digital AE	Background level	ENG	[512 to 1535 / 932 / 1]
4-472-001	Scanner ACC: Front	Read New Chart	ENG	[0 to 1 / 0 / 1]
4-472-002	Scanner ACC: Front	Recall Prev. Chart	ENG	[0 to 1 / 0 / 1]
4-472-003	Scanner ACC: Front	Error code	ENG*	[0 to 15 / 0 / 1]
4-473-001	Scanner ACC: Front: Setting	Correct ON / OFF	ENG*	[0 to 1 / 1 / 1]
4-482-001	Scanner ACC: Back	Read New Chart	ENG	[0 to 1 / 0 / 1]
4-482-002	Scanner ACC: Back	Recall Prev Chart	ENG	[0 to 1 / 0 / 1]
4-482-003	Scanner ACC: Back	Error code	ENG*	[0 to 15 / 0 / 1]
4-483-001	Scanner ACC: Back: Setting	Correct ON / OFF	ENG*	[0 to 1 / 1 / 1]
4-501-001	ACC Target Den	Copy:K:Text	ENG*	[0 to 10 / 0 / 1]
4-501-002	ACC Target Den	Copy:C:Text	ENG*	[0 to 10 / 0 / 1]
4-501-003	ACC Target Den	Copy:M:Text	ENG*	[0 to 10 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
4-501-004	ACC Target Den	Copy:Y:Text	ENG*	[0 to 10 / 0 / 1]
4-501-005	ACC Target Den	Copy:K:Photo	ENG*	[0 to 10 / 0 / 1]
4-501-006	ACC Target Den	Copy:C:Photo	ENG*	[0 to 10 / 0 / 1]
4-501-007	ACC Target Den	Copy:M:Photo	ENG*	[0 to 10 / 0 / 1]
4-501-008	ACC Target Den	Copy:Y:Photo	ENG*	[0 to 10 / 0 / 1]
4-505-001	ACC Cor:Bright	Master:K	ENG	[-128 to 127 / 0 / 1]
4-505-002	ACC Cor:Bright	Master:C	ENG	[-128 to 127 / 0 / 1]
4-505-003	ACC Cor:Bright	Master:M	ENG	[-128 to 127 / 0 / 1]
4-505-004	ACC Cor:Bright	Master:Y	ENG	[-128 to 127 / 0 / 1]
4-505-005	ACC Cor:Bright	Slave:K	ENG	[-128 to 127 / 0 / 1]
4-505-006	ACC Cor:Bright	Slave:C	ENG	[-128 to 127 / 0 / 1]
4-505-007	ACC Cor:Bright	Slave:M	ENG	[-128 to 127 / 0 / 1]
4-505-008	ACC Cor:Bright	Slave:Y	ENG	[-128 to 127 / 0 / 1]
4-506-001	ACC Cor:Dark	Master:K	ENG	[-128 to 127 / 0 / 1]
4-506-002	ACC Cor:Dark	Master:C	ENG	[-128 to 127 / 0 / 1]
4-506-003	ACC Cor:Dark	Master:M	ENG	[-128 to 127 / 0 / 1]
4-506-004	ACC Cor:Dark	Master:Y	ENG	[-128 to 127 / 0 / 1]
4-506-005	ACC Cor:Dark	Slave:K	ENG	[-128 to 127 / 0 / 1]
4-506-006	ACC Cor:Dark	Slave:C	ENG	[-128 to 127 / 0 / 1]
4-506-007	ACC Cor:Dark	Slave:M	ENG	[-128 to 127 / 0 / 1]
4-506-008	ACC Cor:Dark	Slave:Y	ENG	[-128 to 127 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				1]
4-520-001	IBACC:DetectedValue	Latest:K_P1	ENG	[0 to 1023 / 0 / 1]
4-520-002	IBACC:DetectedValue	Latest:K_P2	ENG	[0 to 1023 / 0 / 1]
4-520-021	IBACC:DetectedValue	Latest:C_P1	ENG	[0 to 1023 / 0 / 1]
4-520-022	IBACC:DetectedValue	Latest:C_P2	ENG	[0 to 1023 / 0 / 1]
4-520-041	IBACC:DetectedValue	Latest:M_P1	ENG	[0 to 1023 / 0 / 1]
4-520-042	IBACC:DetectedValue	Latest:M_P2	ENG	[0 to 1023 / 0 / 1]
4-520-061	IBACC:DetectedValue	Latest:Y_P1	ENG	[0 to 1023 / 0 / 1]
4-520-062	IBACC:DetectedValue	Latest:Y_P2	ENG	[0 to 1023 / 0 / 1]
4-520-101	IBACC:DetectedValue	Reference:K_P1	ENG	[0 to 1023 / 0 / 1]
4-520-102	IBACC:DetectedValue	Reference:K_P2	ENG	[0 to 1023 / 0 / 1]
4-520-121	IBACC:DetectedValue	Reference:C_P1	ENG	[0 to 1023 / 0 / 1]
4-520-122	IBACC:DetectedValue	Reference:C_P2	ENG	[0 to 1023 / 0 / 1]
4-520-141	IBACC:DetectedValue	Reference:M_P1	ENG	[0 to 1023 / 0 / 1]
4-520-142	IBACC:DetectedValue	Reference:M_P2	ENG	[0 to 1023 / 0 / 1]
4-520-161	IBACC:DetectedValue	Reference:Y_P1	ENG	[0 to 1023 / 0 / 1]
4-520-162	IBACC:DetectedValue	Reference:Y_P2	ENG	[0 to 1023 / 0 / 1]
4-540-001	Print Coverage	RY Phase: Option:Copy	ENG	[0 to 255 / 0 / 1]
4-540-002	Print Coverage	RY Phase: R:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-003	Print Coverage	RY Phase: G:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-004	Print Coverage	RY Phase: B:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-005	Print Coverage	YR Phase: Option:Copy	ENG	[0 to 255 / 0 / 1]
4-540-006	Print Coverage	YR Phase: R:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-007	Print Coverage	YR Phase: G:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-008	Print Coverage	YR Phase: B:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-009	Print Coverage	YG Phase: Option:Copy	ENG	[0 to 255 / 0 / 1]
4-540-010	Print Coverage	YG Phase: R:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-011	Print Coverage	YG Phase: G:Copy	ENG	[-256 to 255 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
4-540-012	Print Coverage	YG Phase: B:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-013	Print Coverage	GY Phase: Option:Copy	ENG	[0 to 255 / 0 / 1]
4-540-014	Print Coverage	GY Phase: R:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-015	Print Coverage	GY Phase: G:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-016	Print Coverage	GY Phase: B:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-017	Print Coverage	GC Phase: Option:Copy	ENG	[0 to 255 / 0 / 1]
4-540-018	Print Coverage	GC Phase: R:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-019	Print Coverage	GC Phase: G:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-020	Print Coverage	GC Phase: B:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-021	Print Coverage	CG Phase: Option:Copy	ENG	[0 to 255 / 0 / 1]
4-540-022	Print Coverage	CG Phase: R:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-023	Print Coverage	CG Phase: G:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-024	Print Coverage	CG Phase: B:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-025	Print Coverage	CB Phase: Option:Copy	ENG	[0 to 255 / 0 / 1]
4-540-026	Print Coverage	CB Phase: R:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-027	Print Coverage	CB Phase: G:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-028	Print Coverage	CB Phase: B:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-029	Print Coverage	BC Phase: Option:Copy	ENG	[0 to 255 / 0 / 1]
4-540-030	Print Coverage	BC Phase: R:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-031	Print Coverage	BC Phase: G:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-032	Print Coverage	BC Phase: B:Copy	ENG	[-256 to 255 / 0 /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				1]
4-540-033	Print Coverage	BM Phase: Option:Copy	ENG	[0 to 255 / 0 / 1]
4-540-034	Print Coverage	BM Phase: R:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-035	Print Coverage	BM Phase: G:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-036	Print Coverage	BM Phase: B:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-037	Print Coverage	MB Phase: Option:Copy	ENG	[0 to 255 / 0 / 1]
4-540-038	Print Coverage	MB Phase: R:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-039	Print Coverage	MB Phase: G:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-040	Print Coverage	MB Phase: B:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-041	Print Coverage	MR Phase: Option:Copy	ENG	[0 to 255 / 0 / 1]
4-540-042	Print Coverage	MR Phase: R:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-043	Print Coverage	MR Phase: G:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-044	Print Coverage	MR Phase: B:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-045	Print Coverage	RM Phase: Option:Copy	ENG	[0 to 255 / 0 / 1]
4-540-046	Print Coverage	RM Phase: R:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-047	Print Coverage	RM Phase: G:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-048	Print Coverage	RM Phase: B:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-049	Print Coverage	WHITE: Option:Copy	ENG	[0 to 255 / 0 / 1]
4-540-050	Print Coverage	WHITE:R:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-051	Print Coverage	WHITE:G:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-052	Print Coverage	WHITE:B:Copy	ENG	[-256 to 255 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
4-540-053	Print Coverage	BLACK: Option:Copy	ENG	[0 to 255 / 0 / 1]
4-540-054	Print Coverage	BLACK:R:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-055	Print Coverage	BLACK:G:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-056	Print Coverage	BLACK:B:Copy	ENG	[-256 to 255 / 0 / 1]
4-540-057	Print Coverage	RY Phase: Option:Scan	ENG	[0 to 255 / 0 / 1]
4-540-058	Print Coverage	RY Phase: R:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-059	Print Coverage	RY Phase: G:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-060	Print Coverage	RY Phase: B:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-061	Print Coverage	YR Phase: Option:Scan	ENG	[0 to 255 / 0 / 1]
4-540-062	Print Coverage	YR Phase: R:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-063	Print Coverage	YR Phase: G:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-064	Print Coverage	YR Phase: B:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-065	Print Coverage	YG Phase: Option:Scan	ENG	[0 to 255 / 0 / 1]
4-540-066	Print Coverage	YG Phase: R:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-067	Print Coverage	YG Phase: G:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-068	Print Coverage	YG Phase: B:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-069	Print Coverage	GY Phase: Option:Scan	ENG	[0 to 255 / 0 / 1]
4-540-070	Print Coverage	GY Phase: R:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-071	Print Coverage	GY Phase: G:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-072	Print Coverage	GY Phase: B:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-073	Print Coverage	GC Phase: Option:Scan	ENG	[0 to 255 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
4-540-074	Print Coverage	GC Phase: R:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-075	Print Coverage	GC Phase: G:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-076	Print Coverage	GC Phase: B:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-077	Print Coverage	CG Phase: Option:Scan	ENG	[0 to 255 / 0 / 1]
4-540-078	Print Coverage	CG Phase: R:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-079	Print Coverage	CG Phase: G:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-080	Print Coverage	CG Phase: B:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-081	Print Coverage	CB Phase: Option:Scan	ENG	[0 to 255 / 0 / 1]
4-540-082	Print Coverage	CB Phase: R:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-083	Print Coverage	CB Phase: G:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-084	Print Coverage	CB Phase: B:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-085	Print Coverage	BC Phase: Option:Scan	ENG	[0 to 255 / 0 / 1]
4-540-086	Print Coverage	BC Phase: R:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-087	Print Coverage	BC Phase: G:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-088	Print Coverage	BC Phase: B:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-089	Print Coverage	BM Phase: Option:Scan	ENG	[0 to 255 / 0 / 1]
4-540-090	Print Coverage	BM Phase: R:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-091	Print Coverage	BM Phase: G:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-092	Print Coverage	BM Phase: B:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-093	Print Coverage	MB Phase: Option:Scan	ENG	[0 to 255 / 0 / 1]
4-540-094	Print Coverage	MB Phase: R:Scan	ENG	[-256 to 255 / 0 /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				1]
4-540-095	Print Coverage	MB Phase: G:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-096	Print Coverage	MB Phase: B:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-097	Print Coverage	MR Phase: Option:Scan	ENG	[0 to 255 / 0 / 1]
4-540-098	Print Coverage	MR Phase: R:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-099	Print Coverage	MR Phase: G:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-100	Print Coverage	MR Phase: B:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-101	Print Coverage	RM Phase: Option:Scan	ENG	[0 to 255 / 0 / 1]
4-540-102	Print Coverage	RM Phase: R:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-103	Print Coverage	RM Phase: G:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-104	Print Coverage	RM Phase: B:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-105	Print Coverage	WHITE: Option:Scan	ENG	[0 to 255 / 0 / 1]
4-540-106	Print Coverage	WHITE:R:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-107	Print Coverage	WHITE:G:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-108	Print Coverage	WHITE:B:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-109	Print Coverage	BLACK: Option:Scan	ENG	[0 to 255 / 0 / 1]
4-540-110	Print Coverage	BLACK:R:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-111	Print Coverage	BLACK:G:Scan	ENG	[-256 to 255 / 0 / 1]
4-540-112	Print Coverage	BLACK:B:Scan	ENG	[-256 to 255 / 0 / 1]
4-541-001	Photo Correction	Copied Photo	ENG	[0 to 1 / 0 / 1]
4-550-005	Scan Apli:Txt/Print	MTF: 0(Off) 1-15 (Weak-Strong)	ENG	[0 to 15 / 8 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
4-550-006	Scan Apli:Txt/Print	Smoothing: 0(x1) 1-7 (Weak-Strong)	ENG	[0 to 7 / 4 / 1]
4-550-007	Scan Apli:Txt/Print	Brightness: 1-255	ENG	[1 to 255 / 128 / 1]
4-550-008	Scan Apli:Txt/Print	Contrast: 1-255	ENG	[1 to 255 / 128 / 1]
4-550-009	Scan Apli:Txt/Print	Ind Dot Erase: 0(Off) 1-7 (Weak-Strong)	ENG	[0 to 7 / 0 / 1]
4-551-005	Scan Apli:Txt	MTF: 0(Off) 1-15 (Weak-Strong)	ENG	[0 to 15 / 8 / 1]
4-551-006	Scan Apli:Txt	Smoothing: 0(x1) 1-7 (Weak-Strong)	ENG	[0 to 7 / 4 / 1]
4-551-007	Scan Apli:Txt	Brightness: 1-255	ENG	[1 to 255 / 128 / 1]
4-551-008	Scan Apli:Txt	Contrast: 1-255	ENG	[1 to 255 / 128 / 1]
4-551-009	Scan Apli:Txt	Ind Dot Erase: 0(Off) 1-7 (Weak-Strong)	ENG	[0 to 7 / 0 / 1]
4-552-005	Scan Apli:Txt Dropout	MTF: 0(Off) 1-15 (Weak-Strong)	ENG	[0 to 15 / 8 / 1]
4-552-006	Scan Apli:Txt Dropout	Smoothing: 0(x1) 1-7 (Weak-Strong)	ENG	[0 to 7 / 4 / 1]
4-552-007	Scan Apli:Txt Dropout	Brightness: 1-255	ENG	[1 to 255 / 128 / 1]
4-552-008	Scan Apli:Txt Dropout	Contrast: 1-255	ENG	[1 to 255 / 128 / 1]
4-552-009	Scan Apli:Txt Dropout	Ind Dot Erase: 0(Off) 1-7 (Weak-Strong)	ENG	[0 to 7 / 0 / 1]
4-553-005	Scan Apli:Txt/Photo	MTF: 0(Off) 1-15 (Weak-Strong)	ENG	[0 to 15 / 8 / 1]
4-553-006	Scan Apli:Txt/Photo	Smoothing: 0(x1) 1-7 (Weak-Strong)	ENG	[0 to 7 / 4 / 1]
4-553-007	Scan Apli:Txt/Photo	Brightness: 1-255	ENG	[1 to 255 / 128 / 1]
4-553-008	Scan Apli:Txt/Photo	Contrast: 1-255	ENG	[1 to 255 / 128 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
4-553-009	Scan Apli:Txt/Photo	Ind Dot Erase: 0(Off) 1-7 (Weak-Strong)	ENG	[0 to 7 / 0 / 1]
4-554-005	Scan Apli:Photo	MTF: 0(Off) 1-15 (Weak-Strong)	ENG	[0 to 15 / 8 / 1]
4-554-006	Scan Apli:Photo	Smoothing: 0(x1) 1-7 (Weak-Strong)	ENG	[0 to 7 / 4 / 1]
4-554-007	Scan Apli:Photo	Brightness: 1-255	ENG	[1 to 255 / 128 / 1]
4-554-008	Scan Apli:Photo	Contrast: 1-255	ENG	[1 to 255 / 128 / 1]
4-554-009	Scan Apli:Photo	Ind Dot Erase: 0(Off) 1-7 (Weak-Strong)	ENG	[0 to 7 / 0 / 1]
4-565-005	Scan Apli:GrayScale	MTF: 0(Off) 1-15 (Weak-Strong)	ENG	[0 to 15 / 8 / 1]
4-565-006	Scan Apli:GrayScale	Smoothing: 0(x1) 1-7 (Weak-Strong)	ENG	[0 to 7 / 4 / 1]
4-565-007	Scan Apli:GrayScale	Brightness: 1-255	ENG	[1 to 255 / 128 / 1]
4-565-008	Scan Apli:GrayScale	Contrast: 1-255	ENG	[1 to 255 / 128 / 1]
4-565-009	Scan Apli:GrayScale	Ind Dot Erase: 0(Off) 1-7 (Weak-Strong)	ENG	[0 to 7 / 0 / 1]
4-570-005	Scan Apli:Col Txt/Photo	MTF: 0(Off) 1-15 (Weak-Strong)	ENG	[0 to 15 / 8 / 1]
4-570-006	Scan Apli:Col Txt/Photo	Smoothing: 0(x1) 1-7 (Weak-Strong)	ENG	[0 to 7 / 4 / 1]
4-570-007	Scan Apli:Col Txt/Photo	Brightness: 1-255	ENG	[1 to 255 / 128 / 1]
4-570-008	Scan Apli:Col Txt/Photo	Contrast: 1-255	ENG	[1 to 255 / 128 / 1]
4-570-009	Scan Apli:Col Txt/Photo	Ind Dot Erase: 0(Off) 1-7 (Weak-Strong)	ENG	[0 to 7 / 0 / 1]
4-571-005	Scan Apli:Col Gloss Photo	MTF: 0(Off) 1-15 (Weak-Strong)	ENG	[0 to 15 / 8 / 1]
4-571-006	Scan Apli:Col Gloss Photo	Smoothing: 0(x1) 1-7 (Weak-Strong)	ENG	[0 to 7 / 4 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
4-571-007	Scan Apli:Col Gloss Photo	Brightness: 1-255	ENG	[1 to 255 / 128 / 1]
4-571-008	Scan Apli:Col Gloss Photo	Contrast: 1-255	ENG	[1 to 255 / 128 / 1]
4-571-009	Scan Apli:Col Gloss Photo	Ind Dot Erase: 0(Off) 1-7 (Weak-Strong)	ENG	[0 to 7 / 0 / 1]
4-572-005	Scan Apli:AutoCol	MTF: 0(Off) 1-15 (Weak-Strong)	ENG	[0 to 15 / 8 / 1]
4-572-006	Scan Apli:AutoCol	Smoothing: 0(x1) 1-7 (Weak-Strong)	ENG	[0 to 7 / 4 / 1]
4-572-007	Scan Apli:AutoCol	Brightness: 1-255	ENG	[1 to 255 / 128 / 1]
4-572-008	Scan Apli:AutoCol	Contrast: 1-255	ENG	[1 to 255 / 128 / 1]
4-572-009	Scan Apli:AutoCol	Ind Dot Erase: 0(Off) 1-7 (Weak-Strong)	ENG	[0 to 7 / 0 / 1]
4-580-005	Fax Apli:Txt/Chart	MTF: 0(Off) 1-15 (Weak-Strong)	ENG	[0 to 15 / 8 / 1]
4-580-006	Fax Apli:Txt/Chart	Smoothing: 0(x1) 1-7 (Weak-Strong)	ENG	[0 to 7 / 4 / 1]
4-580-007	Fax Apli:Txt/Chart	Brightness: 1-255	ENG	[1 to 255 / 128 / 1]
4-580-008	Fax Apli:Txt/Chart	Contrast: 1-255	ENG	[1 to 255 / 128 / 1]
4-580-009	Fax Apli:Txt/Chart	Ind Dot Erase: 0(Off) 1-7 (Weak-Strong)	ENG	[0 to 7 / 0 / 1]
4-580-010	Fax Apli:Txt/Chart	Texture Erase: 0	ENG	[0 to 2 / 0 / 1]
4-581-005	Fax Apli:Txt	MTF: 0(Off) 1-15 (Weak-Strong)	ENG	[0 to 15 / 8 / 1]
4-581-006	Fax Apli:Txt	Smoothing: 0(x1) 1-7 (Weak-Strong)	ENG	[0 to 7 / 4 / 1]
4-581-007	Fax Apli:Txt	Brightness: 1-255	ENG	[1 to 255 / 128 / 1]
4-581-008	Fax Apli:Txt	Contrast: 1-255	ENG	[1 to 255 / 128 / 1]
4-581-009	Fax Apli:Txt	Ind Dot Erase: 0(Off) 1-7	ENG	[0 to 7 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
		(Weak-Strong)		
4-582-005	Fax Apli:Txt/Photo	MTF: 0(Off) 1-15 (Weak-Strong)	ENG	[0 to 15 / 8 / 1]
4-582-006	Fax Apli:Txt/Photo	Smoothing: 0(x1) 1-7 (Weak-Strong)	ENG	[0 to 7 / 4 / 1]
4-582-007	Fax Apli:Txt/Photo	Brightness: 1-255	ENG	[1 to 255 / 128 / 1]
4-582-008	Fax Apli:Txt/Photo	Contrast: 1-255	ENG	[1 to 255 / 128 / 1]
4-582-009	Fax Apli:Txt/Photo	Ind Dot Erase: 0(Off) 1-7 (Weak-Strong)	ENG	[0 to 7 / 0 / 1]
4-582-010	Fax Apli:Txt/Photo	Texture Erase: 0	ENG	[0 to 2 / 0 / 1]
4-583-005	Fax Apli:Photo	MTF: 0(Off) 1-15 (Weak-Strong)	ENG	[0 to 15 / 8 / 1]
4-583-006	Fax Apli:Photo	Smoothing: 0(x1) 1-7 (Weak-Strong)	ENG	[0 to 7 / 4 / 1]
4-583-007	Fax Apli:Photo	Brightness: 1-255	ENG	[1 to 255 / 128 / 1]
4-583-008	Fax Apli:Photo	Contrast: 1-255	ENG	[1 to 255 / 128 / 1]
4-583-009	Fax Apli:Photo	Ind Dot Erase: 0(Off) 1-7 (Weak-Strong)	ENG	[0 to 7 / 0 / 1]
4-583-010	Fax Apli:Photo	Texture Erase: 0	ENG	[0 to 2 / 0 / 1]
4-584-005	Fax Apli:Original 1	MTF: 0(Off) 1-15 (Weak-Strong)	ENG	[0 to 15 / 8 / 1]
4-584-006	Fax Apli:Original 1	Smoothing: 0(x1) 1-7 (Weak-Strong)	ENG	[0 to 7 / 4 / 1]
4-584-007	Fax Apli:Original 1	Brightness: 1-255	ENG	[1 to 255 / 128 / 1]
4-584-008	Fax Apli:Original 1	Contrast: 1-255	ENG	[1 to 255 / 128 / 1]
4-584-009	Fax Apli:Original 1	Ind Dot Erase: 0(Off) 1-7 (Weak-Strong)	ENG	[0 to 7 / 0 / 1]
4-585-005	Fax Apli:Original 2	MTF: 0(Off) 1-15 (Weak-Strong)	ENG	[0 to 15 / 8 / 1]
4-585-006	Fax Apli:Original 2	Smoothing: 0(x1) 1-7	ENG	[0 to 7 / 4 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
		(Weak-Strong)		
4-585-007	Fax Apli:Original 2	Brightness: 1-255	ENG	[1 to 255 / 128 / 1]
4-585-008	Fax Apli:Original 2	Contrast: 1-255	ENG	[1 to 255 / 128 / 1]
4-585-009	Fax Apli:Original 2	Independent Dot Erase (0)/ 1-7 (Strong)	ENG	[0 to 7 / 0 / 1]
4-603-001	Auto Adjustment Operation	HP Detection Enable	ENG	[0 to 1 / 0 / 1]
4-606-001	Front: White Level Peak Target	Color/Monochrome	ENG*	[0 to 1023 / 725 / 1digit]
4-614-001	Front: Fact Setting: WB Value	R	ENG*	[70 to 255 / 70 / 1]
4-614-002	Front: Fact Setting: WB Value	G	ENG*	[70 to 255 / 70 / 1]
4-614-003	Front: Fact Setting: WB Value	B	ENG*	[70 to 255 / 70 / 1]
4-614-004	Front: Fact Setting: WB Value	BW	ENG*	[70 to 255 / 70 / 1]
4-615-001	Front: WB Value: Conversio	Execution	ENG	[0 to 1 / 0 / 1]
4-645-001	Front: Scan Adjust Error	White level	ENG	[0 to 65535 / 0 / 1]
4-645-002	Front: Scan Adjust Error	Black level	ENG	[0 to 65535 / 0 / 1]
4-647-001	Front: Scanner Hard Error		ENG	[0 to 65535 / 0 / 1]
4-688-002	Density Adjust	1-Pass	ENG*	[80 to 120 / 100 / 1%]
4-689-003	CVT Scan Density Corr Coeff	Red	ENG	[0 to 255 / 100 / 1]
4-689-004	CVT Scan Density Corr Coeff	Green	ENG	[0 to 255 / 100 / 1]
4-689-005	CVT Scan Density Corr Coeff	Blue	ENG	[0 to 255 / 100 / 1]
4-689-006	CVT Scan Density	Mono	ENG	[0 to 255 / 100 /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
	Corr Coeff			1]
4-699-001	Front: Test Pattern Change		ENG	[0 to 3 / 0 / 1]
4-717-001	Back: Fact Setting: White Ave.	R	ENG*	[0 to 4095 / 0 / 1digit]
4-717-002	Back: Fact Setting: White Ave.	G	ENG*	[0 to 4095 / 0 / 1digit]
4-717-003	Back: Fact Setting: White Ave.	B	ENG*	[0 to 4095 / 0 / 1digit]
4-717-004	Back: Fact Setting: White Ave.	BW	ENG*	[0 to 4095 / 0 / 1digit]
4-718-001	Back: Fact Setting: WB Value	R	ENG*	[0 to 255 / 0 / 1]
4-718-002	Back: Fact Setting: WB Value	G	ENG*	[0 to 255 / 0 / 1]
4-718-003	Back: Fact Setting: WB Value	B	ENG*	[0 to 255 / 0 / 1]
4-718-004	Back: Fact Setting: WB Value	BW	ENG*	[0 to 255 / 0 / 1]
4-719-001	Back: WB Value: Conversion	Execution	ENG	[0 to 1 / 0 / 1]
4-721-001	Auto Adjustment Operation		ENG	[0 to 1 / 0 / 1]
4-723-001	Back: OUTPUT Check	Scanner Lamp: Color	ENG	[0 to 1 / 0 / 1]
4-736-001	CISForeignObjectDetectJudge	R	ENG*	[0 to 1023 / 25 / 1digit]
4-736-002	CISForeignObjectDetectJudge	G	ENG*	[0 to 1023 / 25 / 1digit]
4-736-003	CISForeignObjectDetectJudge	B	ENG*	[0 to 1023 / 25 / 1digit]
4-745-001	Back: Scan Adjust Error	White level	ENG	[0 to 65535 / 0 / 1]
4-745-002	Back: Scan Adjust Error	Black level	ENG	[0 to 65535 / 0 / 1]
4-747-001	Back: Scanner Hard		ENG	[0 to 65535 / 0 /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
	Error			1]
4-785-001	Back: White Level Peak Target	Color/Monochrome	ENG*	[0 to 1023 / 725 / 1digit]
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	Back Side	ENG*	[0 to 3 / 0 / 1] 0: OFF 1: WEAK 2: MEDIUM 3: STRONG
4-797-001	Rear Side: Digital AE	Low Limit Setting	ENG	[0 to 1023 / 364 / 1]
4-797-002	Rear Side: Digital AE	Background Erase Level	ENG	[512 to 1535 / 932 / 1]
4-799-001	Back: Test Pattern Change		ENG	[0 to 7 / 0 / 1]
4-805-001	Home Position Adjustment		ENG*	[-4.3 to 4.3 / 0 / 0.1mm]
4-814-001	FB Factory Setting Input	Input	ENG	[0 to 1 / 0 / 1]
4-814-002	FB Factory Setting Input	Execution Flag	ENG*	[0 to 255 / 0 / 1]
4-902-001	Disp ACC Data	ditect patch(up)1	ENG	[0 to 255 / 0 / 1]
4-902-002	Disp ACC Data	ditect patch(up)2	ENG	[0 to 255 / 0 / 1]
4-902-003	Disp ACC Data	ditect patch(up)3	ENG	[0 to 255 / 0 / 1]
4-902-004	Disp ACC Data	ditect patch(up)4	ENG	[0 to 255 / 0 / 1]
4-902-005	Disp ACC Data	ditect patch(up)5	ENG	[0 to 255 / 0 / 1]
4-902-006	Disp ACC Data	ditect patch(up)6	ENG	[0 to 255 / 0 / 1]
4-902-007	Disp ACC Data	ditect patch(up)7	ENG	[0 to 255 / 0 / 1]
4-902-008	Disp ACC Data	ditect patch(up)8	ENG	[0 to 255 / 0 / 1]
4-902-009	Disp ACC Data	ditect patch(up)9	ENG	[0 to 255 / 0 / 1]
4-902-010	Disp ACC Data	ditect patch(up)10	ENG	[0 to 255 / 0 / 1]
4-902-011	Disp ACC Data	ditect patch(up)11	ENG	[0 to 255 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
4-902-012	Disp ACC Data	ditect patch(up)12	ENG	[0 to 255 / 0 / 1]
4-902-013	Disp ACC Data	ditect patch(up)13	ENG	[0 to 255 / 0 / 1]
4-902-014	Disp ACC Data	ditect patch(up)14	ENG	[0 to 255 / 0 / 1]
4-902-015	Disp ACC Data	ditect patch(up)15	ENG	[0 to 255 / 0 / 1]
4-902-016	Disp ACC Data	ditect patch(up)16	ENG	[0 to 255 / 0 / 1]
4-902-017	Disp ACC Data	ditect patch(up)17	ENG	[0 to 255 / 0 / 1]
4-902-018	Disp ACC Data	ditect patch(up)18	ENG	[0 to 255 / 0 / 1]
4-902-019	Disp ACC Data	ditect patch(up)19	ENG	[0 to 255 / 0 / 1]
4-902-020	Disp ACC Data	ditect patch(up)20	ENG	[0 to 255 / 0 / 1]
4-902-021	Disp ACC Data	K patch (text)1	ENG	[0 to 255 / 0 / 1]
4-902-038	Disp ACC Data	K patch (text)18	ENG	[0 to 255 / 0 / 1]
4-902-039	Disp ACC Data	K patch (text)19	ENG	[0 to 255 / 0 / 1]
4-902-040	Disp ACC Data	K patch (text)20	ENG	[0 to 255 / 0 / 1]
4-902-041	Disp ACC Data	C patch (text)1	ENG	[0 to 255 / 0 / 1]
4-902-058	Disp ACC Data	C patch (text)18	ENG	[0 to 255 / 0 / 1]
4-902-059	Disp ACC Data	C patch (text)19	ENG	[0 to 255 / 0 / 1]
4-902-060	Disp ACC Data	C patch (text)20	ENG	[0 to 255 / 0 / 1]
4-902-061	Disp ACC Data	M patch (text)1	ENG	[0 to 255 / 0 / 1]
4-902-078	Disp ACC Data	M patch (text)18	ENG	[0 to 255 / 0 / 1]
4-902-079	Disp ACC Data	M patch (text)19	ENG	[0 to 255 / 0 / 1]
4-902-080	Disp ACC Data	M patch (text)20	ENG	[0 to 255 / 0 / 1]
4-902-081	Disp ACC Data	Y patch (text)1	ENG	[0 to 255 / 0 / 1]
4-902-098	Disp ACC Data	Y patch (text)18	ENG	[0 to 255 / 0 / 1]
4-902-099	Disp ACC Data	Y patch (text)19	ENG	[0 to 255 / 0 / 1]
4-902-100	Disp ACC Data	Y patch (text)20	ENG	[0 to 255 / 0 / 1]
4-902-101	Disp ACC Data	K patch (photo)1	ENG	[0 to 255 / 0 / 1]
4-902-118	Disp ACC Data	K patch (photo)18	ENG	[0 to 255 / 0 / 1]
4-902-119	Disp ACC Data	K patch (photo)19	ENG	[0 to 255 / 0 / 1]
4-902-120	Disp ACC Data	K patch (photo)20	ENG	[0 to 255 / 0 / 1]
4-902-121	Disp ACC Data	C patch (photo)1	ENG	[0 to 255 / 0 / 1]
4-902-138	Disp ACC Data	C patch (photo)18	ENG	[0 to 255 / 0 / 1]
4-902-139	Disp ACC Data	C patch (photo)19	ENG	[0 to 255 / 0 / 1]
4-902-140	Disp ACC Data	C patch (photo)20	ENG	[0 to 255 / 0 / 1]
4-902-141	Disp ACC Data	M patch (photo)1	ENG	[0 to 255 / 0 / 1]
4-902-158	Disp ACC Data	M patch (photo)18	ENG	[0 to 255 / 0 / 1]
4-902-159	Disp ACC Data	M patch (photo)19	ENG	[0 to 255 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
4-902-160	Disp ACC Data	M patch (photo)20	ENG	[0 to 255 / 0 / 1]
4-902-161	Disp ACC Data	Y patch (photo)1	ENG	[0 to 255 / 0 / 1]
4-902-178	Disp ACC Data	Y patch (photo)18	ENG	[0 to 255 / 0 / 1]
4-902-179	Disp ACC Data	Y patch (photo)19	ENG	[0 to 255 / 0 / 1]
4-902-180	Disp ACC Data	Y patch (photo)20	ENG	[0 to 255 / 0 / 1]
4-902-181	Disp ACC Data	ditectpatch down1	ENG	[0 to 255 / 0 / 1]
4-902-182	Disp ACC Data	ditectpatch down2	ENG	[0 to 255 / 0 / 1]
4-902-183	Disp ACC Data	ditectpatch down3	ENG	[0 to 255 / 0 / 1]
4-902-184	Disp ACC Data	ditectpatch down4	ENG	[0 to 255 / 0 / 1]
4-902-185	Disp ACC Data	ditectpatch down5	ENG	[0 to 255 / 0 / 1]
4-902-186	Disp ACC Data	ditectpatch down6	ENG	[0 to 255 / 0 / 1]
4-902-187	Disp ACC Data	ditectpatch down7	ENG	[0 to 255 / 0 / 1]
4-902-188	Disp ACC Data	ditectpatch down8	ENG	[0 to 255 / 0 / 1]
4-902-189	Disp ACC Data	ditectpatch down9	ENG	[0 to 255 / 0 / 1]
4-902-190	Disp ACC Data	ditectpatch down10	ENG	[0 to 255 / 0 / 1]
4-902-191	Disp ACC Data	ditectpatch down11	ENG	[0 to 255 / 0 / 1]
4-902-192	Disp ACC Data	ditectpatch down12	ENG	[0 to 255 / 0 / 1]
4-902-193	Disp ACC Data	ditectpatch down13	ENG	[0 to 255 / 0 / 1]
4-902-194	Disp ACC Data	ditectpatch down14	ENG	[0 to 255 / 0 / 1]
4-902-195	Disp ACC Data	ditectpatch down15	ENG	[0 to 255 / 0 / 1]
4-902-196	Disp ACC Data	ditectpatch down16	ENG	[0 to 255 / 0 / 1]
4-902-197	Disp ACC Data	ditectpatch down17	ENG	[0 to 255 / 0 / 1]
4-902-198	Disp ACC Data	ditectpatch down18	ENG	[0 to 255 / 0 / 1]
4-902-199	Disp ACC Data	ditectpatch down19	ENG	[0 to 255 / 0 / 1]
4-902-200	Disp ACC Data	ditectpatch down20	ENG	[0 to 255 / 0 / 1]
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]
4-918-009	Man Gamma Adj		ENG	[Execute]
4-930-001	Coverage Ctrl: Text	Copy: Full Color 1	ENG	[0 to 400 / 200 / 1]
4-930-002	Coverage Ctrl: Text	Copy: Full Color 2	ENG	[0 to 400 / 200 / 1]
4-930-003	Coverage Ctrl: Text	Copy: Single Color	ENG	[0 to 400 / 100 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
4-930-004	Coverage Ctrl: Text	Copy: Color Conversion	ENG	[0 to 400 / 180 / 1]
4-931-001	Coverage Ctrl: Photo	Copy: Full Color 1	ENG	[0 to 400 / 240 / 1]
4-931-002	Coverage Ctrl: Photo	Copy: Full Color 2	ENG	[0 to 400 / 260 / 1]
4-931-003	Coverage Ctrl: Photo	Copy: Single Color	ENG	[0 to 400 / 100 / 1]
4-931-004	Coverage Ctrl: Photo	Copy: Color Conversion	ENG	[0 to 400 / 200 / 1]
4-937-001	ACS:Preprocessing selection		ENG	[0 to 1 / 1 / 1]
4-938-001	ACS:Edge Mask	Copy:Sub LEdge	ENG	[0 to 31 / 10 / 1mm]
4-938-002	ACS:Edge Mask	Copy:Sub TEdge	ENG	[0 to 31 / 10 / 1mm]
4-938-003	ACS:Edge Mask	Copy:Main LEdge	ENG	[0 to 31 / 10 / 1mm]
4-938-004	ACS:Edge Mask	Copy:Main TEdge	ENG	[0 to 31 / 10 / 1mm]
4-938-005	ACS:Edge Mask	Scan:Sub LEdge	ENG	[0 to 31 / 15 / 1mm]
4-938-006	ACS:Edge Mask	Scan:Sub TEdge	ENG	[0 to 31 / 15 / 1mm]
4-938-007	ACS:Edge Mask	Scan:Main LEdge	ENG	[0 to 31 / 15 / 1mm]
4-938-008	ACS:Edge Mask	Scan:Main TEdge	ENG	[0 to 31 / 15 / 1mm]
4-939-001	ACS:Color Range		ENG	[-2 to 2 / 0 / 1]
4-950-001	ACC Position Error Count		ENG	[0 to 65535 / 0 / 1]
4-984-001	IBACC Target Den	IBACC notch K	ENG*	[0 to 10 / 5 / 1]
4-984-002	IBACC Target Den	IBACC notch C	ENG*	[0 to 10 / 5 / 1]
4-984-003	IBACC Target Den	IBACC notch M	ENG*	[0 to 10 / 5 / 1]
4-984-004	IBACC Target Den	IBACC notch Y	ENG*	[0 to 10 / 5 / 1]
4-992-001	Background Detection	Sensitivity Selection	ENG	[0 to 9 / 4 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
4-992-002	Background Detection	Range Selection	ENG	[0 to 9 / 4 / 1]
4-993-001	High Light Correction	Sensitivity Selection	ENG	[0 to 9 / 4 / 1]
4-993-002	High Light Correction	Range Selection	ENG	[0 to 9 / 4 / 1]
4-993-003	High Light Correction	Background Level Default Setting	ENG	[0 to 1 / 1 / 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	strength	ENG	[0 to 6 / 3 / 1]
4-997-001	White Paper count conditions	conditions 1	ENG	[0 to 255 / 255 / 1]
4-997-002	White Paper count conditions	conditions 2	ENG	[0 to 255 / 255 / 1]
4-997-003	White Paper count conditions	conditions 3	ENG	[0 to 255 / 80 / 1]
4-997-004	White Paper count conditions	conditions 4	ENG	[0 to 16777215 / 16777215 / 1]
4-998-015	White Paper Binary thresh	front side	ENG	[-128 to 127 / 0 / 1]
4-998-016	White Paper Binary thresh	rear side	ENG	[-128 to 127 / 0 / 1]

3.6 SP5-XXX

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: 0
5-045-001	Accounting counter	Counter Method	CTL	[0 to 7 / 0 / 1]
5-051-001	TonerRefillDetectionDisplay		CTL	[0 to 1 / 0 / 1]
5-055-001	Display IP address		CTL	[0 to 1 / 0 / 1]
5-061-002	Toner PreNearEnd Display Change		CTL	[0 to 1 / 0 / 1]
5-071-001	Set Bypass Paper Size Display		CTL	[0 to 1 / 0 / 1]
5-073-001	Supply Part Replacement Operation Type	Waste Toner Bottle	CTL	[0 to 1 / 0 / 1]
5-073-005	Supply Part Replacement Operation Type	Drum Unit	CTL	[0 to 1 / 0 / 1]
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]
5-074-092	Home Key Customization	Product ID	CTL	[0 to 0xffffffff / 0 / 1]
5-074-093	Home Key Customization	Application Screen ID	CTL	[0 to 255 / 0 / 1]
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]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-113-001	Optional Counter Type	Default Optional Counter Type	CTL	[0 to 8 / 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]
5-118-001	Disable Copying		CTL	[0 to 1 / 0 / 1]
5-118-003	Copy mode setting	DocumentServer:Printed File Auto Delete	CTL	[0 to 1 / 0 / 1]
5-118-004	Copy mode setting	Print Limit Warning Display Setting	CTL	[0 to 1 / 1 / 1]
5-120-001	Mode Clear Opt. Counter Removal	0:Yes 1:StandBy 2:No	CTL	[0 to 2 / 0 / 1]
5-121-001	Counter Up Timing	0:Feed 1:Exit	CTL	[0 to 1 / 0 / 1]
5-126-001	DF Original Size Setting	SEF:A5/HLT	ENG	[0 to 1 / * / 1] *NA: 0 *EU: 1 0: HLTSEF 1: A5SEF
5-126-002	DF Original Size Setting	SEF:LG/Foolscape/Oficio	ENG	[0 to 2 / * / 1] *NA: 0 *EU: 1 0: LGSEF 1: FoolscapeSEF 2: OficioSEF
5-126-004	DF Original Size Setting	SEF:B5/8*10	ENG	[0 to 1 / * / 1] *NA: 0 *EU: 1 0: 8*10SEF 1: B5SEF
5-127-001	APS Mode		CTL	[0 to 1 / 0 / 1]
5-128-001	Code Mode With Key/Card Option		CTL	[0 to 1 / 0 / 1]
5-167-001	Fax Printing Mode at Optional Counter Off		CTL	[0 to 1 / 0 / 1]
5-169-001	CE Login		CTL	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-181-001	Size Adjust	LCT	ENG*	[1 to 2 / 2 / 1] *NA: 1 *EU: 2 1: LT 2: A4
5-182-001	Size Adjust	B5	ENG*	[1 to 2 / 1 / 1] 1: 1:B5(ISO) 2: 2:B5(JIS)
5-186-001	RK4: Setting		ENG*	[0 to 1 / 0 / 1]
5-188-001	Copy Nv Version		CTL	[0 to 0 / 0 / 0]
5-191-002	Mode Set	Power Low Clock Mode	CTL	[0 to 1 / 1 / 1]
5-195-001	Limitless SW		CTL	[0 to 1 / 0 / 1]
5-199-001	Paper Exit After Staple End	Staple(1:Without 2:After 0:Auto)	CTL	[0 to 0 / 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]
5-302-002	Set Time	Time Difference	CTL	[-1440 to 1440 / * / 1] *NA: -300 *EU: 60 *CHN/TWN: 480 *KOR: 540
5-305-101	Auto Off Set	Auto Off Limit Set	CTL	[0 to 1 / 1 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-307-001	Daylight Saving Time	Setting	CTL	[0 to 1 / 0 / 1]
5-307-003	Daylight Saving Time	Rule Set(Start)	CTL	[0 to 0xffffffff / * / 1] *NA: 0x03200210 *EU: 0x03500010 *AA: 0x10500010 *CHN/TWN/KOR: 0
5-307-004	Daylight Saving Time	Rule Set(End)	CTL	[0 to 0xffffffff / * / 1] *NA: 0x11100200 *EU: 0x10500100 *AA: 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] Note: Authentication Time for external server, such as Windows and LDAP
5-401-162	Access Control	ExtAuth 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]
5-401-210	Access Control	SDK2 UniqueID	CTL	[0 to 0xFFFFFFFF / 0 / 1]
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]
5-401-240	Access Control	Detail Option	CTL	[0 to 0xff / 0 / 1]
5-404-001	User Code Count Clear	User Code Count	CTL	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
		Clear		
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]
5-411-005	LDAP-Certification	Password Null Not Permit	CTL	[0 to 1 / 1 / 1]
5-411-006	LDAP-Certification	Detail Option	CTL	[0 to 0xff / 0 / 1]
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]
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]
5-413-004	Lockout Setting	Cancelation Time	CTL	[1 to 9999 / 60 / 1min]
5-414-001	Access Mitigation	Mitigation On/Off	CTL	[0 to 1 / 0 / 1]
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]
5-420-001	User Authentication	Copy	CTL	[0 to 1 / 0 / 1]
5-420-002	User Authentication	Color Security Setting	CTL	[0 to 255 / 0 / 1]
5-420-011	User Authentication	DocumentServer	CTL	[0 to 1 / 0 / 1]
5-420-021	User Authentication	Fax	CTL	[0 to 1 / 0 / 1]
5-420-031	User Authentication	Scanner	CTL	[0 to 1 / 0 / 1]
5-420-041	User Authentication	Printer	CTL	[0 to 1 / 0 / 1]
5-420-051	User Authentication	SDK1	CTL	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-420-061	User Authentication	SDK2	CTL	[0 to 1 / 0 / 1]
5-420-071	User Authentication	SDK3	CTL	[0 to 1 / 0 / 1]
5-420-081	User Authentication	Browser	CTL	[0 to 1 / 0 / 1]
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]
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	SmtplAuth	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]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
	Preset			
5-481-001	Authentication Error Code	System Log Disp	CTL	[0 to 1 / 0 / 1]
5-481-002	Authentication Error Code	Panel Disp	CTL	[0 to 1 / 1 / 1]
5-490-001	MF KeyCard	Job Permit Setting	CTL	[0 to 1 / 0 / 1]
5-490-002	MF KeyCard	Count Mode Setting	CTL	[0 to 1 / 0 / 1]
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]
5-501-002	PM Alarm	Original Count Alarm	CTL	[0 to 1 / 0 / 1]
5-504-001	Jam Alarm		CTL	[0 to 3 / 3 / 1]
5-504-002	Jam Alarm	Threshold	CTL	[1 to 99 / 10 / 1]
5-505-001	Error Alarm		CTL	[0 to 255 / 20 / 1]
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]
5-507-002	Supply/CC Alarm	Staple Supply Alarm	CTL	[0 to 1 / 1 / 1]
5-507-003	Supply/CC Alarm	Toner Supply Alarm	CTL	[0 to 1 / 1 / 1]
5-507-005	Supply/CC Alarm	DrumLifeRemain	CTL	[0 to 2 / 1 / 1]
5-507-006	Supply/CC Alarm	WasteTonerBottle	CTL	[0 to 2 / 1 / 1]
5-507-007	Supply/CC Alarm	Tensya	CTL	[1 to 2 / 2 / 1]
5-507-008	Supply/CC Alarm	Fuser Supply Alarm	CTL	[0 to 1 / 0 / 1]
5-507-014	Supply/CC Alarm	Paper Transfer Unit Alarm	CTL	[0 to 1 / 0 / 1]
5-507-071	Supply/CC Alarm	Drum unit Bk Call Trigger	CTL	[0 to 2 / 1 / 1]
5-507-072	Supply/CC Alarm	Drum unit C Call Trigger	CTL	[0 to 2 / 1 / 1]
5-507-073	Supply/CC Alarm	Drum unit M Call Trigger	CTL	[0 to 2 / 1 / 1]
5-507-074	Supply/CC Alarm	Drum unit Y Call Trigger	CTL	[0 to 2 / 1 / 1]
5-507-075	Supply/CC Alarm	Image Transfer UnitCallTrigger	CTL	[0 to 2 / 1 / 1]
5-507-076	Supply/CC Alarm	Paper Transfer UnitCallTrigger	CTL	[0 to 2 / 1 / 1]
5-507-077	Supply/CC Alarm	Fusing Unit Call	CTL	[0 to 2 / 1 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
		Trigger		
5-507-080	Supply/CC Alarm	Toner Call Timing	CTL	[0 to 1 / 0 / 1]
5-507-081	Supply/CC Alarm	Toner Call Threshold:Bk	CTL	[10 to 90 / 30 / 10%]
5-507-082	Supply/CC Alarm	Toner Call Threshold:CMY	CTL	[10 to 90 / 30 / 10%]
5-507-128	Supply/CC Alarm	Interval: Others	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]
5-507-142	Supply/CC Alarm	Interval: B5	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]
5-508-002	CC Call	Continuous Jams	CTL	[0 to 1 / 1 / 1]
5-508-003	CC Call	Continuous Door Open	CTL	[0 to 1 / 1 / 1]
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]
5-515-001	SC/Alarm Setting	SC Call	CTL	[0 to 1 / 1 / 1]
5-515-002	SC/Alarm Setting	Service Parts Near End Call	CTL	[0 to 1 / 1 / 1]
5-515-003	SC/Alarm Setting	Service Parts End Call	CTL	[0 to 1 / 1 / 1]
5-515-004	SC/Alarm Setting	User Call	CTL	[0 to 1 / 1 / 1]
5-515-006	SC/Alarm Setting	Communication Test	CTL	[0 to 1 / 1 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
		Call		
5-515-007	SC/Alarm Setting	Machine Information Notice	CTL	[0 to 1 / 1 / 1]
5-515-008	SC/Alarm Setting	Alarm Notice	CTL	[0 to 1 / 1 / 1]
5-515-009	SC/Alarm Setting	Non Genuine Toner Ararm	CTL	[0 to 1 / 1 / 1]
5-515-010	SC/Alarm Setting	Supply Automatic Ordering Call	CTL	[0 to 1 / 1 / 1]
5-515-011	SC/Alarm Setting	Supply Management Report Call	CTL	[0 to 1 / 1 / 1]
5-515-012	SC/Alarm Setting	Jam/Door Open Call	CTL	[0 to 1 / 1 / 1]
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]
5-517-066	Get Machine Information	AutoDiscovery SNMP Community Name	CTL	[0 to 0 / 0 / 0]
5-517-100	Get Machine Information	GetLog:NotificationSetting	CTL	[0 to 1 / 0 / 1]
5-610-004	Base Gamma Ctrl Pt:Execute	Get Factory Default	ENG	[0 to 1 / 0 / 1]
5-610-005	Base Gamma Ctrl Pt:Execute	Set Factory Default	ENG	[0 to 1 / 0 / 1]
5-610-006	Base Gamma Ctrl Pt:Execute	Restore Orginal Value	ENG	[0 to 1 / 0 / 1]
5-611-001	Toner Color in 2C	B-C	ENG	[0 to 128 / 100 / 1]
5-611-002	Toner Color in 2C	B-M	ENG	[0 to 128 / 100 / 1]
5-611-003	Toner Color in 2C	G-C	ENG	[0 to 128 / 100 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-611-004	Toner Color in 2C	G-Y	ENG	[0 to 128 / 100 / 1]
5-611-005	Toner Color in 2C	R-M	ENG	[0 to 128 / 100 / 1]
5-611-006	Toner Color in 2C	R-Y	ENG	[0 to 128 / 100 / 1]
5-618-001	Color Mode Display Selection		CTL	[0 to 1 / 1 / 1]
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]
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 /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				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]
5-731-001	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]
5-748-101	OpePanel Setting	Op Type Action Setting	CTL	[0 to 255 / 0 / 1]
5-749-001	Import/Export	Export	CTL	[0 to 0 / 0 / 0]
5-749-101	Import/Export	Import	CTL	[0 to 0 / 0 / 0]
5-752-001	Copy:WebAPI Setting	Copy:FlairAPI Setting	CTL	[0 to 255 / 0 / 1]
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]
5-758-001	RemoteUI Setting	Authentication	CTL	[0 to 1 / 0 / 1]
5-759-001	Machine Limit Count	Machine Limit Count Setting	CTL	[0 to 1 / 0 / 1]
5-759-061	Machine Limit Count	Full Color Limit Count	CTL	[0 to 99999999 / 0 / 1]
5-759-062	Machine Limit Count	Mono Color Limit Count	CTL	[0 to 99999999 / 0 / 1]
5-761-001	SmartOperationPanel Setting	Restore the default Home screen	CTL	[0 to 255 / 0 / 1]
5-761-007	SmartOperationPanel Setting	Introduction Setting Boot Mode	CTL	[0 to 255 / 0 / 1]
5-764-001	NFC Setting	GuestNetwork	CTL	[0 to 1 / 0 / 1]
5-764-002	NFC Setting	Encrypted	CTL	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
		Communication Permission		
5-764-003	NFC Setting	Access Port1	CTL	[0 to 65535 / 8081 / 1]
5-764-004	NFC Setting	Access Port2	CTL	[0 to 65535 / 8080 / 1]
5-764-005	NFC Setting	Access Port3	CTL	[0 to 65535 / 80 / 1]
5-768-001	Remaining toner detection type	MIB Output	ENG	[0 to 1 / 0 / 1] 0: 0%-100% (10% increments) 1: 0%-100% (1% increments)
5-780-001	ACT Version	Current Version Disp	CTL	[0 to 0 / 0 / 1]
5-780-002	ACT Version	ROM Max Version Disp	CTL	[0 to 0 / 0 / 1]
5-780-003	ACT Version	HDD Version Disp	CTL	[0 to 0 / 0 / 1]
5-780-004	ACT Version	OpePanel Version Disp	CTL	[0 to 0 / 0 / 1]
5-780-050	ACT Version	Batch Activate Exe	CTL	[0 to 0 / 0 / 1]
5-780-100	ACT Version	Auto Activate Setting	CTL	[0 to 1 / 0 / 1]
5-780-200	ACT Version	Restore from NV	CTL	[0 to 0 / 0 / 1]
5-780-201	ACT Version	Restore from HDD	CTL	[0 to 0 / 0 / 1]
5-780-202	ACT Version	Restore from OpePanel	CTL	[0 to 0 / 0 / 1]
5-781-001	ACT Setting	ACT1.1	CTL	[0 to 1 / 0 / 1]
5-785-001	SmartSDK	Version Setting	CTL	[0 to 0 / 0 / 0]
5-801-001	Memory Clear	All Clear	CTL	[EXECUTE]
5-801-002	Memory Clear	Engine	ENG	[EXECUTE]
5-801-003	Memory Clear	SCS	CTL	[EXECUTE]
5-801-004	Memory Clear	IMH Memory Clr	CTL	[EXECUTE]
5-801-005	Memory Clear	MCS	CTL	[EXECUTE]
5-801-006	Memory Clear	Copier application	CTL	[EXECUTE]
5-801-007	Memory Clear	Fax Application	CTL	[EXECUTE]
5-801-008	Memory Clear	Printer Application	CTL	[EXECUTE]
5-801-009	Memory Clear	Scanner Application	CTL	[EXECUTE]
5-801-010	Memory Clear	Web Service	CTL	[EXECUTE]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-801-011	Memory Clear	NCS	CTL	[EXECUTE]
5-801-012	Memory Clear	R-FAX	CTL	[EXECUTE]
5-801-014	Memory Clear	Clear DCS Setting	CTL	[EXECUTE]
5-801-015	Memory Clear	Clear UCS Setting	CTL	[EXECUTE]
5-801-016	Memory Clear	MIRS Setting	CTL	[EXECUTE]
5-801-017	Memory Clear	CCS	CTL	[EXECUTE]
5-801-018	Memory Clear	SRM Memory Clr	CTL	[EXECUTE]
5-801-019	Memory Clear	LCS	CTL	[EXECUTE]
5-801-021	Memory Clear	ECS	CTL	[EXECUTE]
5-801-025	Clear Memory	websys	CTL	[EXECUTE]
5-801-027	Memory Clear	SAS	CTL	[EXECUTE]
5-801-028	Memory Clear	Rest WebService	CTL	[EXECUTE]
5-803-016	INPUT Check	Key Card Set	ENG	[0 to 1 / 0 / 1]
5-803-017	INPUT Check	Key Counter Set	ENG	[0 to 3 / 0 / 1]
5-803-018	INPUT Check	IPU Version	ENG	[0 to 7 / 0 / 1]
5-803-030	INPUT Check	Fusing Relay Enable	ENG	[0 to 1 / 0 / 1]
5-803-031	INPUT Check	Fusing Fuse Sensor	ENG	[0 to 1 / 0 / 1]
5-803-032	INPUT Check	Envelope Mode Sensor	ENG	[0 to 1 / 0 / 1]
5-803-033	INPUT Check	IOT Exit Sensor(Hot Line)	ENG	[0 to 1 / 0 / 1]
5-803-034	INPUT Check	Compile Exit Sensor	ENG	[0 to 1 / 0 / 1]
5-803-035	INPUT Check	Eject Home Sensor	ENG	[0 to 1 / 0 / 1]
5-803-036	INPUT Check	Sub Paddle Home Sensor	ENG	[0 to 1 / 0 / 1]
5-803-037	INPUT Check	Set Clamp Home Sensor	ENG	[0 to 1 / 0 / 1]
5-803-038	INPUT Check	Right Tamper Home Sensor	ENG	[0 to 1 / 0 / 1]
5-803-039	INPUT Check	Left Tamper Home Sensor	ENG	[0 to 1 / 0 / 1]
5-803-040	INPUT Check	Self Priming Sensor	ENG	[0 to 1 / 0 / 1]
5-803-041	INPUT Check	IOT Exit Sensor(Hot Line)	ENG	[0 to 1 / 0 / 1]
5-803-042	INPUT Check	Inter Lock Side Cover	ENG	[0 to 1 / 0 / 1]
5-803-043	INPUT Check	Inter Lock Rear Cover	ENG	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-803-044	INPUT Check	Front Cover Sensor	ENG	[0 to 1 / 0 / 1]
5-803-045	INPUT Check	Main FAN Alarm	ENG	[0 to 1 / 0 / 1]
5-803-046	INPUT Check	Sub FAN Alarm	ENG	[0 to 1 / 0 / 1]
5-803-047	INPUT Check	Main Rear FAN Alarm	ENG	[0 to 1 / 0 / 1]
5-803-048	INPUT Check	MSI No Paper Sensor	ENG	[0 to 1 / 0 / 1]
5-803-049	INPUT Check	Tray1 No Paper Sensor	ENG	[0 to 1 / 0 / 1]
5-803-050	INPUT Check	Regi Sensor	ENG	[0 to 1 / 0 / 1]
5-803-051	INPUT Check	Exit Sensor	ENG	[0 to 1 / 0 / 1]
5-803-052	INPUT Check	Full Stack Sensor	ENG	[0 to 1 / 0 / 1]
5-803-053	INPUT Check	Paper Size Sensor0	ENG	[0 to 1 / 0 / 1]
5-803-054	INPUT Check	Paper Size Sensor1	ENG	[0 to 1 / 0 / 1]
5-803-055	INPUT Check	Paper Size Sensor2	ENG	[0 to 1 / 0 / 1]
5-803-056	INPUT Check	Option Feeder1 Size Sensor0	ENG	[0 to 1 / 0 / 1]
5-803-057	INPUT Check	Option Feeder1 Size Sensor1	ENG	[0 to 1 / 0 / 1]
5-803-058	INPUT Check	Option Feeder1 Size Sensor2	ENG	[0 to 1 / 0 / 1]
5-803-059	INPUT Check	Option Feeder1 No Paper Sensor	ENG	[0 to 1 / 0 / 1]
5-803-060	INPUT Check	Option Feeder1 Path Sensor	ENG	[0 to 1 / 0 / 1]
5-803-061	INPUT Check	Option Feeder2 Size Sensor0	ENG	[0 to 1 / 0 / 1]
5-803-062	INPUT Check	Option Feeder2 Size Sensor1	ENG	[0 to 1 / 0 / 1]
5-803-063	INPUT Check	Option Feeder2 Size Sensor2	ENG	[0 to 1 / 0 / 1]
5-803-064	INPUT Check	Option Feeder2 No Paper Sensor	ENG	[0 to 1 / 0 / 1]
5-803-065	INPUT Check	Option Feeder2 Path Sensor	ENG	[0 to 1 / 0 / 1]
5-803-066	INPUT Check	Option Feeder3 Size Sensor0	ENG	[0 to 1 / 0 / 1]
5-803-067	INPUT Check	Option Feeder3 Size	ENG	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
		Sensor1		
5-803-068	INPUT Check	Option Feeder3 Size Sensor2	ENG	[0 to 1 / 0 / 1]
5-803-069	INPUT Check	Option Feeder3 No Paper Sensor	ENG	[0 to 1 / 0 / 1]
5-803-070	INPUT Check	Option Feeder3 Path Sensor	ENG	[0 to 1 / 0 / 1]
5-803-071	INPUT Check	Option Feeder4 Size Sensor0	ENG	[0 to 1 / 0 / 1]
5-803-072	INPUT Check	Option Feeder4 Size Sensor1	ENG	[0 to 1 / 0 / 1]
5-803-073	INPUT Check	Option Feeder4 Size Sensor2	ENG	[0 to 1 / 0 / 1]
5-803-074	INPUT Check	Option Feeder4 No Paper Sensor	ENG	[0 to 1 / 0 / 1]
5-803-075	INPUT Check	Option Feeder4 Path Sensor	ENG	[0 to 1 / 0 / 1]
5-803-076	INPUT Check	Option Feeder1 Tray Open Sensor	ENG	[0 to 1 / 0 / 1]
5-803-077	INPUT Check	Option Feeder1 Lift Up Sensor	ENG	[0 to 1 / 0 / 1]
5-803-078	INPUT Check	Option Feeder2 Tray Open Sensor	ENG	[0 to 1 / 0 / 1]
5-803-079	INPUT Check	Option Feeder2 Lift Up Sensor	ENG	[0 to 1 / 0 / 1]
5-803-080	INPUT Check	Main Motor Alarm	ENG	[0 to 1 / 0 / 1]
5-803-081	INPUT Check	IOT Motor Alarm	ENG	[0 to 1 / 0 / 1]
5-803-082	INPUT Check	Option Feeder1 Motor Alarm	ENG	[0 to 1 / 0 / 1]
5-803-083	INPUT Check	Option Feeder2 Motor Alarm	ENG	[0 to 1 / 0 / 1]
5-803-084	INPUT Check	Option Feeder3 Motor Alarm	ENG	[0 to 1 / 0 / 1]
5-803-085	INPUT Check	Option Feeder4 Motor Alarm	ENG	[0 to 1 / 0 / 1]
5-803-086	INPUT Check	PH Motor Alarm	ENG	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-803-087	INPUT Check	Deve Motor Alarm	ENG	[0 to 1 / 0 / 1]
5-803-088	INPUT Check	Deve/IOT Retract Sensor	ENG	[0 to 1 / 0 / 1]
5-803-089	INPUT Check	K Belt Retract Sensor	ENG	[0 to 1 / 0 / 1]
5-803-090	INPUT Check	Waste Toner Box Full Sensor	ENG	[0 to 1 / 0 / 1]
5-803-091	INPUT Check	2nd BTR Waste Toner Full Sensor	ENG	[0 to 1 / 0 / 1]
5-803-200	INPUT Check	Scanner HP Sensor	ENG	[0 to 1 / 0 / 1]
5-803-201	INPUT Check	Platen Cover Sensor	ENG	[0 to 1 / 0 / 1]
5-804-030	OUTPUT Check	Fusing Relay	ENG	[0 to 1 / 0 / 1]
5-804-031	OUTPUT Check	Fusing Fuse Cut	ENG	[0 to 1 / 0 / 1]
5-804-032	OUTPUT Check	Fusing Envelope Motor	ENG	[0 to 1 / 0 / 1]
5-804-033	OUTPUT Check	Fusing Common Mode	ENG	[0 to 1 / 0 / 1]
5-804-034	OUTPUT Check	Fusing Envelope Mode	ENG	[0 to 1 / 0 / 1]
5-804-035	OUTPUT Check	Fusing Retract Mode	ENG	[0 to 1 / 0 / 1]
5-804-036	OUTPUT Check	Transport Motor(Forward/Low Speed)	ENG	[0 to 1 / 0 / 1]
5-804-037	OUTPUT Check	Transport Motor(Forward/Middle Speed)	ENG	[0 to 1 / 0 / 1]
5-804-038	OUTPUT Check	Transport Motor(Forward/High Speed)	ENG	[0 to 1 / 0 / 1]
5-804-039	OUTPUT Check	Transport Gate Solenoid(Pull)	ENG	[0 to 1 / 0 / 1]
5-804-040	OUTPUT Check	Transport Gate Solenoid(Push)	ENG	[0 to 1 / 0 / 1]
5-804-041	OUTPUT Check	Eject Compile Motor(Forward/Eject)	ENG	[0 to 1 / 0 / 1]
5-804-042	OUTPUT Check	Eject Compile Motor(Rel/Sub Padl Speed)	ENG	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-804-043	OUTPUT Check	Right Tamper Motor(Front/Low Speed)	ENG	[0 to 1 / 0 / 1]
5-804-044	OUTPUT Check	Right Tamper Motor(Front/Middle Speed)	ENG	[0 to 1 / 0 / 1]
5-804-045	OUTPUT Check	Right Tamper Motor(Front/High Speed)	ENG	[0 to 1 / 0 / 1]
5-804-046	OUTPUT Check	Right Tamper Motor(Rear/Low Speed)	ENG	[0 to 1 / 0 / 1]
5-804-047	OUTPUT Check	Right Tamper Motor(Rear/Middle Speed)	ENG	[0 to 1 / 0 / 1]
5-804-048	OUTPUT Check	Right Tamper Motor(Rear/High Speed)	ENG	[0 to 1 / 0 / 1]
5-804-049	OUTPUT Check	Left Tamper Motor(Front/Low Speed)	ENG	[0 to 1 / 0 / 1]
5-804-050	OUTPUT Check	Left Tamper Motor(Front/Middle Speed)	ENG	[0 to 1 / 0 / 1]
5-804-051	OUTPUT Check	Left Tamper Motor(Front/High Speed)	ENG	[0 to 1 / 0 / 1]
5-804-052	OUTPUT Check	Left Tamper Motor(Rear/Low Speed)	ENG	[0 to 1 / 0 / 1]
5-804-053	OUTPUT Check	Left Tamper Motor(Rear/Middle Speed)	ENG	[0 to 1 / 0 / 1]
5-804-054	OUTPUT Check	Left Tamper Motor(Rear/High Speed)	ENG	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-804-055	OUTPUT Check	Transport Motor(Forward/Low Speed)	ENG	[0 to 1 / 0 / 1]
5-804-056	OUTPUT Check	Transport Motor(Forward/High Speed)	ENG	[0 to 1 / 0 / 1]
5-804-057	OUTPUT Check	Transport Gate Solenoid(Pull)	ENG	[0 to 1 / 0 / 1]
5-804-058	OUTPUT Check	Transport Gate Solenoid(Push)	ENG	[0 to 1 / 0 / 1]
5-804-059	OUTPUT Check	Low Voltage Power Supply 24V	ENG	[0 to 1 / 0 / 1]
5-804-060	OUTPUT Check	Main Fan(Normal)	ENG	[0 to 1 / 0 / 1]
5-804-061	OUTPUT Check	Main Fan(Half)	ENG	[0 to 1 / 0 / 1]
5-804-062	OUTPUT Check	Sub Fan(Normal)	ENG	[0 to 1 / 0 / 1]
5-804-063	OUTPUT Check	Sub Fan(Half)	ENG	[0 to 1 / 0 / 1]
5-804-064	OUTPUT Check	HVPS_Clock	ENG	[0 to 1 / 0 / 1]
5-804-065	OUTPUT Check	DBAC_Clock	ENG	[0 to 1 / 0 / 1]
5-804-066	OUTPUT Check	TR_Clock	ENG	[0 to 1 / 0 / 1]
5-804-067	OUTPUT Check	LPH(Solid)	ENG	[0 to 1 / 0 / 1]
5-804-068	OUTPUT Check	LPH(Half)	ENG	[0 to 1 / 0 / 1]
5-804-069	OUTPUT Check	LPH(Thyristor)	ENG	[0 to 1 / 0 / 1]
5-804-070	OUTPUT Check	MSI Feed Solenoid	ENG	[0 to 1 / 0 / 1]
5-804-071	OUTPUT Check	Tray1 Feed Clutch	ENG	[0 to 1 / 0 / 1]
5-804-072	OUTPUT Check	Take Away Clutch	ENG	[0 to 1 / 0 / 1]
5-804-073	OUTPUT Check	Regi Clutch	ENG	[0 to 1 / 0 / 1]
5-804-074	OUTPUT Check	Exit Clutch	ENG	[0 to 1 / 0 / 1]
5-804-075	OUTPUT Check	Invert Clutch	ENG	[0 to 1 / 0 / 1]
5-804-076	OUTPUT Check	Duplex Clutch	ENG	[0 to 1 / 0 / 1]
5-804-077	OUTPUT Check	Tray1 LED	ENG	[0 to 1 / 0 / 1]
5-804-078	OUTPUT Check	Option Feeder1 Motor (Normal)	ENG	[0 to 1 / 0 / 1]
5-804-079	OUTPUT Check	Option Feeder1 Motor (Slow Speed 1)	ENG	[0 to 1 / 0 / 1]
5-804-080	OUTPUT Check	Option Feeder1 Motor (Slow Speed 2)	ENG	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-804-081	OUTPUT Check	Option Feeder1 Motor (Slow Speed 3)	ENG	[0 to 1 / 0 / 1]
5-804-082	OUTPUT Check	Option Feeder1 Feed Clutch	ENG	[0 to 1 / 0 / 1]
5-804-083	OUTPUT Check	Option Feeder1 Take Away Clutch	ENG	[0 to 1 / 0 / 1]
5-804-084	OUTPUT Check	Option Feeder1 LED	ENG	[0 to 1 / 0 / 1]
5-804-085	OUTPUT Check	Option Feeder2 Motor (Normal)	ENG	[0 to 1 / 0 / 1]
5-804-086	OUTPUT Check	Option Feeder2 Motor (Slow Speed 1)	ENG	[0 to 1 / 0 / 1]
5-804-087	OUTPUT Check	Option Feeder2 Motor (Slow Speed 2)	ENG	[0 to 1 / 0 / 1]
5-804-088	OUTPUT Check	Option Feeder2 Motor (Slow Speed 3)	ENG	[0 to 1 / 0 / 1]
5-804-089	OUTPUT Check	Option Feeder2 Feed Clutch	ENG	[0 to 1 / 0 / 1]
5-804-090	OUTPUT Check	Option Feeder2 Take Away Clutch	ENG	[0 to 1 / 0 / 1]
5-804-091	OUTPUT Check	Option Feeder2 LED	ENG	[0 to 1 / 0 / 1]
5-804-092	OUTPUT Check	Option Feeder3 Motor (Normal)	ENG	[0 to 1 / 0 / 1]
5-804-093	OUTPUT Check	Option Feeder3 Motor (Slow Speed 1)	ENG	[0 to 1 / 0 / 1]
5-804-094	OUTPUT Check	Option Feeder3 Motor (Slow Speed 2)	ENG	[0 to 1 / 0 / 1]
5-804-095	OUTPUT Check	Option Feeder3 Motor (Slow Speed 3)	ENG	[0 to 1 / 0 / 1]
5-804-096	OUTPUT Check	Option Feeder3 Feed Clutch	ENG	[0 to 1 / 0 / 1]
5-804-097	OUTPUT Check	Option Feeder3 Take Away Clutch	ENG	[0 to 1 / 0 / 1]
5-804-098	OUTPUT Check	Option Feeder3 LED	ENG	[0 to 1 / 0 / 1]
5-804-099	OUTPUT Check	Option Feeder4 Motor (Normal)	ENG	[0 to 1 / 0 / 1]
5-804-100	OUTPUT Check	Option Feeder4 Motor	ENG	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
		(Slow Speed 1)		
5-804-101	OUTPUT Check	Option Feeder4 Motor (Slow Speed 2)	ENG	[0 to 1 / 0 / 1]
5-804-102	OUTPUT Check	Option Feeder4 Motor (Slow Speed 3)	ENG	[0 to 1 / 0 / 1]
5-804-103	OUTPUT Check	Option Feeder4 Feed Clutch	ENG	[0 to 1 / 0 / 1]
5-804-104	OUTPUT Check	Option Feeder4 Take Away Clutch	ENG	[0 to 1 / 0 / 1]
5-804-105	OUTPUT Check	Option Feeder4 LED	ENG	[0 to 1 / 0 / 1]
5-804-106	OUTPUT Check	Duplex Gate Solenoid	ENG	[0 to 1 / 0 / 1]
5-804-107	OUTPUT Check	Main Motor (Normal)	ENG	[0 to 1 / 0 / 1]
5-804-108	OUTPUT Check	Main Motor (Slow Speed 1)	ENG	[0 to 1 / 0 / 1]
5-804-109	OUTPUT Check	Main Motor (Slow Speed 2)	ENG	[0 to 1 / 0 / 1]
5-804-110	OUTPUT Check	Main Motor (Slow Speed 3)	ENG	[0 to 1 / 0 / 1]
5-804-111	OUTPUT Check	IOT Motor(Normal)	ENG	[0 to 1 / 0 / 1]
5-804-112	OUTPUT Check	IOT Motor(Slow Speed 1)	ENG	[0 to 1 / 0 / 1]
5-804-113	OUTPUT Check	IOT Motor(Slow Speed 2)	ENG	[0 to 1 / 0 / 1]
5-804-114	OUTPUT Check	IOT Motor(Slow Speed 3)	ENG	[0 to 1 / 0 / 1]
5-804-115	OUTPUT Check	PH Motor(Normal)	ENG	[0 to 1 / 0 / 1]
5-804-116	OUTPUT Check	PH Motor(Slow Speed 1)	ENG	[0 to 1 / 0 / 1]
5-804-117	OUTPUT Check	PH Motor(Slow Speed 2)	ENG	[0 to 1 / 0 / 1]
5-804-118	OUTPUT Check	PH Motor(Slow Speed 3)	ENG	[0 to 1 / 0 / 1]
5-804-119	OUTPUT Check	Deve Motor(Normal)	ENG	[0 to 1 / 0 / 1]
5-804-120	OUTPUT Check	Deve Motor(Slow Speed 1)	ENG	[0 to 1 / 0 / 1]
5-804-121	OUTPUT Check	Deve Motor(Slow	ENG	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
		Speed 2)		
5-804-122	OUTPUT Check	Deve Motor(Slow Speed 3)	ENG	[0 to 1 / 0 / 1]
5-804-123	OUTPUT Check	Main Motor (Slow Speed 3 Counter)	ENG	[0 to 1 / 0 / 1]
5-804-124	OUTPUT Check	Option Feeder1 Lift Up	ENG	[0 to 1 / 0 / 1]
5-804-125	OUTPUT Check	Option Feeder2 Lift Up	ENG	[0 to 1 / 0 / 1]
5-804-126	OUTPUT Check	K Erase LED	ENG	[0 to 1 / 0 / 1]
5-804-127	OUTPUT Check	YMC Erase LED	ENG	[0 to 1 / 0 / 1]
5-804-128	OUTPUT Check	Yellow Toner Dispence Motor(Normal)	ENG	[0 to 1 / 0 / 1]
5-804-129	OUTPUT Check	Yellow Toner Dispence Motor(Half)	ENG	[0 to 1 / 0 / 1]
5-804-130	OUTPUT Check	Magenta Toner Dispence Motor(Normal)	ENG	[0 to 1 / 0 / 1]
5-804-131	OUTPUT Check	Magenta Toner Dispence Motor(Half)	ENG	[0 to 1 / 0 / 1]
5-804-132	OUTPUT Check	Cyan Toner Dispence Motor(Normal)	ENG	[0 to 1 / 0 / 1]
5-804-133	OUTPUT Check	Cyan Toner Dispence Motor(Half)	ENG	[0 to 1 / 0 / 1]
5-804-134	OUTPUT Check	Black Toner Dispence Motor(Normal)	ENG	[0 to 1 / 0 / 1]
5-804-135	OUTPUT Check	Black Toner Dispence Motor(Half)	ENG	[0 to 1 / 0 / 1]
5-804-136	OUTPUT Check	Deve/IOT Retract Solenoid	ENG	[0 to 1 / 0 / 1]
5-804-137	OUTPUT Check	K Belt Retract Clutch	ENG	[0 to 1 / 0 / 1]
5-804-138	OUTPUT Check	Belt Color Mode	ENG	[0 to 1 / 0 / 1]
5-804-139	OUTPUT Check	Belt Monochrome Mode	ENG	[0 to 1 / 0 / 1]
5-804-202	Front: OUTPUT Check	Scanner Lamp: Color	ENG	[0 to 1 / 0 / 1]
5-804-203	OUTPUT Check	DP Motor	ENG	[0 to 1 / 0 / 1]
5-810-001	SC Reset	Fusing SC Reset	ENG	[0 to 1 / 0 / 1]
5-811-002	Machine Serial	Display	ENG*	[0 to 255 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-811-004	Machine Serial	IPU	ENG	[0 to 255 / 0 / 1]
5-811-021	Machine Serial	Latest Update Date	ENG*	[0 to 1 / 0 / 1]
5-811-022	Machine Serial	Previous Update Date	ENG*	[0 to 1 / 0 / 1]
5-811-023	Machine Serial	Previous Serial	ENG*	[0 to 255 / 0 / 1]
5-811-024	Machine Serial	Latest Update Date (IPU)	ENG*	[0 to 1 / 0 / 1]
5-811-025	Machine Serial	Previous Update Date (IPU)	ENG*	[0 to 1 / 0 / 1]
5-811-026	Machine Serial	Previous Serial(IPU)	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]
5-812-101	Service Tel. No. Setting	Disp Inquiry	CTL	[0 to 1 / 0 / 1]
5-816-001	Remote Service	I/F Setting	CTL	[0 to 2 / 2 / 1]
5-816-002	Remote Service	CE Call	CTL	[0 to 1 / 0 / 1]
5-816-003	Remote Service	Function Flag	CTL	[0 to 1 / 0 / 1]
5-816-007	Remote Service	SSL Disable	CTL	[0 to 1 / 0 / 1]
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]
5-816-013	Remote Service	RFU Timing	CTL	[0 to 1 / 1 / 1]
5-816-014	Remote Service	RCG Error Cause	CTL	[0 to 2 / 0 / 1]
5-816-021	Remote Service	RCG-C Registered	CTL	[0 to 1 / 0 / 1]
5-816-023	Remote Service	Connect Type(N/M/3G)	CTL	[0 to 2 / 0 / 1]
5-816-061	Remote Service	Cert Expire Timing	CTL	[0 to 0 / 0 / 1]
5-816-062	Remote Service	Use Proxy	CTL	[0 to 1 / 0 / 1]
5-816-063	Remote Service	Proxy Host	CTL	[0 to 0 / 0 / 0]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-816-083	Remote Service	Firm Up Status	CTL	[0 to 1 / 0 / 1]
5-816-085	Remote Service	Firm Up User Check	CTL	[0 to 1 / 0 / 1]
5-816-086	Remote Service	Firmware Size	CTL	[0 to 0xffffffff / 0 / 1]
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]
5-816-115	Remote Service	Network Information Waiting timer	CTL	[5 to 255 / 5 / 1sec]
5-816-190	Remote Service	3G DongleID	CTL	[0 to 0 / 0 / 0]
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]
5-816-202	Remote Service	Letter Number	CTL	[0 to 0 / 0 / 0]
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]
5-816-205	Remote Service	Confirm Place	CTL	[0 to 1 / 0 / 1]
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 /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				0x00000000 / 1]
5-816-244	Remote Service	CommErrorState 1	CTL	[0 to 0xffff / 0x0000 / 1]
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]
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]
5-828-065	Network Setting	Job Spooling	CTL	[0 to 1 / 0 / 1]
5-828-066	Network Setting	Job Spooling Clear: Start Time	CTL	[0 to 1 / 1 / 1]
5-828-069	Network Setting	Job Spooling (Protocol)	CTL	[0x00 to 0xff / 0x7f / 0]
5-828-087	Network Setting	Protocol usage	CTL	[0x00000000 to 0xffffffff / 0x00000000 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-828-090	Network Setting	TELNET(0:OFF 1:ON)	CTL	[0 to 1 / 1 / 1]
5-828-091	Network Setting	Web(0:OFF 1:ON)	CTL	[0 to 1 / 1 / 1]
5-828-145	Network Setting	Active IPv6 Link Local Address	CTL	[- / - / -]
5-828-147	Network Setting	Active IPv6 Stateless Address 1	CTL	[- / - / -]
5-828-149	Network Setting	Active IPv6 Stateless Address 2	CTL	[- / - / -]
5-828-151	Network Setting	Active IPv6 Stateless Address 3	CTL	[- / - / -]
5-828-153	Network Setting	Active IPv6 Stateless Address 4	CTL	[- / - / -]
5-828-155	Network Setting	Active IPv6 Stateless Address 5	CTL	[- / - / -]
5-828-156	Network Setting	IPv6 Manual Address	CTL	[- / - / -]
5-828-158	Network Setting	IPv6 Gateway Address	CTL	[- / - / -]
5-828-161	Network Setting	IPv6 Stateless Auto Setting	CTL	[0 to 1 / 1 / 1]
5-828-236	Network Setting	Web Item visible	CTL	[0x0000 to 0xffff / 0xffff / 1]
5-828-237	Network Setting	Web shopping link visible	CTL	[0 to 1 / 1 / 1]
5-828-238	Network Setting	Web Supplies Link visible	CTL	[0 to 1 / 1 / 1]
5-828-239	Network Setting	Web Link1 Name	CTL	[- / - / -]
5-828-240	Network Setting	Web Link1 URL	CTL	[- / - / -]
5-828-241	Network Setting	Web Link1 visible	CTL	[0 to 1 / 1 / 1]
5-828-242	Network Setting	Web Link2 Name	CTL	[- / - / -]
5-828-243	Network Setting	Web Link2 URL	CTL	[- / - / -]
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]
5-840-006	IEEE 802.11	Channel MAX	CTL	[1 to 14 / 14 / 1]
5-840-007	IEEE 802.11	Channel MIN	CTL	[1 to 14 / 1 / 1]
5-840-011	IEEE 802.11	WEP Key Select	CTL	[0x00 to 0x11 / 0x00 / 0]
5-840-045	IEEE 802.11	WPA Debug Lvl	CTL	[1 to 3 / 3 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
5-840-046	IEEE 802.11	11w	CTL	[0 to 2 / 0 / 1]
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	[- / - / -]
5-841-002	Supply Name Setting	Toner Name Setting: Cyan	CTL	[- / - / -]
5-841-003	Supply Name Setting	Toner Name Setting: Yellow	CTL	[- / - / -]
5-841-004	Supply Name Setting	Toner Name Setting: Magenta	CTL	[- / - / -]
5-841-009	Supply Name Setting	WasteTonerBottle	CTL	[- / - / -]
5-841-011	Supply Name Setting	StapleStd1	CTL	[- / - / -]
5-841-012	Supply Name Setting	StapleStd2	CTL	[- / - / -]
5-841-013	Supply Name Setting	StapleStd3	CTL	[- / - / -]
5-841-014	Supply Name Setting	StapleStd4	CTL	[- / - / -]
5-841-101	Supply Name Setting	DrumUnit: Black	CTL	[- / - / -]
5-841-103	Supply Name Setting	DrumUnit: Cyan	CTL	[- / - / -]
5-841-104	Supply Name Setting	DrumUnit: Yellow	CTL	[- / - / -]
5-841-105	Supply Name Setting	DrumUnit: Magenta	CTL	[- / - / -]
5-842-001	GWWS Analysis	Setting 1	CTL	[0x00 to 0xFF / 0 / 1]
5-842-002	GWWS Analysis	Setting 2	CTL	[0x00 to 0xFF / 0 / 1]
5-844-001	USB	Transfer Rate	CTL	[1 to 4 / 4 / 0]
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]
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 /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				1]
5-845-006	Delivery Server Setting	Delivery Error Display Time	CTL	[0 to 999 / 300 / 1sec]
5-845-022	Delivery Server Setting	Rapid Sending Control	CTL	[0 to 1 / 1 / 1]
5-846-010	UCS Setting	LDAP Search Timeout	CTL	[1 to 255 / 60 / 1]
5-846-021	UCS Setting	Folder Auth Change	CTL	[0 to 1 / 0 / 1]
5-846-043	UCS Setting	Addr Book Media	CTL	[0 to 30 / 0 / 1]
5-846-047	UCS Setting	Initialize Local 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]
5-846-053	UCS Setting	Clear Backup Info	CTL	[0 to 0 / 0 / 0]
5-846-060	UCS Setting	Search option	CTL	[0x00 to 0xff / 0x0f / 1]
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]
5-846-094	UCS Setting	Encryption Stat	CTL	[0 to 255 / 0 / 0]
5-846-100	UCS Setting	Initialize Suprvisor	CTL	[0 to 0 / 0 / 0]
5-848-004	Web Service	Access Ctrl: uirectory (Lower 4bits)	CTL	[0x00 to 0xFF / 0x00 / 0]
5-848-007	Web Service	Access Ctrl: Comm. Log Fax(Lower 4bits)	CTL	[0x00 to 0xFF / 0x00 / 0]
5-848-009	Web Service	Access Ctrl: Job Ctrl (Lower 4bits)	CTL	[0x00 to 0xFF / 0x00 / 0]
5-848-011	Web Service	Access Ctrl: Devicemanagement(Lower 4bits)	CTL	[0x00 to 0xFF / 0x00 / 0]
5-848-022	Web Service	Access Ctrl: uadministration (Lower 4bits)	CTL	[0x00 to 0xFF / 0x00 / 0]
5-848-024	Web Service	Access Ctrl: Log Service (Lower 4bits)	CTL	[0x00 to 0xFF / 0x00 / 0]
5-848-025	Web Service	Access Ctrl: Rest	CTL	[0x00 to 0xFF / 0x00 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
		WebService (Lower 4bits)		/ 0]
5-848-045	Web Service	Reverse Proxy Server Setting(ESA Port)	CTL	[0x00 to 0xFF / 0 / 1]
5-848-046	Web Service	8080/51443 Port Open Time	CTL	[0 to 300 / 60 / 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]
5-848-218	SysLogTrans	Setting: Timing	CTL	[0 to 1 / 0 / 1]
5-848-220	SysLogTrans	Primary srv port number	CTL	[1 to 65535 / 80 / 1]
5-848-221	SysLogTrans	Check Cert	CTL	[0 to 1 / 0 / 1]
5-849-001	Installation Date	Display	CTL	[0 to 0 / 0 / 0]
5-849-002	Installation Date	Switch to Print	CTL	[0 to 1 / 1 / 1]
5-849-003	Installation Date	Total Counter	CTL	[0 to 99999999 / 0 / 1]
5-850-003	Address Book Function	Replacement of Circuit Classifications	CTL	[0 to 0 / 0 / 0]
5-856-002	Remote ROM Update	Local Port	CTL	[0 to 1 / 0 / 1]
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 2 / 0 / 1]
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	CTL	[0 to 1 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
		Logs		
5-858-142	Collect Machine Info	Acquire Controller Debug Logs Only	CTL	[0 to 1 / 0 / 0]
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]
5-860-021	SMTP/POP3/IMAP4	MDN Response RFC2298 Compliance	CTL	[0 to 1 / 1 / 1]
5-860-022	SMTP/POP3/IMAP4	SMTP Auth. From Field Replacement	CTL	[0 to 1 / 0 / 1]
5-860-025	SMTP/POP3/IMAP4	SMTP Auth. Direct Setting	CTL	[0 to 0xff / 0x0 / 1]
5-860-026	SMTP/POP3/IMAP4	S/MIME:MIME Header Setting	CTL	[0 to 2 / 0 / 1]
5-860-028	SMTP/POP3/IMAP4	S/MIME: Authentication Check	CTL	[0 to 1 / 0 / 1]
5-866-001	E-Mail Report	Report Validity	CTL	[0 to 1 / 0 / 1]
5-866-005	E-Mail Report	Add Date Field	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-	CTL	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
		Mail:Destination2		
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]
5-875-001	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]
5-885-205	Set WIM Function	MonitorDisable	CTL	[0 to 1 / 0 / 1]
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]
5-886-111	Farm Update Setting	Auto Update Setting	CTL	[0 to 1 / 1 / 1]
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]
5-886-120	Farm Update Setting	Auto Update Prohibit Day of Week Setting	CTL	[0 to 255 / 0 / 1]
5-886-126	Farm Update Setting	Auto Update Power Off Update Setting	CTL	[0 to 2 / 0 / 1]
5-886-127	Update Setting	Auto Update User Setting Enable	CTL	[0 to 1 / 1 / 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]
5-888-001	Personal Information Protect		CTL	[0 to 1 / 0 / 1]
5-893-001	SDK Application Counter	SDK-1	CTL	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
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	ExternalCountSet	SW Charge Mode	ENG*	[0 to 2 / 0 / 1]
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]
5-930-001	Meter Charge	Setting	ENG*	[0 to 1 / 1 / 1] 0: No 1: Yes
5-931-001	Life Alert Disp.	Maintenance Kit	ENG*	[0 to 1 / 0 / 1] 0: No 1: Yes
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]
5-990-021	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]
5-990-023	SP Print Mode	Scanner User Program	CTL	[0 to 255 / 0 / 0]
5-990-026	SP Print Mode	Printer SP	CTL	[0 to 255 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
5-992-007	SP Text Mode	NIB Summary	CTL	[0 to 0 / 0 / 0]
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]
5-992-026	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]
5-993-001	SP Text Mode(Privacy)	All (Data List)	CTL	[0 to 255 / 0 / 0]
5-993-002	SP Text Mode(Privacy)	SP (Mode Data List)	CTL	[0 to 255 / 0 / 0]
5-993-003	SP Text Mode(Privacy)	User Program	CTL	[0 to 255 / 0 / 0]
5-993-004	SP Text Mode(Privacy)	Logging Data	CTL	[0 to 255 / 0 / 0]
5-993-005	SP Text Mode(Privacy)	Diagnostic Report	CTL	[0 to 255 / 0 / 0]
5-993-006	SP Text Mode(Privacy)	Non-Default	CTL	[0 to 255 / 0 / 0]
5-993-007	SP Text Mode(Privacy)	NIB Summary	CTL	[0 to 0 / 0 / 0]
5-993-008	SP Text Mode(Privacy)	Capture Log	CTL	[0 to 255 / 0 / 1]
5-993-021	SP Text Mode(Privacy)	Copier User Program	CTL	[0 to 0 / 0 / 0]
5-993-022	SP Text Mode(Privacy)	Scanner SP	CTL	[0 to 255 / 0 / 0]
5-993-023	SP Text Mode(Privacy)	Scanner User Program	CTL	[0 to 255 / 0 / 0]
5-993-026	SP Text Mode(Privacy)	Printer SP	CTL	[0 to 255 / 0 / 0]
5-993-027	SP Text Mode(Privacy)	SmartOperationPanel SP	CTL	[0 to 255 / 0 / 0]
5-993-028	SP Text Mode(Privacy)	SmartOperationPanel	CTL	[0 to 255 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
		UP		
5-995-001	Self Diagnostic		ENG	[0 to 1 / 0 / 1]
5-998-001	Fusing Warm UP	Warm Up In Advance ON/OFF	ENG	[0 to 1 / 0 / 1] 0: Silent 1: Fast

3.7 SP6-XXX

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
6-006-001	ADF Regi Adj	Side1 Side	ENG	[-3 to 3 / 0 / 0.1mm]
6-006-002	ADF Regi Adj	Side2 Side	ENG*	[-12 to 12 / 0 / 0.1mm]
6-006-010	ADF Regi Adj	Side1 Lead Regi450	ENG	[-1.5 to 1.5 / 0 / 0.1mm]
6-006-011	ADF Regi Adj	Side1 Lead Regi350	ENG	[-1.5 to 1.5 / 0 / 0.1mm]
6-006-012	ADF Regi Adj	Side1 Lead Regi233	ENG	[-1.5 to 1.5 / 0 / 0.1mm]
6-006-013	ADF Regi Adj	Side1 Tail Regi450	ENG	[-7.5 to 10.8 / 0 / 0.1mm]
6-006-014	ADF Regi Adj	Side1 Tail Regi350	ENG	[-7.5 to 10.8 / 0 / 0.1mm]
6-006-015	ADF Regi Adj	Side1 Tail 233	ENG	[-7.5 to 10.8 / 0 / 0.1mm]
6-007-016	ADF Lead Regi Adj ALL	Side1	ENG	[-11 to 4 / 0 / 0.1mm]
6-008-017	ADF Tail Regi Adj ALL	Side1	ENG	[-7.5 to 10.8 / 0 / 0.1mm]
6-009-022	ADF Regi Side2 Adjustment	Lead edge	ENG*	[-12 to 12 / 0 / 0.1mm]
6-009-023	ADF Regi Side2 Adjustment	Tail edge	ENG*	[-12 to 12 / 0 / 0.1mm]
6-011-009	ADF INPUT Check	DADF Document Sensor	ENG	[0 to 1 / 0 / 1STEP]
6-011-010	ADF INPUT Check	DADF Feed Sensor	ENG	[0 to 1 / 0 / 1STEP]
6-011-011	ADF INPUT Check	DADF Exit Sensor	ENG	[0 to 1 / 0 / 1STEP]
6-011-013	ADF INPUT Check	DADF Regi Sensor	ENG	[0 to 1 / 0 / 1STEP]
6-011-015	ADF INPUT Check	DADF Feed Cover Sensor	ENG	[0 to 1 / 0 / 1STEP]
6-011-016	ADF INPUT Check	DADF Feeder Cover Interlock Switch	ENG	[0 to 1 / 0 / 1STEP]
6-011-017	ADF INPUT Check	DADF Tray APS Sensor1	ENG	[0 to 1 / 0 / 1STEP]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
6-011-018	ADF INPUT Check	DADF Tray APS Sensor2	ENG	[0 to 1 / 0 / 1STEP]
6-011-019	ADF INPUT Check	DADF Tray Size SNR No.2	ENG	[0 to 1 / 0 / 1STEP]
6-011-020	ADF INPUT Check	Scan Start	ENG	[0 to 1 / 0 / 1STEP]
6-012-001	ADF OUTPUT Check	Feed Clutch	ENG	[0 to 1 / 0 / 1STEP]
6-012-002	ADF OUTPUT Check	TA Clutch	ENG	[0 to 1 / 0 / 1STEP]
6-012-003	ADF OUTPUT Check	Doc Set LED	ENG	[0 to 1 / 0 / 1STEP]
6-012-004	ADF OUTPUT Check	Doc Ready	ENG	[0 to 1 / 0 / 1STEP]
6-012-005	ADF OUTPUT Check	Image Area	ENG	[0 to 1 / 0 / 1STEP]
6-012-006	ADF OUTPUT Check	CIS Sync	ENG	[0 to 1 / 0 / 1STEP]
6-012-007	ADF OUTPUT Check	Feed Motor(CW) 450.0mm/sec	ENG	[0 to 1 / 0 / 1STEP]
6-012-008	ADF OUTPUT Check	Feed Motor(CW) 350.0mm/sec	ENG	[0 to 1 / 0 / 1STEP]
6-012-009	ADF OUTPUT Check	Feed Motor(CW) 233.3mm/sec	ENG	[0 to 1 / 0 / 1STEP]
6-012-010	ADF OUTPUT Check	Feed Motor(CCW) 75.0mm/s	ENG	[0 to 1 / 0 / 1STEP]
6-017-010	ADF Sub Magnification Adj	450mm/s	ENG	[-2 to 2 / 0 / 0.1%]
6-017-011	ADF Sub Magnification Adj	350mm/s	ENG	[-2 to 2 / 0 / 0.1%]
6-017-012	ADF Sub Magnification Adj	233mm/s	ENG	[-2 to 2 / 0 / 0.1%]
6-018-013	ADF Sub Magnification Adj ALL	Side 1&2	ENG	[-2 to 2 / 0 / 0.1%]
6-030-001	DF Hinge	Hinge Counter	ENG*	[0 to 999999 / 0 / 1]
6-030-003	DF Hinge	Hinge Count Clear	ENG	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
6-190-001	FIN Input Check	Low Staple Sensor	ENG	[0 to 1 / 0 / 1]
6-190-002	FIN Input Check	Staple Home Sensor	ENG	[0 to 1 / 0 / 1]
6-190-003	FIN Input Check	Stacker No Paper Full Sensor	ENG	[0 to 1 / 0 / 1]
6-190-004	FIN Input Check	Stacker Height Sensor 1	ENG	[0 to 1 / 0 / 1]
6-190-005	FIN Input Check	Stacker Height Sensor 2	ENG	[0 to 1 / 0 / 1]
6-190-006	FIN Input Check	Finisher Rear Door Sensor	ENG	[0 to 1 / 0 / 1]
6-190-007	FIN Input Check	Finisher Staple Door Switch	ENG	[0 to 1 / 0 / 1]
6-190-008	FIN Input Check	Finisher Detect	ENG	[0 to 1 / 0 / 1]
6-191-001	FIN Output Check	Stapler Motor(Forward)	ENG	[0 to 1 / 0 / 1]
6-191-002	FIN Output Check	Stapler Motor(Reverse)	ENG	[0 to 1 / 0 / 1]
6-191-003	FIN Output Check	Stacker Motor(Lift Up/Low Speed)	ENG	[0 to 1 / 0 / 1]
6-191-004	FIN Output Check	Stacker Motor(Lift Down/Prifile2)	ENG	[0 to 1 / 0 / 1]
6-191-005	FIN OUTPUT Check	Finisher Gate	ENG	[0 to 1 / 0 / 1]
6-200-001	MBX Input Check	1Bin Exit Full Paper Sensor	ENG	[0 to 1 / 0 / 1]
6-200-002	MBX Input Check	2Bin Exit Full Paper Sensor	ENG	[0 to 1 / 0 / 1]
6-200-003	MBX Input Check	3Bin Exit Full Paper Sensor	ENG	[0 to 1 / 0 / 1]
6-200-004	MBX Input Check	4Bin Exit Full Paper Sensor	ENG	[0 to 1 / 0 / 1]
6-200-005	MBX Input Check	MBX Vertical Sensor	ENG	[0 to 1 / 0 / 1]
6-200-006	MBX Input Check	MBX Detect	ENG	[0 to 1 / 0 / 1]
6-200-007	MBX Input Check	MBX Rear Door Open Sensor	ENG	[0 to 1 / 0 / 1]
6-201-001	FIN Output Check	MBX Bin Gate Solenoid 2	ENG	[0 to 1 / 0 / 1]
6-201-002	FIN Output Check	MBX Bin Gate Solenoid 3	ENG	[0 to 1 / 0 / 1]
6-201-003	FIN Output Check	MBX Bin Gate Solenoid	ENG	[0 to 1 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
		4		
6-814-001	ADF Factory Value	Save	ENG	[0 to 1 / 0 / 1]
6-814-002	ADF Factory Value	Save Flag	ENG	[0 to 255 / 0 / 1]
6-814-003	ADF Factory Value	Input	ENG	[0 to 1 / 0 / 1]
6-814-004	ADF Factory Value	Input Flag	ENG	[0 to 255 / 0 / 1]
6-830-001	Extra	Staples 0 to 50 (Initial:0)	CTL	[0 to 50 / 0 / 1]

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SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
7-334-001	Function Use Count	Orig. Orien.	CTL	[0 to 0xffffffff / 0 / 0]
7-334-002	Function Use Count	Reverse Orien.	CTL	[0 to 0xffffffff / 0 / 0]
7-334-003	Function Use Count	All Job Stop	CTL	[0 to 0xffffffff / 0 / 0]
7-334-004	Function Use Count	Copy Quality	CTL	[0 to 0xffffffff / 0 / 0]
7-334-005	Function Use Count	Mag. FixRatio	CTL	[0 to 0xffffffff / 0 / 0]
7-334-006	Function Use Count	Mag. Ratio	CTL	[0 to 0xffffffff / 0 / 0]
7-334-007	Function Use Count	Size Mag.	CTL	[0 to 0xffffffff / 0 / 0]
7-334-008	Function Use Count	Direct. Mag.	CTL	[0 to 0xffffffff / 0 / 0]
7-334-009	Function Use Count	Dir. Size Mag.	CTL	[0 to 0xffffffff / 0 / 0]
7-334-010	Function Use Count	Auto Reduce/Enlarge	CTL	[0 to 0xffffffff / 0 / 0]
7-334-011	Function Use Count	Create Margin	CTL	[0 to 0xffffffff / 0 / 0]
7-334-012	Function Use Count	OneSideDpx	CTL	[0 to 0xffffffff / 0 / 0]
7-334-013	Function Use Count	Cover	CTL	[0 to 0xffffffff / 0 / 0]
7-334-014	Function Use Count	Chapter	CTL	[0 to 0xffffffff / 0 / 0]
7-334-015	Function Use Count	SlipSheet	CTL	[0 to 0xffffffff / 0 / 0]
7-334-016	Function Use Count	EraseCenter	CTL	[0 to 0xffffffff / 0 / 0]
7-334-017	Function Use Count	EraseFrame	CTL	[0 to 0xffffffff / 0 / 0]
7-334-018	Function Use Count	MarginAdj	CTL	[0 to 0xffffffff / 0 / 0]
7-334-019	Function Use Count	Centering	CTL	[0 to 0xffffffff / 0 / 0]
7-334-020	Function Use Count	Double	CTL	[0 to 0xffffffff / 0 / 0]
7-334-021	Function Use Count	Repeat	CTL	[0 to 0xffffffff / 0 / 0]
7-334-022	Function Use Count	Mirror	CTL	[0 to 0xffffffff / 0 / 0]
7-334-023	Function Use Count	Negative	CTL	[0 to 0xffffffff / 0 / 0]
7-334-024	Function Use Count	NumberingStmp	CTL	[0 to 0xffffffff / 0 / 0]
7-334-025	Function Use Count	Stmp	CTL	[0 to 0xffffffff / 0 / 0]
7-334-026	Function Use Count	UserStmp	CTL	[0 to 0xffffffff / 0 / 0]
7-334-027	Function Use Count	DateStmp	CTL	[0 to 0xffffffff / 0 / 0]
7-334-028	Function Use Count	PageStmp	CTL	[0 to 0xffffffff / 0 / 0]
7-334-029	Function Use Count	CharStmp	CTL	[0 to 0xffffffff / 0 / 0]
7-334-030	Function Use Count	CharNumStmp	CTL	[0 to 0xffffffff / 0 / 0]
7-334-031	Function Use Count	PatternPrint	CTL	[0 to 0xffffffff / 0 / 0]
7-334-032	Function Use Count	ReserveCopy	CTL	[0 to 0xffffffff / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
7-334-033	Function Use Count	IntCopy	CTL	[0 to 0xffffffff / 0 / 0]
7-334-034	Function Use Count	ProgramCopy	CTL	[0 to 0xffffffff / 0 / 0]
7-334-035	Function Use Count	SampleCopy	CTL	[0 to 0xffffffff / 0 / 0]
7-334-036	Function Use Count	OriginalReturn	CTL	[0 to 0xffffffff / 0 / 0]
7-334-037	Function Use Count	FullColor	CTL	[0 to 0xffffffff / 0 / 0]
7-334-038	Function Use Count	TwoColor	CTL	[0 to 0xffffffff / 0 / 0]
7-334-039	Function Use Count	SingleColor	CTL	[0 to 0xffffffff / 0 / 0]
7-334-040	Function Use Count	MonoColor	CTL	[0 to 0xffffffff / 0 / 0]
7-334-041	Function Use Count	Acs	CTL	[0 to 0xffffffff / 0 / 0]
7-334-042	Function Use Count	Accessibility	CTL	[0 to 0xffffffff / 0 / 0]
7-334-043	Function Use Count	SmallSizeMode	CTL	[0 to 0xffffffff / 0 / 0]
7-334-044	Function Use Count	Glossy	CTL	[0 to 0xffffffff / 0 / 0]
7-335-001	Total Job Count	LegacyCopy	CTL	[0 to 0xffffffff / 0 / 0]
7-335-002	Total Job Count	SmartCopy	CTL	[0 to 0xffffffff / 0 / 0]
7-335-003	Total Job Count	SmartCopy Ful.	CTL	[0 to 0xffffffff / 0 / 0]
7-335-004	Total Job Count	SimpleCopy	CTL	[0 to 0xffffffff / 0 / 0]
7-335-005	Total Job Count	OtherCopy	CTL	[0 to 0xffffffff / 0 / 0]
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]
7-404-006	Software Error History	Latest 5	CTL	[0 to 0 / 0 / 0]
7-404-007	Software Error History	Latest 6	CTL	[0 to 0 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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	Tray 1: On	CTL	[0 to 65535 / 0 / 0]
7-504-004	Paper Jam Location	Tray 2: On	CTL	[0 to 65535 / 0 / 0]
7-504-005	Paper Jam Location	Tray 3: On	CTL	[0 to 65535 / 0 / 0]
7-504-006	Paper Jam Location	Tray 4: On	CTL	[0 to 65535 / 0 / 0]
7-504-007	Paper Jam Location	Tray 5: 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	Registration Sn: On (Duplex)	CTL	[0 to 65535 / 0 / 0]
7-504-012	Paper Jam Location	Transport Sn 2:On	CTL	[0 to 65535 / 0 / 0]
7-504-013	Paper Jam Location	Transport Sn 3:On	CTL	[0 to 65535 / 0 / 0]
7-504-014	Paper Jam Location	Transport Sn 4:On	CTL	[0 to 65535 / 0 / 0]
7-504-017	Paper Jam Location	Registration Sn: On (Option)	CTL	[0 to 65535 / 0 / 0]
7-504-020	Paper Jam Location	Paper Exit: On	CTL	[0 to 65535 / 0 / 0]
7-504-057	Paper Jam Location	Registration Sn: Off	CTL	[0 to 65535 / 0 / 0]
7-504-060	Paper Jam Location	Paper Exit: Off	CTL	[0 to 65535 / 0 / 0]
7-504-096	Paper Jam Location	Registration Sn: Off (Image)	CTL	[0 to 65535 / 0 / 0]
7-504-097	Paper Jam Location	Unmatched Paper Size	CTL	[0 to 65535 / 0 / 0]
7-504-240	Paper Jam Location	Fin: Paper Exit: On	CTL	[0 to 65535 / 0 / 0]
7-504-241	Paper Jam Location	Fin: Paper Exit: Off	CTL	[0 to 65535 / 0 / 0]
7-504-242	Paper Jam Location	Fin: Output	CTL	[0 to 65535 / 0 / 0]
7-504-250	Paper Jam Location	Staple: Stapling	CTL	[0 to 65535 / 0 / 0]
7-504-251	Paper Jam Location	Staple	CTL	[0 to 65535 / 0 / 0]
7-505-001	Original Jam Detection	At Power On	CTL	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
7-505-013	Original Jam Detection	Paper Feed: On	CTL	[0 to 65535 / 0 / 0]
7-505-016	Original Jam Detection	Registration Sn: On	CTL	[0 to 65535 / 0 / 0]
7-505-017	Original Jam Detection	Paper Exit Sn: On	CTL	[0 to 65535 / 0 / 0]
7-505-066	Original Jam Detection	Registration Sn: Off	CTL	[0 to 65535 / 0 / 0]
7-505-067	Original Jam Detection	Registration Sn: Off	CTL	[0 to 65535 / 0 / 0]
7-505-094	Original Jam Detection	Paper Exit Sn: Off	CTL	[0 to 65535 / 0 / 0]
7-505-095	Original Jam Detection	Original Too long	CTL	[0 to 65535 / 0 / 0]
7-505-239	Original Jam Detection	Original Pulled Out	CTL	[0 to 65535 / 0 / 0]
7-506-006	Jam Count by Paper Size	A5 LEF	CTL	[0 to 65535 / 0 / 0]
7-506-044	Jam Count by Paper Size	HLT LEF	CTL	[0 to 65535 / 0 / 0]
7-506-133	Jam Count by Paper Size	A4 SEF	CTL	[0 to 65535 / 0 / 0]
7-506-134	Jam Count by Paper Size	A5 SEF	CTL	[0 to 65535 / 0 / 0]
7-506-142	Jam Count by Paper Size	B5 SEF	CTL	[0 to 65535 / 0 / 0]
7-506-164	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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
7-508-001	Original Jam History	Latest	CTL	[0 to 0 / 0 / 0]
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]
7-509-145	Paper Jam Location	Paper Exit Bin: On 1	CTL	[0 to 65535 / 0 / 0]
7-509-146	Paper Jam Location	Paper Exit Bin: On 2	CTL	[0 to 65535 / 0 / 0]
7-509-147	Paper Jam Location	Paper Exit Bin: On 3	CTL	[0 to 65535 / 0 / 0]
7-509-148	Paper Jam Location	Paper Exit Bin: On 4	CTL	[0 to 65535 / 0 / 0]
7-509-149	Paper Jam Location	Paper Exit Bin: Off 1	CTL	[0 to 65535 / 0 / 0]
7-509-150	Paper Jam Location	Paper Exit Bin: Off 2	CTL	[0 to 65535 / 0 / 0]
7-509-151	Paper Jam Location	Paper Exit Bin: Off 3	CTL	[0 to 65535 / 0 / 0]
7-509-152	Paper Jam Location	Paper Exit Bin: Off 4	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	Tray 1: On	CTL	[0 to 65535 / 0 / 0]
7-514-004	Paper Jam Count by Location	Tray 2: On	CTL	[0 to 65535 / 0 / 0]
7-514-005	Paper Jam Count by Location	Tray 3: On	CTL	[0 to 65535 / 0 / 0]
7-514-006	Paper Jam Count by Location	Tray 4: On	CTL	[0 to 65535 / 0 / 0]
7-514-007	Paper Jam Count by Location	Tray 5: 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	Registration Sn: On (Duplex)	CTL	[0 to 65535 / 0 / 0]
7-514-012	Paper Jam Count by Location	Transport Sn 2:On	CTL	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
7-514-013	Paper Jam Count by Location	Transport Sn 3:On	CTL	[0 to 65535 / 0 / 0]
7-514-014	Paper Jam Count by Location	Transport Sn 4:On	CTL	[0 to 65535 / 0 / 0]
7-514-017	Paper Jam Count by Location	Registration Sn: On (Option)	CTL	[0 to 65535 / 0 / 0]
7-514-020	Paper Jam Count by Location	Paper Exit: On	CTL	[0 to 65535 / 0 / 0]
7-514-057	Paper Jam Count by Location	Registration Sn: Off	CTL	[0 to 65535 / 0 / 0]
7-514-060	Paper Jam Count by Location	Paper Exit: Off	CTL	[0 to 65535 / 0 / 0]
7-514-096	Paper Jam Count by Location	Registration Sn: Off (Image)	CTL	[0 to 65535 / 0 / 0]
7-514-097	Paper Jam Count by Location	Unmatched Paper Size	CTL	[0 to 65535 / 0 / 0]
7-514-240	Paper Jam Count by Location	Fin: Paper Exit: On	CTL	[0 to 65535 / 0 / 0]
7-514-241	Paper Jam Count by Location	Fin: Paper Exit: Off	CTL	[0 to 65535 / 0 / 0]
7-514-242	Paper Jam Count by Location	Fin: Output	CTL	[0 to 65535 / 0 / 0]
7-514-250	Paper Jam Count by Location	Staple: Stapling	CTL	[0 to 65535 / 0 / 0]
7-514-251	Paper Jam Count by Location	Staple	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	Paper Feed: On	CTL	[0 to 65535 / 0 / 0]
7-515-016	Original Jam Count by Detection	Registration Sn: On	CTL	[0 to 65535 / 0 / 0]
7-515-017	Original Jam Count by Detection	Paper Exit Sn: On	CTL	[0 to 65535 / 0 / 0]
7-515-066	Original Jam Count by Detection	Registration Sn: Off	CTL	[0 to 65535 / 0 / 0]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
7-515-067	Original Jam Count by Detection	Registration Sn: Off	CTL	[0 to 65535 / 0 / 0]
7-515-094	Original Jam Count by Detection	Paper Exit Sn: Off	CTL	[0 to 65535 / 0 / 0]
7-515-095	Original Jam Count by Detection	Original Too long	CTL	[0 to 65535 / 0 / 0]
7-515-239	Original Jam Count by Detection	Original Pulled Out	CTL	[0 to 65535 / 0 / 0]
7-516-006	Paper Size Jam Count	A5 LEF	CTL	[0 to 65535 / 0 / 0]
7-516-044	Paper Size Jam Count	HLT LEF	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]
7-516-142	Paper Size Jam Count	B5 SEF	CTL	[0 to 65535 / 0 / 0]
7-516-164	Paper Size Jam Count	LG SEF	CTL	[0 to 65535 / 0 / 0]
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]
7-519-145	Paper Jam Count by Location	Paper Exit Bin: On 1	CTL	[0 to 65535 / 0 / 0]
7-519-146	Paper Jam Count by Location	Paper Exit Bin: On 2	CTL	[0 to 65535 / 0 / 0]
7-519-147	Paper Jam Count by Location	Paper Exit Bin: On 3	CTL	[0 to 65535 / 0 / 0]
7-519-148	Paper Jam Count by Location	Paper Exit Bin: On 4	CTL	[0 to 65535 / 0 / 0]
7-519-149	Paper Jam Count by Location	Paper Exit Bin: Off 1	CTL	[0 to 65535 / 0 / 0]
7-519-150	Paper Jam Count by Location	Paper Exit Bin: Off 2	CTL	[0 to 65535 / 0 / 0]
7-519-151	Paper Jam Count by Location	Paper Exit Bin: Off 3	CTL	[0 to 65535 / 0 / 0]
7-519-152	Paper Jam Count by Location	Paper Exit Bin: Off 4	CTL	[0 to 65535 / 0 / 0]
7-520-001	Update Log	ErrorRecord1	CTL	[0 to 255 / 0 / 1]
7-520-002	Update Log	ErrorRecord2	CTL	[0 to 255 / 0 / 1]
7-520-003	Update Log	ErrorRecord3	CTL	[0 to 255 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
7-520-025	Update Log	Auto:EndDate5	CTL	[0 to 0 / 0 / 0]
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]
7-520-058	Update Log	Auto:Result8	CTL	[0 to 255 / 0 / 1]
7-520-059	Update Log	Auto:Result9	CTL	[0 to 255 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
7-520-060	Update Log	Auto:Result10	CTL	[0 to 255 / 0 / 1]
7-617-001	PM Parts Counter Display	Normal	CTL	[0 to 99999999 / 0 / 0]
7-617-002	PM Parts Counter Display	Df	CTL	[0 to 99999999 / 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 Pages	#PCDU:K	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-621-025	PM Counter Pages	#PCDU:C	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-621-048	PM Counter Pages	#PCDU:M	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-621-071	PM Counter Pages	#PCDU:Y	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-621-093	PM Counter Pages	#ITB Unit	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-621-109	PM Counter Pages	#PTR Unit	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-621-115	PM Counter Pages	#Fuser Unit	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-621-145	PM Counter Pages	#Paper Feed Roller Unit	ENG	[0 to 0xFFFFFFFF / 0 / 1sheet]
7-621-205	PM Counter Pages	#DF Paper Feed Roller Unit	ENG	[0 to 99999999 / 0 / 1sheet]
7-622-093	PM Counter Clear	#ITB Unit	ENG	[0 to 1 / 0 / 1]
7-622-109	PM Counter Clear	#PTR Unit	ENG	[0 to 1 / 0 / 1]
7-622-115	PM Counter Clear	#Fuser Unit	ENG	[0 to 1 / 0 / 1]
7-622-145	PM Counter Clear	#Paper Feed Roller Unit	ENG	[0 to 1 / 0 / 1]
7-622-205	PM Counter Clear	#DF Paper Feed Roller Unit	ENG	[0 to 1 / 0 / 1]
7-625-002	PreCounter1 Pages	#PCDU:K	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-625-025	PreCounter1 Pages	#PCDU:C	ENG	[0 to 0xFFFFFFFF / 0 / 1page]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
7-625-048	PreCounter1 Pages	#PCDU:M	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-625-071	PreCounter1 Pages	#PCDU:Y	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-625-093	PreCounter1 Pages	#ITB Unit	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-625-109	PreCounter1 Pages	#PTR Unit	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-625-115	PreCounter1 Pages	#Fuser Unit	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-625-145	PreCounter1 Pages	#Paper Feed Roller Unit	ENG	[0 to 0xFFFFFFFF / 0 / 1sheet]
7-625-205	PreCounter1 Pages	#DF Paper Feed Roller Unit	ENG	[0 to 99999999 / 0 / 1sheet]
7-626-002	PreCounter2 Pages	#PCDU:K	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-626-025	PreCounter2 Pages	#PCDU:C	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-626-048	PreCounter2 Pages	#PCDU:M	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-626-071	PreCounter2 Pages	#PCDU:Y	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-626-093	PreCounter2 Pages	#ITB Unit	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-626-109	PreCounter2 Pages	#PTR Unit	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-626-115	PreCounter2 Pages	#Fuser Unit	ENG	[0 to 0xFFFFFFFF / 0 / 1page]
7-626-145	PreCounter2 Pages	#Paper Feed Roller Unit	ENG	[0 to 0xFFFFFFFF / 0 / 1sheet]
7-626-205	PreCounter2 Pages	#DF Paper Feed Roller Unit	ENG	[0 to 99999999 / 0 / 1sheet]
7-801-002	ROM Info Display	P/#: Engine	ENG	[- / - / -]
7-801-005	ROM Info Display	P/#: PFU5	ENG	[- / - / -]
7-801-007	ROM Info Display	P/#: Finisher	ENG	[- / - / -]
7-801-009	ROM Info Display	P/#: PFU1	ENG	[- / - / -]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
7-801-011	ROM Info Display	P/#: MailBox	ENG	[- / - / -]
7-801-015	ROM Info Display	P/#: IPU	ENG	[- / - / -]
7-801-019	ROM Info Display	P/#: PFU2	ENG	[- / - / -]
7-801-040	ROM Info Display	P/#: PFU3	ENG	[- / - / -]
7-801-041	ROM Info Display	P/#: PFU4	ENG	[- / - / -]
7-801-102	ROM Info Display	Version: Engine	ENG	[- / - / -]
7-801-105	ROM Info Display	Version:PFU5	ENG	[- / - / -]
7-801-107	ROM Info Display	Version: Finisher	ENG	[- / - / -]
7-801-109	ROM Info Display	Version:PFU1	ENG	[- / - / -]
7-801-111	ROM Info Display	Version:MailBox	ENG	[- / - / -]
7-801-115	ROM Info Display	Version: IPU	ENG	[- / - / -]
7-801-119	ROM Info Display	Version:PFU2	ENG	[- / - / -]
7-801-140	ROM Info Display	Version:PFU3	ENG	[- / - / -]
7-801-141	ROM Info Display	Version:PFU4	ENG	[- / - / -]
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]
7-835-001	ACC Counter	Copy ACC	CTL	[0 to 9999999 / 0 / 0]
7-835-002	ACC Counter	Printer ACC	CTL	[0 to 9999999 / 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]
7-840-102	ServiceSP Entry Code Chg Hist	Initialize Time :Last1	CTL	[0 to 0 / 0 / 0]
7-841-021	eMMC SmartInfo	Bad Block Cnt	CTL	[0 to 0xFFFFFFFF / 0 /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				0]
7-841-022	eMMC SmartInfo	Free Block Cnt	CTL	[0 to 0xFFFFFFFF / 0 / 0]
7-841-023	eMMC SmartInfo	Max Block Cnt	CTL	[0 to 0xFFFFFFFF / 0 / 0]
7-841-024	eMMC SmartInfo	Max Erase Cnt	CTL	[0 to 0xFFFFFFFF / 0 / 0]
7-841-031	Cheetah eMMC SmartInfo	Minumum Cnt	CTL	[0 to 0xFFFFFFFF / 0 / 0]
7-841-032	Cheetah eMMC SmartInfo	Max Cnt	CTL	[0 to 0xFFFFFFFF / 0 / 0]
7-841-033	Cheetah eMMC SmartInfo	Average Cnt	CTL	[0 to 0xFFFFFFFF / 0 / 0]
7-852-001	DF Glass Dust Check	Dust Detection Counter	ENG*	[0 to 65535 / 0 / 1]
7-852-002	DF Glass Dust Check	Dust Detection Clear Counter	ENG*	[0 to 65535 / 0 / 1]
7-852-003	DF Dust Check	Dust Counter:Back	ENG*	[0 to 65535 / 0 / 1]
7-853-002	Replace Counter	#PCDU:K	ENG	[0 to 255 / 0 / 1]
7-853-025	Replace Counter	#PCDU:C	ENG	[0 to 255 / 0 / 1]
7-853-048	Replace Counter	#PCDU:M	ENG	[0 to 255 / 0 / 1]
7-853-071	Replace Counter	#PCDU:Y	ENG	[0 to 255 / 0 / 1]
7-853-093	Replace Counter	#ITB Unit	ENG	[0 to 255 / 0 / 1]
7-853-109	Replace Counter	#PTR Unit	ENG	[0 to 255 / 0 / 1]
7-853-115	Replace Counter	#Fuser Unit	ENG	[0 to 255 / 0 / 1]
7-853-145	Replace Counter	#Paper Feed Roller Unit	ENG	[0 to 255 / 0 / 1]
7-853-205	Replace Counter	#DF Paper Feed Roller Unit	ENG	[0 to 255 / 0 / 1]
7-855-001	Coverage Range	Coverage Range 1	CTL	[1 to 200 / 5 / 1%]
7-855-002	Coverage Range	Coverage Range 2	CTL	[1 to 200 / 20 / 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]
7-904-001	Near End Setting	PCDU:Life	ENG	[0 to 255 / 98.3 / 0.1%]
7-904-002	Near End Setting	PCDU:Print Stop	ENG	[0 to 255 / 118.3 / 0.1%]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
7-904-004	Near End Setting	ITB Unit:Life	ENG	[0 to 255 / 99.5 / 0.1%]
7-904-005	Near End Setting	ITB Unit:Print Stop	ENG	[0 to 255 / 107.9 / 0.1%]
7-904-006	Near End Setting	Fuser Unit:Life	ENG	[0 to 255 / 99.5 / 0.1%]
7-904-007	Near End Setting	PTR Unit:Life	ENG	[0 to 255 / 99.5 / 0.1%]
7-906-002	PreCounter Cycle	#PCDU:K	ENG	[0 to 0xFFFFFFFF / 0 / 1cycle]
7-906-025	PreCounter Cycle	#PCDU:C	ENG	[0 to 0xFFFFFFFF / 0 / 1cycle]
7-906-048	PreCounter Cycle	#PCDU:M	ENG	[0 to 0xFFFFFFFF / 0 / 1cycle]
7-906-071	PreCounter Cycle	#PCDU:Y	ENG	[0 to 0xFFFFFFFF / 0 / 1cycle]
7-906-093	PreCounter Cycle	#ITB Unit	ENG	[0 to 0xFFFFFFFF / 0 / 1cycle]
7-907-002	PreCounter Cycle(%)	#PCDU:K	ENG	[0 to 255 / 0 / 0.1%]
7-907-025	PreCounter Cycle(%)	#PCDU:C	ENG	[0 to 255 / 0 / 0.1%]
7-907-048	PreCounter Cycle(%)	#PCDU:M	ENG	[0 to 255 / 0 / 0.1%]
7-907-071	PreCounter Cycle(%)	#PCDU:Y	ENG	[0 to 255 / 0 / 0.1%]
7-907-093	PreCounter Cycle(%)	#ITB Unit	ENG	[0 to 255 / 0 / 0.1%]
7-909-115	PreCounter Heat time	#Fuser Unit	ENG	[0 to 71582788 / 0 / 1Hr]
7-910-001	ROM No	System/Copy	CTL	[- / - / -]
7-910-002	ROM No	Engine	CTL	[- / - / -]
7-910-003	ROM No	Lcdc	CTL	[- / - / -]
7-910-005	ROM No	ADF	CTL	[- / - / -]
7-910-007	ROM No	Finisher1	CTL	[- / - / -]
7-910-009	ROM No	Bank	CTL	[- / - / -]
7-910-011	ROM No	Mail Box	CTL	[- / - / -]
7-910-012	ROM No	FCU	CTL	[- / - / -]
7-910-015	ROM No	Engine(IPU)	CTL	[- / - / -]
7-910-019	ROM No	Bank2	CTL	[- / - / -]
7-910-040	ROM No	Bank3	CTL	[- / - / -]
7-910-041	ROM No	Bank4	CTL	[- / - / -]
7-910-151	ROM No	PS	CTL	[- / - / -]
7-910-158	ROM No	PCL	CTL	[- / - / -]
7-910-159	ROM No	PCLXL	CTL	[- / - / -]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
7-910-162	ROM No	PDF	CTL	[- / - / -]
7-910-165	ROM No	PJL	CTL	[- / - / -]
7-910-167	ROM No	MediaPrint:JPEG	CTL	[- / - / -]
7-910-168	ROM No	MediaPrint:TIFF	CTL	[- / - / -]
7-910-169	ROM No	XPS	CTL	[- / - / -]
7-910-180	ROM No	FONT	CTL	[- / - / -]
7-910-181	ROM No	FONT1	CTL	[- / - / -]
7-910-182	ROM No	FONT2	CTL	[- / - / -]
7-910-183	ROM No	FONT3	CTL	[- / - / -]
7-910-184	ROM No	FONT4	CTL	[- / - / -]
7-910-185	ROM No	FONT5	CTL	[- / - / -]
7-910-186	ROM No	FONT6	CTL	[- / - / -]
7-910-187	ROM No	FONT7	CTL	[- / - / -]
7-910-200	ROM No	Factory	CTL	[- / - / -]
7-910-201	ROM No	Copy	CTL	[- / - / -]
7-910-202	ROM No	NetworkDocBox	CTL	[- / - / -]
7-910-203	ROM No	Fax	CTL	[- / - / -]
7-910-204	ROM No	Printer	CTL	[- / - / -]
7-910-205	ROM No	Scanner	CTL	[- / - / -]
7-910-206	ROM No	RFax	CTL	[- / - / -]
7-910-210	ROM No	MIB	CTL	[- / - / -]
7-910-211	ROM No	Websupport	CTL	[- / - / -]
7-910-212	ROM No	WebUapl	CTL	[- / - / -]
7-910-250	ROM No	Package	CTL	[- / - / -]
7-911-001	Firmware Version	System/Copy	CTL	[- / - / -]
7-911-002	Firmware Version	Engine	CTL	[- / - / -]
7-911-003	Firmware Version	Lcdc	CTL	[- / - / -]
7-911-005	Firmware Version	ADF	CTL	[- / - / -]
7-911-007	Firmware Version	Finisher1	CTL	[- / - / -]
7-911-009	Firmware Version	Bank	CTL	[- / - / -]
7-911-011	Firmware Version	Mail Box	CTL	[- / - / -]
7-911-012	Firmware Version	FCU	CTL	[- / - / -]
7-911-015	Firmware Version	Engine(IPU)	CTL	[- / - / -]
7-911-019	Firmware Version	Bank2	CTL	[- / - / -]
7-911-040	Firmware Version	Bank3	CTL	[- / - / -]
7-911-041	Firmware Version	Bank4	CTL	[- / - / -]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
7-911-151	Firmware Version	PS	CTL	[- / - / -]
7-911-158	Firmware Version	PCL	CTL	[- / - / -]
7-911-159	Firmware Version	PCLXL	CTL	[- / - / -]
7-911-162	Firmware Version	PDF	CTL	[- / - / -]
7-911-165	Firmware Version	PJL	CTL	[- / - / -]
7-911-169	Firmware Version	XPS	CTL	[- / - / -]
7-911-180	Firmware Version	FONT	CTL	[- / - / -]
7-911-181	Firmware Version	FONT1	CTL	[- / - / -]
7-911-182	Firmware Version	FONT2	CTL	[- / - / -]
7-911-183	Firmware Version	FONT3	CTL	[- / - / -]
7-911-184	Firmware Version	FONT4	CTL	[- / - / -]
7-911-185	Firmware Version	FONT5	CTL	[- / - / -]
7-911-186	Firmware Version	FONT6	CTL	[- / - / -]
7-911-187	Firmware Version	FONT7	CTL	[- / - / -]
7-911-200	Firmware Version	Factory	CTL	[- / - / -]
7-911-201	Firmware Version	Copy	CTL	[- / - / -]
7-911-202	Firmware Version	NetworkDocBox	CTL	[- / - / -]
7-911-203	Firmware Version	Fax	CTL	[- / - / -]
7-911-204	Firmware Version	Printer	CTL	[- / - / -]
7-911-205	Firmware Version	Scanner	CTL	[- / - / -]
7-911-206	Firmware Version	RFax	CTL	[- / - / -]
7-911-210	Firmware Version	MIB	CTL	[- / - / -]
7-911-211	Firmware Version	Websupport	CTL	[- / - / -]
7-911-212	Firmware Version	WebUapl	CTL	[- / - / -]
7-911-250	Firmware Version	Package	CTL	[- / - / -]
7-912-115	PreCounter Heat time(%)	#Fuser Unit	ENG	[0 to 255 / 0 / 0.1%]
7-913-002	PreCounter Pixel	#PCDU:K	ENG	[0 to 0xFFFFFFFF / 0 / 1Kpixel]
7-913-025	PreCounter Pixel	#PCDU:C	ENG	[0 to 0xFFFFFFFF / 0 / 1Kpixel]
7-913-048	PreCounter Pixel	#PCDU:M	ENG	[0 to 0xFFFFFFFF / 0 / 1Kpixel]
7-913-071	PreCounter Pixel	#PCDU:Y	ENG	[0 to 0xFFFFFFFF / 0 / 1Kpixel]
7-914-002	PreCounter Pixel(%)	#PCDU:K	ENG	[0 to 255 / 0 / 0.1%]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
7-914-025	PreCounter Pixel(%)	#PCDU:C	ENG	[0 to 255 / 0 / 0.1%]
7-914-048	PreCounter Pixel(%)	#PCDU:M	ENG	[0 to 255 / 0 / 0.1%]
7-914-071	PreCounter Pixel(%)	#PCDU:Y	ENG	[0 to 255 / 0 / 0.1%]
7-915-002	PreCounter thickness	#PCDU:K	ENG	[0 to 0xFFFFFFFF / 0 / 1]
7-915-025	PreCounter thickness	#PCDU:C	ENG	[0 to 0xFFFFFFFF / 0 / 1]
7-915-048	PreCounter thickness	#PCDU:M	ENG	[0 to 0xFFFFFFFF / 0 / 1]
7-915-071	PreCounter thickness	#PCDU:Y	ENG	[0 to 0xFFFFFFFF / 0 / 1]
7-916-002	PreCounter thickness(%)	#PCDU:K	ENG	[0 to 255 / 0 / 0.1%]
7-916-025	PreCounter thickness(%)	#PCDU:C	ENG	[0 to 255 / 0 / 0.1%]
7-916-048	PreCounter thickness(%)	#PCDU:M	ENG	[0 to 255 / 0 / 0.1%]
7-916-071	PreCounter thickness(%)	#PCDU:Y	ENG	[0 to 255 / 0 / 0.1%]
7-931-012	Toner Bottle Bk	Toner Remaining	ENG	[0 to 100 / 100 / 1%]
7-932-012	Toner Bottle M	Toner Remaining	ENG	[0 to 100 / 100 / 1%]
7-933-012	Toner Bottle C	Toner Remaining	ENG	[0 to 100 / 100 / 1%]
7-934-012	Toner Bottle Y	Toner Remaining	ENG	[0 to 100 / 100 / 1%]
7-935-001	Toner Bottle	SerialNo.K	ENG	[- / - / -]
7-935-002	Toner Bottle	SerialNo.C	ENG	[- / - / -]
7-935-003	Toner Bottle	SerialNo.M	ENG	[- / - / -]
7-935-004	Toner Bottle	SerialNo.Y	ENG	[- / - / -]
7-935-011	Toner Bottle	Life End Count K	ENG	[0 to 255 / 0 / 1]
7-935-012	Toner Bottle	Life End Count C	ENG	[0 to 255 / 0 / 1]
7-935-013	Toner Bottle	Life End Count M	ENG	[0 to 255 / 0 / 1]
7-935-014	Toner Bottle	Life End Count Y	ENG	[0 to 255 / 0 / 1]
7-935-021	Toner Bottle	Refill Flag K	ENG	[- / - / -]
7-935-022	Toner Bottle	Refill Flag C	ENG	[- / - / -]
7-935-023	Toner Bottle	Refill Flag M	ENG	[- / - / -]
7-935-024	Toner Bottle	Refill Flag Y	ENG	[- / - / -]
7-936-001	PDCU	SerialNo.K	ENG	[- / - / -]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
7-936-002	PDCU	SerialNo.C	ENG	[- / - / -]
7-936-003	PDCU	SerialNo.M	ENG	[- / - / -]
7-936-004	PDCU	SerialNo.Y	ENG	[- / - / -]
7-942-002	Counter Cycle(%)	#PCDU:K	ENG	[0 to 255 / 0 / 0.1%]
7-942-025	Counter Cycle(%)	#PCDU:C	ENG	[0 to 255 / 0 / 0.1%]
7-942-048	Counter Cycle(%)	#PCDU:M	ENG	[0 to 255 / 0 / 0.1%]
7-942-071	Counter Cycle(%)	#PCDU:Y	ENG	[0 to 255 / 0 / 0.1%]
7-942-093	Counter Cycle(%)	#ITB Unit	ENG	[0 to 255 / 0 / 0.1%]
7-943-115	Counter Heat time(%)	#Fuser Unit	ENG	[0 to 255 / 0 / 0.1%]
7-944-002	PM Counter Cycle	#PCDU:K	ENG	[0 to 0xFFFFFFFF / 0 / 1cycle]
7-944-025	PM Counter Cycle	#PCDU:C	ENG	[0 to 0xFFFFFFFF / 0 / 1cycle]
7-944-048	PM Counter Cycle	#PCDU:M	ENG	[0 to 0xFFFFFFFF / 0 / 1cycle]
7-944-071	PM Counter Cycle	#PCDU:Y	ENG	[0 to 0xFFFFFFFF / 0 / 1cycle]
7-944-093	PM Counter Cycle	#ITB Unit	ENG	[0 to 0xFFFFFFFF / 0 / 1cycle]
7-945-115	PM Counter Heat time	#Fuser Unit	ENG	[0 to 71582788 / 0 / 1Hr]
7-946-002	PM Counter Pixel	#PCDU:K	ENG	[0 to 0xFFFFFFFF / 0 / 1Kpixel]
7-946-025	PM Counter Pixel	#PCDU:C	ENG	[0 to 0xFFFFFFFF / 0 / 1Kpixel]
7-946-048	PM Counter Pixel	#PCDU:M	ENG	[0 to 0xFFFFFFFF / 0 / 1Kpixel]
7-946-071	PM Counter Pixel	#PCDU:Y	ENG	[0 to 0xFFFFFFFF / 0 / 1Kpixel]
7-947-002	PM Counter Pixel(%)	#PCDU:K	ENG	[0 to 255 / 0 / 0.1%]
7-947-025	PM Counter Pixel(%)	#PCDU:C	ENG	[0 to 255 / 0 / 0.1%]
7-947-048	PM Counter Pixel(%)	#PCDU:M	ENG	[0 to 255 / 0 / 0.1%]
7-947-071	PM Counter Pixel(%)	#PCDU:Y	ENG	[0 to 255 / 0 / 0.1%]
7-948-002	PM Counter thickness	#PCDU:K	ENG	[0 to 0xFFFFFFFF / 260 / 1]
7-948-025	PM Counter thickness	#PCDU:C	ENG	[0 to 0xFFFFFFFF / 260 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				/ 1]
7-948-048	PM Counter thickness	#PCDU:M	ENG	[0 to 0xFFFFFFFF / 260 / 1]
7-948-071	PM Counter thickness	#PCDU:Y	ENG	[0 to 0xFFFFFFFF / 260 / 1]
7-949-002	PM Counter thickness(%)	#PCDU:K	ENG	[0 to 255 / 0 / 0.1%]
7-949-025	PM Counter thickness(%)	#PCDU:C	ENG	[0 to 255 / 0 / 0.1%]
7-949-048	PM Counter thickness(%)	#PCDU:M	ENG	[0 to 255 / 0 / 0.1%]
7-949-071	PM Counter thickness(%)	#PCDU:Y	ENG	[0 to 255 / 0 / 0.1%]
7-954-002	Counter: Pages(%)	#PCDU:K	ENG	[0 to 255 / 0 / 0.1%]
7-954-025	Counter: Pages(%)	#PCDU:C	ENG	[0 to 255 / 0 / 0.1%]
7-954-048	Counter: Pages(%)	#PCDU:M	ENG	[0 to 255 / 0 / 0.1%]
7-954-071	Counter: Pages(%)	#PCDU:Y	ENG	[0 to 255 / 0 / 0.1%]
7-954-093	Counter: Pages(%)	#ITB Unit	ENG	[0 to 255 / 0 / 0.1%]
7-954-109	Counter: Pages(%)	#PTR Unit	ENG	[0 to 255 / 0 / 0.1%]
7-954-115	Counter: Pages(%)	#Fuser Unit	ENG	[0 to 255 / 0 / 0.1%]
7-954-145	Counter: Pages(%)	#Paper Feed Roller Unit	ENG	[0 to 255 / 0 / 1%]
7-954-205	Counter: Pages(%)	#DF Paper Feed Roller Unit	ENG	[0 to 255 / 0 / 1%]
7-960-002	Estimated Usage Rate	#PCDU:K	ENG	[0 to 255 / 0 / 0.1%]
7-960-025	Estimated Usage Rate	#PCDU:C	ENG	[0 to 255 / 0 / 0.1%]
7-960-048	Estimated Usage Rate	#PCDU:M	ENG	[0 to 255 / 0 / 0.1%]
7-960-071	Estimated Usage Rate	#PCDU:Y	ENG	[0 to 255 / 0 / 0.1%]
7-960-093	Estimated Usage Rate	#ITB Unit	ENG	[0 to 255 / 0 / 0.1%]
7-960-109	Estimated Usage Rate	#PTR Unit	ENG	[0 to 255 / 0 / 0.1%]
7-960-115	Estimated Usage Rate	#Fuser Unit	ENG	[0 to 255 / 0 / 0.1%]
7-960-145	Estimated Usage Rate	#Paper Feed Roller Unit	ENG	[0 to 255 / 0 / 1%]
7-960-205	Estimated Usage Rate	#DF Paper Feed Roller Unit	ENG	[0 to 255 / 0 / 1%]
7-961-001	Auto Ordering Thresh	PCDU	ENG	[0 to 255 / 98.3 / 0.1%]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
7-961-003	Auto Ordering Thresh	ITB Unit	ENG	[0 to 255 / 99.5 / 0.1%]
7-961-004	Auto Ordering Thresh	PTR Unit	ENG	[0 to 255 / 99.5 / 0.1%]
7-961-005	Auto Ordering Thresh	Fuser Unit	ENG	[0 to 255 / 99.5 / 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]
7-979-006	CPU Reset Log	Data6	ENG*	[0x0000 to 0xFFFF / 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 /

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
				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]

3.9 SP8-XXX

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]
8-025-001	S:Pjob/LS		CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-052-001	C:TX Jobs/DesApl		CTL*	[0 to 99999999 / 0 / 1]
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]
8-061-013	T:FIN Jobs	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-062-015	C:FIN Jobs	3rd Vendor	CTL*	[0 to 99999999 / 0 / 1]
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]
8-064-001	P:FIN Jobs	Sort	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-065-003	S:FIN Jobs	Staple	CTL*	[0 to 99999999 / 0 / 1]
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]
8-066-005	L:FIN Jobs	Z-Fold	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-067-007	O:FIN Jobs	Other	CTL*	[0 to 99999999 / 0 / 1]
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]
8-071-009	T:Jobs/PGS	51~100 Pages	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-072-013	C:Jobs/PGS	701~1000 Pages	CTL*	[0 to 99999999 / 0 / 1]
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]
8-074-003	P:Jobs/PGS	3 Pages	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-075-007	S:Jobs/PGS	11~20 Pages	CTL*	[0 to 99999999 / 0 / 1]
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]
8-076-011	L:Jobs/PGS	301~500 Pages	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-081-001	T:Smart Device	Smart Device	CTL*	[0 to 99999999 / 0 / 1]
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]
8-111-002	T:FAX TX Jobs	Color(Tel)	CTL*	[0 to 99999999 / 0 / 1]
8-111-101	T:FAX TX Jobs	B/W(Cloud)	CTL*	[0 to 99999999 / 0 / 1]
8-111-102	T:FAX TX Jobs	Color(Cloud)	CTL*	[0 to 99999999 / 0 / 1]
8-113-001	F:FAX TX Jobs	B/W(Tel)	CTL*	[0 to 99999999 / 0 / 1]
8-113-002	F:FAX TX Jobs	Color(Tel)	CTL*	[0 to 99999999 / 0 / 1]
8-113-101	F:FAX TX Jobs	B/W(Cloud)	CTL*	[0 to 99999999 / 0 / 1]
8-113-102	F:FAX TX Jobs	Color(Cloud)	CTL*	[0 to 99999999 / 0 / 1]
8-121-001	T:IFAX TX Jobs	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-121-002	T:IFAX TX Jobs	Color	CTL*	[0 to 99999999 / 0 / 1]
8-123-001	F:IFAX TX Jobs	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-123-002	F:IFAX TX Jobs	Color	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]
8-141-002	T:Deliv Jobs/Svr	Color	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-175-003	S:Deliv Jobs/WSD/DSM	ACS	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-215-001	S:Scan PGS/LS		CTL*	[0 to 99999999 / 0 / 1]
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]
8-231-007	Scan PGS/Mode	ID card Feeder	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]
8-241-009	T:Scan PGS/Org	Grayscale	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-245-004	S:Scan PGS/Org	GenCopy, Pale	CTL*	[0 to 99999999 / 0 / 1]
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]
8-261-001	T:Scn PGS/ColCr	Color Conversion	CTL*	[0 to 99999999 / 0 / 1]
8-261-002	T:Scn PGS/ColCr	Color Erase	CTL*	[0 to 99999999 / 0 / 1]
8-261-003	T:Scn PGS/ColCr	Background	CTL*	[0 to 99999999 / 0 / 1]
8-261-004	T:Scn PGS/ColCr	Other	CTL*	[0 to 99999999 / 0 / 1]
8-262-001	C:Scn PGS/ColCr	Color Conversion	CTL*	[0 to 99999999 / 0 / 1]
8-262-002	C:Scn PGS/ColCr	Color Erase	CTL*	[0 to 99999999 / 0 / 1]
8-262-003	C:Scn PGS/ColCr	Background	CTL*	[0 to 99999999 / 0 / 1]
8-262-004	C:Scn PGS/ColCr	Other	CTL*	[0 to 99999999 / 0 / 1]
8-265-001	S:Scn PGS/ColCr	Color Conversion	CTL*	[0 to 99999999 / 0 / 1]
8-265-002	S:Scn PGS/ColCr	Color Erase	CTL*	[0 to 99999999 / 0 / 1]
8-265-003	S:Scn PGS/ColCr	Background	CTL*	[0 to 99999999 / 0 / 1]
8-265-004	S:Scn PGS/ColCr	Other	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
8-266-001	L:Scn PGS/ColCr	Color Conversion	CTL*	[0 to 99999999 / 0 / 1]
8-266-002	L:Scn PGS/ColCr	Color Erase	CTL*	[0 to 99999999 / 0 / 1]
8-266-003	L:Scn PGS/ColCr	Background	CTL*	[0 to 99999999 / 0 / 1]
8-266-004	L:Scn PGS/ColCr	Other	CTL*	[0 to 99999999 / 0 / 1]
8-281-001	T:Scn PGS/TWAIN		CTL*	[0 to 99999999 / 0 / 1]
8-285-001	S:Scn PGS/TWAIN		CTL*	[0 to 99999999 / 0 / 1]
8-291-001	T:Scn PGS/Stamp		CTL*	[0 to 99999999 / 0 / 1]
8-293-001	F:Scn PGS/Stamp		CTL*	[0 to 99999999 / 0 / 1]
8-295-001	S:Scn PGS/Stamp		CTL*	[0 to 99999999 / 0 / 1]
8-301-001	T:Scn PGS/Size	A3	CTL*	[0 to 99999999 / 0 / 1]
8-301-002	T:Scn PGS/Size	A4	CTL*	[0 to 99999999 / 0 / 1]
8-301-003	T:Scn PGS/Size	A5	CTL*	[0 to 99999999 / 0 / 1]
8-301-004	T:Scn PGS/Size	B4	CTL*	[0 to 99999999 / 0 / 1]
8-301-005	T:Scn PGS/Size	B5	CTL*	[0 to 99999999 / 0 / 1]
8-301-006	T:Scn PGS/Size	DLT	CTL*	[0 to 99999999 / 0 / 1]
8-301-007	T:Scn PGS/Size	LG	CTL*	[0 to 99999999 / 0 / 1]
8-301-008	T:Scn PGS/Size	LT	CTL*	[0 to 99999999 / 0 / 1]
8-301-009	T:Scn PGS/Size	HLT	CTL*	[0 to 99999999 / 0 / 1]
8-301-010	T:Scn PGS/Size	Full Bleed	CTL*	[0 to 99999999 / 0 / 1]
8-301-254	T:Scn PGS/Size	Other (Standard)	CTL*	[0 to 99999999 / 0 / 1]
8-301-255	T:Scn PGS/Size	Other (Custom)	CTL*	[0 to 99999999 / 0 / 1]
8-302-001	C:Scn PGS/Size	A3	CTL*	[0 to 99999999 / 0 / 1]
8-302-002	C:Scn PGS/Size	A4	CTL*	[0 to 99999999 / 0 / 1]
8-302-003	C:Scn PGS/Size	A5	CTL*	[0 to 99999999 / 0 / 1]
8-302-004	C:Scn PGS/Size	B4	CTL*	[0 to 99999999 / 0 / 1]
8-302-005	C:Scn PGS/Size	B5	CTL*	[0 to 99999999 / 0 / 1]
8-302-006	C:Scn PGS/Size	DLT	CTL*	[0 to 99999999 / 0 / 1]
8-302-007	C:Scn PGS/Size	LG	CTL*	[0 to 99999999 / 0 / 1]
8-302-008	C:Scn PGS/Size	LT	CTL*	[0 to 99999999 / 0 / 1]
8-302-009	C:Scn PGS/Size	HLT	CTL*	[0 to 99999999 / 0 / 1]
8-302-010	C:Scn PGS/Size	Full Bleed	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-303-010	F:Scan PGS/Size	Full Bleed	CTL*	[0 to 99999999 / 0 / 1]
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]
8-306-004	L:Scan PGS/Size	B4	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-315-005	S:Scan PGS/Rez	~199dpi	CTL*	[0 to 99999999 / 0 / 1]
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]
8-391-003	LSize PrtPGS	BannerPaper	CTL*	[0 to 99999999 / 0 / 1]
8-401-001	T:PrtPGS/LS		CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-421-012	T:PrtPGS/Dup Comb	Booklet	CTL*	[0 to 99999999 / 0 / 1]
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	9in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
	Comb			
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]
8-422-006	C:PrtPGS/Dup Comb	2in1	CTL*	[0 to 99999999 / 0 / 1]
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	4in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
	Comb			
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]
8-423-012	F:PrtPGS/Dup Comb	Booklet	CTL*	[0 to 99999999 / 0 / 1]
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	4in1 + Magazine	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
	Comb			
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]
8-424-012	P:PrtPGS/Dup Comb	Booklet	CTL*	[0 to 99999999 / 0 / 1]
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	9in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
	Comb			
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]
8-425-009	S:PrtPGS/Dup Comb	8in1	CTL*	[0 to 99999999 / 0 / 1]
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	4in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
	Comb			
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]
8-426-007	L:PrtPGS/Dup Comb	4in1	CTL*	[0 to 99999999 / 0 / 1]
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	4in1 + Booklet	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
	Comb			
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]
8-427-007	O:PrtPGS/Dup Comb	4in1	CTL*	[0 to 99999999 / 0 / 1]
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	Magazine	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
	Comb			
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]
8-431-001	T:PrtPGS/ImgEdt	Cover/Slip Sheet	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-441-004	T:PrtPGS/Ppr Size	B4	CTL*	[0 to 99999999 / 0 / 1]
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]
8-442-010	C:PrtPGS/Ppr Size	Full Bleed	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-444-004	P:PrtPGS/Ppr Size	B4	CTL*	[0 to 99999999 / 0 / 1]
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]
8-445-010	S:PrtPGS/Ppr Size	Full Bleed	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-447-004	O:PrtPGS/Ppr Size	B4	CTL*	[0 to 99999999 / 0 / 1]
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]
8-451-010	PrtPGS/Ppr Tray	Tray 9	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-462-002	C:PrtPGS/Ppr Type	Recycled	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-464-004	P:PrtPGS/Ppr Type	Thick	CTL*	[0 to 99999999 / 0 / 1]
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]
8-481-001	T:PrtPGS/TonSave		CTL*	[0 to 99999999 / 0 / 1]
8-484-001	P:PrtPGS/TonSave		CTL*	[0 to 99999999 / 0 / 1]
8-491-001	T:PrtPGS/Col Mode	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-491-002	T:PrtPGS/Col Mode	Single Color	CTL*	[0 to 99999999 / 0 / 1]
8-491-003	T:PrtPGS/Col	Two Color	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
	Mode			
8-491-004	T:PrtPGS/Col Mode	Full Color	CTL*	[0 to 99999999 / 0 / 1]
8-491-051	T:PrtPGS/Col Mode	B/W(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-491-052	T:PrtPGS/Col Mode	Single Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-491-053	T:PrtPGS/Col Mode	Two Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-491-054	T:PrtPGS/Col Mode	Full Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-492-001	C:PrtPGS/Col Mode	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-492-002	C:PrtPGS/Col Mode	Single Color	CTL*	[0 to 99999999 / 0 / 1]
8-492-003	C:PrtPGS/Col Mode	Two Color	CTL*	[0 to 99999999 / 0 / 1]
8-492-004	C:PrtPGS/Col Mode	Full Color	CTL*	[0 to 99999999 / 0 / 1]
8-492-051	C:PrtPGS/Col Mode	B/W(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-492-052	C:PrtPGS/Col Mode	Single Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-492-053	C:PrtPGS/Col Mode	Two Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-492-054	C:PrtPGS/Col Mode	Full Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-493-001	F:PrtPGS/Col Mode	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-493-002	F:PrtPGS/Col Mode	Single Color	CTL*	[0 to 99999999 / 0 / 1]
8-493-003	F:PrtPGS/Col Mode	Two Color	CTL*	[0 to 99999999 / 0 / 1]
8-493-004	F:PrtPGS/Col Mode	Full Color	CTL*	[0 to 99999999 / 0 / 1]
8-493-051	F:PrtPGS/Col	B/W(Banner)	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
	Mode			
8-493-052	F:PrtPGS/Col Mode	Single Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-493-053	F:PrtPGS/Col Mode	Two Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-493-054	F:PrtPGS/Col Mode	Full Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-496-001	L:PrtPGS/Col Mode	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-496-002	L:PrtPGS/Col Mode	Single Color	CTL*	[0 to 99999999 / 0 / 1]
8-496-003	L:PrtPGS/Col Mode	Two Color	CTL*	[0 to 99999999 / 0 / 1]
8-496-004	L:PrtPGS/Col Mode	Full Color	CTL*	[0 to 99999999 / 0 / 1]
8-496-051	L:PrtPGS/Col Mode	B/W(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-496-052	L:PrtPGS/Col Mode	Single Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-496-053	L:PrtPGS/Col Mode	Two Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-496-054	L:PrtPGS/Col Mode	Full Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-497-001	O:PrtPGS/Col Mode	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-497-002	O:PrtPGS/Col Mode	Single Color	CTL*	[0 to 99999999 / 0 / 1]
8-497-003	O:PrtPGS/Col Mode	Two Color	CTL*	[0 to 99999999 / 0 / 1]
8-497-004	O:PrtPGS/Col Mode	Full Color	CTL*	[0 to 99999999 / 0 / 1]
8-497-051	O:PrtPGS/Col Mode	B/W(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-497-052	O:PrtPGS/Col Mode	Single Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-497-053	O:PrtPGS/Col	Two Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
	Mode			
8-497-054	O:PrtPGS/Col Mode	Full Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-501-001	T:PrtPGS/Col Mode	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-501-002	T:PrtPGS/Col Mode	Mono Color	CTL*	[0 to 99999999 / 0 / 1]
8-501-003	T:PrtPGS/Col Mode	Full Color	CTL*	[0 to 99999999 / 0 / 1]
8-501-004	T:PrtPGS/Col Mode	Single Color	CTL*	[0 to 99999999 / 0 / 1]
8-501-005	T:PrtPGS/Col Mode	Two Color	CTL*	[0 to 99999999 / 0 / 1]
8-501-051	T:PrtPGS/Col Mode	B/W(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-501-052	T:PrtPGS/Col Mode	Full Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-501-053	T:PrtPGS/Col Mode	Single Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-501-054	T:PrtPGS/Col Mode	Two Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-504-001	P:PrtPGS/Col Mode	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-504-002	P:PrtPGS/Col Mode	Mono Color	CTL*	[0 to 99999999 / 0 / 1]
8-504-003	P:PrtPGS/Col Mode	Full Color	CTL*	[0 to 99999999 / 0 / 1]
8-504-004	P:PrtPGS/Col Mode	Single Color	CTL*	[0 to 99999999 / 0 / 1]
8-504-005	P:PrtPGS/Col Mode	Two Color	CTL*	[0 to 99999999 / 0 / 1]
8-504-051	P:PrtPGS/Col Mode	B/W(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-504-052	P:PrtPGS/Col Mode	Full Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-504-053	P:PrtPGS/Col	Single Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
	Mode			
8-504-054	P:PrtPGS/Col Mode	Two Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-507-001	O:PrtPGS/Col Mode	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-507-002	O:PrtPGS/Col Mode	Mono Color	CTL*	[0 to 99999999 / 0 / 1]
8-507-003	O:PrtPGS/Col Mode	Full Color	CTL*	[0 to 99999999 / 0 / 1]
8-507-004	O:PrtPGS/Col Mode	Single Color	CTL*	[0 to 99999999 / 0 / 1]
8-507-005	O:PrtPGS/Col Mode	Two Color	CTL*	[0 to 99999999 / 0 / 1]
8-507-051	O:PrtPGS/Col Mode	B/W(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-507-052	O:PrtPGS/Col Mode	Full Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-507-053	O:PrtPGS/Col Mode	Single Color(Banner)	CTL*	[0 to 99999999 / 0 / 1]
8-507-054	O:PrtPGS/Col Mode	Two Color(Banner)	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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
8-511-016	T:PrtPGS/Emul	XPS	CTL*	[0 to 99999999 / 0 / 1]
8-511-017	T:PrtPGS/Emul	IRIPS PS	CTL*	[0 to 99999999 / 0 / 1]
8-511-018	T:PrtPGS/Emul	IRIPS PDF	CTL*	[0 to 99999999 / 0 / 1]
8-511-019	T:PrtPGS/Emul	PictBridge	CTL*	[0 to 99999999 / 0 / 1]
8-511-020	T:PrtPGS/Emul	MediaPrintTIFF	CTL*	[0 to 99999999 / 0 / 1]
8-511-021	T:PrtPGS/Emul	MediaPrintJPEG	CTL*	[0 to 99999999 / 0 / 1]
8-514-001	P:PrtPGS/Emul	RPCS	CTL*	[0 to 99999999 / 0 / 1]
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]
8-514-017	P:PrtPGS/Emul	IRIPS PS	CTL*	[0 to 99999999 / 0 / 1]
8-514-018	P:PrtPGS/Emul	IRIPS PDF	CTL*	[0 to 99999999 / 0 / 1]
8-514-019	P:PrtPGS/Emul	PictBridge	CTL*	[0 to 99999999 / 0 / 1]
8-514-020	P:PrtPGS/Emul	MediaPrintTIFF	CTL*	[0 to 99999999 / 0 / 1]
8-514-021	P:PrtPGS/Emul	MediaPrintJPEG	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]
8-521-003	T:PrtPGS/FIN	Staple	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-522-005	C:PrtPGS/FIN	Z-Fold	CTL*	[0 to 99999999 / 0 / 1]
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]
8-523-007	F:PrtPGS/FIN	Other	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-524-009	P:PrtPGS/FIN	Three-IN-Fold	CTL*	[0 to 99999999 / 0 / 1]
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]
8-525-011	S:PrtPGS/FIN	Four-Fold	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-526-013	L:PrtPGS/FIN	Perfect-Bind	CTL*	[0 to 99999999 / 0 / 1]
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]
8-561-001	T:A Sheet Of Paper	Total: Over A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
	Paper			
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]
8-566-003	L:A Sheet Of Paper	Duplex: Over A3/DLT	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
	Paper			
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]
8-581-002	T:Counter	Total: Full Color	CTL*	[0 to 99999999 / 0 / 1]
8-581-003	T:Counter	B&W/Single Color	CTL*	[0 to 99999999 / 0 / 1]
8-581-004	T:Counter	Development: CMY	CTL*	[0 to 99999999 / 0 / 1]
8-581-005	T:Counter	Development: K	CTL*	[0 to 99999999 / 0 / 1]
8-581-006	T:Counter	Copy: Color	CTL*	[0 to 99999999 / 0 / 1]
8-581-007	T:Counter	Copy: B/W	CTL*	[0 to 99999999 / 0 / 1]
8-581-008	T:Counter	Print: Color	CTL*	[0 to 99999999 / 0 / 1]
8-581-009	T:Counter	Print: B/W	CTL*	[0 to 99999999 / 0 / 1]
8-581-010	T:Counter	Total: Color	CTL*	[0 to 99999999 / 0 / 1]
8-581-011	T:Counter	Total: B/W	CTL*	[0 to 99999999 / 0 / 1]
8-581-012	T:Counter	Full Color: A3	CTL*	[0 to 99999999 / 0 / 1]
8-581-013	T:Counter	Full Color: B4 JIS or Smaller	CTL*	[0 to 99999999 / 0 / 1]
8-581-014	T:Counter	Full Color Print	CTL*	[0 to 99999999 / 0 / 1]
8-581-015	T:Counter	Mono Color Print	CTL*	[0 to 99999999 / 0 / 1]
8-581-016	T:Counter	Full Color GPC	CTL*	[0 to 99999999 / 0 / 1]
8-581-017	T:Counter	Twin Color Mode Print	CTL*	[0 to 99999999 / 0 / 1]
8-581-018	T:Counter	Full Color Print(Twin)	CTL*	[0 to 99999999 / 0 / 1]
8-581-019	T:Counter	Mono Color Print(Twin)	CTL*	[0 to 99999999 / 0 / 1]
8-581-020	T:Counter	Full Color Total(CV)	CTL*	[0 to 99999999 / 0 / 1]
8-581-021	T:Counter	Mono Color Total(CV)	CTL*	[0 to 99999999 / 0 / 1]
8-581-022	T:Counter	Full Color Print(CV)	CTL*	[0 to 99999999 / 0 / 1]
8-581-028	T:Counter	Development: CMY(A3)	CTL*	[0 to 99999999 / 0 / 1]
8-581-029	T:Counter	Development: K(A3)	CTL*	[0 to 99999999 / 0 / 1]
8-581-030	T:Counter	Total: Color(A3)	CTL*	[0 to 99999999 / 0 / 1]
8-581-031	T:Counter	Total: B/W(A3)	CTL*	[0 to 99999999 / 0 / 1]
8-582-001	C:Counter	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-582-002	C:Counter	Single Color	CTL*	[0 to 99999999 / 0 / 1]
8-582-003	C:Counter	Two Color	CTL*	[0 to 99999999 / 0 / 1]
8-582-004	C:Counter	Full Color	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
8-583-001	F:Counter	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-583-002	F:Counter	Single Color	CTL*	[0 to 99999999 / 0 / 1]
8-584-001	P:Counter	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-584-002	P:Counter	Mono Color	CTL*	[0 to 99999999 / 0 / 1]
8-584-003	P:Counter	Full Color	CTL*	[0 to 99999999 / 0 / 1]
8-584-004	P:Counter	Single Color	CTL*	[0 to 99999999 / 0 / 1]
8-584-005	P:Counter	Two Color	CTL*	[0 to 99999999 / 0 / 1]
8-586-001	L:Counter	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-586-002	L:Counter	Single Color	CTL*	[0 to 99999999 / 0 / 1]
8-586-003	L:Counter	Two Color	CTL*	[0 to 99999999 / 0 / 1]
8-586-004	L:Counter	Full Color	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]
8-591-005	O:Counter	Banner	CTL*	[0 to 99999999 / 0 / 1]
8-601-001	T:Coverage Counter	B/W	CTL*	[0 to 2147483647 / 0 / 1%]
8-601-002	T:Coverage Counter	Color	CTL*	[0 to 2147483647 / 0 / 1%]
8-601-011	T:Coverage Counter	B/W Printing Pages	CTL*	[0 to 99999999 / 0 / 1]
8-601-012	T:Coverage Counter	Color Printing Pages	CTL*	[0 to 99999999 / 0 / 1]
8-601-021	T:Coverage Counter	Coverage Counter 1	CTL*	[0 to 99999999 / 0 / 1]
8-601-022	T:Coverage Counter	Coverage Counter 2	CTL*	[0 to 99999999 / 0 / 1]
8-601-023	T:Coverage Counter	Coverage Counter 3	CTL*	[0 to 99999999 / 0 / 1]
8-601-031	Coverage Counter	Coverage Counter 1 (YMC)	CTL*	[0 to 99999999 / 0 / 1]
8-601-032	Coverage Counter	Coverage Counter 2 (YMC)	CTL*	[0 to 99999999 / 0 / 1]
8-601-033	Coverage Counter	Coverage Counter 3 (YMC)	CTL*	[0 to 99999999 / 0 / 1]
8-602-001	C:Coverage Counter	B/W	CTL*	[0 to 2147483647 / 0 / 1%]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
8-602-002	C:Coverage Counter	Single Color	CTL*	[0 to 2147483647 / 0 / 1%]
8-602-003	C:Coverage Counter	Two Color	CTL*	[0 to 2147483647 / 0 / 1%]
8-602-004	C:Coverage Counter	Full Color	CTL*	[0 to 2147483647 / 0 / 1%]
8-603-001	F:Coverage Counter	B/W	CTL*	[0 to 2147483647 / 0 / 1%]
8-603-002	F:Coverage Counter	Single Color	CTL*	[0 to 2147483647 / 0 / 1%]
8-604-001	P:Coverage Counter	B/W	CTL*	[0 to 2147483647 / 0 / 1%]
8-604-002	P:Coverage Counter	Single Color	CTL*	[0 to 2147483647 / 0 / 1%]
8-604-003	P:Coverage Counter	Two Color	CTL*	[0 to 2147483647 / 0 / 1%]
8-604-004	P:Coverage Counter	Full Color	CTL*	[0 to 2147483647 / 0 / 1%]
8-606-001	L:Coverage Counter	B/W	CTL*	[0 to 2147483647 / 0 / 1%]
8-606-002	L:Coverage Counter	Single Color	CTL*	[0 to 2147483647 / 0 / 1%]
8-606-003	L:Coverage Counter	Two Color	CTL*	[0 to 2147483647 / 0 / 1%]
8-606-004	L:Coverage Counter	Full Color	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]
8-617-003	SDK Apli Counter	SDK-3	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-621-009	Func Use Counter	Function-009	CTL*	[0 to 99999999 / 0 / 1]
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]
8-621-027	Func Use Counter	Function-027	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-621-045	Func Use Counter	Function-045	CTL*	[0 to 99999999 / 0 / 1]
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]
8-621-063	Func Use Counter	Function-063	CTL*	[0 to 99999999 / 0 / 1]
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]
8-631-002	T:FAX TX PGS	Color(Tel)	CTL*	[0 to 99999999 / 0 / 1]
8-631-101	T:FAX TX PGS	B/W(Cloud)	CTL*	[0 to 99999999 / 0 / 1]
8-631-102	T:FAX TX PGS	Color(Cloud)	CTL*	[0 to 99999999 / 0 / 1]
8-633-001	F:FAX TX PGS	B/W(Tel)	CTL*	[0 to 99999999 / 0 / 1]
8-633-002	F:FAX TX PGS	Color(Tel)	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
8-633-101	F:FAX TX PGS	B/W(Cloud)	CTL*	[0 to 99999999 / 0 / 1]
8-633-102	F:FAX TX PGS	Color(Cloud)	CTL*	[0 to 99999999 / 0 / 1]
8-641-001	T:IFAX TX PGS	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-641-002	T:IFAX TX PGS	Color	CTL*	[0 to 99999999 / 0 / 1]
8-643-001	F:IFAX TX PGS	B/W	CTL*	[0 to 99999999 / 0 / 1]
8-643-002	F:IFAX TX PGS	Color	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]
8-675-001	S:Deliv PGS/PC	B/W	CTL*	[0 to 99999999 / 0 / 1]
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]
8-711-004	T:Scan PGS/Comp	Other	CTL*	[0 to 99999999 / 0 / 1]
8-711-005	T:Scan PGS/Comp	PDF/Comp	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-725-002	S:Deliv PGS/WSD/DSM	Color	CTL*	[0 to 99999999 / 0 / 1]
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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-771-002	Dev Counter	K	CTL*	[0 to 99999999 / 0 / 1]
8-771-003	Dev Counter	Y	CTL*	[0 to 99999999 / 0 / 1]
8-771-004	Dev Counter	M	CTL*	[0 to 99999999 / 0 / 1]
8-771-005	Dev Counter	C	CTL*	[0 to 99999999 / 0 / 1]
8-781-001	Toner_Botol_Info.	BK	CTL*	[0 to 99999999 / 0 / 1]
8-781-002	Toner_Botol_Info.	Y	CTL*	[0 to 99999999 / 0 / 1]
8-781-003	Toner_Botol_Info.	M	CTL*	[0 to 99999999 / 0 / 1]
8-781-004	Toner_Botol_Info.	C	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%]
8-801-002	Toner Remain	Y	CTL*	[0 to 100 / 0 / 1%]
8-801-003	Toner Remain	M	CTL*	[0 to 100 / 0 / 1%]
8-801-004	Toner Remain	C	CTL*	[0 to 100 / 0 / 1%]
8-811-001	Eco Counter	Eco Total	CTL*	[0 to 99999999 / 0 / 1]
8-811-002	Eco Counter	Color	CTL*	[0 to 99999999 / 0 / 1]
8-811-003	Eco Counter	Full Color	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]
8-811-006	Eco Counter	Color(%)	CTL*	[0 to 100 / 0 / 1%]
8-811-007	Eco Counter	Full Color(%)	CTL*	[0 to 100 / 0 / 1%]
8-811-008	Eco Counter	Duplex(%)	CTL*	[0 to 100 / 0 / 1%]
8-811-009	Eco Counter	Combine(%)	CTL*	[0 to 100 / 0 / 1%]
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]
8-811-052	Eco Counter	Sync Color	CTL*	[0 to 99999999 / 0 / 1]
8-811-053	Eco Counter	Sync Full Color	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]
8-811-056	Eco Counter	Sync Color(%)	CTL*	[0 to 100 / 0 / 1%]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
8-811-057	Eco Counter	Sync Full Color(%)	CTL*	[0 to 100 / 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]
8-811-102	Eco Counter	Color>Last	CTL*	[0 to 99999999 / 0 / 1]
8-811-103	Eco Counter	Full Color>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]
8-811-106	Eco Counter	Color(%):Last	CTL*	[0 to 100 / 0 / 1%]
8-811-107	Eco Counter	Full Color(%):Last	CTL*	[0 to 100 / 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]
8-811-152	Eco Counter	Sync Color>Last	CTL*	[0 to 99999999 / 0 / 1]
8-811-153	Eco Counter	Sync Full Color>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]
8-811-156	Eco Counter	Sync Color(%):Last	CTL*	[0 to 100 / 0 / 1%]
8-811-157	Eco Counter	Sync Full Color(%):Last	CTL*	[0 to 100 / 0 / 1%]
8-811-158	Eco Counter	Sync Duplex(%):Last	CTL*	[0 to 100 / 0 / 1%]
8-811-159	Eco Counter	Sync Combine(%):Last	CTL*	[0 to 100 / 0 / 1%]
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]
8-851-012	Cvr Cnt:0-10%	0~2%:Y	CTL*	[0 to 99999999 / 0 / 1]
8-851-013	Cvr Cnt:0-10%	0~2%:M	CTL*	[0 to 99999999 / 0 / 1]
8-851-014	Cvr Cnt:0-10%	0~2%:C	CTL*	[0 to 99999999 / 0 / 1]
8-851-021	Cvr Cnt:0-10%	3~4%:BK	CTL*	[0 to 99999999 / 0 / 1]
8-851-022	Cvr Cnt:0-10%	3~4%:Y	CTL*	[0 to 99999999 / 0 / 1]
8-851-023	Cvr Cnt:0-10%	3~4%:M	CTL*	[0 to 99999999 / 0 / 1]
8-851-024	Cvr Cnt:0-10%	3~4%:C	CTL*	[0 to 99999999 / 0 / 1]
8-851-031	Cvr Cnt:0-10%	5~7%:BK	CTL*	[0 to 99999999 / 0 / 1]
8-851-032	Cvr Cnt:0-10%	5~7%:Y	CTL*	[0 to 99999999 / 0 / 1]
8-851-033	Cvr Cnt:0-10%	5~7%:M	CTL*	[0 to 99999999 / 0 / 1]
8-851-034	Cvr Cnt:0-10%	5~7%:C	CTL*	[0 to 99999999 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
8-851-041	Cvr Cnt:0-10%	8~10%:BK	CTL*	[0 to 99999999 / 0 / 1]
8-851-042	Cvr Cnt:0-10%	8~10%:Y	CTL*	[0 to 99999999 / 0 / 1]
8-851-043	Cvr Cnt:0-10%	8~10%:M	CTL*	[0 to 99999999 / 0 / 1]
8-851-044	Cvr Cnt:0-10%	8~10%:C	CTL*	[0 to 99999999 / 0 / 1]
8-861-001	Cvr Cnt:11-20%	BK	CTL*	[0 to 99999999 / 0 / 1]
8-861-002	Cvr Cnt:11-20%	Y	CTL*	[0 to 99999999 / 0 / 1]
8-861-003	Cvr Cnt:11-20%	M	CTL*	[0 to 99999999 / 0 / 1]
8-861-004	Cvr Cnt:11-20%	C	CTL*	[0 to 99999999 / 0 / 1]
8-871-001	Cvr Cnt:21-30%	BK	CTL*	[0 to 99999999 / 0 / 1]
8-871-002	Cvr Cnt:21-30%	Y	CTL*	[0 to 99999999 / 0 / 1]
8-871-003	Cvr Cnt:21-30%	M	CTL*	[0 to 99999999 / 0 / 1]
8-871-004	Cvr Cnt:21-30%	C	CTL*	[0 to 99999999 / 0 / 1]
8-881-001	Cvr Cnt:31%-	BK	CTL*	[0 to 99999999 / 0 / 1]
8-881-002	Cvr Cnt:31%-	Y	CTL*	[0 to 99999999 / 0 / 1]
8-881-003	Cvr Cnt:31%-	M	CTL*	[0 to 99999999 / 0 / 1]
8-881-004	Cvr Cnt:31%-	C	CTL*	[0 to 99999999 / 0 / 1]
8-891-001	Page/Toner Bottle	BK	CTL*	[0 to 99999999 / 0 / 1]
8-891-002	Page/Toner Bottle	Y	CTL*	[0 to 99999999 / 0 / 1]
8-891-003	Page/Toner Bottle	M	CTL*	[0 to 99999999 / 0 / 1]
8-891-004	Page/Toner Bottle	C	CTL*	[0 to 99999999 / 0 / 1]
8-901-001	Page/Toner_Prev1	BK	CTL*	[0 to 99999999 / 0 / 1]
8-901-002	Page/Toner_Prev1	Y	CTL*	[0 to 99999999 / 0 / 1]
8-901-003	Page/Toner_Prev1	M	CTL*	[0 to 99999999 / 0 / 1]
8-901-004	Page/Toner_Prev1	C	CTL*	[0 to 99999999 / 0 / 1]
8-911-001	Page/Toner_Prev2	BK	CTL*	[0 to 99999999 / 0 / 1]
8-911-002	Page/Toner_Prev2	Y	CTL*	[0 to 99999999 / 0 / 1]
8-911-003	Page/Toner_Prev2	M	CTL*	[0 to 99999999 / 0 / 1]
8-911-004	Page/Toner_Prev2	C	CTL*	[0 to 99999999 / 0 / 1]
8-921-001	Cvr Cnt/Total	Coverage(%):BK	CTL*	[0 to 2147483647 / 0 / 1%]
8-921-002	Cvr Cnt/Total	Coverage(%):Y	CTL*	[0 to 2147483647 / 0 / 1%]
8-921-003	Cvr Cnt/Total	Coverage(%):M	CTL*	[0 to 2147483647 / 0 / 1%]
8-921-004	Cvr Cnt/Total	Coverage(%):C	CTL*	[0 to 2147483647 / 0 / 1%]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
8-921-011	Cvr Cnt/Total	Coverage/P:BK	CTL*	[0 to 99999999 / 0 / 1]
8-921-012	Cvr Cnt/Total	Coverage/P:Y	CTL*	[0 to 99999999 / 0 / 1]
8-921-013	Cvr Cnt/Total	Coverage/P:M	CTL*	[0 to 99999999 / 0 / 1]
8-921-014	Cvr Cnt/Total	Coverage/P:C	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]
8-941-005	Machine Status	Off Mode Time	CTL*	[0 to 99999999 / 0 / 1]
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]
8-961-004	Electricity Status	Reading and Printing Time	CTL*	[0 to 99999999 / 0 / 1]
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 Power 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]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
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]
8-971-004	Unit Control	Standby Recovery Count	CTL*	[0 to 99999999 / 0 / 1]
8-971-005	Unit Control	STR Recovery Count	CTL*	[0 to 99999999 / 0 / 1]
8-999-001	Admin. Counter List	Total	CTL*	[0 to 99999999 / 0 / 1]
8-999-002	Admin. Counter List	Copy: Full Color	CTL*	[0 to 99999999 / 0 / 1]
8-999-003	Admin. Counter List	Copy: BW	CTL*	[0 to 99999999 / 0 / 1]
8-999-004	Admin. Counter List	Copy: Single Color	CTL*	[0 to 99999999 / 0 / 1]
8-999-005	Admin. Counter List	Copy: Two Color	CTL*	[0 to 99999999 / 0 / 1]
8-999-006	Admin. Counter List	Printer: Full Color	CTL*	[0 to 99999999 / 0 / 1]
8-999-007	Admin. Counter List	Printer: BW	CTL*	[0 to 99999999 / 0 / 1]
8-999-008	Admin. Counter List	Printer: Single Color	CTL*	[0 to 99999999 / 0 / 1]
8-999-009	Admin. Counter List	Printer: Two Color	CTL*	[0 to 99999999 / 0 / 1]
8-999-010	Admin. Counter List	Fax Print: BW	CTL*	[0 to 99999999 / 0 / 1]
8-999-013	Admin. Counter List	Duplex	CTL*	[0 to 99999999 / 0 / 1]
8-999-022	Admin. Counter List	Copy: Full Color(%)	CTL*	[0 to 2147483647 / 0 / 1]
8-999-023	Admin. Counter List	Copy: BW(%)	CTL*	[0 to 2147483647 / 0 / 1]
8-999-024	Admin. Counter List	Copy: Single Color(%)	CTL*	[0 to 2147483647 / 0 / 1]
8-999-025	Admin. Counter List	Copy: Two Color(%)	CTL*	[0 to 2147483647 / 0 / 1]

SP No.	Large Category	Small Category	ENG or CTL	[Min to Max/Init./Step]
8-999-026	Admin. Counter List	Printer: Full Color(%)	CTL*	[0 to 2147483647 / 0 / 1]
8-999-027	Admin. Counter List	Printer: BW(%)	CTL*	[0 to 2147483647 / 0 / 1]
8-999-028	Admin. Counter List	Printer: Single Color(%)	CTL*	[0 to 2147483647 / 0 / 1]
8-999-029	Admin. Counter List	Printer: Two Color(%)	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]

3.10 PRINTER SP MODE

3.10.1 SP1-XXX (SERVICE MODE)

1001	[Bit Switch]			
1-001-001	Bit Switch 1 Settings		0	1
	bit 0	DFU	-	-
	bit 1	sysName value	Model name (PnP name)	Hostname
	This BitSw can switch the value of the sysName of the standard MIB.			
	bit 2	DFU	-	-
	bit 3	I/O timeout	Enabled	Disabled
	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
	This BitSw enables the SD card save mode setting menu to be displayed. After enabling this BitSw, the Card Save settings will appear under: "User Tools > Machine Features > Printer Features > List/Test print"			
	bit 5	Paper size error margin	±5pt	±10pt
When a PS job is printed on a custom paper size, the job might not print because of a paper size mismatch caused by a calculation error. This BitSw can set the allowable margin of error value. Note: This is available for PS, PDF only.				
bit 6	Color balance switching 1	Standard Color Balance	FX compatibility	
This BitSw can be used to restore the color balance to match that of Fuji-Xerox devices. Note: If both BitSw #2-0, BitSw #2-4 and BitSw #1-6 are configured to "1", the configuration of #2-0 will be given priority and the color balance of 09S and earlier models will be used.				
bit 7	DFU	-	-	

1001	[Bit Switch]			
1-001-002	Bit Switch 2 Settings		0	1
	bit 0	Color balance switching 2	Standard Color Balance	Color balance of 09S and earlier models.

		This BitSw can be used to restore the color balance to match 09S and earlier model devices. Note: If both BitSw #2-0 and BitSw #2-4 are configured to "1", the configuration of #2-0 will be given priority and the color balance of 09S and earlier models will be used.	
bit 1	DFU	-	-
bit 2	Collation type	Shift Collation	Normal Collation
	The type of collation will be applied to a job when the job does not explicitly define a collation type. Note: If #5-0 is enabled, this BitSw has no effect.		
bit 3	PDL auto switching	Enabled	Disabled
	Enables/Disables the MFPs ability to switch the PDL processor when receiving a job which contains both PS and PCL5e/c.		
bit 4	Color balance switching 3	Standard Color Balance	Color balance of 09A and extended 09A models.
	This BitSw can be used to restore the color balance to match 09A and extended 09A model devices. Note: If both BitSw #2-0 and BitSw #2-4 are configured to "1", the configuration of #2-0 will be given priority and the color balance of 09S and earlier models will be used.		
bit 5	DFU	-	-
bit 6	DFU	-	-
bit 7	DFU	-	-

1001	[Bit Switch]		
1-001-003	Bit Switch 3 Settings	0	1
bit 0	DFU	-	-
bit 1	DFU	-	-
bit 2	Legacy HP compatibility	Disabled	Enabled
	Uses the same left margin as older HP models such as HP4000/HP8000. This setting enables the starting position of the graphics in the job to be changed. If this BitSw is enabled, the left margin command of "<ESC>*r0A" will be conducted as "<ESC>*r1A". PCL command are below:		

		- <Esc> *r0A ->Start Graphics at X coordinate of Zero - <Esc> *r1A ->Start Graphics at Current Cursor Note: This is available for PCL5e/c only.		
bit 3	DFU	-	-	
bit 4	DFU	-	-	
bit 5	DFU	-	-	
bit 6	DFU	-	-	
bit 7	DFU	-	-	

1001	[Bit Switch]			
1-001-004	Bit Switch 4 Settings		0	1
	bit 0 to 7	DFU	-	-

1001	[Bit Switch]			
1-001-005	Bit Switch 5 Settings	0	1	
bit 0	Display finishing settings	Hide settings	Display settings	
	If enabled, users will be able to configure the Collate Settings, Staple Settings, and Punch Settings from the operation panel. The available Settings will depend on the device and configured options. After enabling this BitSw, the settings will appear under: "User Tools > Machine Features > Printer Features > System"			
bit 1	Number of copies with paper mismatch	Print Single Copy	Print All Copies	
	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	DFU	-	-	
bit 3	PS trigger for PDL switching	Standard pattern	Pattern1	
	Specifying the auto detection algorithm for PS while switching the print language. If the Pattern1 is selected, "%%" is used as a printer system PS trigger.			
bit	DFU	-	-	

	4			
	bit	DFU	-	-
	5			
	bit	Change imposition specification	Standard specification	Old model specification
	6	<p>This setting enables the specification for imposition such as page alignment and image rotation to be changed to the specification of old models when job orientation and paper size are mixed.</p> <p>The old models are below:</p> <ul style="list-style-type: none"> - PCL: 04A and earlier models - PS/PDF/RPCS: 05S and earlier models - BMLinkS: 05A and earlier models <p>IRIPS PS/PDF:</p> <ul style="list-style-type: none"> - 09A and earlier models: Operation under current model specification is not supported (Operation with older specification is recommended) - 15S and later models: Operation under current model specification is supported. 		
	bit	Paper path for letterhead simplex job	Simplex paper path	Duplex paper path
	7	<p>This setting enables the simplex job to be routed through the duplex unit.</p> <p>Only affects jobs specified as letterhead.</p>		

1001	[Bit Switch]			
1-001-006	Bit Switch 6 Settings		0	1
	bit 0 to 7	DFU	-	-

1001	[Bit Switch]			
1-001-007	Bit Switch 7 Settings		0	1
	bit 0 to 7	DFU	-	-

1001	[Bit Switch]			
1-001-008	Bit Switch 8 Settings		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	BW printing without the PJI color command	Disabled	Enabled

		This setting enables a job to be printed in BW without the PJL color command "DATAMODE". Note: Color jobs will not be printed without the PJL color command "DATAMODE". This is available for PCL, PS only.		
bit 4	DFU		-	-
bit 5	DFU		-	-
bit 6	PJL/PDL color command priority		PJL Priority	PDL Priority
		This setting enables the priority of a PDL color command to be changed when a PJL color command is "@PJL RENDERMODE = GRAYSCALE" in a job. Note: This is available for PCL,RPCS,PS.		
bit 7	DFU		-	-

1001	[Bit Switch]			
1-	Bit Switch 9 Settings		0	1
001- 009	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 autodetection 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 after jam	Not cancelled	Cancelled
		This setting enables it to be specified whether 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) - Printing a large number of jobs continuously (The status of the job are not acquired when jobs exceeding the number guaranteed by the job monitor are continuously printed.)		
	bit 3	DFU	-	-

bit	4	Timing of the PjL Status ReadBack (JOB END) when printing multiple collated copies.	Mode 0	Mode 1
	<p>This BitSw determines the timing of the PjL STATUS JOB END sent when multiple collated copies are being printed.</p> <p>Mode 0: 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.</p> <p>Mode 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.</p>			
	5	UTF-8 mode	Enabled	Disabled
	<p>Enabled (=0): Text composed of UTF-8 characters can be displayed in the operation panel.</p> <p>Disabled (=1): UTF-8 characters cannot be displayed in the operation panel.</p> <p>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 switch is enabled (=0).</p>			
bit	6	Print option configuration (rsh, rcp, ftp)	Enabled	Disable
	<p>This BitSw enables the specification of the configuration of the print option using rcp/rsh/ftp.</p>			
bit	7	DFU	-	-

1001	[Bit Switch]		
1-001-010	Bit Switch A Settings	0	1
	bit 0 to 7	DFU	-

1001	[Bit Switch]		
1-001-011	Bit Switch B Settings	0	1
bit 0	DFU	-	-
bit 1	DFU	-	-
bit 2	DFU	-	-
bit 3	DFU	-	-
bit 4	"Apply Auto Paper Select" to override paper size or paper type of the device	Disabled	Enabled

		<p>If this BitSw is 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 overridden by the job's commands when "Tray Setting Priority" is set to "Driver/Command" or "Machine Setting(s): Any Type".</p> <p>- Apply Auto Paper Select = OFF: Overridden (priority is given to the job's commands)</p> <p>- Apply Auto Paper Select = ON: NOT overridden (priority is given to the device settings)</p>		
bit 5	DFU	-	-	
bit 6	Tray selection when a paper mismatch occurs.	Disabled	Enabled	
	This BitSw enables the inactive auto paper select tray to be unselectable when a paper size/type mismatch occurs.			
bit 7	DFU	-	-	

1001	[Bit Switch]			
1-001-012	Bit Switch C Settings	0	1	
bit 0	DFU	-	-	
bit 1	DFU	-	-	
bit 2	DFU	-	-	
bit 3	Switching paper discharge operation when the limit number of sheets stapled is exceeded	one by one	Upper limit number	
bit 4	DFU	-	-	
bit 5	Change the user ID type displayed on the operation panel	Login User Name	User ID	
	If this BitSw is enabled, the user ID type on the operation panel can change to the user ID behavior exhibited in 14A and earlier models.			
bit 6	AirPrint	Enabled	Disabled	
bit 7	AirPrint PDF	Enabled	Disabled	

1002	[Bit Switch2]			
1-002-001	Bit Switch (2) 1 Settings	0	1	

	bit 0	Paper size mismatch display	Enabled	Disabled
		Display warning screen (40909) of paper size mismatch.		
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	Switch dither	Normal dither	Alternative dither
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
bit 7	DFU	-	-	

1002	[Bit Switch2]				
1-002-002	Bit Switch (2) 2 Settings			0	1
	bit 0 to 7	DFU	-	-	

1002	[Bit Switch2]				
1-002-003	Bit Switch (2) 3 Settings			0	1
	bit 0 to 7	DFU	-	-	

1002	[Bit Switch2]				
1-002-004	Bit Switch (2) 4 Settings			0	1
	bit 0 to 7	DFU	-	-	

1002	[Bit Switch2]				
1-002-005	Bit Switch (2) 5 Settings			0	1
	bit 0	PDF speeding printing operation	Enabled	Disabled	
	bit 1 to 7	DFU			

1002	[Bit Switch2]				
1-002-006	Bit Switch (2) 6 Settings			0	1
	bit 0 to 7	DFU	-	-	

1002	[Bit Switch2]				
1-002-007	Bit Switch (2) 7 Settings			0	1
	bit 0 to 7	DFU	-	-	

1002	[Bit Switch2]				
1-002-008	Bit Switch (2) 8 Settings			0	1
	bit 0 to 7	DFU	-	-	

1002	[Bit Switch2]			
1-002-009	Bit Switch (2) 9 Settings		0	1
	bit 0 to 7	DFU	-	-

1002	[Bit Switch2]			
1-002-010	Bit Switch (2) A Settings		0	1
	bit 0 to 7	DFU	-	-

1002	[Bit Switch2]			
1-002-011	Bit Switch (2) B Settings		0	1
	bit 0 to 7	DFU	-	-

1002	[Bit Switch2]			
1-002-012	Bit Switch (2) C Settings		0	1
	bit 0 to 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]	

1101	[ToneCtlSet]			
	Recalls a set of gamma settings. This can be either a) the factory setting, b) the previous setting, or c) the current setting.			
1-101-001	Factory	CTL	[Execute]	
1-101-002	Previous	CTL		
1-101-003	Current	CTL		
1-101-004	ACC	CTL		

1102	[Resolution Settings]		
	Sets the printing mode (resolution) for the printer gamma adjustment. <ul style="list-style-type: none"> • 0: 1200x1200Photo • 1: 600x600Text • 2: 1200x1200Text • 3: 1200x600Text • 4: 600x600Photo • 5: 1200x600Photo • 6: 600x600Text • 7: 600x600Text 		
1-102-001	Tone Control Mode Selection	CTL	[0 to 7 / 0 / 1]

1103	[PrnColorSheet]		
	[Execute]Prints the test page to check the color balance before and after the gamma adjustment.		
1-103-001	ToneCtlSheet	CTL	[Execute]
1-103-002	ColorChart	CTL	

1104	[ToneCtlValue]		
	Adjusts the printer gamma for the mode selected in the Mode Selection menu.		
1-104-001	Black: Highlight	CTL	[0 to 30 / 15 / 1]
1-104-002	Black: Shadow	CTL	
1-104-003	Black: Middle	CTL	
1-104-004	Black: IDmax	CTL	
1-104-021	Cyan: Highlight	CTL	
1-104-022	Cyan: Shadow	CTL	
1-104-023	Cyan: Middle	CTL	
1-104-024	Cyan: IDmax	CTL	
1-104-041	Magenta: Highlight	CTL	
1-104-042	Magenta: Shadow	CTL	
1-104-043	Magenta: Middle	CTL	
1-104-044	Magenta: IDmax	CTL	
1-104-061	Yellow: Highlight	CTL	
1-104-062	Yellow: Shadow	CTL	
1-104-063	Yellow: Middle	CTL	

1-104-064	Yellow: IDmax	CTL	
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1105	[Save Tone Control Value]		
	Saves the print gamma (adjusted with the Gamma Adj.) as the new Current Setting. Before the machine stores the new "current settingR", it moves the data stored as the "current setting" to the "previous setting" memory-storage location.		
1-105-001	Save Tone Control Value	CTL	[Execute]

1106	[Toner Limit]		
	Adjusts the maximum toner amount for image development.		
1-106-001	Toner Limit Value	CTL*	[100 to 400 / 0 / 1]

1110	[Media Print Device Setting]		
1-110-002	0:Disable 1:Enable	CTL*	[0 or 1 / 1 / -]

1111	[All Job Delete Mode]		
1-111-001	0:excluding New Job 1:including New Job	CTL*	[0 or 1 / 1 / -]

1113	[IBACC Correction Execute]		
	0: Do not calculate IBACC gamma (Make IBACC Gamma Linear) 1: Calculate IBACC gamma		
1-113-001	-	CTL*	[0 or 1 / 1 / 1]

1114	[IBACC]		
1-114-001	-	CTL	[Execute]
	Returns the IBACC gamma correction to the previous value.		
1-114-002	-	CTL	[Execute]
	Restore the IBACC gamma correction value to the factory default value.		

1115	[IBACC Execution Date and Time Display]		
	<p>Displays the execution date and time when one of the following is executed:</p> <ul style="list-style-type: none"> Running IBACC with Procon: Date and time when IBACC succeeded for all resolutions. However, if IBACC fails, the date and time are not recorded. When IBACC is reset from SP: Date and time when IBACC is reset to previous values for all resolutions. When IBACC is returned to factory defaults from SP: Date and time when IBACC is returned to factory defaults for all resolutions. 		

1-115-001	-	CTL*	[- / - / -]
1-115-001	IBACC Data Copy	CTL	[Execute]

3.11 SCANNER SP MODE

3.11.1 SP1-XXX (SYSTEM AND OTHERS)

1001	[Scan Nv Version] Operates automatic initialization to ensure that scanner NV is initialized if necessary. To do this SP, specify the version of scanner NV within 9 characters. "Function name"_"Machine code"_"Serial number" - Function name: Enter "3". - Machine code: Enter the machine code with three characters. - Serial number: Enter the number (default: 001).		
1-001-005	-	CTL*	-

1005	[Erase margin] Creates an erase margin for all edges of the scanned image. If the machine has scanned the edge of the original, create a margin. This SP is activated only when the machine uses TWAIN scanning.		
1-005-001	Range from 0 to 5 mm	CTL*	[0 to 5 / 0 / 1 mm]

1009	[Remote scan disable] Enable or disable remote scan.		
1-009-001	0:Enable 1:Disable	CTL*	[0 or 1 / 0 / -] 0: enable, 1: disable

1010	[Non Display Clear Light PDF] Enable or disable remote scan.		
1-010-001	0:Enable 1:Disable	CTL*	[0 or 1 / 0 / -] 0: Display, 1: No display

1011	[Org count Disp] Selects the original counter display. 0: Displays remaining memory for the original scanning.. 1: Displays original counter.		
1-011-001	0:ON 1:OFF	CTL*	[0 or 1 / 0 / -]

1012	[UserInfo release]		
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	Clear the following settings: Address, Sender, Text / Subject, Filename		
1-012-001	0:NO 1:YES	CTL*	[0 or 1 / 1 / -] 0: No, 1: Yes

1013	[Scan to Media Device Setting] On or off multimedia function		
1-013-001	0:OFF 1:ON	CTL*	[0 or 1 / 1 / -] 0: OFF, 1: ON

1014	[Scan to Folder Pass Input Set]		
1-014-001	0:OFF 1:ON	CTL*	[0 or 1 / 0 / -] 0: OFF, 1: ON

1016	[Scan To Email Sender Address]		
1-016-001	0:OFF 1:ON	CTL*	[0 or 1 / 0 / -] 0: OFF, 1: ON

1041	[Scan:FlairAPI Setting]		
1-041-001	0x00 – 0xff	CTL*	[- / 00000000 / -]

1042	[Email Date Setting]		
1-042-001	Setting Range: 0-3	CTL*	[0 to 3 / 0 / -] 0: Follow language setting 1: MM/DD/YYYY 2: DD/MM/YYYY 3: YYYY/MM/DD

1043	[Result Screen Doc Name Display]		
1-043-001	0:Nondisplay 1:Display	CTL*	[0 or 1 / 0 / -] 0: No Display, 1: display

3.11.2 SP2-XXX, SP3-XXX (SCANNING-IMAGE QUALITY)

2021	[Compression Level (Grayscale)] Selects the compression ratio for grayscale processing mode (JPEG) for the three settings that can be selected at the operation panel.		
2-021-001	Comp 1: 5-95	CTL*	[5 to 95 / 20 / 1]
2-021-002	Comp 2: 5-95	CTL*	[5 to 95 / 40 / 1]
2-021-003	Comp 3: 5-95	CTL*	[5 to 95 / 65 / 1]
2-021-004	Comp 4: 5-95	CTL*	[5 to 95 / 80 / 1]
2-021-005	Comp 5: 5-95	CTL*	[5 to 95 / 95 / 1]

2023	[ClearLightPDF:ACS Setting]		
2-023-001	0:OFF 1:ON	CTL*	[0 or 1 / 1 / 1]

2024	[Compression ratio of ClearLight PDF] Selects the compression ratio for clearlight PDF for the two settings that can be selected at the operation panel.		
2-024-001	Compression Ratio (Normal)	CTL*	[5 to 95 / 25 / 1]
2-024-002	Compression Ratio (High)	CTL*	[5 to 95 / 15 / 1]

2025	[Compression ratio of ClearLight PDF JPEG2000] Selects the compression ratio for clearlight PDF for the two settings that can be selected at the operation panel.		
2-025-001	Compression Ratio (Normal) JPEG2000	CTL*	[5 to 95 / 25 / 1]
2-025-002	Compression Ratio (High) JPEG2000	CTL*	[5 to 95 / 15 / 1]

3066	[HighCompressPDF PrioritySettnng]		
3-066-001	0:Generate PDF 1:Handling Speed	CTL*	[0 or 1 / 1 / 1]

3067	[flate Compression Setting]		
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3-067-001	0:Disable 1:Enable	CTL*	[0 or 1 / 1 / 1]
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3070	[Scan Limit Warning Display Setting]		
3-070-001	0:Not display 1:Display	CTL*	[0 or 1 / 1 / 1]

3071	[Function Use Count]		
3-071-001	WSD	CTL*	[0 to 0xffffffff / 0 / 1]
3-071-002	DSM	CTL*	[0 to 0xffffffff / 0 / 1]
3-071-003	SmallSizeTray	CTL*	[0 to 0xffffffff / 0 / 1]
3-071-004	BlankDetect Ocr	CTL*	[0 to 0xffffffff / 0 / 1]
3-071-005	BlankDetect	CTL*	[0 to 0xffffffff / 0 / 1]
3-071-006	AirPrint/Mopria	CTL*	[0 to 0xffffffff / 0 / 1]
3-071-007	ScanToURL	CTL*	[0 to 0xffffffff / 0 / 1]

3072	[Total Job Count]		
3-072-001	LegacyScan	CTL*	[0 to 0xffffffff / 0 / 1]
3-072-002	SmartScan	CTL*	[0 to 0xffffffff / 0 / 1]
3-072-003	SimpleScan	CTL*	[0 to 0xffffffff / 0 / 1]
3-072-004	MediaScan	CTL*	[0 to 0xffffffff / 0 / 1]
3-072-005	OtherScan	CTL*	[0 to 0xffffffff / 0 / 1]

3.12 INPUT AND OUTPUT CHECK

3.12.1 INPUT CHECK

SP No.	Part Name	0	1
5-803-016	Key Card Set	Set	Not set
5-803-017	(Not available)	-	-
5-803-018	(Not available)	-	-
5-803-030	Fusing Relay Enable	OFF (Low)	ON (High)
5-803-031	Fusing Fuse Sensor	OFF (Low)	ON (High)
5-803-032	Envelope Mode Sensor (S9)	OFF (Low)	ON (High)
5-803-033	Exit Sensor(Hot Line)	OFF (Low)	ON (High)
5-803-034	Stacker Exit Sensor (S52)	OFF (Low)	ON (High)
5-803-035	Eject Home Sensor (S54)	OFF (Low)	ON (High)
5-803-036	Sub Paddle Home Sensor (S51)	OFF (Low)	ON (High)
5-803-037	Set Clamp Home Sensor (S55)	OFF (Low)	ON (High)
5-803-038	Right Jogger Fence Home Sensor (S58)	OFF (Low)	ON (High)
5-803-039	Left Jogger Fence Home Sensor (S59)	OFF (Low)	ON (High)
5-803-040	Self Priming Sensor (S61)	OFF (Low)	ON (High)
5-803-041	Exit Sensor(Hot Line)	OFF (Low)	ON (High)
5-803-042	Side Interlock Switch (SW2)	OFF (Low)	ON (High)
5-803-043	Rear Interlock Switch (SW1)	OFF (Low)	ON (High)
5-803-044	Toner Cover Sensor (S8)	OFF (Low)	ON (High)
5-803-045	Main Fan (FAN1)	OFF (Low)	ON (High)
5-803-046	Sub Fan (FAN2)	OFF (Low)	ON (High)
5-803-047	Rear Fan (FAN3)	OFF (Low)	ON (High)
5-803-048	Bypass Paper End Sensor (S6)	OFF (Low)	ON (High)
5-803-049	Paper End Sensor (S2)	OFF (Low)	ON (High)
5-803-050	Registration Sensor (S1)	OFF (Low)	ON (High)
5-803-051	Exit Sensor (S5)	OFF (Low)	ON (High)
5-803-052	Full Stack Sensor (S4)	OFF (Low)	ON (High)
5-803-053	Paper Size Switch (SW3)	OFF (Low)	ON (High)
5-803-054		OFF (Low)	ON (High)
5-803-055		OFF (Low)	ON (High)
5-803-056	PFU Paper Size Switch (SW30) for Tray 2	OFF (Low)	ON (High)
5-803-057		OFF (Low)	ON (High)
5-803-058		OFF (Low)	ON (High)
5-803-059	PFU Paper End Sensor (S30) or LCT Paper End	OFF (Low)	ON (High)

SP No.	Part Name	0	1
	Sensor (S40) for Tray 2		
5-803-060	PFU Transport Sensor (S31) or LCT Transport Sensor (S41) for Tray 2	OFF (Low)	ON (High)
5-803-061	PFU Paper Size Switch (SW30) for Tray 3	OFF (Low)	ON (High)
5-803-062		OFF (Low)	ON (High)
5-803-063		OFF (Low)	ON (High)
5-803-064	PFU Paper End Sensor (S30) or LCT Paper End Sensor (S40) for Tray 3	OFF (Low)	ON (High)
5-803-065	PFU Transport Sensor (S31) or LCT Transport Sensor (S41) for Tray 3	OFF (Low)	ON (High)
5-803-066	PFU Paper Size Switch (SW30) for Tray 4	OFF (Low)	ON (High)
5-803-067		OFF (Low)	ON (High)
5-803-068		OFF (Low)	ON (High)
5-803-069	PFU Paper End Sensor (S30) for Tray 4	OFF (Low)	ON (High)
5-803-070	PFU Transport Sensor (S31) for Tray 4	OFF (Low)	ON (High)
5-803-071	PFU Paper Size Switch (SW30) for Tray 5	OFF (Low)	ON (High)
5-803-072		OFF (Low)	ON (High)
5-803-073		OFF (Low)	ON (High)
5-803-074	PFU Paper End Sensor (S30) for Tray 5	OFF (Low)	ON (High)
5-803-075	PFU Transport Sensor (S31) for Tray 5	OFF (Low)	ON (High)
5-803-076	Tray Open Sensor (S43) for Tray 2	OFF (Low)	ON (High)
5-803-077	Lift Up Sensor (S42) for Tray 2	OFF (Low)	ON (High)
5-803-078	Tray Open Sensor (S43) for Tray 3	OFF (Low)	ON (High)
5-803-079	Lift Up Sensor (S42) for Tray 3	OFF (Low)	ON (High)
5-803-080	Main Motor (M2) Alarm	OFF (Low)	ON (High)
5-803-081	Sub Motor (M3) Alarm	OFF (Low)	ON (High)
5-803-082	PFU Feed Motor (M30) or LCT Feed Motor (M40) Alarm for Tray 2	OFF (Low)	ON (High)
5-803-083	PFU Feed Motor (M30) or LCT Feed Motor (M40) Alarm for Tray 3	OFF (Low)	ON (High)
5-803-084	PFU Feed Motor (M30) Alarm for Tray 4	OFF (Low)	ON (High)
5-803-085	PFU Feed Motor (M30) Alarm for Tray 5	OFF (Low)	ON (High)
5-803-086	Paper Feed/K Development Motor (M1) Alarm	OFF (Low)	ON (High)
5-803-087	Color Development Motor (M4) Alarm	OFF (Low)	ON (High)
5-803-088	(Not applicable)	-	-
5-803-089	K Mode Sensor (S3)	OFF (Low)	ON (High)
5-803-090	Toner Full Sensor (S7)	OFF (Low)	ON (High)

INPUT and OUTPUT Check

SP No.	Part Name	0	1
5-803-091	(Not applicable)	-	-
5-803-200	Scanner Home Position Sensor (S13)	ON	OFF
5-803-201	Platen Angle Sensor 1/2 (S14, S15)	Open	Closed
6-011-009	SPDF Document Sensor (S17)	No paper	Paper present
6-011-010	SPDF Feed Sensor (S19)	No paper	Paper present
6-011-011	SPDF Exit Sensor (S21)	No paper	Paper present
6-011-013	SPDF Registration Sensor (S20)	No paper	Paper present
6-011-015	SPDF Cover Sensor (S18)	Open	Closed
6-011-016	SPDF Feeder Cover Interlock	Lift up	Lift down
6-011-017	Document Tray Set Guide Sensor 1 (S22)	Intercepted	Not intercepted
6-011-018	Document Tray Set Guide Sensor 2 (S23)	Intercepted	Not intercepted
6-011-019	SPDF APS Sensor (S24)	No paper	Paper present
6-011-020	Scan Start	Start signal OFF	Start signal ON
6-190-001	Low Staple Sensor (S62)	OFF (Low)	ON (High)
6-190-002	Staple Home Sensor (S60)	OFF (Low)	ON (High)
6-190-003	Tray Paper End/Full Sensor (S50)	OFF (Low)	ON (High)
6-190-004	Stacker Height Sensor 1 (S56)	OFF (Low)	ON (High)
6-190-005	Stacker Height Sensor 2 (S57)	OFF (Low)	ON (High)
6-190-006	Rear Cover Interlock Sensor (S53)	OFF (Low)	ON (High)
6-190-007	Staple Cover Interlock Switch (SW50)	OFF (Low)	ON (High)
6-190-008	Finisher Detect	OFF (Low)	ON (High)

3.12.2 OUTPUT CHECK

SP No.	Part Name	Remark
5-804-030	Fusing Relay	
5-804-031	Fusing Fuse Cut	Auto OFF
5-804-032	Fusing Envelope Motor (M5)	
5-804-033	Fusing Common Mode	It is automatically turned OFF by sequence operation.
5-804-034	Fusing Envelope Mode	It is automatically turned OFF by sequence operation.
5-804-035	Fusing Retract Mode	It is automatically turned OFF by sequence operation.
5-804-036	Finisher Transport Motor (M52) (Forward/Low Speed)	Only when Finisher is installed
5-804-037	Finisher Transport Motor (M52) (Forward/Middle Speed)	Only when Finisher is installed
5-804-038	Finisher Transport Motor (M52) (Forward/High Speed)	Only when Finisher is installed
5-804-039	Junction Gate Solenoid (SOL50) (Pull)	Only when Finisher is installed
5-804-040	Junction Gate Solenoid (SOL50) (Push)	Only when Finisher is installed
5-804-041	Eject Belt Motor (M51) (Forward/Eject)	Only when Finisher is installed
5-804-042	Eject Belt Motor (M51) (Rel/Sub Paddle Speed)	Only when Finisher is installed
5-804-043	Right Jogger Motor (M53) (Front/Low Speed)	Only when Finisher is installed
5-804-044	Right Jogger Motor (M53) (Front/Middle Speed)	Only when Finisher is installed
5-804-045	Right Jogger Motor (M53) (Front/High Speed)	Only when Finisher is installed
5-804-046	Right Jogger Motor (M53) (Rear/Low Speed)	Only when Finisher is installed
5-804-047	Right Jogger Motor (M53) (Rear/Middle Speed)	Only when Finisher is installed
5-804-048	Right Jogger Motor (M53) (Rear/High Speed)	Only when Finisher is installed
5-804-049	Left Jogger Motor (M54)	Only when Finisher is installed

SP No.	Part Name	Remark
	(Front/Low Speed)	
5-804-050	Left Jogger Motor (M54) (Front/Middle Speed)	Only when Finisher is installed
5-804-051	Left Jogger Motor (M54) (Front/High Speed)	Only when Finisher is installed
5-804-052	Left Jogger Motor (M54) (Rear/Low Speed)	Only when Finisher is installed
5-804-053	Left Jogger Motor (M54) (Rear/Middle Speed)	Only when Finisher is installed
5-804-054	Left Jogger Motor (M54) (Rear/High Speed)	Only when Finisher is installed
5-804-055	Transport Motor (Forward/Low Speed)	Not available
5-804-056	Transport Motor (Forward/High Speed)	Not available
5-804-057	Transport Gate Solenoid (Pull)	Not available
5-804-058	Transport Gate Solenoid (Push)	Not available
5-804-059	Low Voltage Power Supply 24V	
5-804-060	Main Fan (FAN1) (Normal)	
5-804-061	Main Fan (FAN1) (Half)	
5-804-062	Sub Fan (FAN2) (Normal)	
5-804-063	Sub Fan (FAN2) (Half)	
5-804-064	HVPS_Clock	
5-804-065	DBAC_Clock	
5-804-066	TR_Clock	
5-804-067	LED Head (Solid)	
5-804-068	LED Head (Half)	
5-804-069	LED Head (Thyristor)	
5-804-070	Bypass Feed Solenoid (SOL2)	• Auto OFF
5-804-071	Paper Feed Clutch (CL3)	• Paper Feed/K Development Motor (M1) must be turned ON in advance. 5-804-115 (Normal) 5-804-116 (Slow Speed 1) 5-804-117 (Slow Speed 2) 5-804-118 (Slow Speed 3)
5-804-072	Bypass Feed Clutch (CL6)	• Paper Feed/K Development Motor (M1) must be turned ON in advance.
5-804-073	Registration Clutch (CL1)	

SP No.	Part Name	Remark
		5-804-115 (Normal) 5-804-116 (Slow Speed 1) 5-804-117 (Slow Speed 2) 5-804-118 (Slow Speed 3)
5-804-074	Exit Clutch (CL5)	<ul style="list-style-type: none"> Main Motor (M1) must be turned ON in advance. 5-804-107 (Normal) 5-804-108 (Slow Speed 1) 5-804-109 (Slow Speed 2) 5-804-110 (Slow Speed 3)
5-804-075	Invert Clutch (CL4)	
5-804-076	Duplex Clutch (CL2)	<ul style="list-style-type: none"> Paper Feed/K Development Motor (M1) must be turned ON in advance. 5-804-115 (Normal) 5-804-116 (Slow Speed 1) 5-804-117 (Slow Speed 2) 5-804-118 (Slow Speed 3)
5-804-077	Tray1 LED	Not available
5-804-078	PFU/LCT Feed Motor (M30/M40) for Tray 2 (Normal)	Only when optional bank/LCT is installed
5-804-079	PFU/LCT Feed Motor (M30/M40) for Tray 2 (Slow Speed 1)	
5-804-080	PFU/LCT Feed Motor (M30/M40) for Tray 2 (Slow Speed 2)	
5-804-081	PFU/LCT Feed Motor (M30/M40) for Tray 2 (Slow Speed 3)	
5-804-082	PFU/LCT Feed Clutch (CL30/CL40) for Tray 2	
5-804-083	PFU/LCT Transport Clutch (CL31/CL41) for Tray 2	<ul style="list-style-type: none"> Only when optional bank/LCT is installed Feed Motor for Tray 2 must be turned ON in advance. 5-804-078 (Normal) 5-804-079 (Slow Speed 1) 5-804-080 (Slow Speed 2) 5-804-081 (Slow Speed 3)
5-804-084	Option Feeder LED	Not available
5-804-085	PFU/LCT Feed Motor (M30/M40) for Tray 3 (Normal)	Only when optional bank is installed
5-804-086	PFU/LCT Feed Motor (M30/M40) for Tray 3 (Slow Speed 1)	

SP No.	Part Name	Remark
5-804-087	PFU/LCT Feed Motor (M30/M40) for Tray 3 (Slow Speed 2)	
5-804-088	PFU/LCT Feed Motor (M30/M40) for Tray 3 (Slow Speed 3)	
5-804-089	PFU/LCT Feed Clutch (CL30/CL40) for Tray 3	<ul style="list-style-type: none"> • Only when optional bank is installed • Feed Motor for Tray 3 must be turned ON in advance. 5-804-085 (Normal) 5-804-086 (Slow Speed 1) 5-804-087 (Slow Speed 2) 5-804-088 (Slow Speed 3)
5-804-090	PFU/LCT Transport Clutch (CL31/CL41) for Tray 3	
5-804-091	Option Feeder LED	Not available
5-804-092	PFU Feed Motor (M30) for Tray 4 (Normal)	Only when optional bank is installed
5-804-093	PFU Feed Motor (M30) for Tray 4 (Slow Speed 1)	
5-804-094	PFU Feed Motor (M30) for Tray 4 (Slow Speed 2)	
5-804-095	PFU Feed Motor (M30) for Tray 4 (Slow Speed 3)	
5-804-096	PFU Feed Clutch (CL30) for Tray 4	<ul style="list-style-type: none"> • Only when optional bank is installed • Feed Motor for Tray 4 must be turned ON in advance. 5-804-092 (Normal) 5-804-093 (Slow Speed 1) 5-804-094 (Slow Speed 2) 5-804-095 (Slow Speed 3)
5-804-097	PFU Transport Clutch (CL31) for Tray 4	
5-804-098	Option Feeder LED	Not available
5-804-099	PFU Feed Motor (M30) for Tray 5 (Normal)	Only when optional bank is installed
5-804-100	PFU Feed Motor (M30) for Tray 5 (Slow Speed 1)	
5-804-101	PFU Feed Motor (M30) for Tray 5 (Slow Speed 2)	
5-804-102	PFU Feed Motor (M30) for Tray 5 (Slow Speed 3)	
5-804-103	PFU Feed Clutch (CL30) for Tray	

SP No.	Part Name	Remark
	5	<ul style="list-style-type: none"> Feed Motor for Tray 5 must be turned ON in advance. 5-804-099 (Normal) 5-804-100 (Slow Speed 1) 5-804-101 (Slow Speed 2) 5-804-102 (Slow Speed 3)
5-804-104	PFU Transport Clutch (CL31) for Tray 5	
5-804-105	Option Feeder LED	Not available
5-804-106	Exit Gate Solenoid (SOL1)	<ul style="list-style-type: none"> Paper Feed /K Development Motor (M1) must be turned ON in advance. 5-804-115 (Normal) 5-804-116 (Slow Speed 1) 5-804-117 (Slow Speed 2) 5-804-118 (Slow Speed 3)
5-804-107	Main Motor (M2) (Normal)	
5-804-108	Main Motor (M2) (Slow Speed 1)	
5-804-109	Main Motor (M2) (Slow Speed 2)	
5-804-110	Main Motor (M2) (Slow Speed 3)	
5-804-111	Sub Motor (M3) (Normal)	
5-804-112	Sub Motor (M3) (Slow Speed 1)	
5-804-113	Sub Motor (M3) (Slow Speed 2)	
5-804-114	Sub Motor (M3) (Slow Speed 3)	
5-804-115	Paper Feed/K Development Motor (M1) (Normal)	
5-804-116	Paper Feed/K Development Motor (M1) (Slow Speed 1)	
5-804-117	Paper Feed/K Development Motor (M1) (Slow Speed 2)	
5-804-118	Paper Feed/K Development Motor (M1) (Slow Speed 3)	
5-804-119	Color Development Motor (M4) (Normal)	
5-804-120	Color Development Motor (M4) (Slow Speed 1)	
5-804-121	Color Development Motor (M4) (Slow Speed 2)	
5-804-122	Color Development Motor (M4) (Slow Speed 3)	

SP No.	Part Name	Remark
5-804-123	Main Motor (M2) (Slow Speed 3 Counter)	
5-804-124	Lift Motor (M41) for Tray 2	<ul style="list-style-type: none"> Only when LCT is installed It is automatically turned OFF by sequence operation.
5-804-125	Lift Motor (M41) for Tray 3	
5-804-126	Erase Lamp (L)	
5-804-127	Erase Lamp (YMC)	
5-804-128	Toner Supply Motor (Y) (M8) (Normal)	
5-804-129	Toner Supply Motor (Y) (M8) (Half)	
5-804-130	Toner Supply Motor (M) (M6) (Normal)	
5-804-131	Toner Supply Motor (M) (M6) (Half)	
5-804-132	Toner Supply Motor (C) (M9) (Normal)	
5-804-133	Toner Supply Motor (C) (M9) (Half)	
5-804-134	Toner Supply Motor (K) (M7) (Normal)	
5-804-135	Toner Supply Motor (K) (M7) (Half)	
5-804-136	Deve/IOT Retract Solenoid	
5-804-137	K Belt Retract Clutch	<ul style="list-style-type: none"> It is automatically turned OFF by sequence operation. Main Motor (M2) must be turned ON in advance. 5-804-107 (Normal) 5-804-108 (Slow Speed 1) 5-804-109 (Slow Speed 2) 5-804-110 (Slow Speed 3)
5-804-138	Belt Color Mode	It is automatically turned OFF by sequence operation.
5-804-139	Belt Monochrome Mode	It is automatically turned OFF by sequence operation.
5-804-202	Scanner Lamp: Color	
5-804-203	Scanner Motor (M10)	
6-012-001	SPDF Feed Clutch (CL8)	
6-012-002	SPDF Transport Clutch (CL9)	

SP No.	Part Name	Remark
6-012-003	Document Set LED	
6-012-004	Doc Ready	
6-012-005	Image Area	
6-012-006	CIS Sync	
6-012-007	SPDF Motor (M11) (CW) 450.0mm/sec	
6-012-008	SPDF Motor (M11) (CW) 350.0mm/sec	
6-012-009	SPDF Motor (M11) (CW) 233.3mm/sec	
6-012-010	SPDF Motor (M11) (CCW) 75.0mm/s	
6-191-001	Stapler Motor (M55) (Forward)	Only when Finisher is installed
6-191-002	Stapler Motor (M55) (Reverse)	Only when Finisher is installed
6-191-003	Stacker Motor (M50) (Lift Up/Low Speed)	Only when Finisher is installed
6-191-004	Stacker Motor (M50) (Lift Down/Prifile2)	Only when Finisher is installed
6-191-005	Finisher Gate	<ul style="list-style-type: none"> • Only when Finisher is installed • Paper Feed/K Development Motor (M1) must be turned ON in advance. 5-804-115 (Normal) 5-804-116 (Slow Speed 1) 5-804-117 (Slow Speed 2) 5-804-118 (Slow Speed 3)

DEVICE SOFTWARE CONFIGURATION

4. DEVICE SOFTWARE CONFIGURATION

4.1 PRINTING FEATURES

4.1.1 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:**

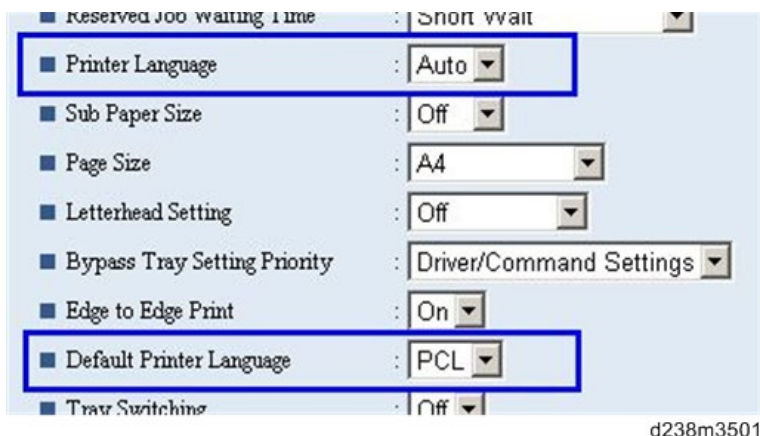
It can detect PCL5 triggers in PS data. If a PCL trigger is detected, the PS interpreter will abort processing and return the unprocessed part of the job back to the printer system. The entire page (regardless of the number of bytes) is searched for triggers.

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".

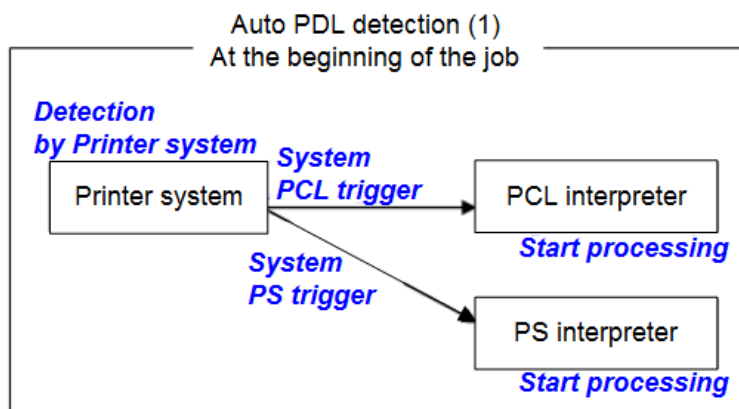
The Printer Language setting and Default Printer Language setting in WIM:



PDL Selection and Switching

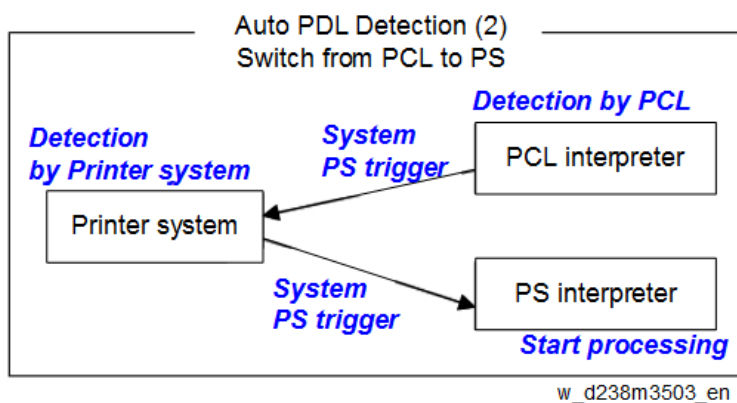
3 types of PDL selection/switching are performed:

1. PDL selection (PCL5 or PS (including PDF)) at the beginning of the job: performed by the printer system

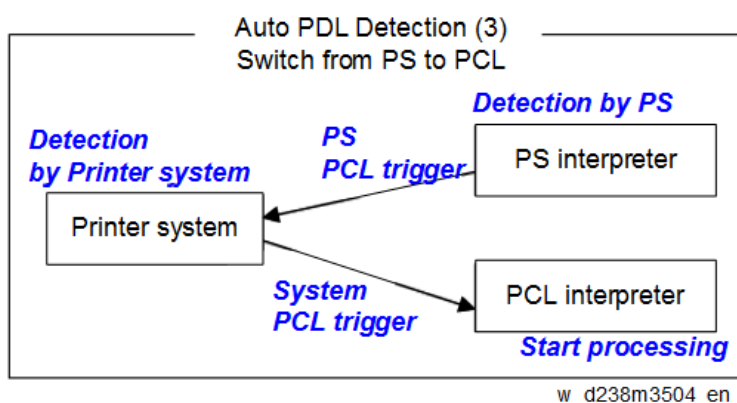


w_d238m3502_en

- PDL switching from PCL5 to PS: performed by the PCL interpreter and the printer system



- 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.

4.1.2 PRINT IMAGES ROTATION

Printer Bit Switch Description

Bit Switch 5-6

This changes 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:

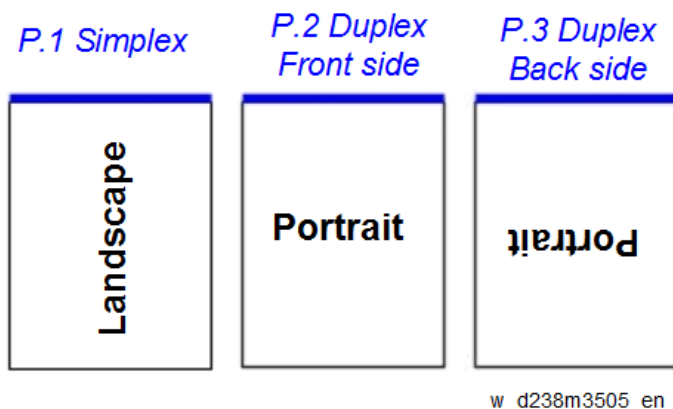
A uniform binding edge (short or long edge) will only be applied if the job is stapled, punched, or Z-folded. Otherwise, the bound edge might differ from page to page.

Example:

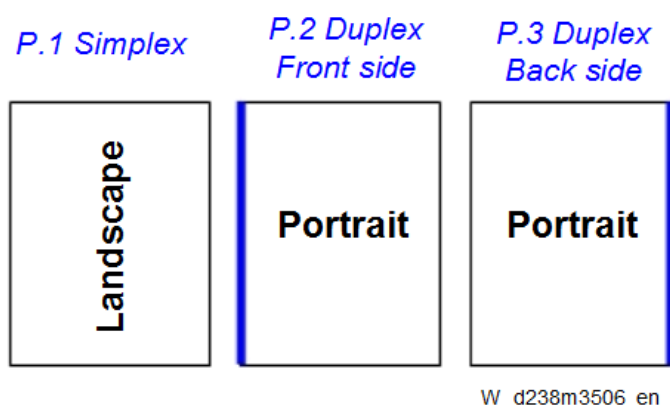
A 3-page job. Page 1 has the PCL simplex command. Page 2 and 3 have the PCL duplex long-edge bind commands.

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.

4.1.3 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

@PJM USTATUS JOB

START

NAME="TEST_page1-3"

@PJM USTATUS PAGE

1

@PJM USTATUS PAGE

2

@PJM USTATUS PAGE

3

@PJM USTATUS JOB

END

NAME="TEST_page1-3"

PAGES=3

<comment> The page count of the first copy is returned.</comment>

@PJM USTATUS PAGE

1

@PJM USTATUS PAGE

2

@PJM USTATUS PAGE

3

@PJM USTATUS PAGE

4

@PJM USTATUS PAGE

5

@PJM USTATUS PAGE

6

<comment> The page count of the remaining two copies is returned.</comment>

9-4 = 1

@PJM USTATUS JOB

START

NAME="Microsoft Word - TEST_page1-3"

@PJM USTATUS PAGE

1

@PJM USTATUS PAGE

2

@PJM USTATUS PAGE

3

@PJM USTATUS PAGE

4

@PJM USTATUS PAGE

5

@PJM USTATUS PAGE

6@PJM USTATUS PAGE

7

@PJM USTATUS PAGE

8

@PJM USTATUS PAGE

9

@PJM USTATUS JOB

END

NAME="Microsoft Word - TEST_page1-3"

PAGES=9

<comment> The page count of all three copies is returned.</comment>

4.2 SCANNER FEATURES

4.2.1 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 SMTP email address will appear in the email's "From" field. The email address of the user who sent the email or the administrator 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 logs 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
2. The mail header "From:" field = use
3. The SMTP username = device

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.

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].

4.2.2 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.

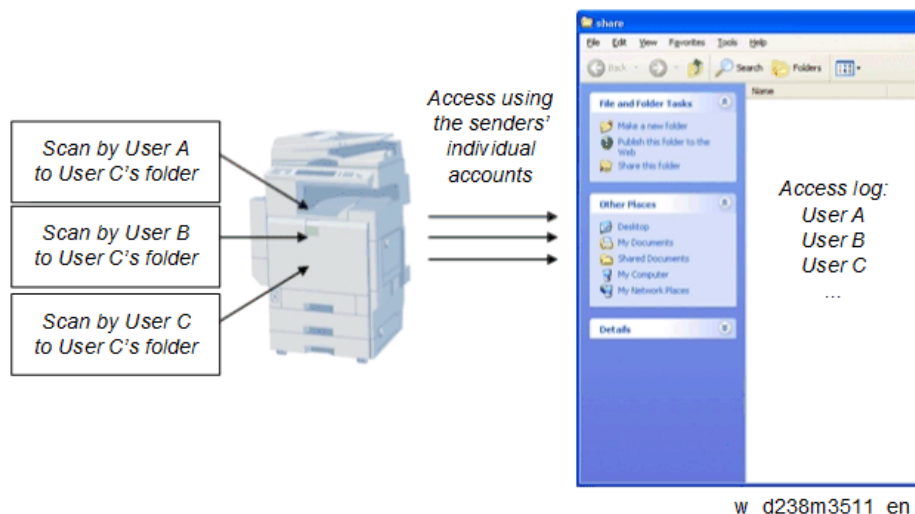
Cases:

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)

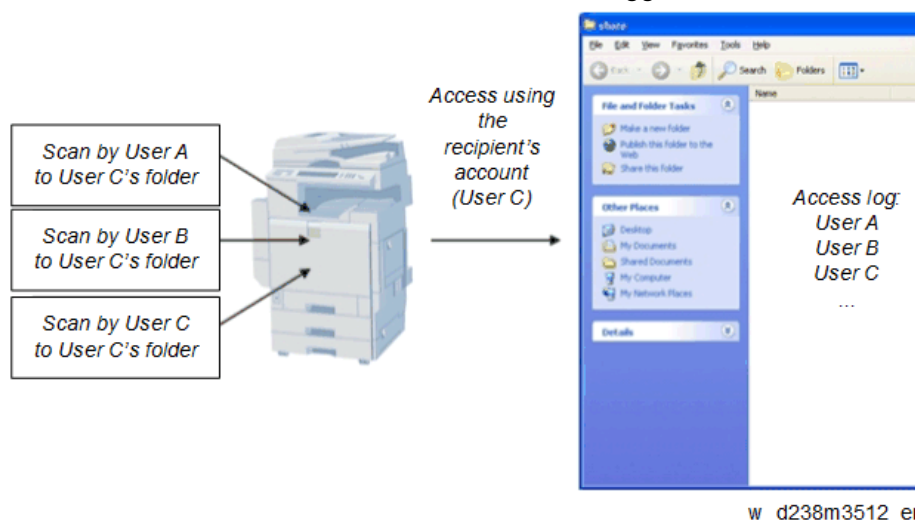
* The "user's account" will be either the one entered during scanning (see the Manual Entry screen capture) or if User Auth. is enabled, the account configured in the user's Folder Authentication setting will be used.

The destination'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.



4.2.3 DISPLAY SETTINGS OF RECENTLY USED ACAN 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

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.

4.3 SECURITY FEATURES

4.3.1 HOW TO RESTRICT ACCESS TO THE WIM JOB MENU

1. Enter 'Printer' SP mode.
2. Set SP5-888-001
0: (default): "Job" menu is enabled.
1: "Job" menu is disabled.

Note

- This setting takes effect only if user authentication (other than User Code auth.) is disabled.



4.3.2 USER AUTHENTICATION FOR SPECIFIC MFP APPLICATIONS

The SP5-420 settings enable/disable User Authentication for specific MFP applications.

SP 5-420 User Authentication Value (Default: 0)

SP 5-420	User Authentication	Value (Default: 0)	
SP5-420-001	Copy	0 (ON)	1 (OFF)
SP5-420-011	Document Server		
SP5-420-021	Fax		
SP5-420-031	Scanner		
SP5-420-041	Printer		

1. Enable User Authentication for the device as a whole:
User Tools > System Settings > Administrator Tools > User Authentication Management
2. Use the SP5-420 settings to specify the applications to which User authentication is to apply.

D0CS/D0CT FAX SERVICE MANUAL






Ver. 1.0

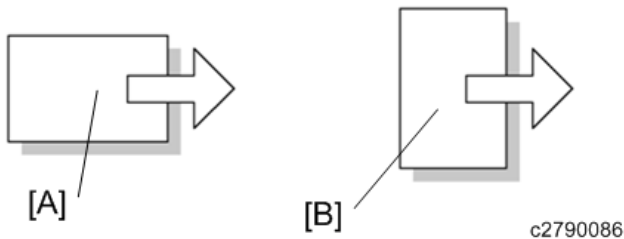
**Latest Release: June, 2020
Initial Release: June, 2020
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Rev. 02/02/2022

SYMBOLS AND 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)

FAX (D0CS/D0CT)

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REPLACEMENT

1. REPLACEMENT

1.1 FCU

Refer to "Field Service Manual > Replacement and Adjustment > Electrical > FCU".

SERVICE TABLES

2. SERVICE TABLES

2.1 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 SPDF 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.

2.2 SERVICE PROGRAM TABLES

2.2.1 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 functions. "Bit Switches – 1" : "System Switches"
102	I-fax Switch	
	001 – 016	00 – 0F Change the bit switches for internet fax settings for the fax functions. "Bit Switches – 2" : "I-Fax Switches"
103	Printer Switch	
	001 – 016	00 – 0F Change the bit switches for printer settings for the fax functions. "Bit Switches – 2" : "Printer Switches"
104	Communication Switch	
	001 – 032	00 – 1F Change the bit switches for communication settings for the fax functions. "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. "Bit Switches – 4" : "G3 Switches"

2.2.2 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"
103	G3-1 NCU Parameters	
	001 – 023	CC, 01 – 22 NCU parameter settings for the standard G3 board. "NCU Parameters"

2.2.3 SP3-XXX (MACHINE SET)

3	Mode No.	Function
102	Serial Number	
	001	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
201	FAX SW		
	001 – 032	00 – 1F	-
301	Fax:FlairAPI Setting		
	001	00 – FF	Sets FAX Flair API Function.
401	Fax Inspection Setting		
	001	00 – FF	Sets FAX Inspection.

2.2.4 SP4-XXX (ROM VERSIONS)

4	Mode No.	Function
102	001	Error Codes
		Displays the latest 64 fax error codes.

2.2.5 SP5-XXX (RAM CLEAR)

5	Mode No.	Function
101	Initialize SRAM (except Secure)	
	001	Initializes the bit switches and user parameters, user data in the SRAM, files in the SAF memory, and clock.
102	Erase All Files	
	001	Erases all files stored in the SAF memory.
103	Reset Bit Switches (except Secure)	
	001	Resets the bit switches and user parameters.
104	Factory Setting	
	001	Resets the bit switches and user parameters, user data in the SRAM and files in the SAF memory.
105	Reset All Bit Switches	
	001	Resets all the current bit switch settings.
106	Reset Security Bit Switches	
	001	Resets only the security bit switches. If you select automatic output/display for the user parameter switches, the security settings are initialized.

2.2.6 SP6-XXX (REPORTS)

6	Mode No.	Function
101	System Parameter List	
	001	- Touch the "ON" button to print the system parameter list.
102	Service Monitor Report	
	001	- Touch the "ON" button to print the service monitor report.
103	G3 Protocol Dump List	
	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.
105	All Files print out	
	001	- Prints out all the user files in the SAF memory, including confidential messages. <div style="border: 1px solid blue; border-radius: 10px; padding: 2px; display: inline-block;"> ↓ Note </div> <ul style="list-style-type: none"> 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
	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

2.2.7 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

2.3 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.

2.3.1 SYSTEM SWITCHES

System Switch 00 (SP No. 1-101-001)		
No	Function	Comments
0-1	Not used	Do not change these settings.
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.
	<p>Example:</p> <p>0000 32V34 288/264 L0100 03 04 (1) (2)(3) (4) (5) (6) (7) (8)</p> <p>(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.</p> <p>Note</p> <ul style="list-style-type: none"> 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. 	
3-4	Not used	Do not change these settings.
5	G3 communication parameter display 0: Disabled	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.

	1: Enabled	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.

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	Not used	Do not change these settings.

System Switch 03 - Not used (Do not change the factory settings.)

System Switch 04 - Not used (Do not change the factory 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	Not used	Do not change the setting.
1	Print timing of communication reports on the Journal when no	0: The Journal is printed only when image data is sent. 1: The Journal is printed when any data is sent.

	image data was exchanged. 0: After DCS/NSS communication (default), 1: After polling	
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
0-3	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-	Not used	Do not change these settings

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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
0-2	Not used	Do not change these settings.
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
	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-	TTI printing	TTI: 08 to 92 (BCD) mm


7	position in the main scan direction	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.
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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)				
No	Function		Comments	
0	Not used		Do not change the settings.	
1	Going into the Energy Saver mode automatically 0: Enabled 1: Disabled		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.	
2-3	Not used		Do not change these settings.	
4-5	Interval for preventing the machine from entering Energy Saver mode if there is a pending transmission file.		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.	
	Bit 5	Bit 4		Setting
	0	0		1 min
	0	1		30 min
	1	0		1 hour
	1	1	24 hours	
6-7	Not used		Do not change	

System Switch 16 - Not used (do not change these settings)
System Switch 17 - Not used (do not change these settings)
System Switch 18 - Not used (do not change these settings)
System Switch 19 - Not used (do not change these settings)
System Switch 1A - Not used (do not change these settings)
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	CSI code display 0: Enable 1: Disable	0: CSI code is displayed on the top line of the LCD panel during communication. 1: Code is 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. <div style="border: 1px solid blue; border-radius: 10px; padding: 2px; display: inline-block;">  Note </div> <ul style="list-style-type: none"> • This setting is effective only when Automatic Journal printout is enabled but the machine cannot print the report (e.g., no paper).
1-2	Not used	Do not change these settings.
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".
4-7	Not used	Do not change these settings.

System Switch 1F (SP No. 1-101-032)		
No	Function	Comments
0	Trace log function	0: Enable 1: Disable
1-6	Not used	Do not change these settings.
7	Action when a fax SC	0: When the fax unit detects a fax SC code other than SC1201 and

	has occurred 0: Automatic reset 1: Fax unit stops	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".
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2.4 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.

2.4.1 I-FAX SWITCHES

I-fax Switch 00 Not used (do not change the settings)

I-fax Switch 01 (SP No. 1-102-002)

No	Function	Comments
0-6	Not used	Do not change these settings.
7	mm/inch	<p>This setting selects mm/inch conversion for mail transmission. 0: Off (No conversion), 1: On (Conversion)</p> <p>When on (set to "1"), the machine converts millimeters to inches for sending mail. There is no switch for converting inches to millimeters.</p> <p>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.</p> <p>When this switch is Off (0):</p> <ul style="list-style-type: none"> 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. <p>When this switch is On (1):</p> <ul style="list-style-type: none"> 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 - Not used (do not change these settings)

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	<p>This setting determines whether the CSI registered on this machine or the CSI of the originator is used in the subject lines of transferred documents.</p> <p>0: Puts the CSI of the originator in the Subject line. Only CSI can be received for use in the subject line.</p> <p>1: Puts the CSI registered on this machine in the Subject line.</p> <p>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.</p>
1-7	Not Used	


I-fax Switch 05 (SP No. 1-102-006)		
No	Function	Comments
0	Mail Addresses of SMTP Broadcast Recipients	<p>Determines whether the e-mail addresses of the destinations that receive transmissions broadcasted using SMTP protocol are recorded in the Journal.</p> <p>For example:</p> <p>"1st destination + Total number of destinations: 9" in the Journal indicates a broadcast to 9 destinations.</p> <p>0: Not recorded</p> <p>1: Recorded</p>
1	IFAXTX Retries	<p>Determines whether the machine retries sending IFAX when connection and transmission fails due to errors.</p> <p>0: Disabled</p> <p>1: Enabled</p>
2	Selects whether to enable or disable the size adjustment function in the main scanning direction when sending TIFF files to e-mail or folder destinations.	<p>0: OFF (Disabled) Size adjustment is not performed. (Normal operation)</p> <p>1: ON (Enabled) Size adjustment is performed.</p>
3-7	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 - Not used (do not change the settings)

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 - Not used (do not change the settings)
I-fax Switch 0E - Not used (do not change the settings)
I-fax Switch 0F - Not used (do not change the settings)

2.4.2 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 <ul style="list-style-type: none"> 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: On	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.
2-7	Not used	Do not change the settings.

Printer Switch 01 - Not used (do not change the settings)
Printer Switch 02 - Not used (do not change the settings)

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 Fax board.

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 to 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	Not used.	Do not change the settings.
1	Selects whether or not to print at a reduced size (95%) when printing on sheets with the width of letter-size paper.	0:OFF 1:ON
2-3	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	
5-6	Not used			Do not change the settings.
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 fax board.

Printer Switch 0F (SP No. 1-103-016)				
No	Function			Comments
0-1	Not used			Do not change the settings.
2*	Duplex printing			1: The machine always prints received fax messages in duplex

	0: Disabled 1: Enabled	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-side machine which has no FCU.

2.5 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.

2.5.1 COMMUNICATION SWITCHES

Communication Switch 00 (SP No. 1-104-001)				
No	Function			Comments
0-1	Compression modes available in receive mode			These bits determine the compression capabilities to be declared in phase B (handshaking) of the T.30 protocol.
	Bit 1	Bit 0	Modes	
	0	0	MH only	
	0	1	MH/MR	
	1	0	MH/MR/MMR	
	1	1	Do not change	
2-3	Compression modes available in transmit mode			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.
	Bit 3	Bit 2	Modes	
	0	0	MH only	
	0	1	MH/MR	
	1	0	MH/MR/MMR	
	1	1	Do not change	
4-7	Not used			Do not change the settings.

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 is switched off automatically.
1-5	Not used			Do not change the setting.
6-7	Maximum printable page length available			The setting determined by these bits is informed to the transmitting terminal in the pre-message protocol exchange (in the DIS/NSF

	Bit 7	Bit 6	Setting	frames).
	0	0	No limit	
	0	1	B4 (364 mm)	
	1	0	A4 (297 mm)	
	1	1	Not used	

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.	
3-7	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 - Not used (do not change the settings)

Communication Switch 05 - 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 - Not used (do not change the settings)

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.
4-7	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)			
No	Function		Comments
0	Inch-to-mm conversion during transmission 0: Disabled, 1: Enabled		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.
1-5	Not used		Do not change the factory settings.
6-7	Available unit of resolution in which fax messages are received		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).
	Bit 7	Bit 6 Unit	

	0	0	mm	
	0	1	inch	
	1	0	mm and inch	
	1	1	Not used	

Communication Switch 15 – Not used (do not change the settings)
Communication Switch 16 – Not used (do not change the settings)
Communication Switch 17 – Not used (do not change the settings)
Communication Switch 18 – Not used (do not change the settings)
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)

2.6 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.

2.6.1 G3 SWITCHES

G3 Switch 00 (SP No. 1-105-001)				
No	Function			Comments
0 1	Monitor speaker during communication (TX and RX)			(0, 0): The monitor speaker is disabled all through the communication.
	Bit 1	Bit 0	Setting	(0, 1): The monitor speaker is on up to phase B in the T.30 protocol.
	0	0	Disabled	(1, 0): Used for testing. The monitor speaker is on all through the communication. Make sure that you reset these bits after testing.
	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- 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 CED/ANSam output 0: Off 1: On (Forbid output)	Do not change this setting (Default: 0: Off), unless communication problem is caused by a CED or ANSam transmission.
7	Not used	Do not change this setting.

G3 Switch 02 (Do not change this setting.)

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	Not Used	Do not change the settings.
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.
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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.
	Bit 3	Bit	Bit	Bit	kbps	

		2	1	0		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
0	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.
	Bit 1	Bit 0	Setting	
	0	0	None	Also, try using the cable equalizer if one or more of the following

	0	1	Low	symptoms occurs. Communication error Modem rate fallback occurs frequently. Note <ul style="list-style-type: none"> This setting is not effective in V.34 communications.
	1	0	Medium	
	1	1	High	
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 <ul style="list-style-type: none"> 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) 0: Disabled 1: Enabled			Keep this bit at "1".
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 0C Not used (do not change the settings).
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	Not used	Do not change these settings.
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.

2.7 BIT SWITCHES - 5

Not used. Do not change this bit switches.

2.8 BIT SWITCHES – 6

Not used. Do not change this bit switches.

2.9 NCU PARAMETERS

2.9.1 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); if SP2-103 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.

Address	Function	Unit	Remarks
7EB52000	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
7EB520B4	PSTN: TX level from the modem	-N – 3 dBm	SP2-103-002 (parameter 01).
7EB52072	Acceptable ringing signal frequency: range 1, upper limit	1000/ N (Hz)	SP2-103-003 (parameter 02).
7EB52073	Acceptable ringing signal frequency: range 1, lower limit	1000/ N (Hz)	SP2-103-004 (parameter 03).
7EB52074	Acceptable ringing signal frequency: range 2, upper limit	1000/ N (Hz)	SP2-103-005 (parameter 04).
7EB52075	Acceptable ringing signal frequency: range 2, lower limit	1000/ N (Hz)	SP2-103-006 (parameter 05).
7EB52076	Number of rings until a call is detected	time(s)	SP2-103-007 (parameter 06). The setting must not be zero.
7EB52077	Minimum required length of the first ring	N x 20ms	See Note 2. SP2-103-008 (parameter 07).
7EB52078	Minimum required length of the second and subsequent rings	N x 20ms	SP2-103-009 (parameter 08).
7EB52079	Ringing signal detection reset time (LOW)	N x 20ms	SP2-103-010 (parameter 09).
7EB5207A	Ringing signal detection reset time (HIGH)	N x 20ms	SP2-103-011 (parameter 10).
7EB5204A	Do not change the settings.		
7EB5204B	Break time for pulse dialing	ms	See Note 1.

Address	Function	Unit	Remarks
			SP2-103-013 (parameter 12).
7EB5204C	Make time for pulse dialing	ms	See Note 1. SP2-103-014 (parameter 13).
7EB5204D	Do not change the settings.		
7EB5204E	Minimum pause between dialed digits (pulse dial mode)	N x 20ms	See Note 1 and 4. SP2-103-016 (parameter 15).
7EB5204F	Time waited when a pause is entered at the operation panel	N x 20ms	SP2-103-017 (parameter 16). See Note 1.
7EB52050	DTMF tone on time	ms	SP2-103-018 (parameter 17).
7EB52051	DTMF tone off time	ms	SP2-103-019 (parameter 18).
7EB52052	Tone attenuation level of DTMF signals while dialing	dBm (See Note 5)	SP2-103-020 (parameter 19). See Note 3.
7EB52053	Tone attenuation value difference between high frequency tone and low frequency tone in DTMF signals	dBm (See Note 5)	SP2-103-021 (parameter 20). The setting must be less than – 5dBm, and should not exceed the setting at 7EB52052h above. See Note 3.
7EB52054	Do not change the settings.	-	
7EB52055	Do not change the settings.	-	
7EB971E8 to 7EB973E7	Error code storage	-	
7EB93800 to 7EB96517	Communication history storage	-	
7EB973E8 to 7EB982E7	Communication error storage	-	

NOTES

- Pulse dial parameters (addresses 7EB5204A to 7EB5204F) are the values for 10 pps. If 20 pps is used, the machine automatically compensates.
- The first ring may not be detected until 1 to 2.5 wavelengths after the time specified by this parameter.
- The calculated level must be between 0 and 10.

The attenuation levels calculated from RAM data are:

High frequency tone:

- $0.5 \times N_{7EB52052/7EB52054} - 3.5$ dBm
- $0.5 \times N_{7EB52055}$ dBm

Low frequency tone:

- $0.5 \times (N_{7EB52052/7EB52054} + N_{7EB52053}) - 3.5$ dBm

- $-0.5 \times (N_{7EB52055} + N_{7EB52053})$ dBm

Note

- $N_{7EB52052}$, for example, means the value stored in address 7EB52052(H)

4. 7EB5204A, 7EB5204D, 7EB5204E: The actual inter-digit pause (pulse dial mode) is the sum of the period specified by the RAM addresses 7EB5204A, 7EB5204D, and 7EB5204E.

Default Values

Country Code [HEX]

00 : FRANCE	12 : ASIA
01 : GERMANY	13 : JAPAN
02 : UK	14 : HONGKONG
03 : ITALY	15 : S.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 : FORMOSA
0A : SWEDEN	1C : KOREA
0B : SWITZERLAND	1D : BRAZIL
0C : PORTUGAL	20 : TURKEY
0D : NETHERLAND	21 : GREECE
0E : SPAIN	22 : HUNGARY
0F : ISRAEL	23 : CZECH
11 : USA	24 : POLAND

Address	Country Code [HEX]																
	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	11
	Default [DEC]																
7EB52000	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	17
7EB520B4	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9
7EB52072	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	16	13
7EB52073	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	83
7EB520	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25

Address	Country Code [HEX]																
74	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
7EB520 75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7EB520 76	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1
7EB520 77	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
7EB520 78	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
7EB520 79	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	14	14
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
7EB520 7A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7EB520 4A	67	50	25	58	53	61	53	61	25	61	10	60	61	58	75	61	77
			2						5		0						
7EB520 4B	69	62	69	62	62	69	69	62	69	62	62	62	69	62	69	62	62
7EB520 4C	31	38	31	38	38	31	31	38	31	38	38	38	31	38	31	38	40
7EB520 4D	45	4	4	4	10	10	10	10	10	10	30	20	10	2	35	10	74
7EB520 4E	40	46	27	40	44	32	26	40	30	33	18	31	35	33	32	46	46
7EB520 4F	33	46	33	15	46	26	26	60	33	33	26	0	33	33	10	10	10
				0											0	1	1
7EB520 50	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7EB520 51	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7EB520 52	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	14
7EB520 53	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4
7EB520 54	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
7EB520 55	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34

Address	Country Code [HEX]																
	12	13	14	15	16	17	18	19	1A	1B	1C	1D	20	21	22	23	24
	Default [DEC]																
7EB520 00	18	19	20	21	22	23	24	25	26	27	28	29	32	33	34	35	36
7EB520 B4	9	8	9	9	11	10	6	8	13	10	9	7	8	8	8	8	6
7EB520 72	17	28	17	17	14	17	17	17	17	13	13	13	13	13	13	13	17
7EB520 73	80	72	80	80	80	80	80	80	80	80	83	80	80	80	80	80	80
7EB520 74	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
7EB520 75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7EB520 76	1	1	1	3	3	4	1	1	1	1	2	2	2	2	2	2	1
7EB520 77	10	8	10	10	9	10	10	10	10	10	10	10	10	10	10	10	10
7EB520 78	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
7EB520 79	14	14	14	14	14	14	14	14	14	14	14	24	24	24	24	24	14
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
7EB520 7A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7EB520 4A	61	77	61	61	25	25	61	61	61	77	77	53	25	25	58	25	61
					5	2							2	2		2	
7EB520 4B	59	67	66	71	91	65	66	66	62	64	67	64	69	62	69	62	69
7EB520 4C	40	33	34	29	13	34	34	34	38	32	33	36	31	38	31	38	31
7EB520 4D	10	74	50	50	30	25	50	50	10	74	74	10	4	4	2	4	50
7EB520 4E	36	46	36	42	24	25	36	36	36	46	46	44	27	27	33	34	36
7EB520 4F	10	10	10	10	10	10	10	10	10	10	10	26	33	33	33	15	10
	1	1	1	1	1	1	1	1	1	1	1				5	1	
7EB520	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

Address	Country Code [HEX]																
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7EB520 51	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
7EB520 52	14	20	14	19	16	16	11	14	12	10	14	16	13	13	13	13	11
7EB520 53	4	4	4	4	2	2	4	4	4	4	4	4	5	5	5	5	4
7EB520 54	34	22	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
7EB520 55	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34

2.10 SERVICE RAM ADDRESSES

2.10.1 SERVICE RAM ADDRESSES

★ Important

- Do not change the settings that are marked as “Not used” or “Read only.”

Address	Descriptions	Byte	Type	Default
7eb50000H	Machine code	1	HEX	01
7eb50001H	ROM version (Read only)	1	BCD	
7eb50002H	Year of the ROM update	1	BCD	
7eb50003H	Month of the ROM update	1	BCD	
7eb50004H	Day of the ROM update	1	BCD	
7eb50005H	Machine code (check ram2)	1	HEX	01
7eb50006H	Machine's serial number (16 digits - ASCII)	16	ASC	00
7eb50016H	Language code	1	HEX	
	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			
7eb50018H	Total program checksum (low)	2	HEX	
7eb50020H	System bit switch 00	1		
7eb50021H	System bit switch 01	1		
7eb50022H	System bit switch 02	1		
7eb50023H	System bit switch 03	1		
7eb50024H	System bit switch 04	1		
7eb50025H	System bit switch 05	1		
7eb50026H	System bit switch 06	1		
7eb50027H	System bit switch 07	1		
7eb50028H	System bit switch 08	1		

Address	Descriptions	Byte	Type	Default
7eb50029H	System bit switch 09	1		
7eb5002aH	System bit switch 0a	1		
7eb5002bH	System bit switch 0b	1		
7eb5002cH	System bit switch 0c	1		
7eb5002dH	System bit switch 0d	1		
7eb5002eH	System bit switch 0e	1		
7eb5002fH	System bit switch 0f	1		
7eb50030H	System bit switch 10	1		
7eb50031H	System bit switch 11	1		
7eb50032H	System bit switch 12	1		
7eb50033H	System bit switch 13	1		
7eb50034H	System bit switch 14	1		
7eb50035H	System bit switch 15	1		
7eb50036H	System bit switch 16	1		
7eb50037H	System bit switch 17	1		
7eb50038H	System bit switch 18	1		
7eb50039H	System bit switch 19	1		
7eb5003aH	System bit switch 1a	1		
7eb5003bH	System bit switch 1b	1		
7eb5003cH	System bit switch 1c	1		
7eb5003dH	System bit switch 1d	1		
7eb5003eH	System bit switch 1e	1		
7eb5003fH	System bit switch 1f	1		
7eb50050H	Printer bit switch 00	1		
7eb50051H	Printer bit switch 01	1		
7eb50052H	Printer bit switch 02	1		
7eb50053H	Printer bit switch 03	1		
7eb50054H	Printer bit switch 04	1		
7eb50055H	Printer bit switch 05	1		
7eb50056H	Printer bit switch 06	1		
7eb50057H	Printer bit switch 07	1		
7eb50058H	Printer bit switch 08	1		
7eb50059H	Printer bit switch 09	1		
7eb5005aH	Printer bit switch 0a	1		
7eb5005bH	Printer bit switch 0b	1		
7eb5005cH	Printer bit switch 0c	1		
7eb5005dH	Printer bit switch 0d	1		

Address	Descriptions	Byte	Type	Default
7eb5005eH	Printer bit switch 0e	1		
7eb5005fH	Printer bit switch 0f	1		
7eb50060H	Communication bit switch 00	1		
7eb50061H	Communication bit switch 01	1		
7eb50062H	Communication bit switch 02	1		
7eb50063H	Communication bit switch 03	1		
7eb50064H	Communication bit switch 04	1		
7eb50065H	Communication bit switch 05	1		
7eb50066H	Communication bit switch 06	1		
7eb50067H	Communication bit switch 07	1		
7eb50068H	Communication bit switch 08	1		
7eb50069H	Communication bit switch 09	1		
7eb5006aH	Communication bit switch 0a	1		
7eb5006bH	Communication bit switch 0b	1		
7eb5006cH	Communication bit switch 0c	1		
7eb5006dH	Communication bit switch 0d	1		
7eb5006eH	Communication bit switch 0e	1		
7eb5006fH	Communication bit switch 0f	1		
7eb50070H	Communication bit switch 10	1		
7eb50071H	Communication bit switch 11	1		
7eb50072H	Communication bit switch 12	1		
7eb50073H	Communication bit switch 13	1		
7eb50074H	Communication bit switch 14	1		
7eb50075H	Communication bit switch 15	1		
7eb50076H	Communication bit switch 16	1		
7eb50077H	Communication bit switch 17	1		
7eb50078H	Communication bit switch 18	1		
7eb50079H	Communication bit switch 19	1		
7eb5007aH	Communication bit switch 1a	1		
7eb5007bH	Communication bit switch 1b	1		
7eb5007cH	Communication bit switch 1c	1		
7eb5007dH	Communication bit switch 1d	1		
7eb5007eH	Communication bit switch 1e	1		
7eb5007fH	Communication bit switch 1f	1		
7eb50080H	G3 bit switch 00	1		
7eb50081H	G3 bit switch 01	1		
7eb50082H	G3 bit switch 02	1		

Address	Descriptions	Byte	Type	Default
7eb50083H	G3 bit switch 03	1		
7eb50084H	G3 bit switch 04	1		
7eb50085H	G3 bit switch 05	1		
7eb50086H	G3 bit switch 06	1		
7eb50087H	G3 bit switch 07	1		
7eb50088H	G3 bit switch 08	1		
7eb50089H	G3 bit switch 09	1		
7eb5008aH	G3 bit switch 0a	1		
7eb5008bH	G3 bit switch 0b	1		
7eb5008cH	G3 bit switch 0c	1		
7eb5008dH	G3 bit switch 0d	1		
7eb5008eH	G3 bit switch 0e	1		
7eb5008fH	G3 bit switch 0f	1		
7eb500b0H	Design SW 00: Not used	1		
7eb500b1H	Design SW 01: Not used	1		
7eb500b2H	Design SW 02 : Not used	1		
7eb500b3H	Design SW 03: Not used	1		
7eb500b4H	Design SW 04 : Not used	1		
7eb500b5H	Design SW 05 : Not used	1		
7eb500b6H	Design SW 06 : Not used	1		
7eb500b7H	Design SW 07 : Not used	1		
7eb500b8H	Design SW 08: Not used	1		
7eb500b9H	Design SW 09: Not used	1		
7eb500baH	Design SW 0a: Not used	1		
7eb500bbH	Design SW 0b: Not used	1		
7eb500bcH	Design SW 0c: Not used	1		
7eb500bdH	Design SW 0d: Not used	1		
7eb500beH	Design SW 0e: Not used	1		
7eb500bfH	Design SW 0f: Not used	1		
7eb500c0H	Design SW 10: Not used	1		
7eb500c1H	Design SW 11: Not used	1		
7eb500c2H	Design SW 12: Not used	1		
7eb500c3H	Design SW 13: Not used	1		
7eb500c4H	Design SW 14: Not used	1		
7eb500c5H	Design SW 15: Not used	1		
7eb500c5H	Design SW 16: Not used	1		
7eb500c7H	Design SW 17: Not used	1		

Address	Descriptions	Byte	Type	Default
7eb500c8H	Design SW 18: Not used	1		
7eb500c9H	Design SW 19: Not used	1		
7eb500caH	Design SW 1a: Not used	1		
7eb500cbH	Design SW 1b: Not used	1		
7eb500ccH	Design SW 1c: Not used	1		
7eb500cdH	Design SW 1d: Not used	1		
7eb500ceH	Design SW 1e: Not used	1		
7eb500cfH	Design SW 1f: Not used	1		
	For details about user SW, see the User Manual "Parameter Settings" in "Fax".			
7eb500d0H	User Switch 00	1		
7eb500d1H	User Switch 01	1		
7eb500d2H	User Switch 02	1		
7eb500d3H	User Switch 03	1		
7eb500d4H	User Switch 04	1		
7eb500d5H	User Switch 05	1		
7eb500d6H	User Switch 06	1		
7eb500d7H	User Switch 07	1		
7eb500d8H	User Switch 08	1		
7eb500d9H	User Switch 09	1		
7eb500daH	User Switch 0a	1		
7eb500dbH	User Switch 0b	1		
7eb500dcH	User Switch 0c	1		
7eb500ddH	User Switch 0d	1		
7eb500deH	User Switch 0e	1		
7eb500dfH	User Switch 0f	1		
7eb500e0H	User Switch 10	1		
7eb500e1H	User Switch 11	1		
7eb500e2H	User Switch 12	1		
7eb500e3H	User Switch 13	1		
7eb500e4H	User Switch 14	1		
7eb500e5H	User Switch 15	1		
7eb500e6H	User Switch 16	1		
7eb500e7H	User Switch 17	1		
7eb500e8H	User Switch 18	1		
7eb500e9H	User Switch 19	1		
7eb500eaH	User Switch 1a	1		

Address	Descriptions	Byte	Type	Default
7eb500ebH	User Switch 1b	1		
7eb500ecH	User Switch 1c	1		
7eb500edH	User Switch 1d	1		
7eb500eeH	User Switch 1e	1		
7eb500efH	User Switch 1f	1		
7eb500f0H	User Switch 20	1		
7eb500f1H	User Switch 21	1		
7eb500f2H	User Switch 22	1		
7eb500f3H	User Switch 23	1		
7eb500f4H	User Switch 24	1		
7eb500f5H	User Switch 25	1		
7eb500f6H	User Switch 26	1		
7eb500f7H	User Switch 27	1		
7eb500f8H	User Switch 28	1		
7eb500f9H	User Switch 29	1		
7eb500faH	User Switch 2a	1		
7eb500fbH	User Switch 2b	1		
7eb500fcH	User Switch 2c	1		
7eb500fdH	User Switch 2d	1		
7eb500feH	User Switch 2e	1		
7eb500ffH	User Switch 2f	1		
7eb50130H	Service (SCU) Switch 00	1		
7eb50131H	Service (SCU) Switch 01	1		
7eb50132H	Service (SCU) Switch 02	1		
7eb50133H	Service (SCU) Switch 03	1		
7eb50134H	Service (SCU) Switch 04	1		
7eb50135H	Service (SCU) Switch 05	1		
7eb50136H	Service (SCU) Switch 06	1		
7eb50137H	Service (SCU) Switch 07	1		
7eb50138H	Service (SCU) Switch 08	1		
7eb50139H	Service (SCU) Switch 09	1		
7eb5013aH	Service (SCU) Switch 0a	1		
7eb5013bH	Service (SCU) Switch 0b	1		
7eb5013cH	Service (SCU) Switch 0c	1		
7eb5013dH	Service (SCU) Switch 0d	1		
7eb5013eH	Service (SCU) Switch 0e	1		
7eb5013fH	Service (SCU) Switch 0f	1		

Address	Descriptions	Byte	Type	Default
7eb50140H	Service (SCU) Switch 10	1		
7eb50141H	Service (SCU) Switch 11	1		
7eb50142H	Service (SCU) Switch 12	1		
7eb50143H	Service (SCU) Switch 13	1		
7eb50144H	Service (SCU) Switch 14	1		
7eb50145H	Service (SCU) Switch 15	1		
7eb50146H	Service (SCU) Switch 16	1		
7eb50147H	Service (SCU) Switch 17	1		
7eb50148H	Service (SCU) Switch 18	1		
7eb50149H	Service (SCU) Switch 19	1		
7eb5014aH	Service (SCU) Switch 1a	1		
7eb5014bH	Service (SCU) Switch 1b	1		
7eb5014cH	Service (SCU) Switch 1c	1		
7eb5014dH	Service (SCU) Switch 1d	1		
7eb5014eH	Service (SCU) Switch 1e	1		
7eb5014fH	Service (SCU) Switch 1f	1		
7eb50150H	Service (SCU) Switch 20	1		
7eb50151H	Service (SCU) Switch 21	1		
7eb50152H	Service (SCU) Switch 22	1		
7eb50153H	Service (SCU) Switch 23	1		
7eb50154H	Service (SCU) Switch 24	1		
7eb50155H	Service (SCU) Switch 25	1		
7eb50156H	Service (SCU) Switch 26	1		
7eb50157H	Service (SCU) Switch 27	1		
7eb50158H	Service (SCU) Switch 28	1		
7eb50159H	Service (SCU) Switch 29	1		
7eb5015aH	Service (SCU) Switch 2a	1		
7eb5015bH	Service (SCU) Switch 2b	1		
7eb5015cH	Service (SCU) Switch 2c	1		
7eb5015dH	Service (SCU) Switch 2d	1		
7eb5015eH	Service (SCU) Switch 2e	1		
7eb5015fH	Service (SCU) Switch 2f	1		
7eb50160H	Service (SCU) Switch 30	1		
7eb50161H	Service (SCU) Switch 31	1		
7eb50162H	Service (SCU) Switch 32	1		
7eb50163H	Service (SCU) Switch 33	1		
7eb50164H	Service (SCU) Switch 34	1		

Address	Descriptions	Byte	Type	Default
7eb50165H	Service (SCU) Switch 35	1		
7eb50166H	Service (SCU) Switch 36	1		
7eb50167H	Service (SCU) Switch 37	1		
7eb50168H	Service (SCU) Switch 38	1		
7eb50169H	Service (SCU) Switch 39	1		
7eb5016aH	Service (SCU) Switch 3a	1		
7eb5016bH	Service (SCU) Switch 3b	1		
7eb5016cH	Service (SCU) Switch 3c	1		
7eb5016dH	Service (SCU) Switch 3d	1		
7eb5016eH	Service (SCU) Switch 3e	1		
7eb5016fH	Service (SCU) Switch 3f	1		
7eb50170H	IFAX Switch 00	1		
7eb50171H	IFAX Switch 01	1		
7eb50172H	IFAX Switch 02	1		
7eb50173H	IFAX Switch 03	1		
7eb50174H	IFAX Switch 04	1		
7eb50175H	IFAX Switch 05	1		
7eb50176H	IFAX Switch 06	1		
7eb50177H	IFAX Switch 07	1		
7eb50178H	IFAX Switch 08	1		
7eb50179H	IFAX Switch 09	1		
7eb5017aH	IFAX Switch 0a	1		
7eb5017bH	IFAX Switch 0b	1		
7eb5017cH	IFAX Switch 0c	1		
7eb5017dH	IFAX Switch 0d	1		
7eb5017eH	IFAX Switch 0e	1		
7eb5017fH	IFAX Switch 0f	1		
7eb50190H	TTI (Max. 64 characters - ASCII) information	64	ASC	0
7eb501d0H	Printing format for TTI 0: DOM (Japan), 1:EXP (Export)	1	HEX	0
7eb501d2H	CSI code (Max. 20 characters - ASCII)	20	ASC	0
7eb501e6H	CSI characters (Hex)	1	HEX	00
7eb5020cH	Registered service station's fax number			
7eb5022cH	Registered own fax number for extension			
7eb50236H	Registered own fax number for outside call			
7eb50240H	Transmission monitor volume			
7eb50241H	Reception monitor volume			

Address	Descriptions	Byte	Type	Default
7eb50242H	On-hook monitor volume			
7eb50243H	Dialing monitor volume			
7eb50244H	Buzzer volume			
7eb50245H	Beeper volume			
7eb52ba0H	Transmission counter			
7eb52ba4H	Reception counter			
7eb53f68H to 7eb53f72H	Dial tone detection parameter	11		
7eb52000H	Start address of G3 table for G3-1			
7eb5216eH	Lateset information of Power Failure Report	8	HEX	00
7eb5218cH	Machine code (check ram3)			
7eb52246H	Modem version (G3-1)	2	HEX	
7eb522daH	Machine code(check ram4)	1	HEX	1
7eb522feH	Machine's serial number	11	ASC	0

TROUBLESHOOTING

3. TROUBLESHOOTING

3.1 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	<ul style="list-style-type: none">• Check the connection.• The other party may be incompatible.• Replace the fax board, or the controller board.• Check for DIS/NSF with an oscilloscope.• If the RX signal is weak, there may be a bad connection.
0-01	DCN received unexpectedly	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• Check the connection.• Try changing the TX level and/or cable equalizer settings.• Replace the fax board, or the controller board.• 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. <p>Reference:</p> <ul style="list-style-type: none">• 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.	<ul style="list-style-type: none">• Check the connection.• Try adjusting the TX level and/or cable equalizer.• Replace the fax board, or the controller board.• Check for line problems.

Code	Meaning	Suggested Cause/Action
		Reference: See error code 0-04.
0-06	The other terminal did not reply to DCS	<ul style="list-style-type: none"> • Check the connection. • Try adjusting the TX level and/or cable equalizer settings. • Replace the fax board, or the controller board. • 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	<ul style="list-style-type: none"> • Check the connection. • Replace the fax board, or the controller board. • 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	<ul style="list-style-type: none"> • Check the connection. • Replace the fax board, or the controller board. • 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/fax board/controller board, try sending to another machine. • Check for line problems and noise. Reference: <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Incompatible or defective remote terminal; try sending to another machine. • Noisy line; resend. • Try adjusting the TX level and/or cable equalizer

Code	Meaning	Suggested Cause/Action
		<p>settings.</p> <ul style="list-style-type: none"> Replace the fax board, or the controller board. <p>Reference: See error code 0-08.</p>
0-15	The other terminal is not capable of specific functions.	<p>The other party is unable to accepting the following functions, or the other party's memory is full.</p> <ul style="list-style-type: none"> Confidential RX Transfer function SEP/SUB/PWD/SID
0-16	CFR or FTT not detected after modem training in confidential or transfer mode	<ul style="list-style-type: none"> Check the connection. Replace the fax board, or the controller board. 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. <p>Reference: See error code 0-08.</p>
0-17	Communication was interrupted by pressing the Stop key	<p>If the Stop key was not pressed and this error keeps occurring, replace the operation panel or the operation panel drive board.</p>
0-20	Facsimile data not received within 6 s of retraining	<ul style="list-style-type: none"> Check the connection. Replace the fax board, or the controller board. Check for line problems. Try calling another fax machine. Try adjusting the reconstruction time for the first line and/or RX cable equalizer setting. <p>Reference: Reconstruction time - G3 Switch 0A, Bit 6 Rx cable equalizer - G3 Switch 07 (PSTN)</p>
0-21	EOL signal (end-of-line) from the other end not received within 5 s of the previous EOL signal	<ul style="list-style-type: none"> Check the connection between the fax board and line. Check for line noise or other line problems. Replace the fax board, or the controller board. The remote machine may be defective or may

Code	Meaning	Suggested Cause/Action
		<p>have been disconnected.</p> <p>Reference: Maximum interval between EOLs and between ECM frames - G3 Bit Switch 0A, Bit 4</p>
0-22	The signal from the other end was interrupted for more than the acceptable modem carrier drop time (default: 200 ms)	<ul style="list-style-type: none"> • Check the connection. • Replace the fax board, or the controller board. • The remote machine may be defective. • Check for line noise or other line problems. • Try adjusting the acceptable modem carrier drop time. <p>Reference: Acceptable modem carrier drop time: G3 Switch 0A, Bits 0 and 1</p>
0-23	Too many errors during reception	<ul style="list-style-type: none"> • Check the connection. • Replace the fax board, or the controller board. • 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. <p>Reference: Rx cable equalizer: G3 Switch 07 (PSTN) Rx error criteria: Communication Switch 02, Bits 0 and 1</p>
0-29	Data block format failure in ECM reception	<ul style="list-style-type: none"> • Check for line noise or other line problems. • Replace the fax board, or the controller board.
0-30	The other terminal did not reply to NSS(A) in AI short protocol mode	<ul style="list-style-type: none"> • Check the connection. • Try adjusting the TX level and/or cable equalizer settings. • The other terminal may not be compatible. <p>Reference: Dedicated TX parameters - Section 4</p>
0-32	The other terminal sent a DCS, which contained functions that the receiving machine cannot handle.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • Check the connection. • The other terminal may have a defective

Code	Meaning	Suggested Cause/Action
		modem.
0-52	Polarity changed during communication	<ul style="list-style-type: none"> Check the connection. Retry communication.
0-55	Fax function does not detect the SG3.	<ul style="list-style-type: none"> Fax 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)	<ul style="list-style-type: none"> 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 terminal.
0-74	The calling terminal fell back to T.30 mode, because it could not detect ANSam after sending CI.	<ul style="list-style-type: none"> 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).	<ul style="list-style-type: none"> 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).	<ul style="list-style-type: none"> 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).	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> The guard timer expired while starting these

Code	Meaning	Suggested Cause/Action
	timeout in V.34 phase 2 – line probing.	phases. Serious noise, narrow bandwidth, or low signal level can cause these errors.
0-81	The line was disconnected due to a timeout in V.34 phase 3 – equalizer training.	If these errors happen at the transmitting terminal: <ul style="list-style-type: none"> • Try making a call later. • Try using V.17 or a slower modem using dedicated TX parameters.
0-82	The line was disconnected due to a timeout in the V.34 phase 4 – control channel start-up.	<ul style="list-style-type: none"> • Try increasing the TX level. • Try adjusting the TX cable equalizer setting.
0-83	The line was disconnected due to a timeout in the V.34 control channel restart sequence.	If these errors happen at the receiving terminal: <ul style="list-style-type: none"> • 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.
0-84	The line was disconnected due to abnormal signaling in V.34 phase 4 – control channel start-up.	<ul style="list-style-type: none"> • 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 fax board, or the controller board.
0-85	The line was disconnected due to abnormal signaling in V.34 control channel restart.	<ul style="list-style-type: none"> • 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 fax board, or the controller board.
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.	<ul style="list-style-type: none"> • The other terminal was incompatible. • Ask the other party to contact the manufacturer.
0-87	The control channel started after an unsuccessful primary channel.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • Try using a lower data rate at the start. • Try adjusting the cable equalizer setting.
2-11	Only one V.21 connection flag was	<ul style="list-style-type: none"> • Replace the fax board, or the controller board.

Code	Meaning	Suggested Cause/Action
	received	
2-12	Modem clock irregularity	<ul style="list-style-type: none"> Replace the fax board, or the controller board.
2-13	Modem initialization error	<ul style="list-style-type: none"> Turn off the machine, and then turn it back on. Update the modem ROM. Replace the fax board, or the controller board.
2-51	The machine resets itself because of a fatal communication error	<ul style="list-style-type: none"> If this is frequent, update the ROM, or replace the fax board, or the controller board.
2-53	Snd msg() in the manual task is an error because the mailbox for the operation task is full.	<ul style="list-style-type: none"> The user did the same operation many times, and this gave too much load to the machine.
4-01	Line current was cut	<ul style="list-style-type: none"> Check the line connector. Check for line problems. Replace the fax board, or the controller board.
4-10	Communication failed because of an ID Code mismatch (Closed Network) or Tel. No./CSI mismatch (Protection against Wrong Connections)	<ul style="list-style-type: none"> 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 fax board, or the controller board.
5-10	DCR timer expired	<ul style="list-style-type: none"> Replace the fax board, or the controller board.
5-20	Storage impossible because of a lack of memory	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Test the SAF memory. Ask the other end to resend the message.
5-25	SAF file access error	<ul style="list-style-type: none"> Replace the fax board, or the controller board.
6-00	G3 ECM - T1 time out during reception of facsimile data	<ul style="list-style-type: none"> Try adjusting the RX cable equalizer. Replace the fax board, or the controller board.
6-01	G3 ECM - no V.21 signal was received	
6-02	G3 ECM - EOR was received	
6-04	G3 ECM - RTC not detected	<ul style="list-style-type: none"> Check the connection. Check for a bad line or defective remote terminal. Replace the fax board, or the controller board.
6-05	G3 ECM - facsimile data frame not received within 18 s of CFR, but	<ul style="list-style-type: none"> Check the connection. Check for a bad line or defective remote

Code	Meaning	Suggested Cause/Action
	there was no line fail	terminal. <ul style="list-style-type: none"> Replace the fax board, or the controller board. Try adjusting the RX cable equalizer Reference: <ul style="list-style-type: none"> RX cable equalizer - G3 Switch 07 (PSTN)
6-06	G3 ECM - coding/decoding error	<ul style="list-style-type: none"> Replace the fax board, or the controller board. The other terminal may be defective.
6-08	G3 ECM - PIP/PIN received in reply to PPS.NULL	<ul style="list-style-type: none"> The other end pressed Stop during communication. The other terminal may be defective.
6-09	G3 ECM - ERR received	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Check for line noise. If the same error occurs frequently, replace the fax board, or the controller board. Defective remote terminal.
6-99	V.21 signal not stopped within 6 s	Replace the fax board, or the controller board.
9-30	HDD write error	<ul style="list-style-type: none"> Check the connection of the controller board (eMMC). If the problem persists, replace the controller board (eMMC).
9-31	HDD control error	
9-32	HDD read error	
9-33	HDD fatal error	
13-17	SIP user name registration error	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Incorrect initial setting for the SIP server. Defective SIP server.
13-24	SIP authentication error	<ul style="list-style-type: none"> Registered password in the device does not match the password in the SIP server.

Code	Meaning	Suggested Cause/Action
13-25	Network I/F setting error	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Active protocol setting does not match the I/F setting for SIP server. • IP address of the device is not registered.
13-27	IP address setting error	<ul style="list-style-type: none"> • IP address of the device is not registered.
14-00	SMTP Send Error	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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)	<ul style="list-style-type: none"> • 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)	<ul style="list-style-type: none"> • 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.

Code	Meaning	Suggested Cause/Action
		<ul style="list-style-type: none"> • 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)	<ul style="list-style-type: none"> • SMTP server operating incorrectly • Direct SMTP sending not operating correctly
14-05	SMTP Server HDD Full (452)	<ul style="list-style-type: none"> • Failed to access the SMTP server because the HDD on the server is full. • 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)	<ul style="list-style-type: none"> • 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)	<ul style="list-style-type: none"> • 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.

Code	Meaning	Suggested Cause/Action
		<ul style="list-style-type: none"> • Direct SMTP sending not operating correctly.
14-08	Data Send to SMTP Server Failed (5XX)	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • POP-Before-SMTP or SMTP authorization failed. • Incorrect setting for file transfer
14-10	Addresses Exceeded	<ul style="list-style-type: none"> • Number of broadcast addresses exceeded the limit for the SMTP server.
14-11	Buffer Full	<ul style="list-style-type: none"> • The send buffer is full so the transmission could not be completed. Buffer is full due to using Scan-to-Email while the buffer is being used send mail at the same time.
14-12	Data Size Too Large	<ul style="list-style-type: none"> • Transmission was cancelled because the detected size of the file was too large.
14-13	Send Cancelled	<ul style="list-style-type: none"> • Processing is interrupted because the user pressed Stop.
14-14	Security Locked File Error	<ul style="list-style-type: none"> • Update the software because of the defective software.
14-15	Mail Data Error	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Update the software because of the defective software.
14-18	Access to MCS File Error	<ul style="list-style-type: none"> • The access to MCS file is denied due to the no permission of access. • Update the software because of the defective software.

Code	Meaning	Suggested Cause/Action
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: <ul style="list-style-type: none"> The number of files created with other applications on the Document Server has exceeded the limit. Software error.
14-31	UFS File Creation Failed	UFS file could not be created: <ul style="list-style-type: none"> Not enough space in UFS area to handle both Scan-to-Email and IFAX transmission. Software error.
14-32	Cancelled the Mail Due to Error Detected by NFAX	<ul style="list-style-type: none"> Error detected with NFAX and send was cancelled due to a software error.
14-33	No Mail Address For the Machine	<ul style="list-style-type: none"> Neither the mail address of the machine nor the mail address of the network administrator is registered.
14-34	Address designated in the domain for SMTP sending does not exist	<ul style="list-style-type: none"> 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 a mail job task error, the send was cancelled: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> The cancel operation by the user failed to cancel the send operation.
14-61	Notification Mail Send Failed for All Destinations	<ul style="list-style-type: none"> All addresses for return notification mail failed.
14-	Transmission Error due to the	<ul style="list-style-type: none"> When the 0 line page exists in received pages

Code	Meaning	Suggested Cause/Action
62	existence of zero line page	with G3 communication, the transmission is interrupted.
14-63	Fax Communication Unit: Transmission Error	Check the following. <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> • Check if the DNS server works normally and is connected to the network. • Check if the settings of the DNS server are correct.
-		Check the network. <ul style="list-style-type: none"> • Check if the LAN works normally. • Check if the no firewall exists.
-		Check the destination folder for the data transfer. <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • At startup, the system detected that the IP address of the POP3/IMAP4 server has not been registered in the machine.

Code	Meaning	Suggested Cause/Action
15-02	POP3/IMAP4 Mail Account Information Not Registered	<ul style="list-style-type: none"> The POP3/IMAP4 mail account has not been registered.
15-03	Mail Address Not Registered	<ul style="list-style-type: none"> The mail address has not been registered.
15-10	DCS Mail Receive Error	<ul style="list-style-type: none"> Error other than 15-11 to 15-18.
15-11	Connection Error	<p>The DNS or POP3/IMAP4 server could not be found:</p> <ul style="list-style-type: none"> 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	<p>POP3/IMAP4 send authorization failed:</p> <ul style="list-style-type: none"> Incorrect IFAX user name or password. Another device, such as the PC, attempted access. POP3/IMAP4 settings incorrect.
15-13	Receive Buffer Full	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> The mail header is not standard format. For example, the Date line description is incorrect.
15-15	Mail Divide Error	<ul style="list-style-type: none"> The e-mail is not in standard format. There is no boundary between parts of the e-mail, including the header.
15-16	Mail Size Receive Error	<ul style="list-style-type: none"> The mail cannot be received because it is too large.
15-17	Receive Timeout	<ul style="list-style-type: none"> May occur during manual receiving only because the network is not operating correctly.
15-18	Incomplete Mail Received	<ul style="list-style-type: none"> Only one portion of the mail was received.
15-31	Final Destination for Transfer Request Reception Format Error	<ul style="list-style-type: none"> The format of the final destination for the transfer request was incorrect.
15-39	Send/Delivery Destination Error	<p>The transmission cannot be delivered to the final destination:</p> <ul style="list-style-type: none"> Destination file format is incorrect. Could not create the destination for the file transmission.

Code	Meaning	Suggested Cause/Action
15-41	SMTP Receive Error	<ul style="list-style-type: none"> Reception rejected because the transaction exceeded the limit for the "Auth. E-mail RX" setting.
15-42	Off Ramp Gateway Error	<ul style="list-style-type: none"> The delivery destination address was specified with Off Ramp Gateway OFF.
15-43	Address Format Error	<ul style="list-style-type: none"> Format error in the address of the Off Ramp Gateway.
15-44	Addresses Over	<ul style="list-style-type: none"> The number of addresses for the Off Ramp Gateway exceeded the limit of 30.
15-61	Attachment File Format Error	<ul style="list-style-type: none"> The attached file is not TIFF format.
15-62	TIFF File Compatibility Error	<p>Could not receive transmission due to:</p> <ul style="list-style-type: none"> 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	<p>The TIFF file sent as the attachment could not be received because the TIFF header is incorrect:</p> <ul style="list-style-type: none"> The TIFF file attachment is a type not supported. The TIFF file attachment is corrupted. Software error.
15-64	TIFF Decompression Error	<p>The file received as an attachment caused the TIFF decompression error:</p> <ul style="list-style-type: none"> The TIFF format of the attachment is corrupted. Software error.
15-71	Not Binary Image Data	<ul style="list-style-type: none"> The file could not be received because the attachment was not binary image data.
15-73	MDN Status Error	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Could not find the Original Message ID line in the header of the Return Receipt, or there is a

Code	Meaning	Suggested Cause/Action
		problem with the firmware.
15-80	Mail Job Task Read Error	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<p>Could not receive the file for transfer to the final destination:</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Transmission could not be received because memory overflowed during the transaction.
15-93	Memory Access Error	<ul style="list-style-type: none"> Transaction could not complete due to a malfunction of SAF memory.
15-94	Incorrect ID Code	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> The machine rejected an incoming e-mail for transfer because the transfer function was unavailable.
16-00	No IP address registered	<ul style="list-style-type: none"> The machine does not get an IP address because the 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	<ul style="list-style-type: none"> Divide the original into more than one page. Check the resolution used for scanning. Lower the scan resolution if possible.

Code	Meaning	Suggested Cause/Action
22-01	Memory overflow while receiving	<ul style="list-style-type: none"> • 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.
22-02	TX or RX job stalled due to line disconnection at the other end	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Update the ROM • Replace the fax board, or the controller board.
22-05	No G3 parameter confirmation answer	<ul style="list-style-type: none"> • Update the ROM • Replace the fax board, or the controller board.
23-00	Data read timeout during construction	<ul style="list-style-type: none"> • Restart the machine. • Replace the fax board, or the controller board.
25-00	The machine software resets itself after a fatal transmission error occurred	<ul style="list-style-type: none"> • Update the ROM • Replace the fax board, or the controller board.
F0-xx	V.34 modem error	<ul style="list-style-type: none"> • Replace the fax board, or the controller board.
F6-xx	SG3 modem error	<ul style="list-style-type: none"> • Update the SG3 modem ROM. • Replace the fax board, or the controller board. • Check for line noise or other line problems. • Try communicating another V.8/V.34 fax.

3.2 FAX CONNECTION UNIT ERROR CODES

3.2.1 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)	<ul style="list-style-type: none"> Either this machine or the machine at the other end has entered SP or Initial settings. An established connection exists. 	<ul style="list-style-type: none"> Exit SP or initial settings. Wait until the connection has finished.

3.2.2 ERROR CODE - 02

Error Code	Possible Causes	Troubleshooting Procedures
02(5)	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Enter the correct IP address/host name Turn ON the main power. Connect the LAN cable Wait until rebooting has finished.

3.2.3 ERROR CODE - 03

Error Code	Possible Causes	Troubleshooting Procedures	
03	<ul style="list-style-type: none"> 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. 	Configure the user authentication setting for client and remote machines as follows:	
		Client Machine	Remote Machine
		OFF	OFF
		ON	OFF
		ON	ON

3.2.4 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.	<ul style="list-style-type: none">• Register the same user to both the remote machine and client machine.• Make sure to match the username and login password.

3.2.5 ERROR CODE - 05

Error Code	Possible Causes	Troubleshooting Procedures
05	An unauthorized user tried to connect.	Authorize the user to use fax connection.

3.2.6 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.

3.2.7 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

3.2.8 ERROR CODE - 08

Error Code	Possible Causes	Troubleshooting Procedures
08(1)	<ul style="list-style-type: none">• A client machine connects to another client machine.• The client machine is not registered on the remote machine as destinations.	<ul style="list-style-type: none">• Connect to the remote machine.• Register the client machine to the remote machine as a destination.
08(2)	<ul style="list-style-type: none">• A remote machine connects to another Remote Machine.• The wrong remote machine is registered on the client machine.	<ul style="list-style-type: none">• Connect to the client machine.• Check the remote machine registered on the client machine.

3.3 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<p>Use the “ping” command on the PC to contact the machine.</p> <p>At the MS-DOS prompt, type ping then the IP address of the machine, then press Enter.</p>
	3. LAN settings in the machine	<ul style="list-style-type: none"> • Check the LAN parameters • Check if there is an IP address conflict with other PCs. <p>Use the “Network” function in the User Tools. If there is an IP address conflict, inform the administrator.</p>
Between machine and e-mail server	1. LAN settings in the machine	<ul style="list-style-type: none"> • Check the LAN parameters • Check if there is an IP address conflict with other PCs. <p>Use the “Network” function in the User Tools. If there is an IP address conflict, inform the administrator.</p>
	2. E-mail account on the server	<ul style="list-style-type: none"> • 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

Communication Route	Item	Troubleshooting Procedures
		<p>account in the server can send/receive e-mail. Ask the administrator to check.</p> <p>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.</p>
Between e-mail server and internet	1. E-mail account on the Server	<ul style="list-style-type: none"> • 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. <p>Ask the administrator to check.</p>
	2. E-mail server	<p>Make sure that the client devices which have an account in the server can send/receive e-mail. Ask the administrator to check.</p> <p>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.</p>
	3. Destination e-mail address	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Use the "ping" command to contact the router. • Check that other devices connected to the router can sent data over the router. <p>Ask the administrator of the server to check.</p>
	5. Error message by e-mail from the network of the destination.	<ul style="list-style-type: none"> • 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. <p>Inform the administrator of the LAN.</p>

SPECIFICATIONS

4. SPECIFICATIONS

4.1 GENERAL SPECIFICATIONS

Fax Transmissions and Reception

Items	Specifications
Type	Desktop type transceiver
Standard	G3: Approx.3 seconds (200x100dpi, MMR, ITUT #1 chart, TTI off, memory transmission)
Resolution	8 × 3.85 lines/mm, 200 × 100 dpi (Standard character), 8 × 7.7 lines/mm, 200 × 200 dpi (Detail character)
Transmission time	3 seconds at 28,800 bps, Standard resolution
Data compression method	MH, MR, MMR
Maximum original size	Standard: A4 SEF or LT SEF Custom: 216 × 600 mm (8.5 × 23.6 inches)
Maximum scanning size	216 × 356 mm (8.5 × 14.0 inches)
Print process	LED alley and electro-photographic printing
Transmission speed	33,600/31,200/28,800/26,400/24,000/21,600/19,200/16,800/14,400/12,000/9,600/7,200/4,800/2,400 bps (auto shift down system)
Page memory size	9.7 MB
SAF memory size	4 MB

E-mail Transmission and Folder Transmission (Transferring the Received Documents only)

Items	Specifications
Network	<ul style="list-style-type: none"> • Standard: Ethernet (10BASE-T/100BASE-TX/1000BASE-T) • Option: IEEE802.11a/b/g/n wireless LAN interface
E-mail transmission protocols	SMTP, TCP/IP
Protocols for sending files to folders	SMB, FTP, TCP/IP
E-mail format	Single/Multi-part, MIME Conversion
File formats	TIFF (MH, MR, MMR compression), PDF
Authentication methods	SMTP-AUTH, POP before SMTP, A-POP
E-mail sending functions	Automatically converts documents to e-mail format and sends them as e-mail.
Sending to folder functions	Sends scanned files over the network to shared folders or FTP server folders.

4.2 CAPABILITIES OF PROGRAMMABLE ITEMS

The following table shows the capabilities of each programmable items.

Items	Descriptions
Number of documents that can be stored in memory when using Memory Transmission	100
Number of pages of documents that can be stored in the memory (ITU-T No.1 chart, resolution "Standard", standard document comprising texts)	About 160
Number of destinations that can be registered in the address book	400
Number of groups that can be registered	20
Number of destinations registered in a group	100
Number of destinations that can be specified for a document when distributing by Broadcast Transmission	100
Number of destinations that can be specified for any document	500
Number of search results that can be displayed at one time	100
Number of destinations that can be held in the destination history	1
Number of characters/digits in a destination that can be entered manually	128 characters
Number of records that can be viewed on the machine	60
Number of communication results that are shown in Records	50
Maximum number of results that can be viewed in Web Image Monitor for transmission performed from the LAN-Fax driver	70
Maximum number of transmission files sent from the LAN-Fax driver that can be stored as Transmission Standby Files on the machine	100
Maximum number of destinations registered in a group	100
Maximum number of programs that can be registered	100
Maximum number of characters that can be used as the name	20 characters
Maximum number of destinations that can be registered in Destination List of LAN-Fax	2000
Maximum number of destinations that can be specified at one time in the LAN-Fax driver	100

D3GX
Paper Feed Unit PB1180

Ver 1.0

Latest Release: December, 2018
Initial Release: December, 2018
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PAPER FEED UNIT PB1180 (D3GX)

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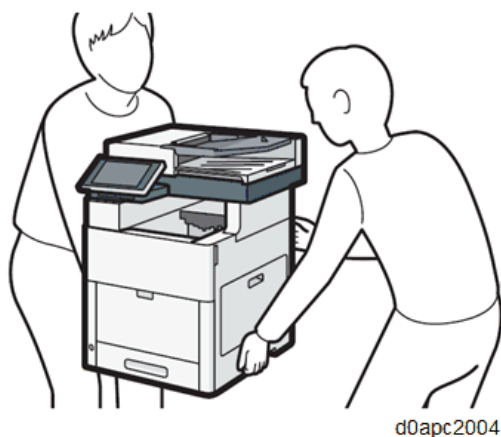
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1. REPLACEMENT AND ADJUSTMENT

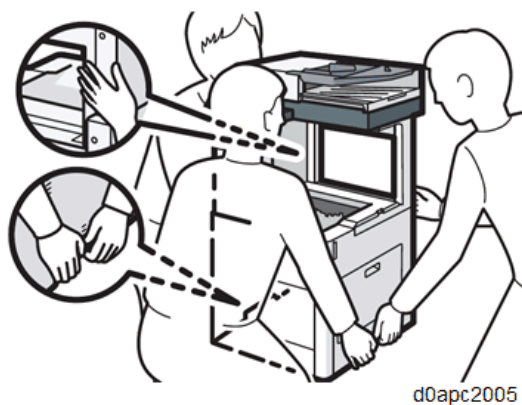
1.1 PAPER FEED UNIT

★ Important

- Turn the machine off.
- Close the front cover, bypass tray, and all other covers.
- The center of gravity of the machine is at the rear and may tip easily because the rear is much heavier than the front. Carefully lift the main machine by the inset grips on the sides, and then keep it horizontal as you move it.

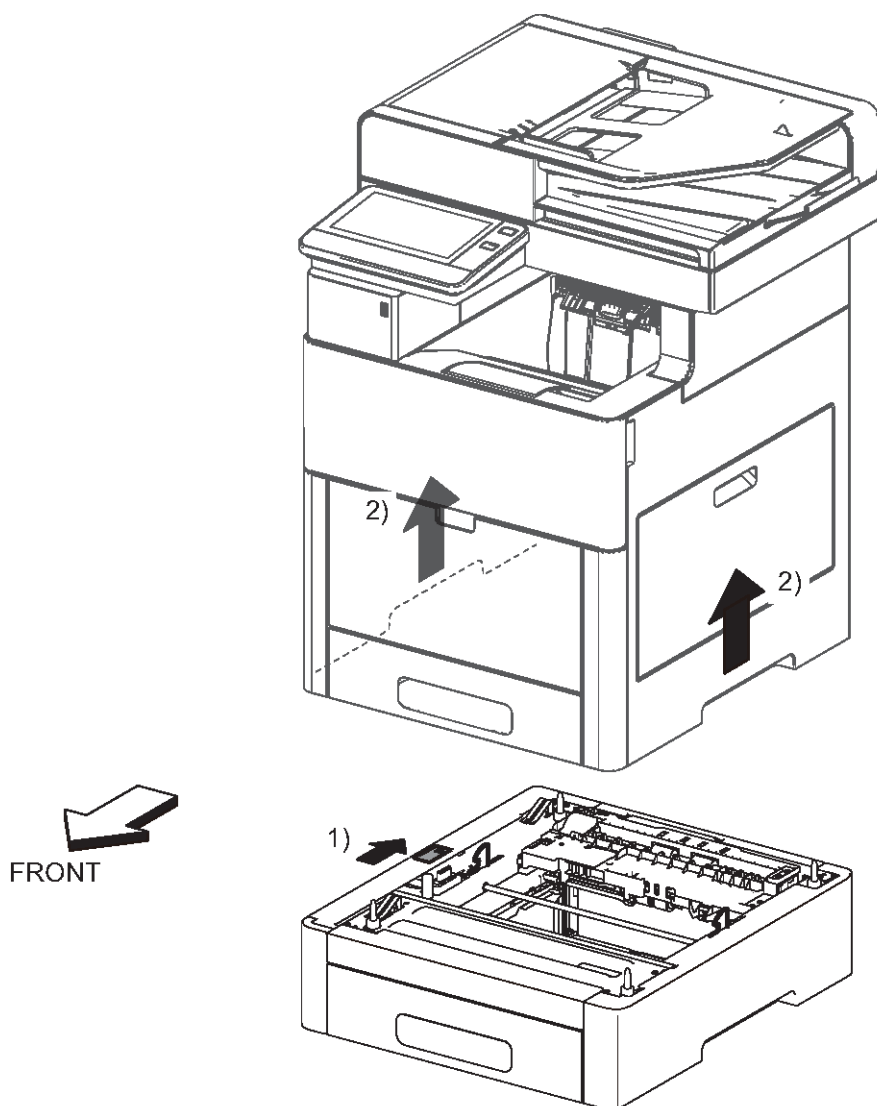


For the IM C530F at least three people are needed to lift the main machine.



- Move the main machine carefully while keeping it.

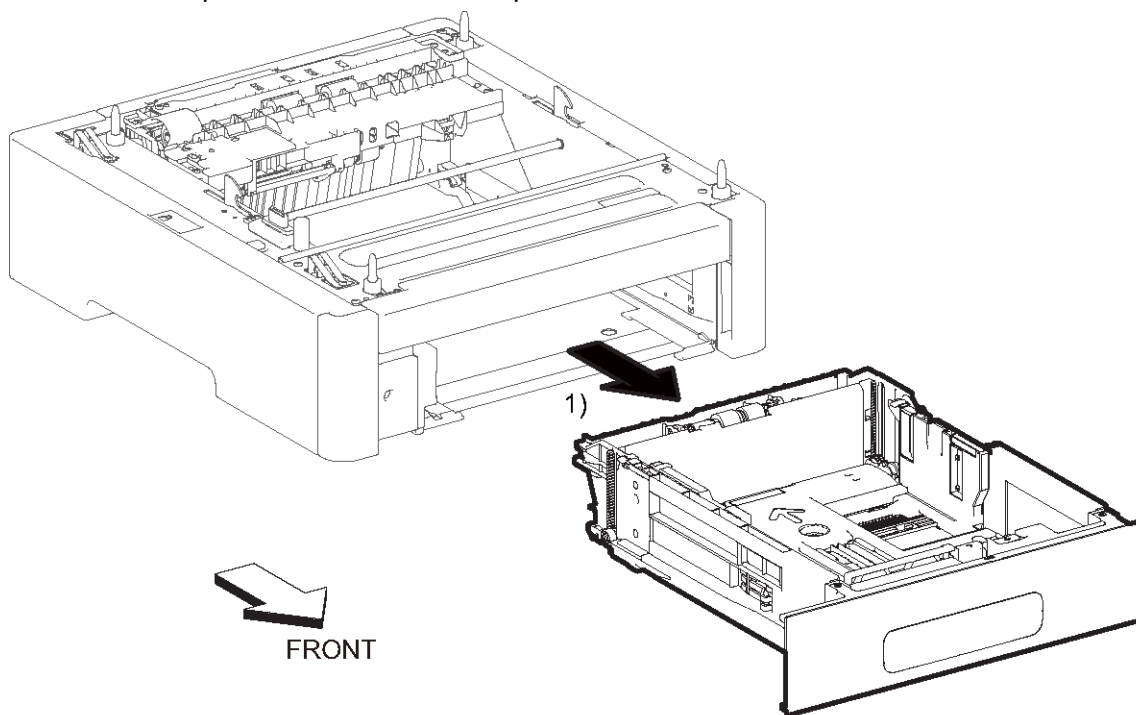
1. Slide the lever and release two hooks.
2. Raise the main machine while holding the recessed areas on both sides, and separate it from the Paper Feed Unit.



FR04144XA

1.2 PAPER CASSETTE

1. Remove the Paper Cassette from the Paper Feed Unit.



FR04150XA

1.3 PAPER FEED ROLLER ASSY/ UPPER GUIDE PLATE

[Before removal]

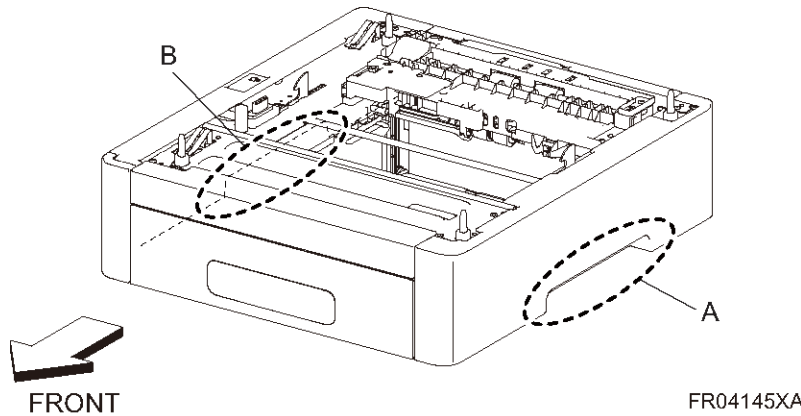
- Paper Feed Unit (*Paper Feed Unit*)

[Removal]

1. Reverse the Paper Feed Unit (PFU).

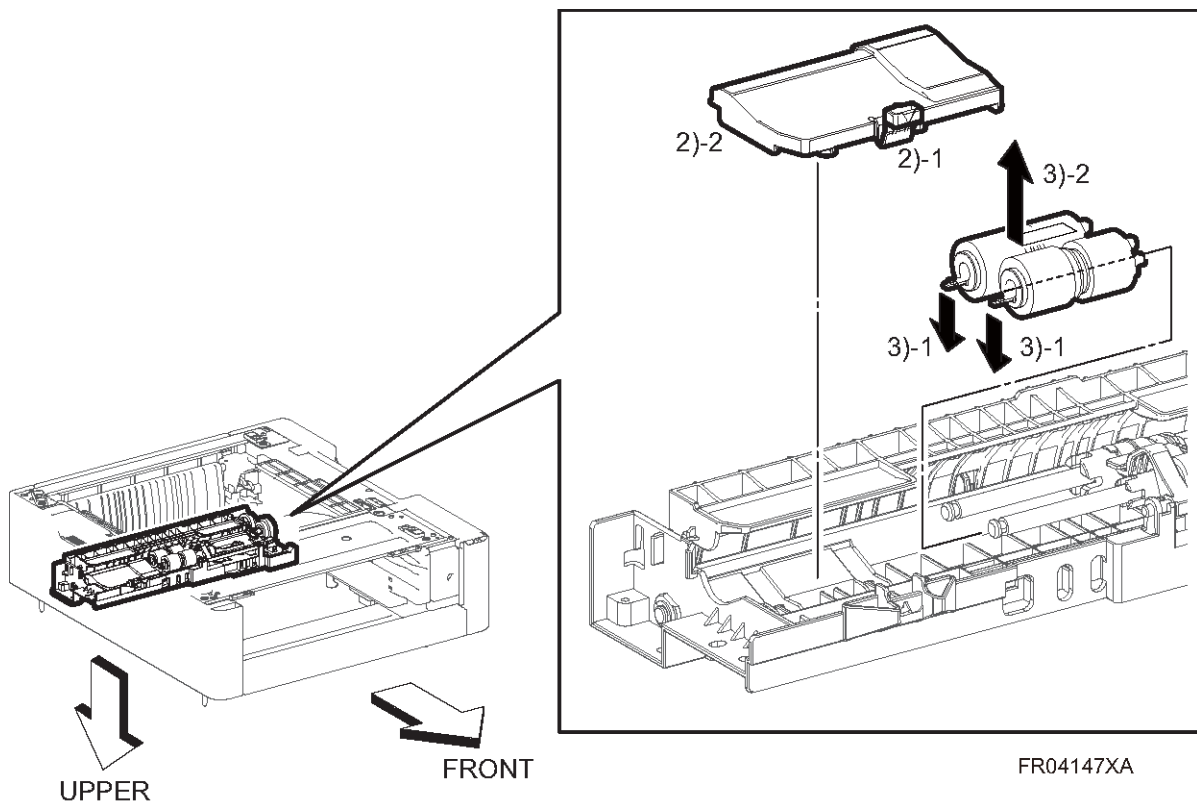
Note

- When reversing the Paper Feed Unit (PFU), hold the position A and B.



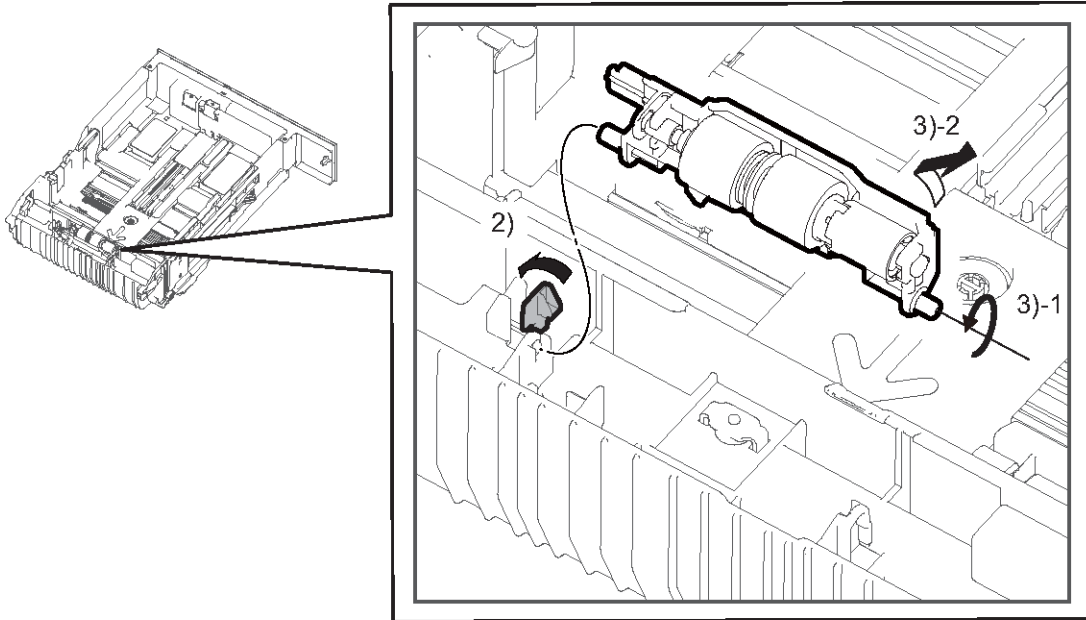
2. Release the hook and remove the Upper Guide Plate.

3. Release the hooks and remove the Paper Feed Roller Assy.



1.4 SEPALLATION ROOLER ASSY

1. Pull out the Paper Tray.
2. Release the hook.
3. Rotate and remove the Separation Roller Assy in the direction of the arrow.



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1.5 PAPER END FEELER

[Before removal]

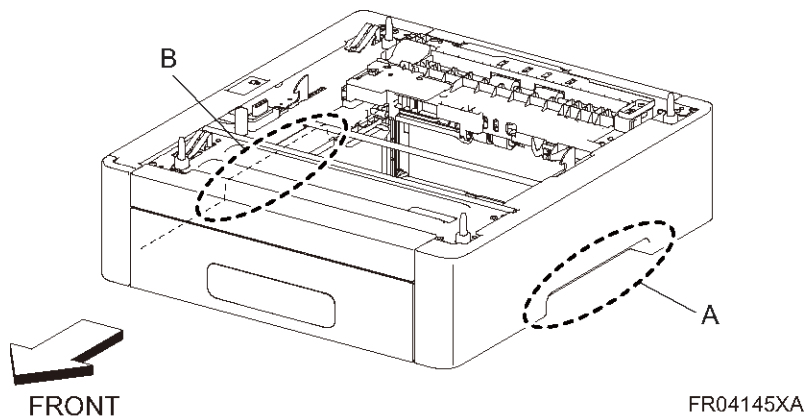
- Paper Feed Unit (*Paper Feed Unit*)

[Removal]

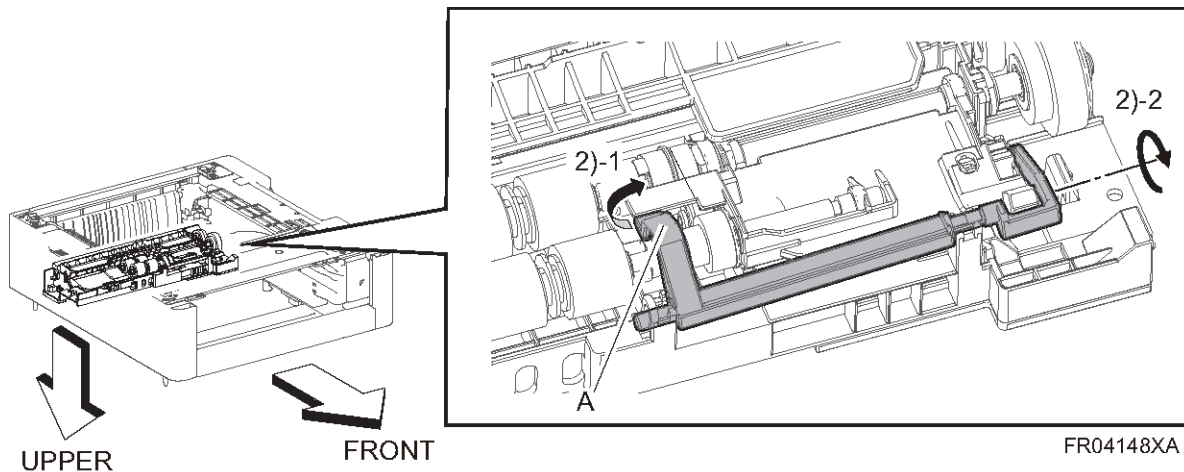
1. Reverse the Paper Feed Unit (PFU).

Note

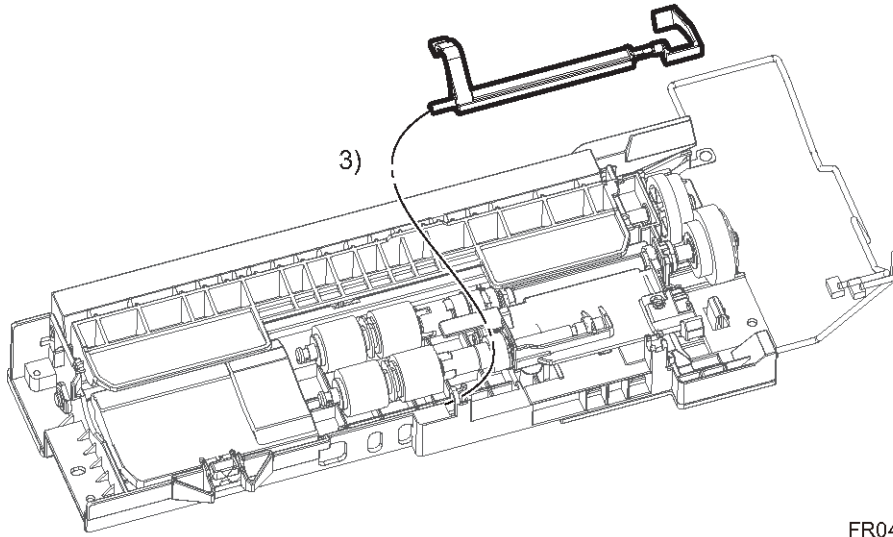
- When reversing the PFU, hold the position A and B.



2. Release the portion [A] of the Paper End Feeler in the direction of the arrow to rotate Paper End Feeler.



3. Remove the Paper End Feeler.



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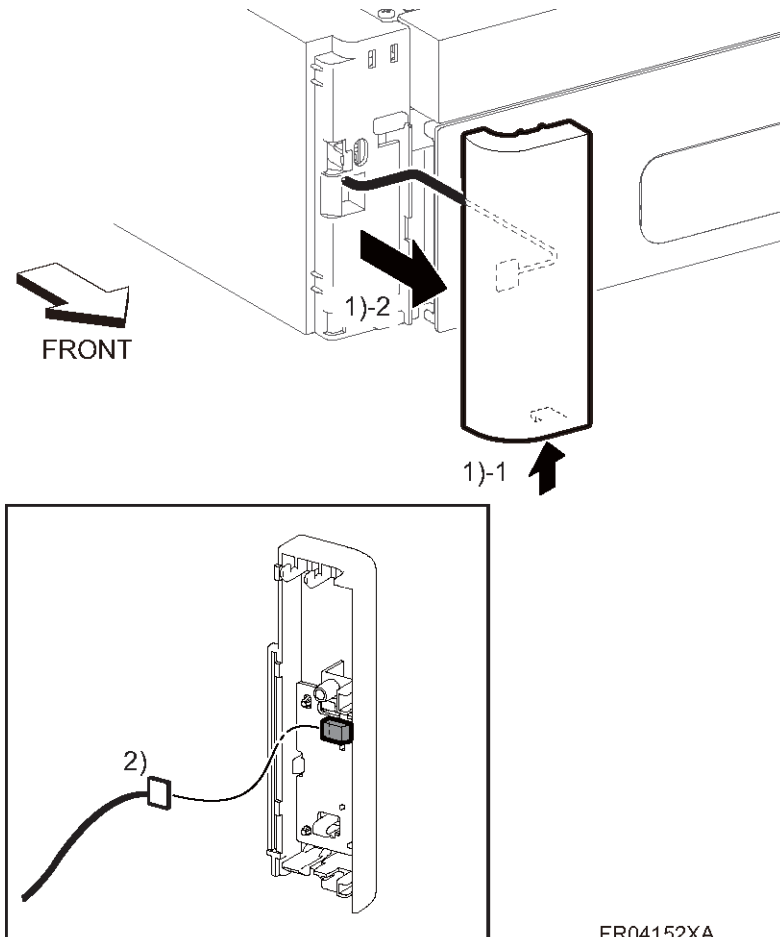
1.6 PAPER SIZE SWITCH (SW30)

[Before removal]

- Paper Feed Unit (*Paper Feed Unit*)
- This board is not used in this machine.

[Removal]

1. Push the hook at the bottom, and release the Front Left Cover.
2. Disengage the connector (P/J814).



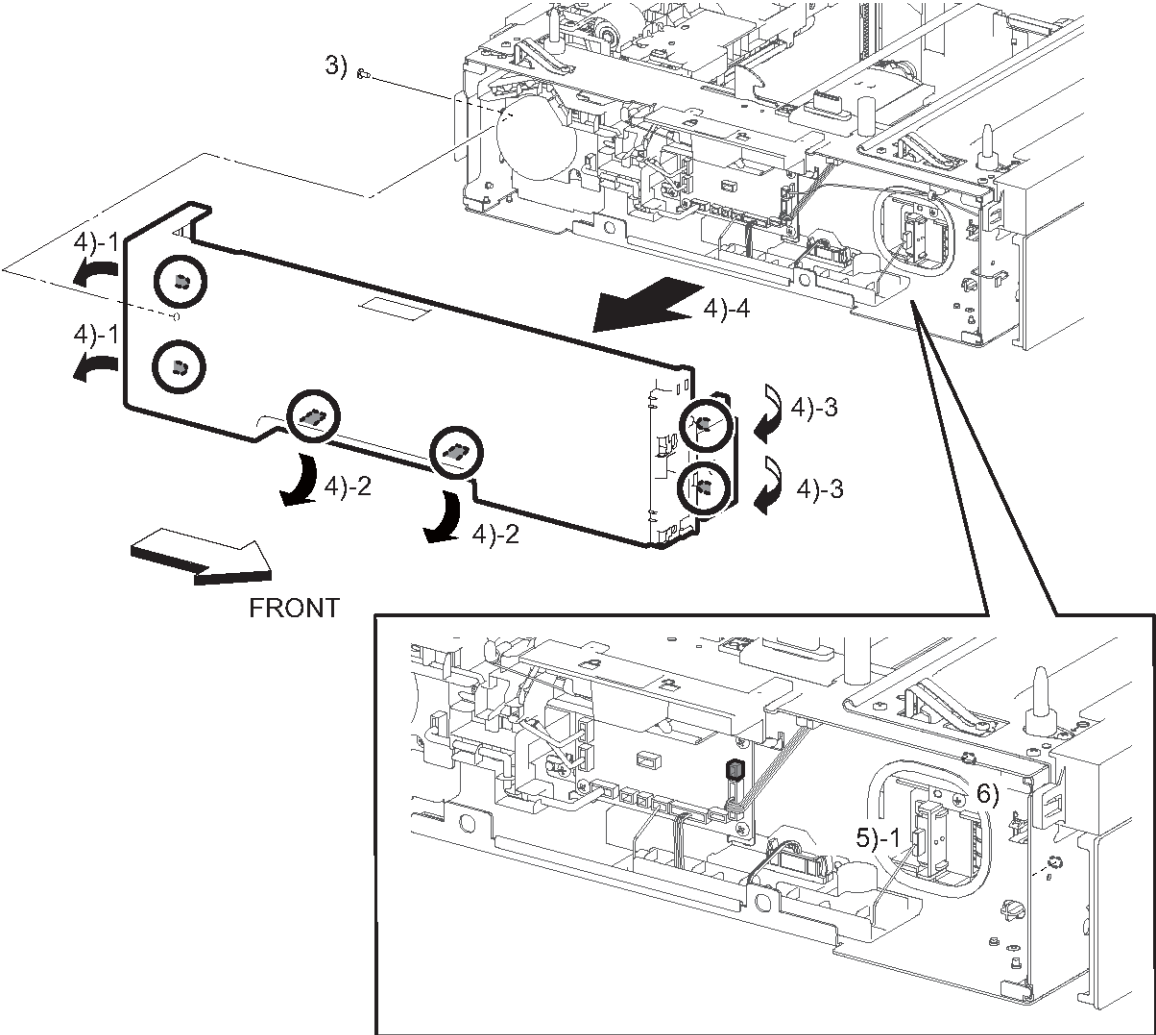
FR04152XA

Note

- This board is not used in this machine.

3. Remove one screw (Silver, M3X6mm).
4. Release two bosses at the rear side, two hooks at the bottom, and two bosses at the front side in order, and remove the Left Cover.
5. Disengage the connector (P/J812).

6. Remove one screw (Silver, M3X6mm) to remove the Paper Size Switch (SW30).



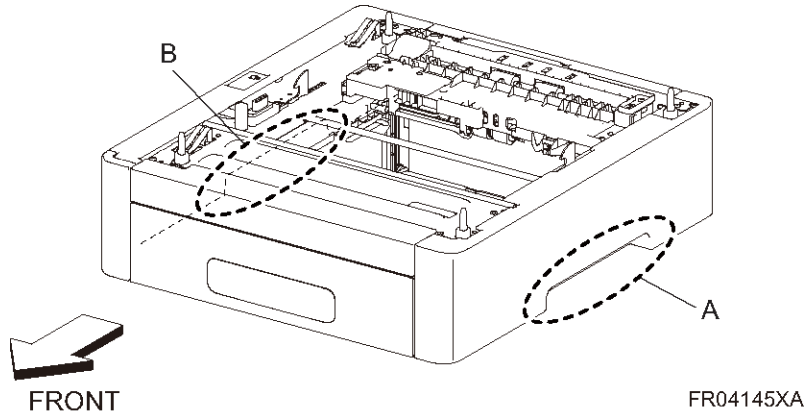
FR04416XA

1.7 RUBBER FOOT

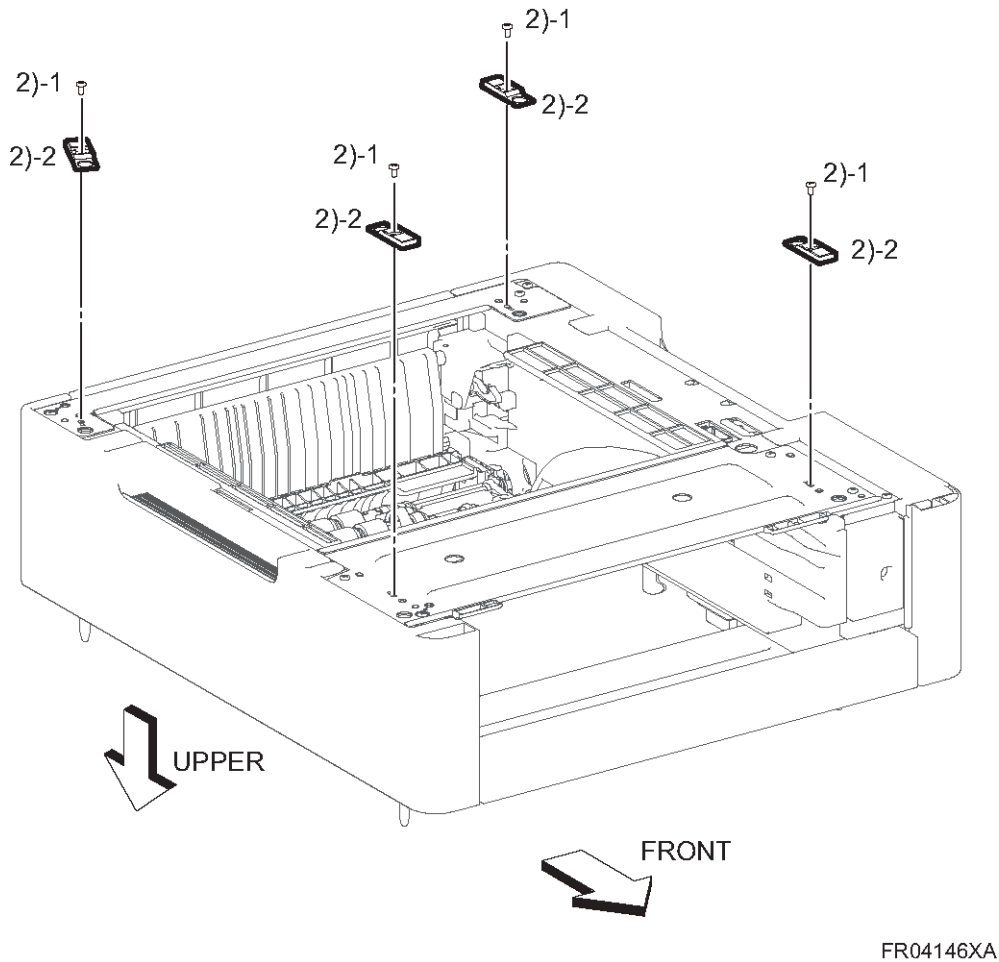
1. Remove the Paper Feed Unit (PFU) from the main machine.
2. Reverse the PFU.

Note

- When reversing the PFU, hold the position A and B.

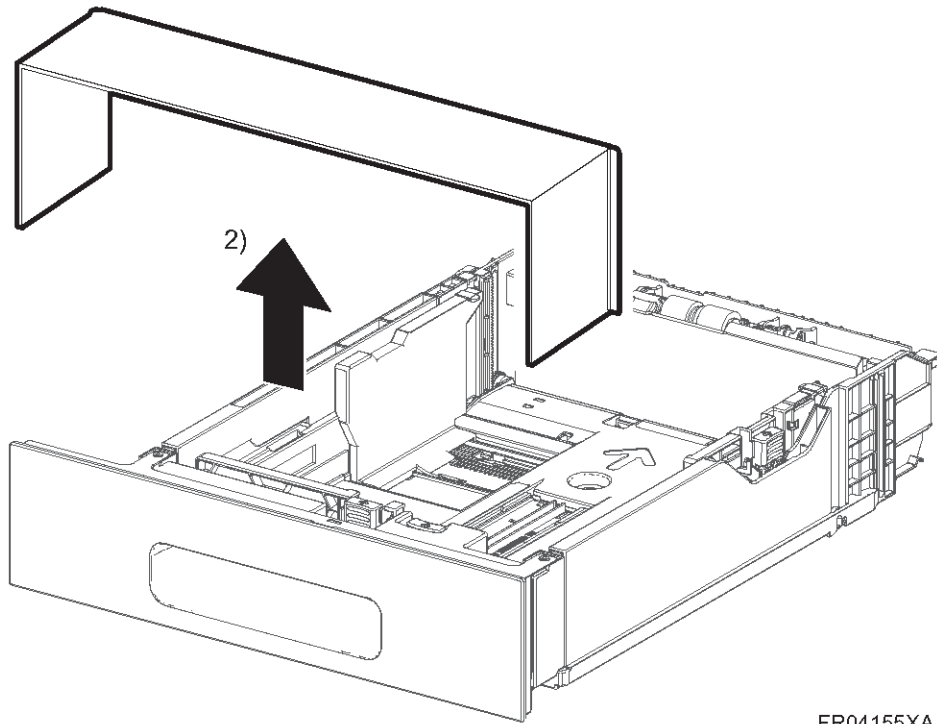


3. Remove four screws (Silver, M3X6mm) fixing the Rubber Foot.



1.8 DUST COVER

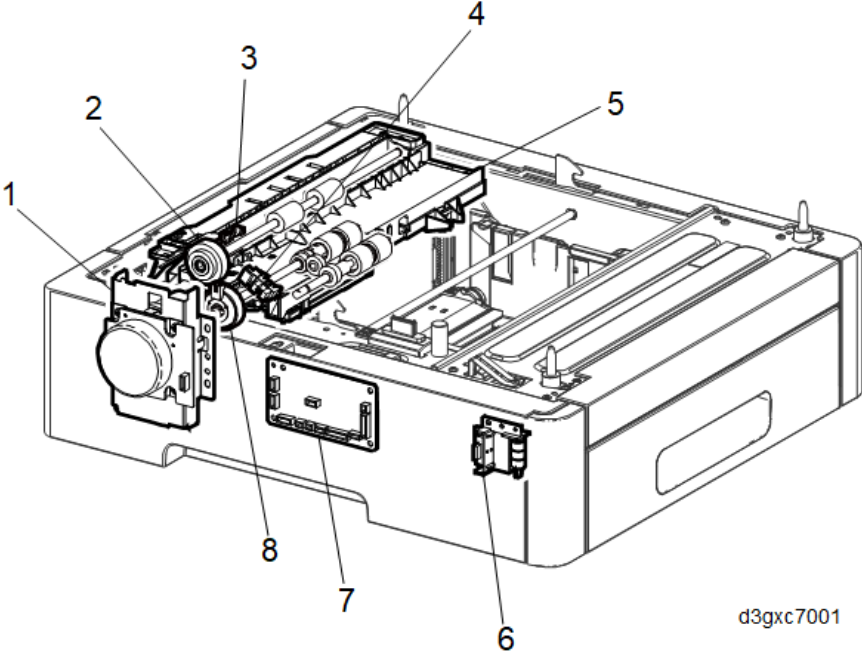
1. Pull out the Paper Tray.
2. Remove the Dust Cover.



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2. DETAILED DESCRIPTIONS

2.1 COMPONENT LAYOUT



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No.	Parts name
1	PFU Feed Motor (M30)
2	PFU Transport Clutch (M31)
3	PFU Transport Sensor (S31)
4	PFU Paper End Sensor (S30)
5	Paper Feeder Assy
6	PFU Paper Size Switch (SW30)
7	PFU Controller Board (PCB30)
8	PFU Feed Clutch (CL30)

2.2 FUNCTIONS OF MAJOR COMPONENTS

- **PFU Controller Board (PCB30)**
Controls each component in the optional tray.
- **PFU Paper Size Switch (SW30)**
Detects a paper size, and presence or absence of paper in the tray.
- **PFU Feed Motor (M30)**
The DC motor that drives each roll of the paper feed section in the optional tray.
- **Paper Feeder Assy**
The Paper Feeder Unit mainly consists of the following components.
 - PFU Transport Clutch (CL31)
Transfers the drive from the PFU Feed Motor (M30) to the Paper Transport Roller.
 - PFU Paper End Sensor (S30)
By changes of the actuator, detects presence or absence in the paper cassette.
 - PFU Feed Clutch (CL30)
Transfers the drive from the PFU Feed Motor (M30) to the Paper Feed Roller.
 - PFU Paper Transport Sensor (S31)
Detects that a lead edge of a sheet is reached to the registration section.

D3GY
LCIT PB1190

Ver 1.0

Latest Release: December, 2018
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LCIT PB1190 (D3GY)

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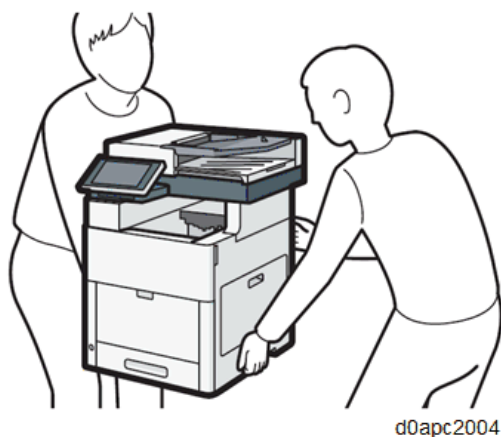
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1. REPLACEMENT AND ADJUSTMENT

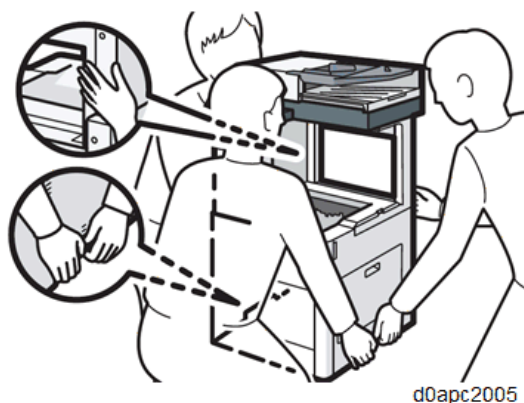
1.1 LCT

★ Important

- Turn the machine off.
- Close the front cover, bypass tray, and all other covers.
- The center of gravity of the machine is at the rear and may tip easily because the rear is much heavier than the front. Carefully lift the main machine by the inset grips on the sides, and then keep it horizontal as you move it.



For the IM C530F (Tall model), at least three people are needed to lift the main machine.



- Move the main machine carefully while keeping it.

1. Slide the lever and release two hooks.

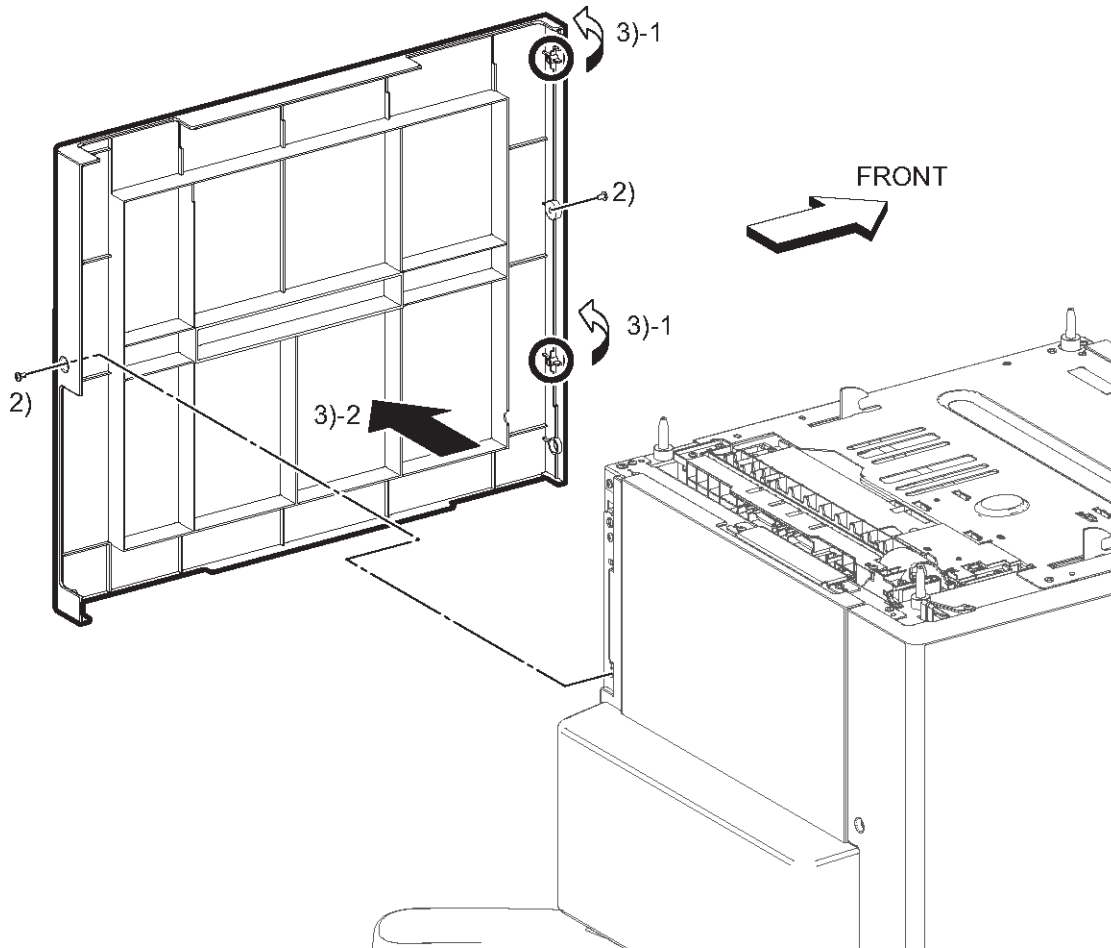
1.2 RIGHT COVER

[Before removal]

- LCT (*LCT*)

[Removal]

1. Open the tray.
2. Remove two screws (Silver, M3X6mm).
3. Release two hooks, and remove the Right Cover.



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1.3 FRONT LEFT COVER

[Before removal]

- LCT (*LCT*)

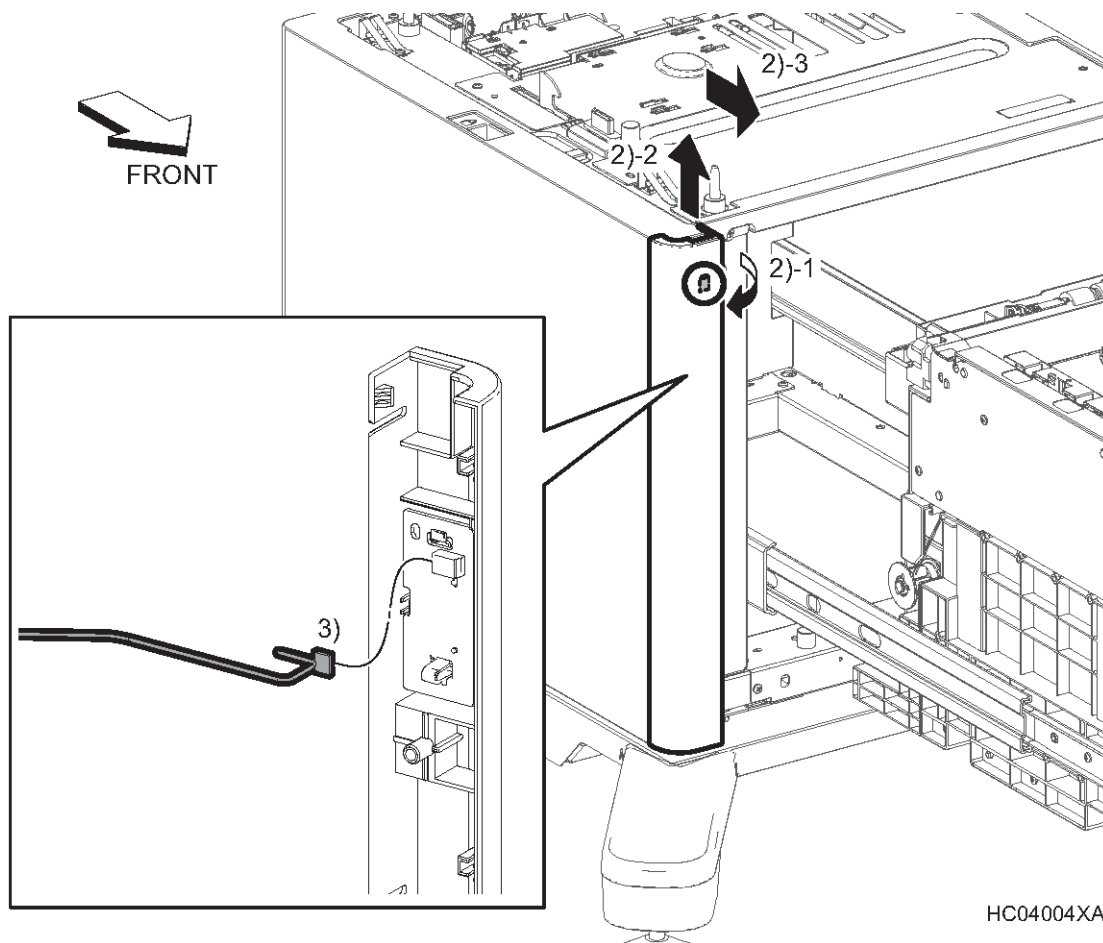
[Removal]

1. Open the tray.
2. Release one hook to release the Front Left Cover

Note

- When releasing the Front Left Cover, be careful not to cut off the harness.

3. Disengage the connector (P/J814).



Note

- This board is not used in this machine.

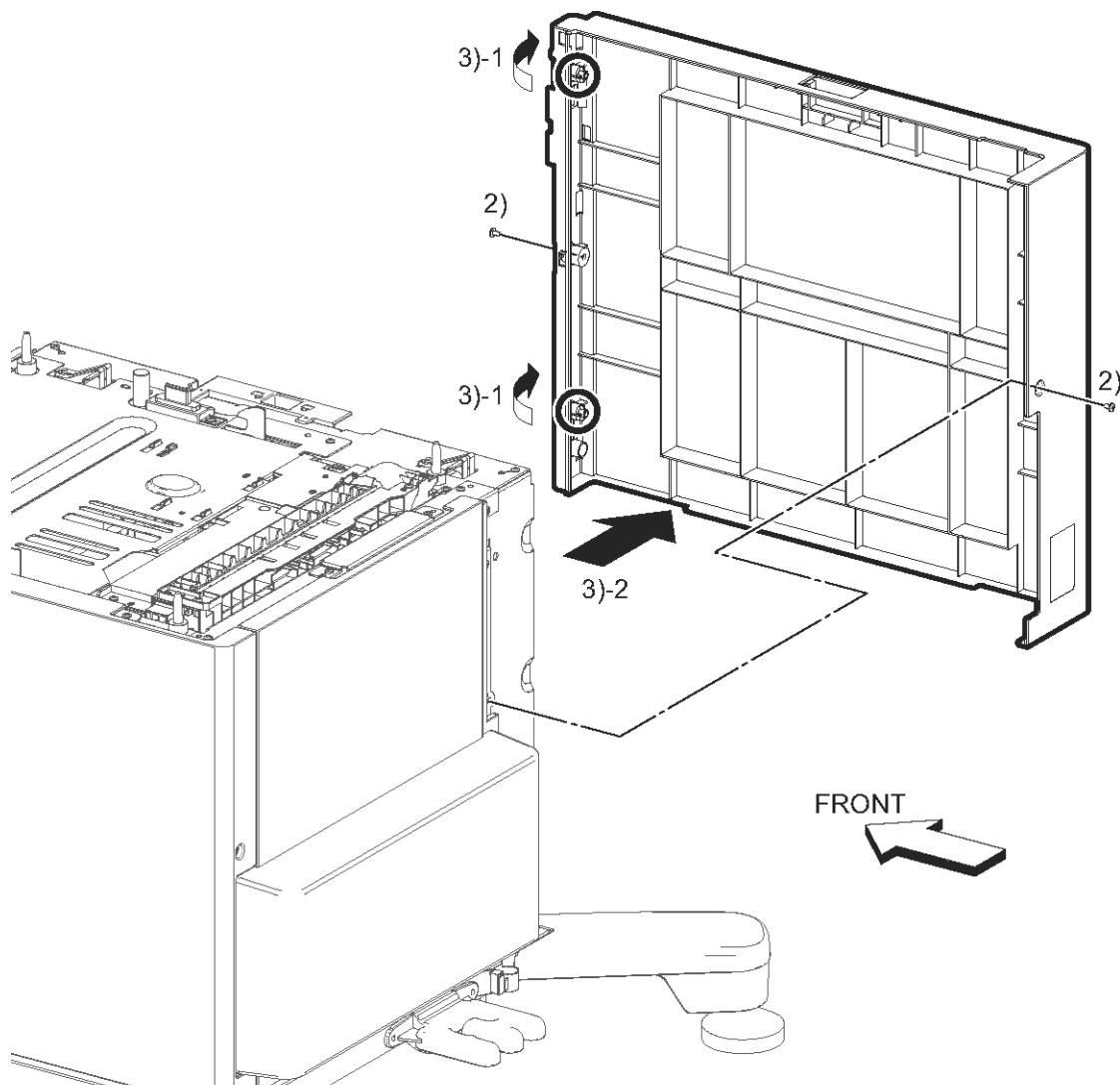
1.4 LEFT COVER

[Before removal]

- LCT (*LCT*)

[Removal]

1. Remove the Front Left Cover. (*Front Left Cover*)
2. Remove two screws (Silver, M3X6mm).
3. Release two hooks, and remove the Left Cover.



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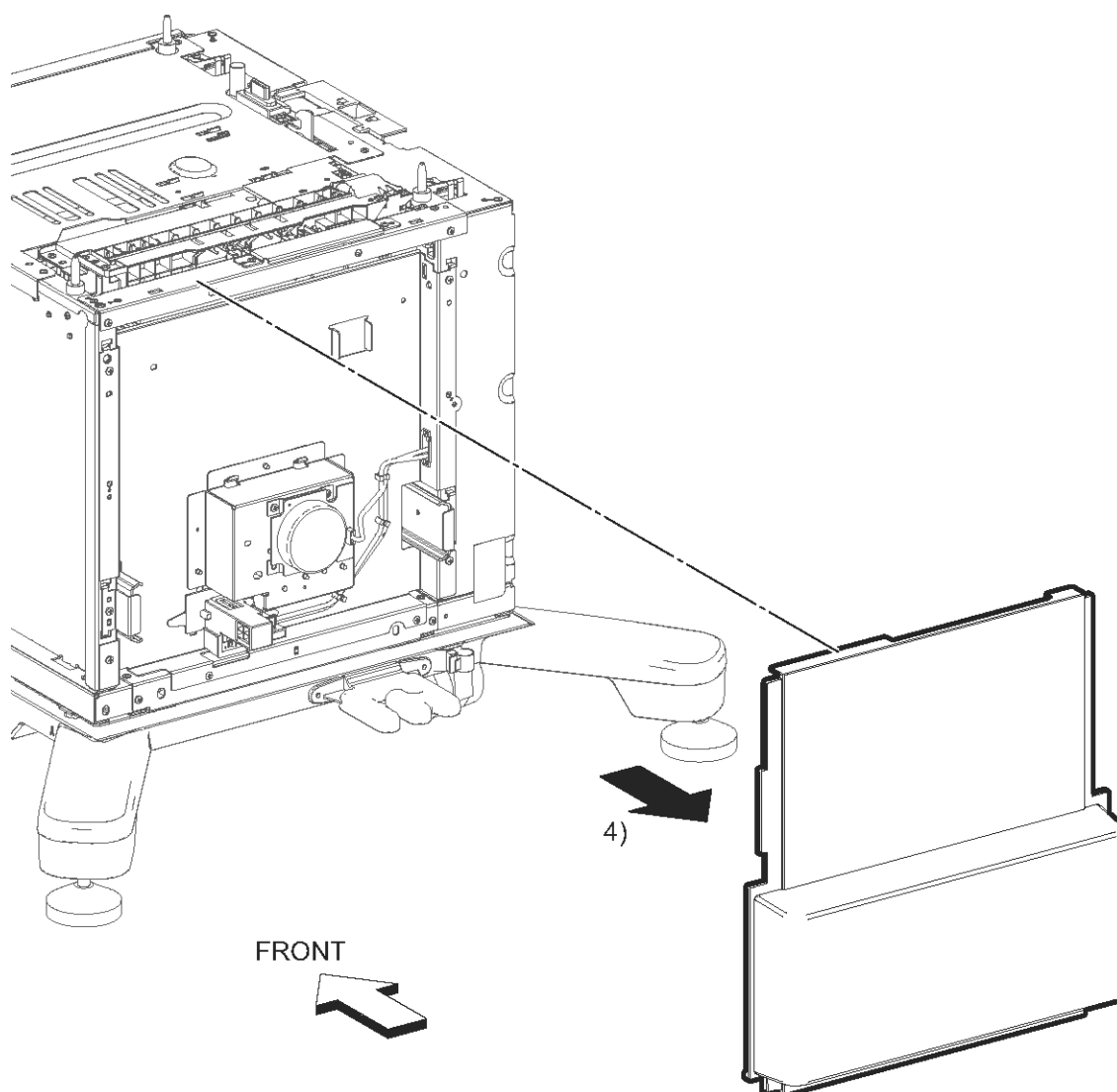
1.5 REAR COVER

[Before removal]

- LCT (*LCT*)

[Removal]

1. Remove the Front Left Cover. (*Front Left Cover*)
2. Remove the Left Cover. (*Left Cover*)
3. Remove the Right Cover. (*Right Cover*)
4. Remove the Rear Cover.



HC04006XA

1.6 LCT FEEDER ASSY

[Before removal]

- LCT (*LCT*)

[Removal]

1. Remove the Front Left Cover. (*Front Left Cover*)
2. Remove the Left Cover. (*Left Cover*)
3. Remove the Right Cover. (*Right Cover*)
4. Remove the Rear Cover. (*Rear Cover*)
5. Release the spring from the harness guide.

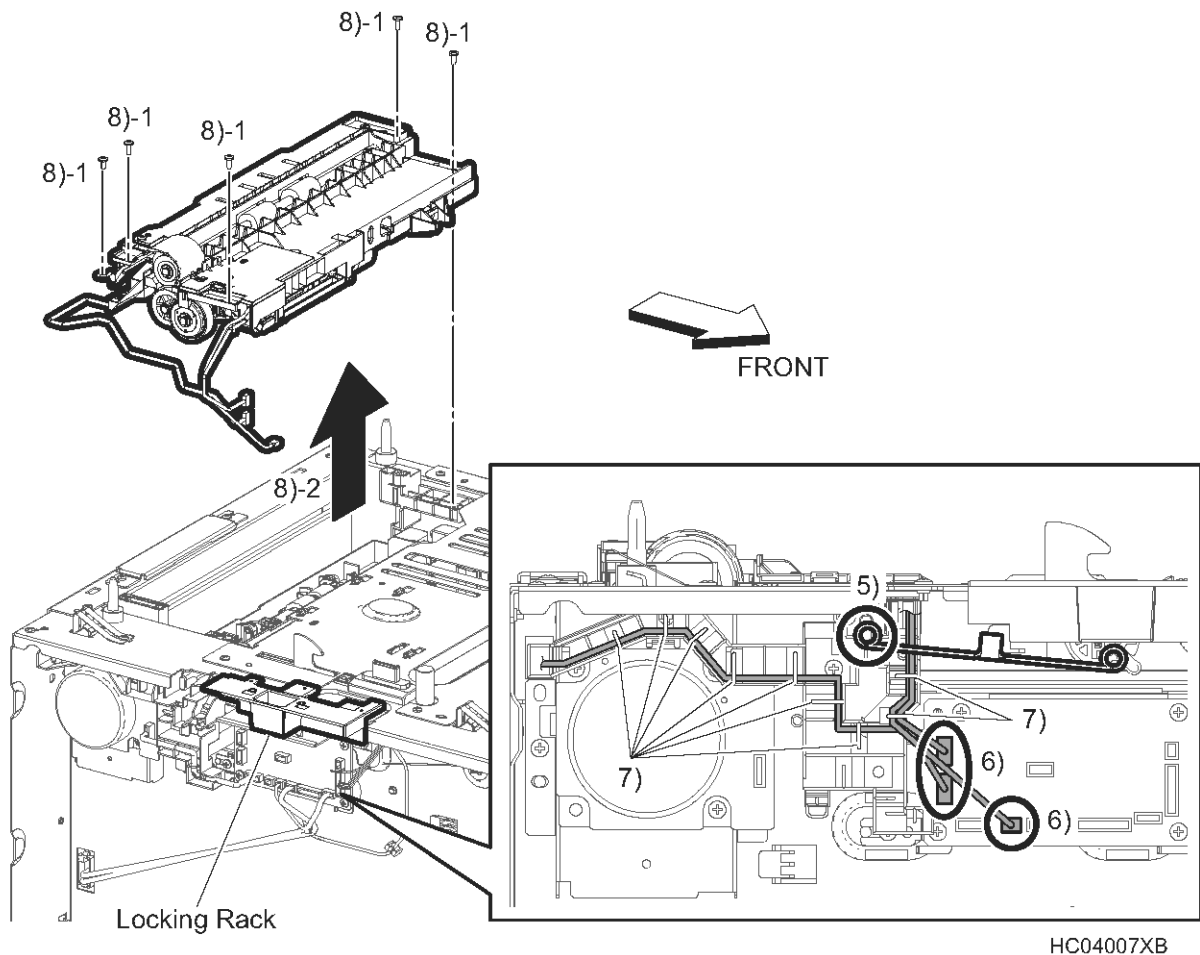
Note

- After releasing the spring, be careful not fall the rack.

6. Disengage the connectors (P/J805, P/J808, P/J822).
7. Release the harnesses from the harness guide.
8. Remove four screws (Silver, tapping, M3X8mm) and one screw (Silver, M3X6mm), and remove the LCT Feeder Assy while pulling out the harnesses.

Note

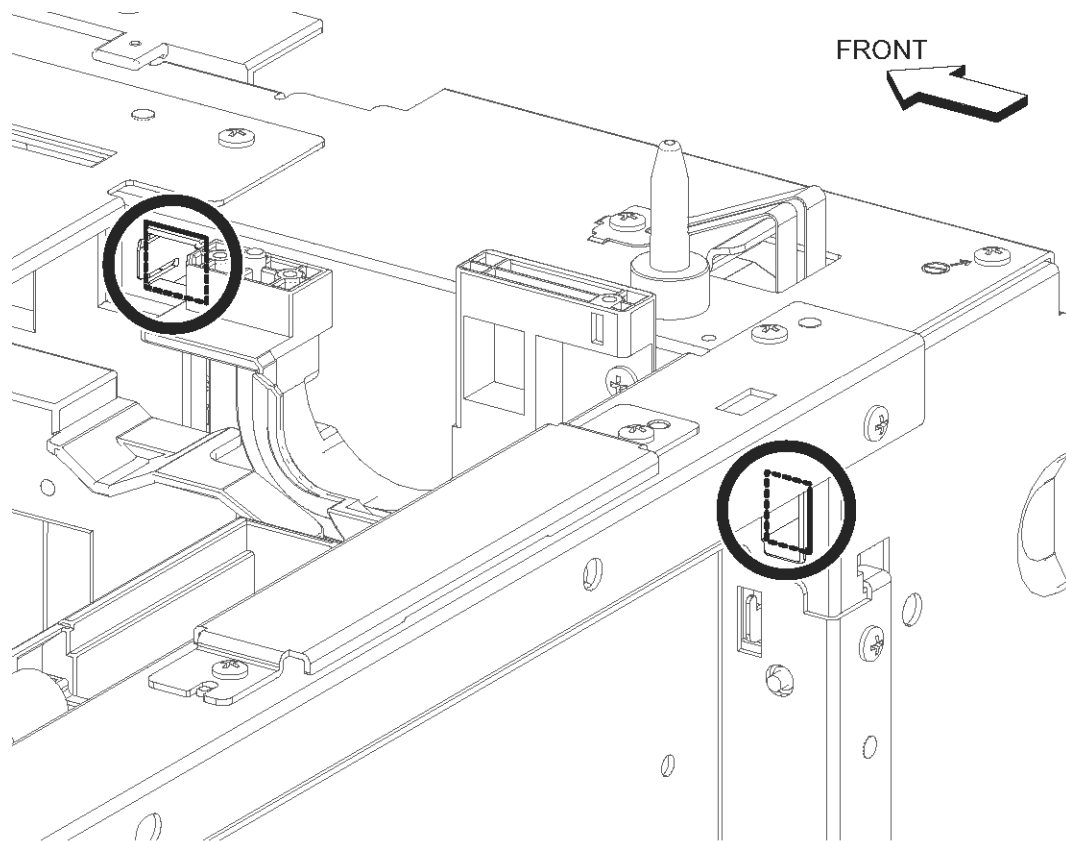
- When removing the LCT Feeder Assy, be sure to remove the screw fixing the earth plate of the LCT Feeder Assy. Or, the earth plate could be broken during the removal of the LCT Feeder Assy.



Note

- When installing the harnesses to the GUIDE HARNESS, install them as shown in the illustration above.
- When installing the LCT Feeder Assy, insert the harnesses of the LCT Feeder Assy into two

holes as shown in the illustration.



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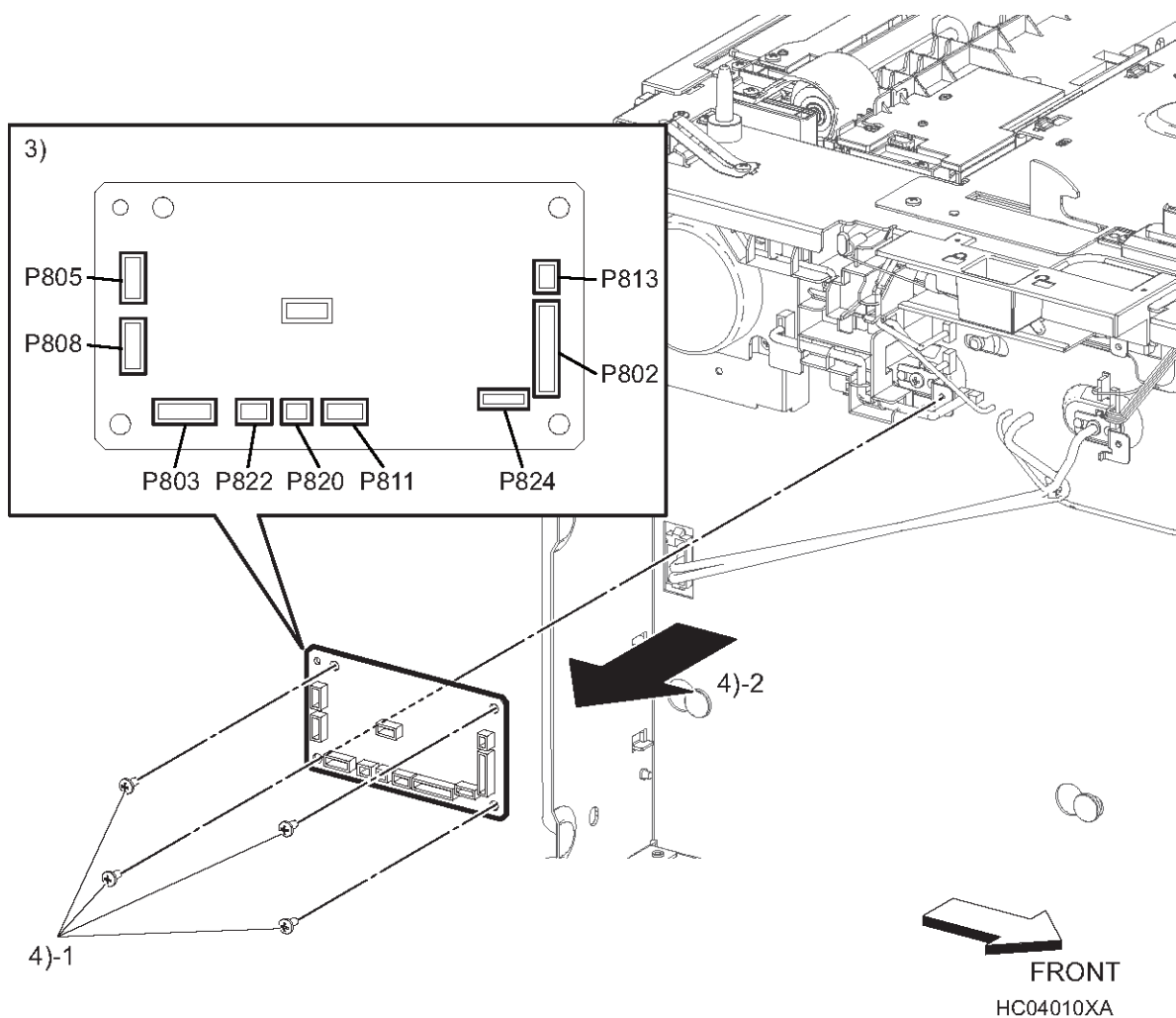
1.7 LCT CONTROLLER BOARD (PCB40)

[Before removal]

- LCT (*LCT*)

[Removal]

1. Remove the Front Left Cover. (*Front Left Cover*)
2. Remove the Left Cover. (*Left Cover*)
3. Disengage the connectors (P/J802, P/J803, P/J805, P/J808, P/J811, P/J813, P/J820, P/J822, P/J824).
4. Remove four screws (Silver, M3X6mm), and remove the LCT Controller Board (PCB40).



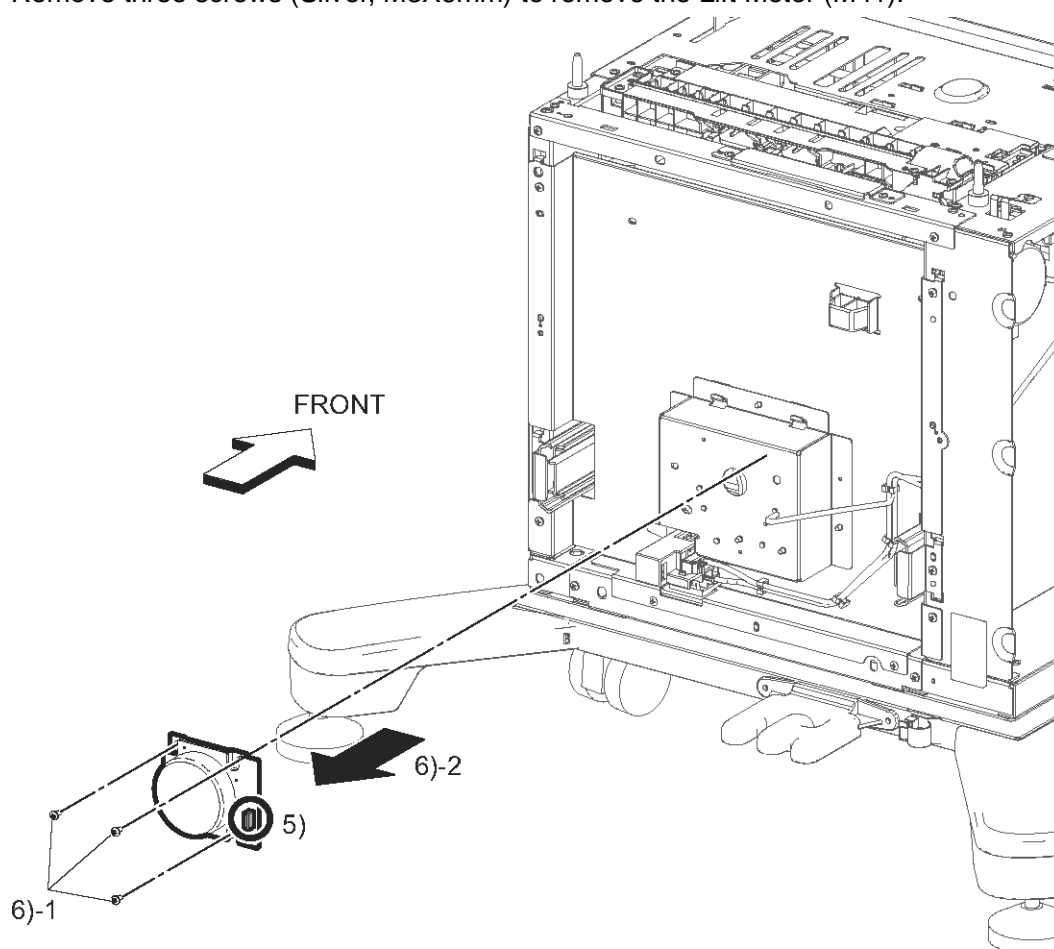
1.8 LIFT MOTOR (M41)

[Before removal]

- LCT (*LCT*)

[Removal]

1. Remove the Front Left Cover. (*Front Left Cover*)
2. Remove the Left Cover. (*Left Cover*)
3. Remove the Right Cover. (*Right Cover*)
4. Remove the Rear Cover. (*Rear Cover*)
5. Disengage the connector (P/J821).
6. Remove three screws (Silver, M3X6mm) to remove the Lift Motor (M41).



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1.9 LCT FEED MOTOR (M40)

[Before removal]

- LCT (*LCT*)

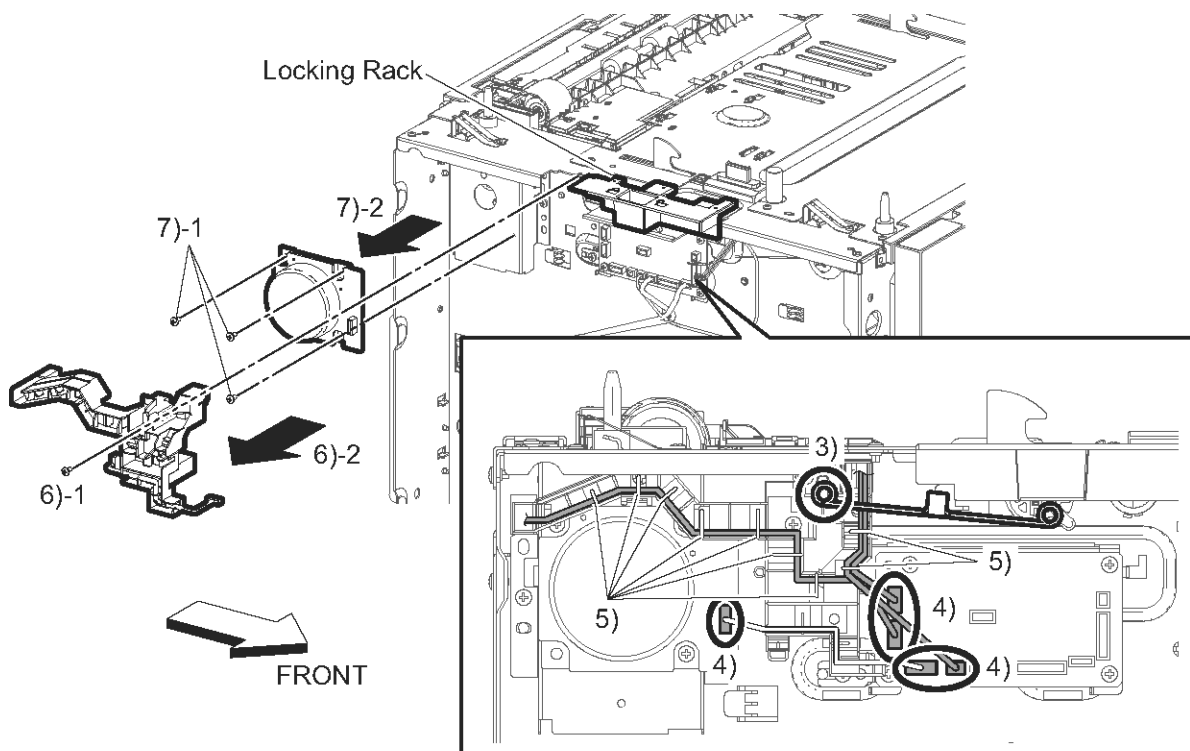
[Removal]

1. Remove the Front Left Cover. (*Front Left Cover*)
2. Remove the Left Cover. (*Left Cover*)
3. Release the spring from the harness guide.

↓ Note

- After releasing the spring, be careful not fall the rack.

4. Disengage the connectors (P/J803, P/J804, P/J805, P/J808, P/J822).
5. Release the harnesses in grey in the illustration.
6. Remove one screw (Silver, M3X6mm), and release two hooks to remove the harness guide.
7. Remove three screws (Silver, M3X6mm), and remove the LCT Feed Motor.



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↓ Note

- When installing the harnesses to the harness guide, install them as shown above.

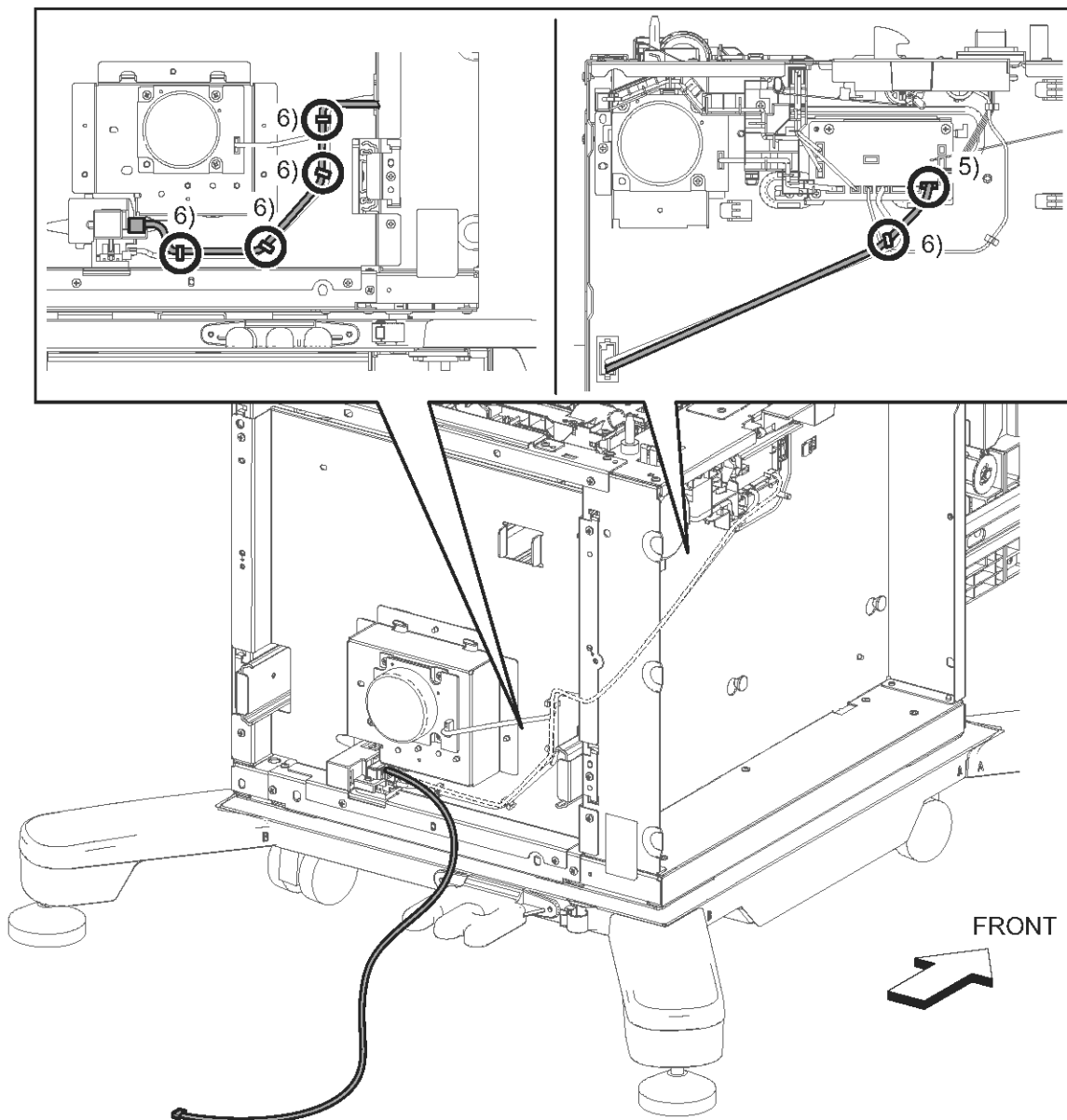
1.10 LCT INTERLOCK SWITCH (SW41)

[Before removal]

- LCT (*LCT*)

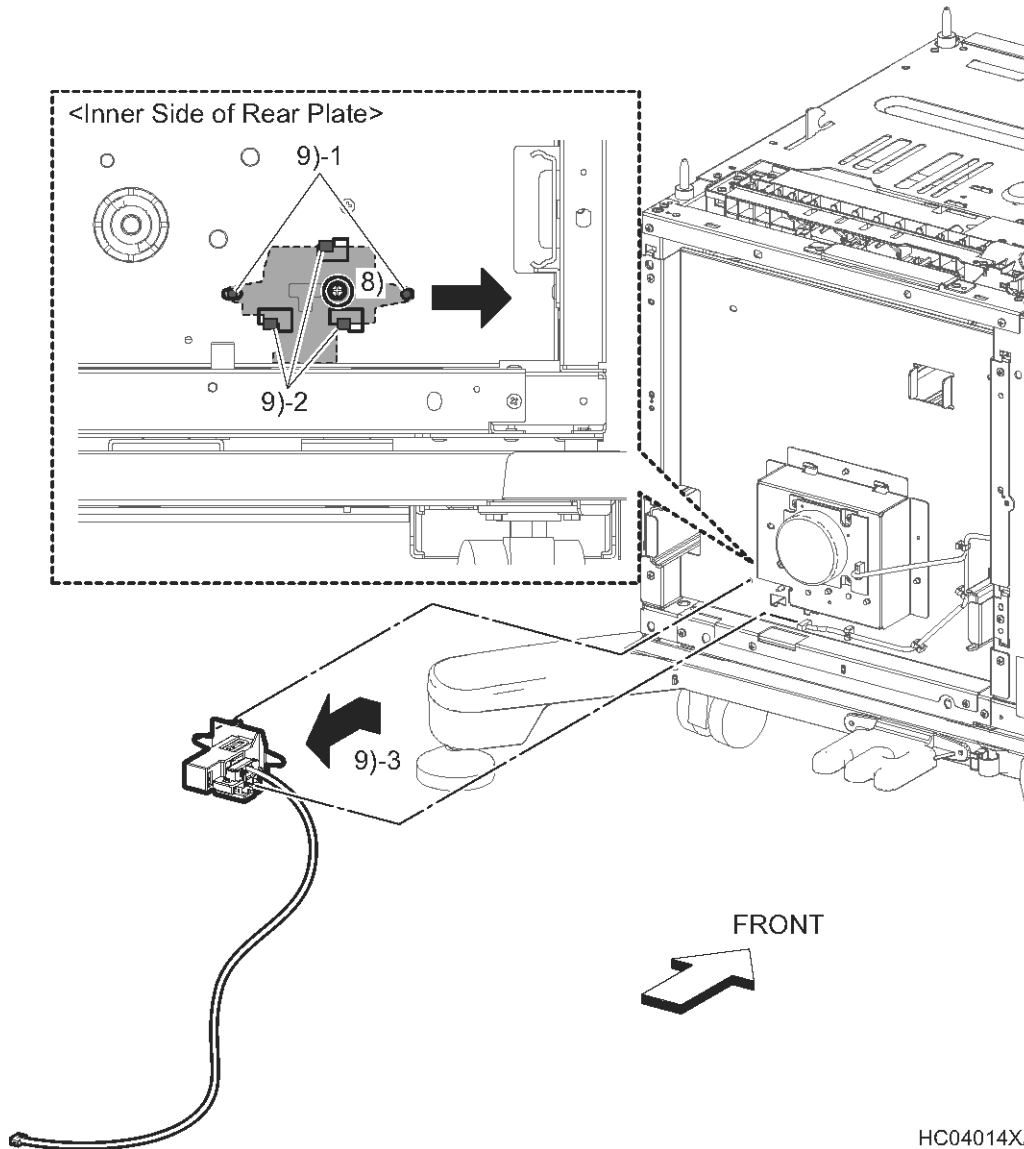
[Removal]

1. Remove the Front Left Cover. (*Front Left Cover*)
2. Remove the Left Cover. (*Left Cover*)
3. Remove the Right Cover. (*Right Cover*)
4. Remove the Rear Cover. (*Rear Cover*)
5. Disengage the connector (P/J824).
6. Release one clamp on the left side and four clamps one the rear side, and release the harness of the LCT Interlock Switch (SW41).



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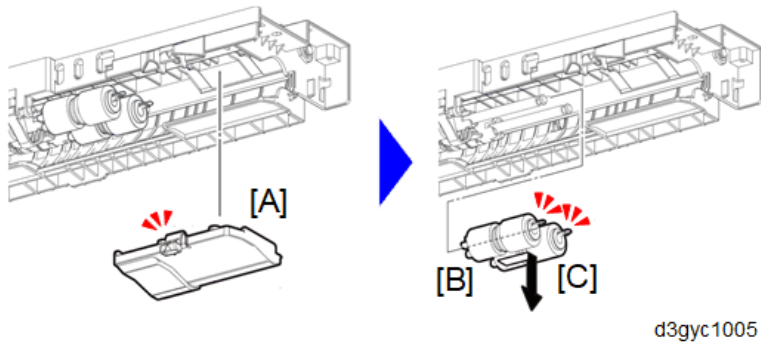
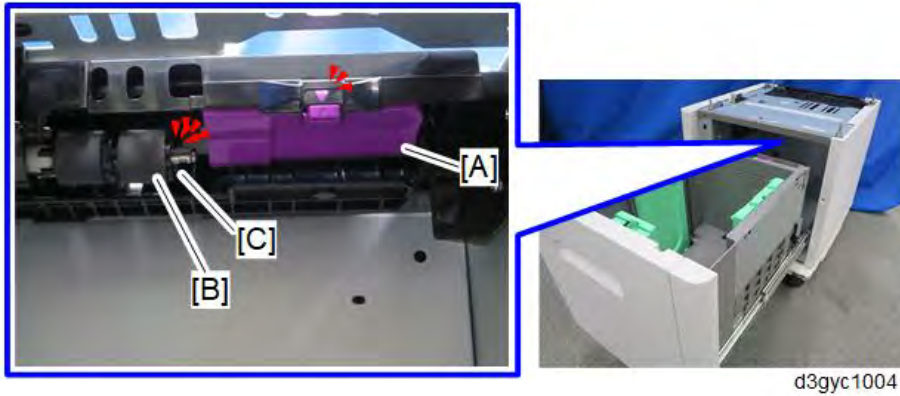
7. Disengage the connector (P/J812).
8. Remove one screw (Silver, tapping, M3X8mm) from the inner side of the rear plate.
9. Release two bosses, and then slide the LCT Interlock Switch with the bracket in the direction of the arrow to release three hooks. Remove the LCT Interlock Switch (SW41).



HC04014XA

1.11 PAPER FEED ROLLER ASSY

1. Pull out the tray.
2. Release the hook to remove the Upper Guide Plate [A].
3. Release the hooks to remove the Paper Feed Roller Assy [B] [C].

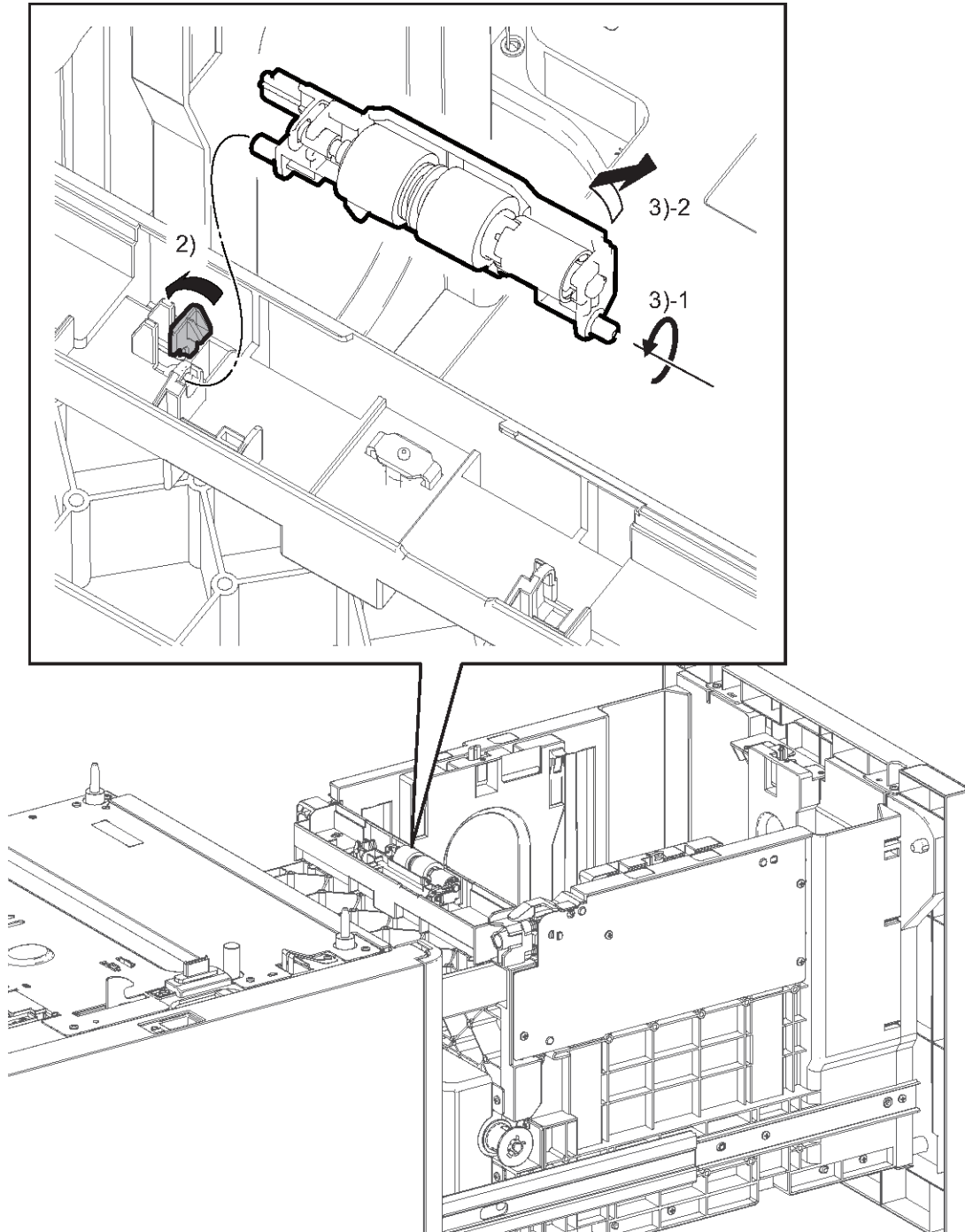


Note

- Replace the rollers at same time.

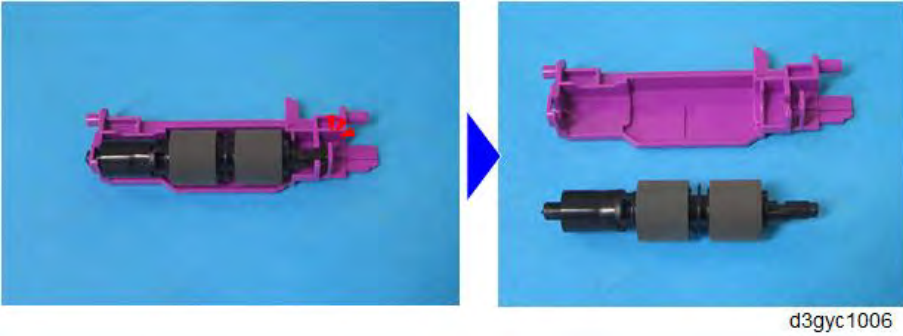
1.12 SEPARATION ROLLER ASSY

1. Pull out the tray.
2. Release the hook.
3. Rotate and remove the Separation Roller Assy in the direction of the arrow.



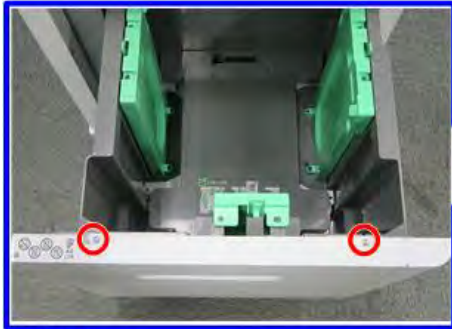
HC04019XA


4. Release the hook to separate the holder and Separation Roller.

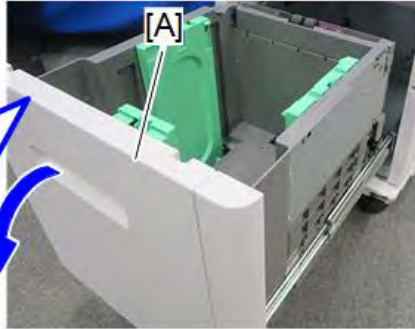


1.13 FRONT COVER

1. Pull out the tray.
2. Remove two screws, and then pull down the Front Cover [A] to remove it.



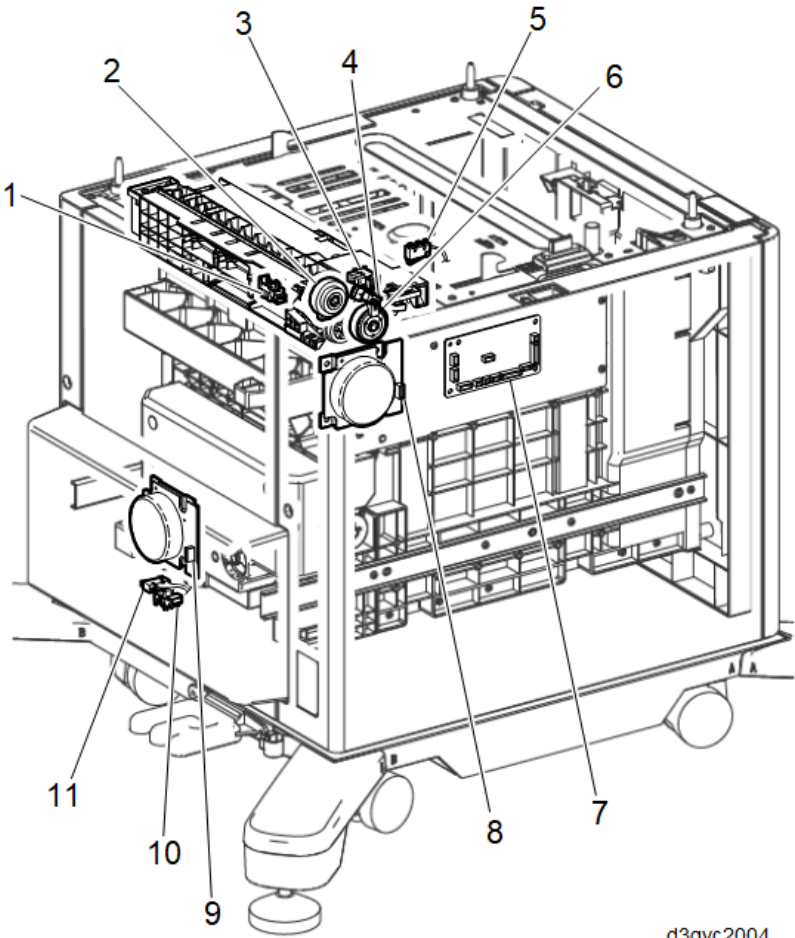
 x2



d3gyc1003

2. DETAILED DESCRIPTIONS

2.1 COMPONENT LAYOUT



d3gyc2004

No.	Part name	No.	Part name
1	LCT Transport Sensor (S41)	7	LCT Controller Board (PCB40)
2	LCT Transport Clutch (CL41)	8	LCT Feed Motor (M40)
3	Lift Up Sensor (S42)	9	Lift Motor (M41)
4	LCT Paper End Sensor (S40)	10	Tray Open Sensor (S43)
5	Tray Limit Switch (SW40)	11	LCT Interlock Switch (SW41)
6	LCT Feed Clutch (CL40)		

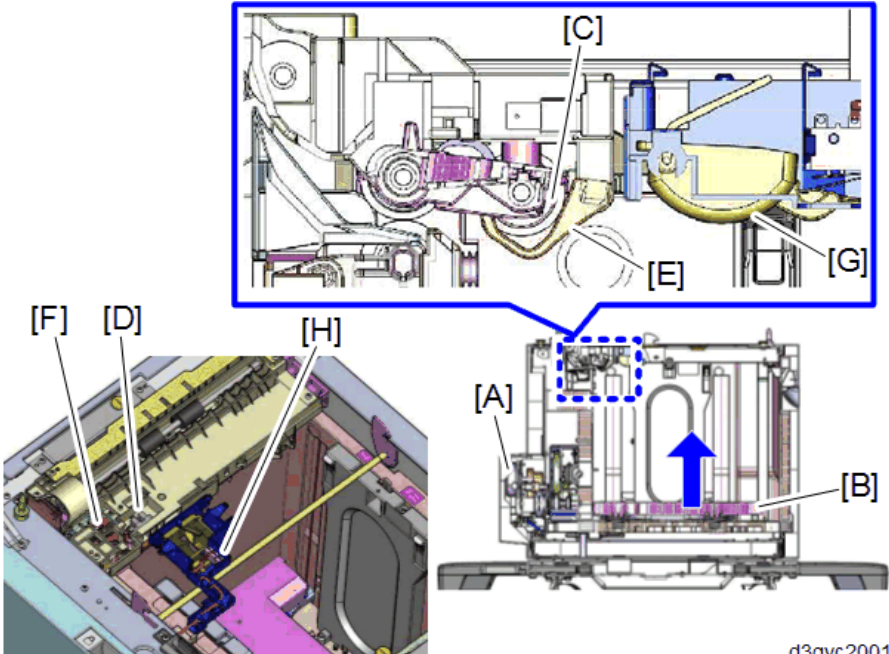
2.2 MECHANISM DETAILS

Basic Operation

1. After the tray is loaded and inserted into the unit, the Lift Motor (M41) [A] turns ON and starts to reel up the wires that raise the bottom plate [B].
2. The top of the stack on the rising bottom plate pushes up the pickup roller [C]. This switches the tray level sensor [D] ON. The unit determines that paper feed is ready and turns the Lift Motor (M41) OFF.
3. At the start of paper feed, the stack lowers (this also lowers the pickup roller arm slightly and switches the tray level sensor OFF). The Lift Motor (M41) switches ON, and then the bottom plate raises the stack to the print feed position. This operation repeats during paper feed.
4. After the last sheet of paper feeds from the tray, the paper end feeler [E] falls and activates the LCT Paper End Sensor (S40) [F] to signal paper out.

Bottom Plate Lift Limit Mechanism

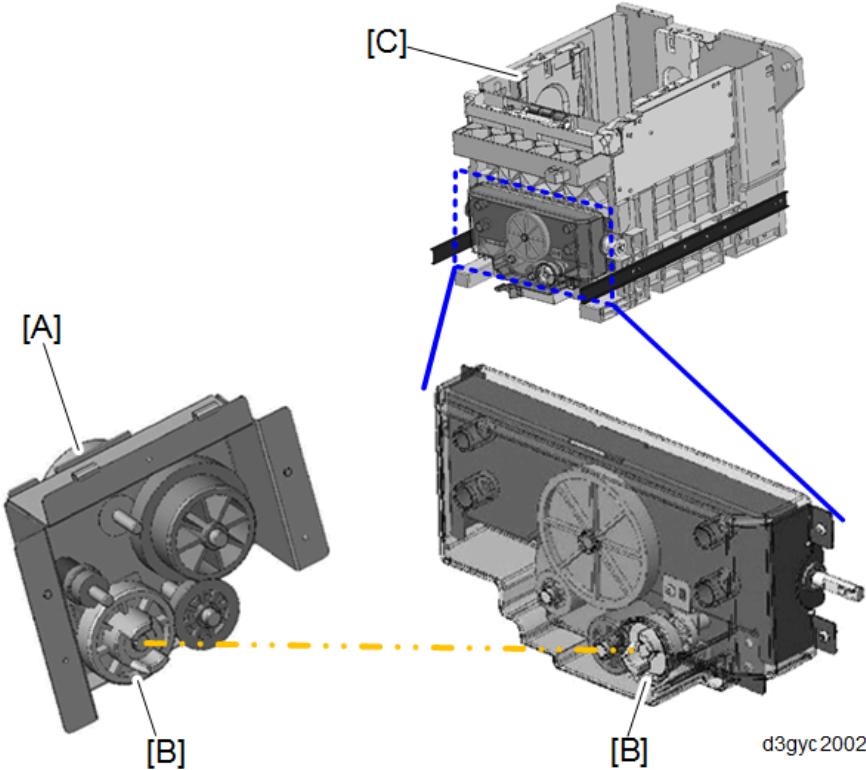
If the LCT Controller Board (PCB40) or the Tray Lift Up Sensor (S42) fails and cannot stop the Lift Motor (M41) when it is raising the stack to the paper feed position, the tray limit actuator [G] will trigger Tray Limit Switch (SW40) [H] which cuts off power to the Lift Motor (M41). This protects the Lift Motor (M41), lift wires, and other moving parts from damage in case of component failure.



d3gyc2001

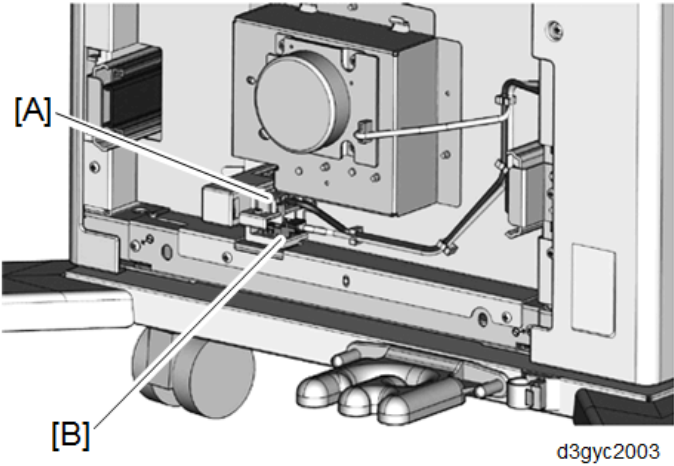
Bottom Plate Lift Mechanism

The Lift Motor (M41) [A] drives coupling [B] inserted into the tray [C] which engages and drives the tray coupling at the upstream side of the tray to raise and lower the bottom plate. Pulleys on both sides of the tray operate the four wires that raise the bottom plate to the paper feed position. Removing the tray from the LCIT disengages the couplings and the tray lowers.



Tray Interlock Switch Mechanism

Every time the tray is removed, the LCT Interlock Switch (SW41) [A] at the back of the tray cuts the power supply to the Lift Motor (M41). Also, the Tray Open Sensor (S43) [B] detects whether the tray is in or out of the LCT.



D3H0
Internal Finisher SR1020

Ver 1.0

Latest Release: December, 2018
Initial Release: December, 2018
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Internal Finisher SR1020 (D3H0)

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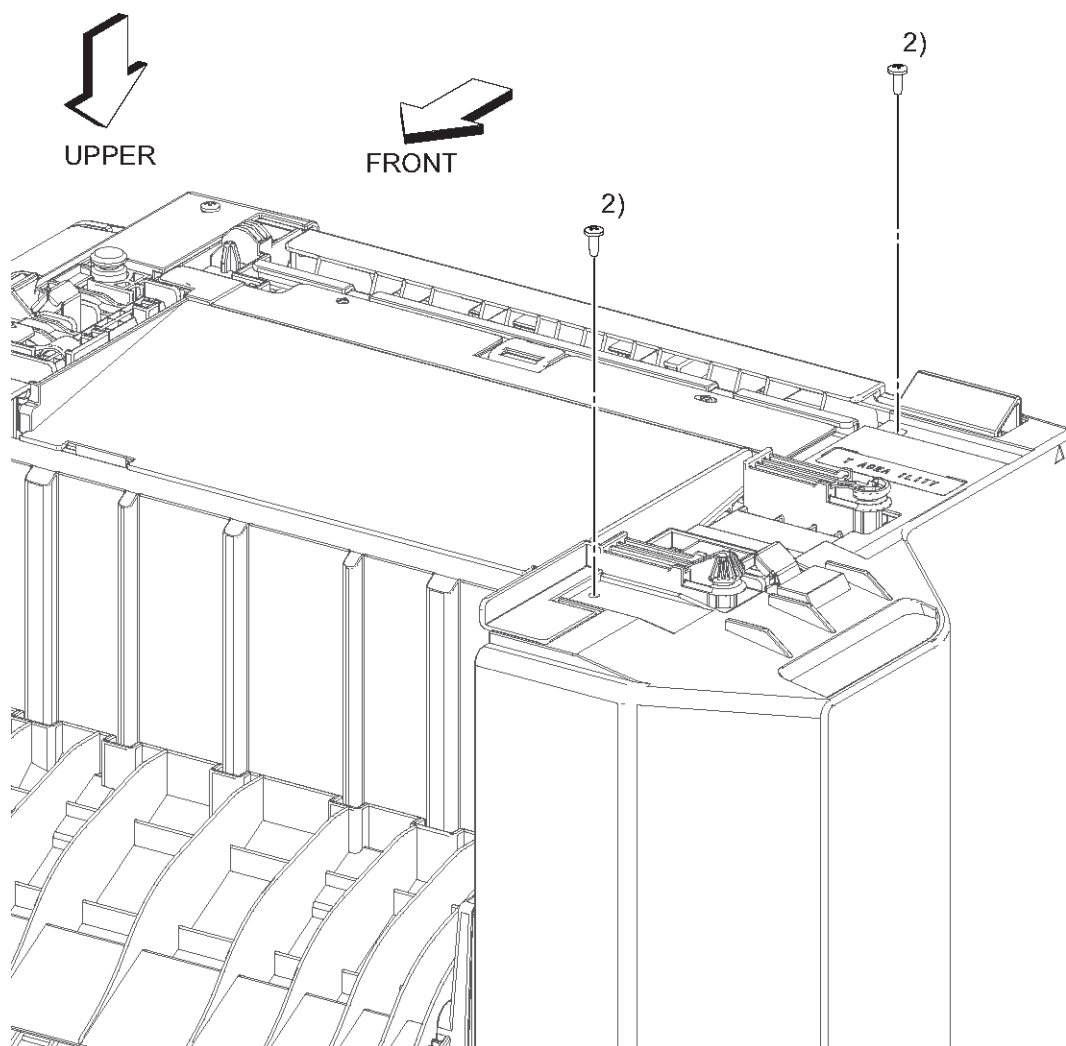
1. REPLACEMENT AND ADJUSTMENT

1.1 LEFT COVER

⚠ CAUTION

- When reversing the Finisher, be careful not to fall the Finisher on the floor.

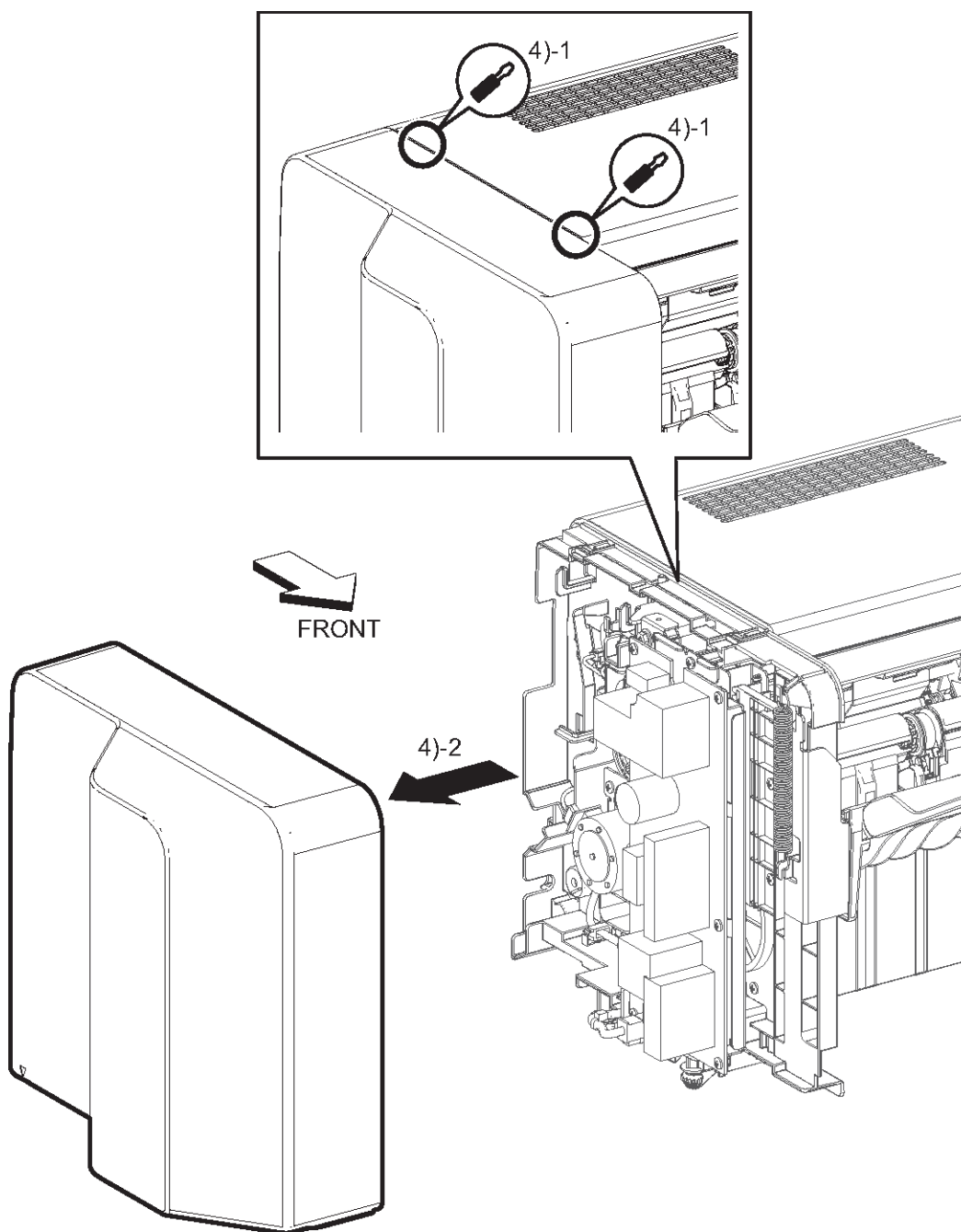
1. Reverse the Finisher as shown in the illustration.



FI04003XA

3. Reverse the Finisher as shown in the illustration.

4. Insert the flat screwdriver to release two hooks, and remove the Left Cover.



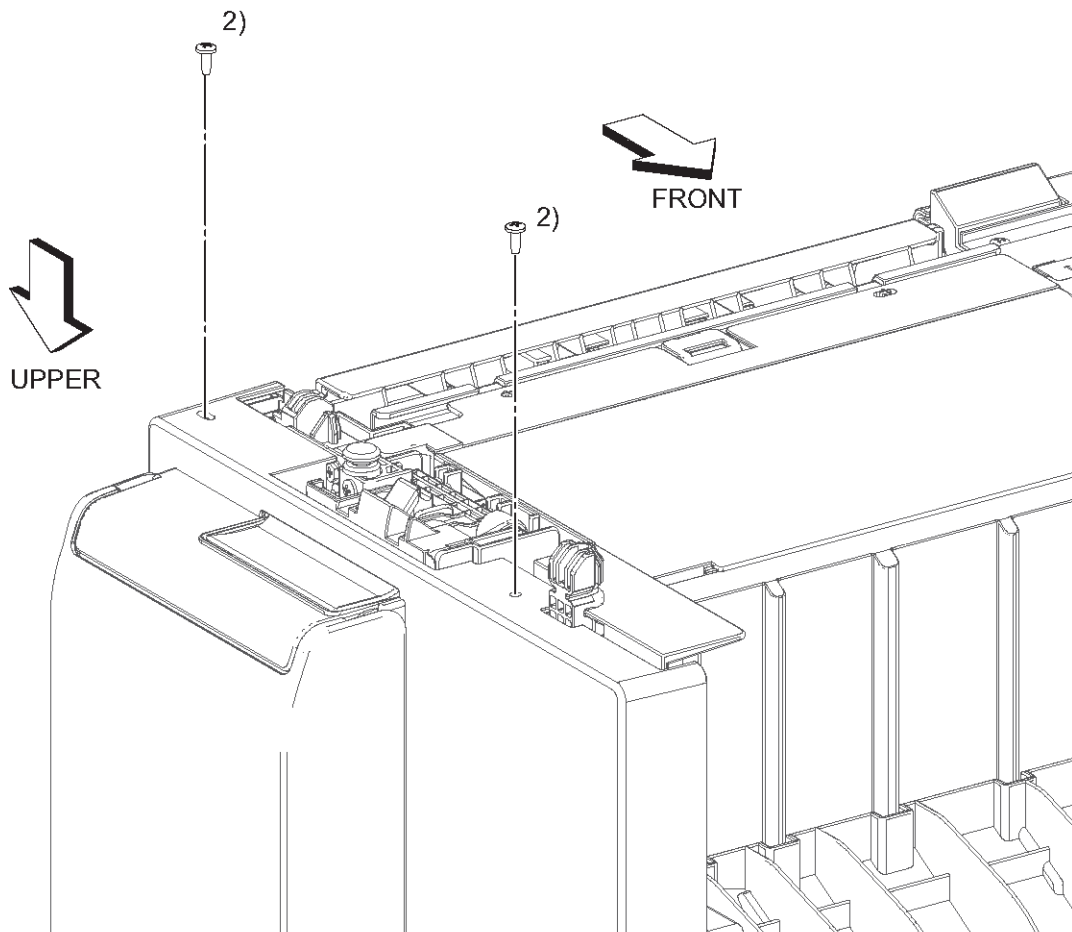
FI04004XA

1.2 RIGHT COVER/ STAPLE COVER

⚠ CAUTION

- When reversing the Finisher, be careful not to fall the Finisher on the floor.

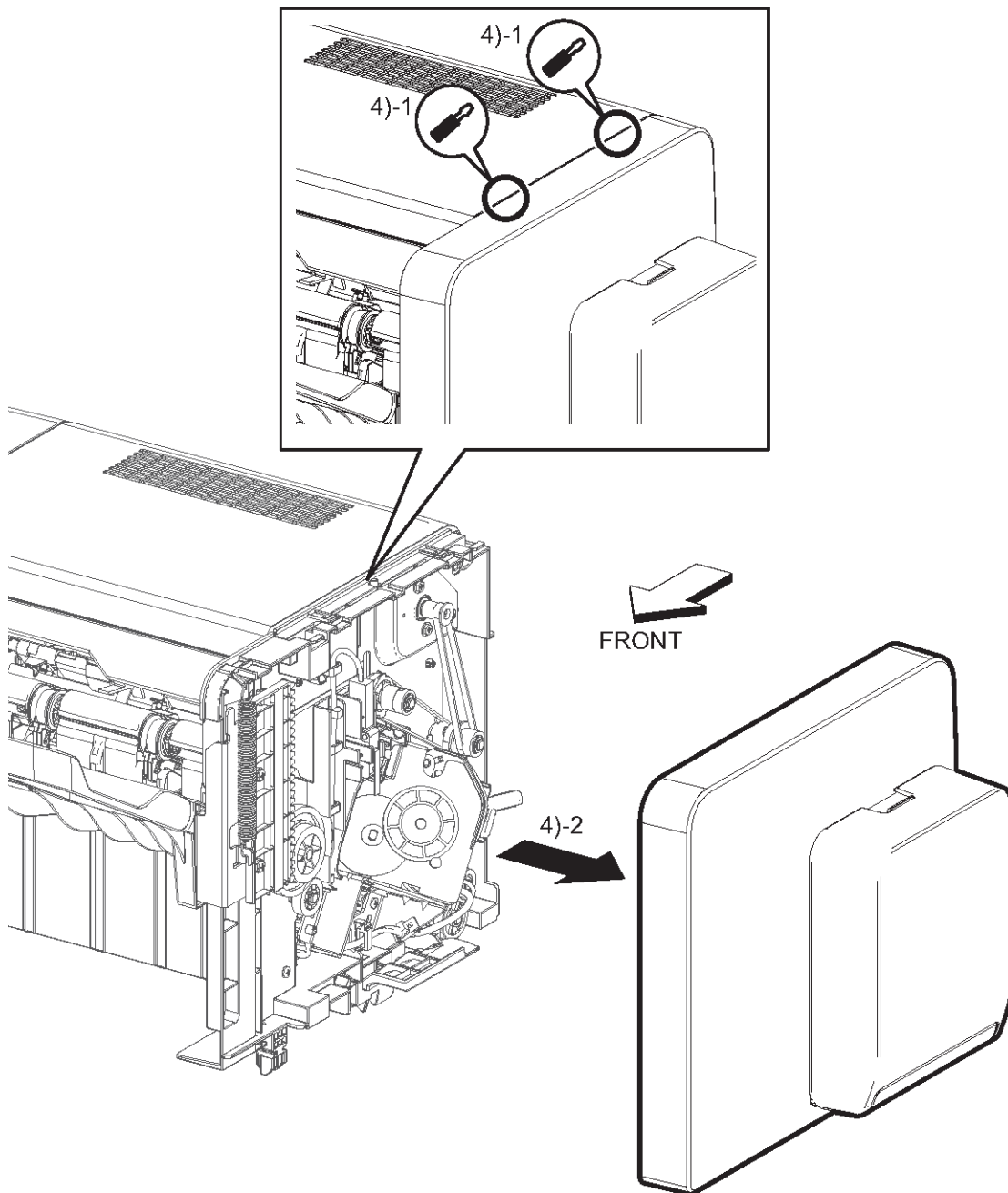
1. Reverse the Finisher as shown in the illustration.
2. Remove two screws (Silver, tapping, M3X8mm) at the bottom.



FI04005XA

3. Reverse the Finisher as shown in the illustration.

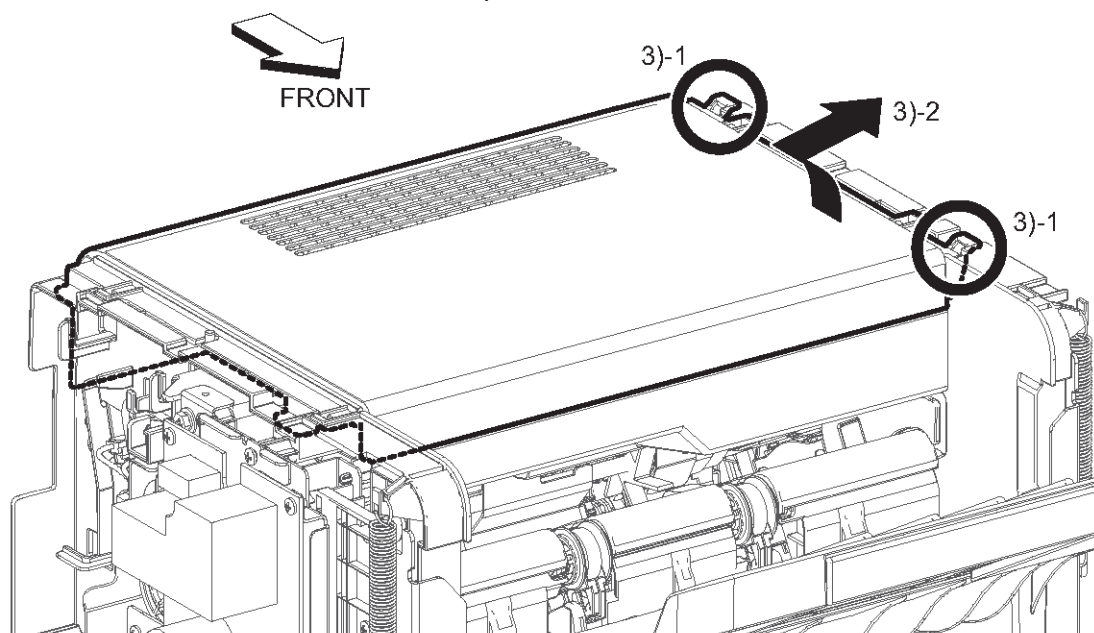
4. Insert the flat screwdriver to release two hooks, and remove the Right Cover and Staple Cover.



FI04006XA

1.3 TOP COVER

1. Remove the Left Cover. (**Left Cover**)
2. Remove the Right Cover/Staple Cover. (**Right Cover/ Staple Cover**)
3. Release two hooks, and remove the Top Cover.



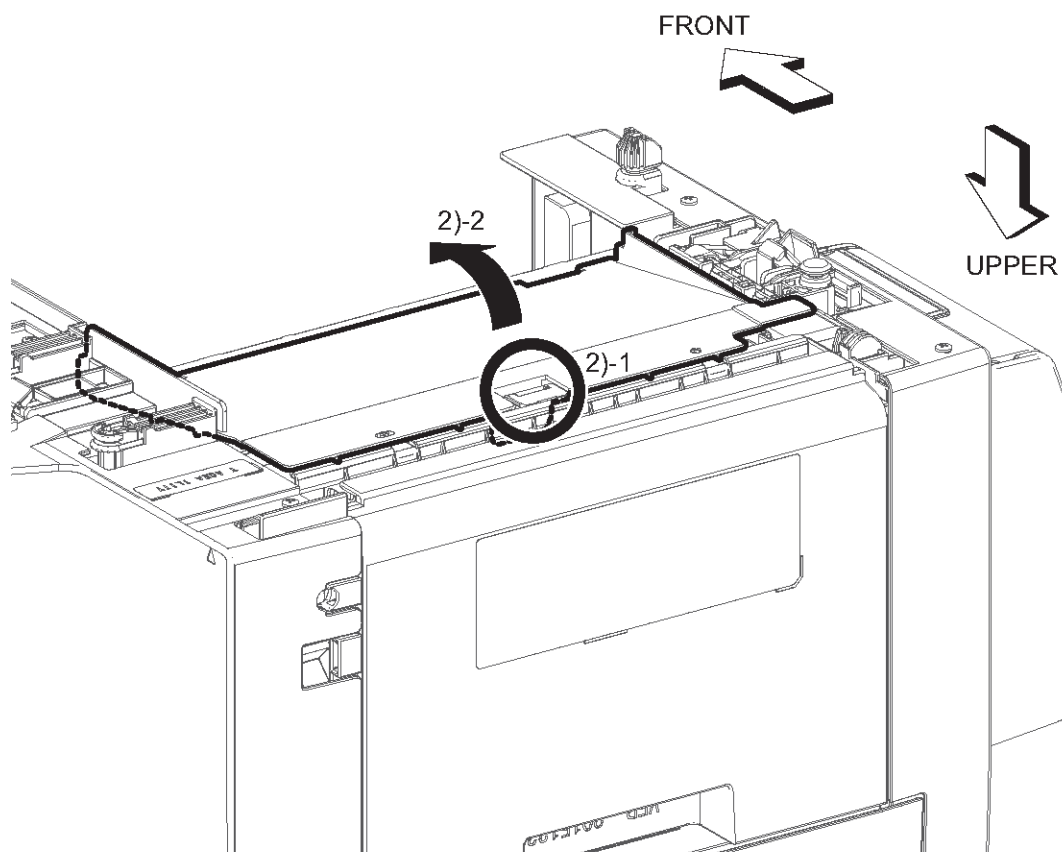
FI04007XA

1.4 LOWER COVER

⚠ CAUTION

- When reversing the Finisher, be careful not to fall the Finisher on the floor.

1. Reverse the Finisher as shown in the illustration.
2. Push to release the hook, and remove the Lower Cover.



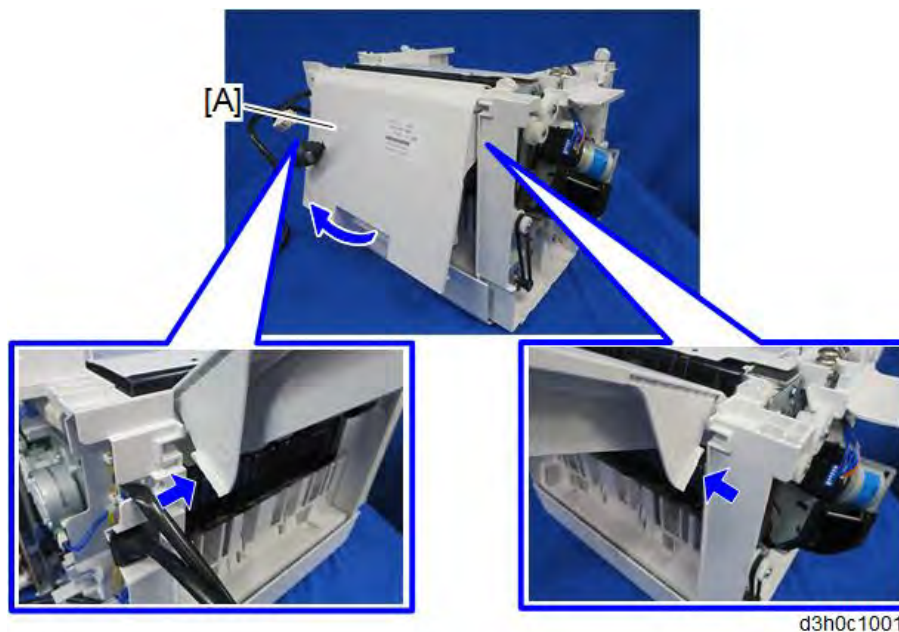
FI04012XA

1.5 REAR COVER

⚠ CAUTION

- When reversing the Finisher, be careful not to fall the Finisher on the floor.

1. Remove the Lower Cover. (**Lower Cover**)
2. Reverse the Finisher.
3. Release the stoppers on both sides to open Rear Cover [A].



4. Open the Rear Cover widely to pull out the Rear Cover.

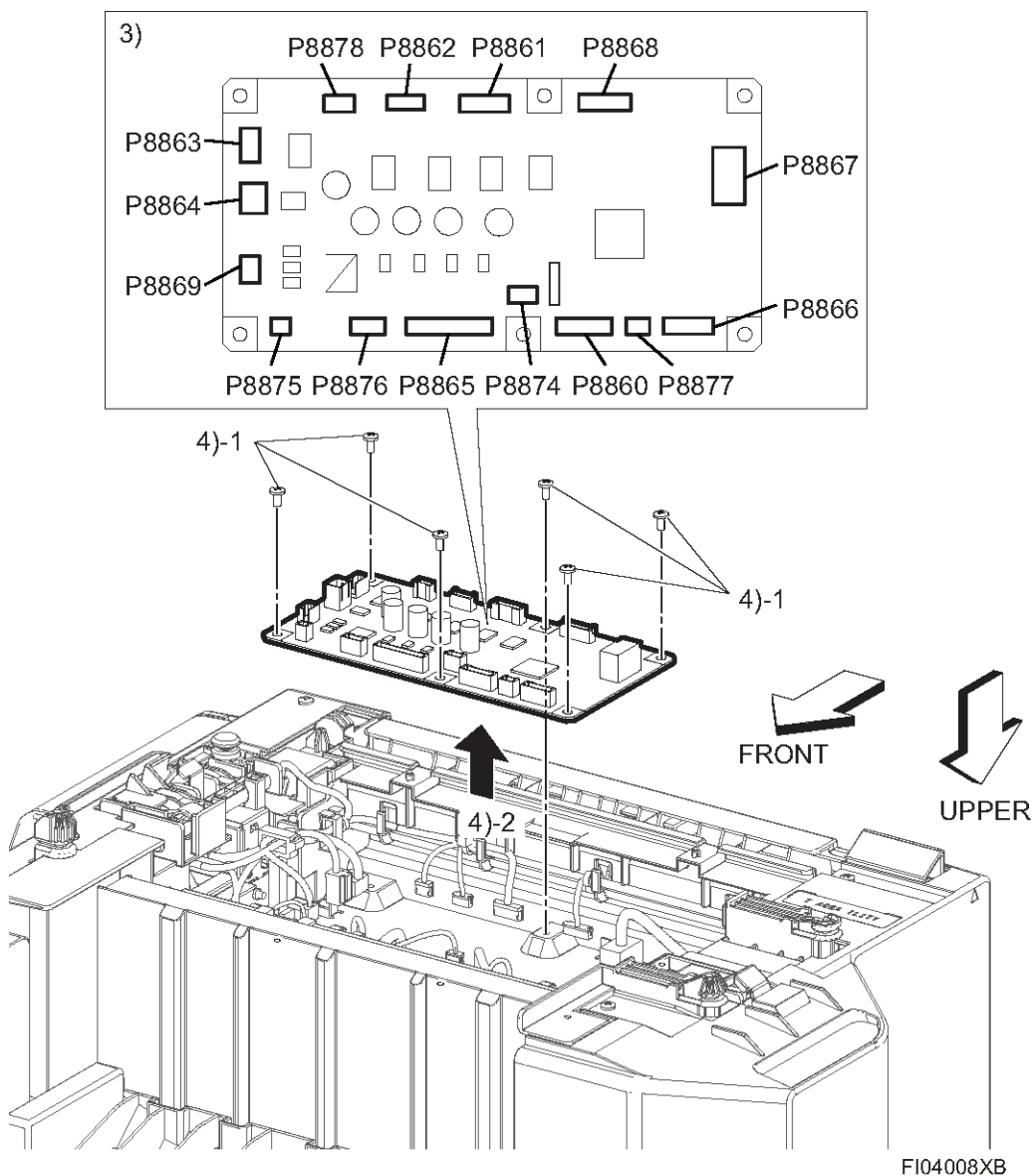


1.6 FINISHER CONTROLLER BOARD (PCB50)

⚠ CAUTION

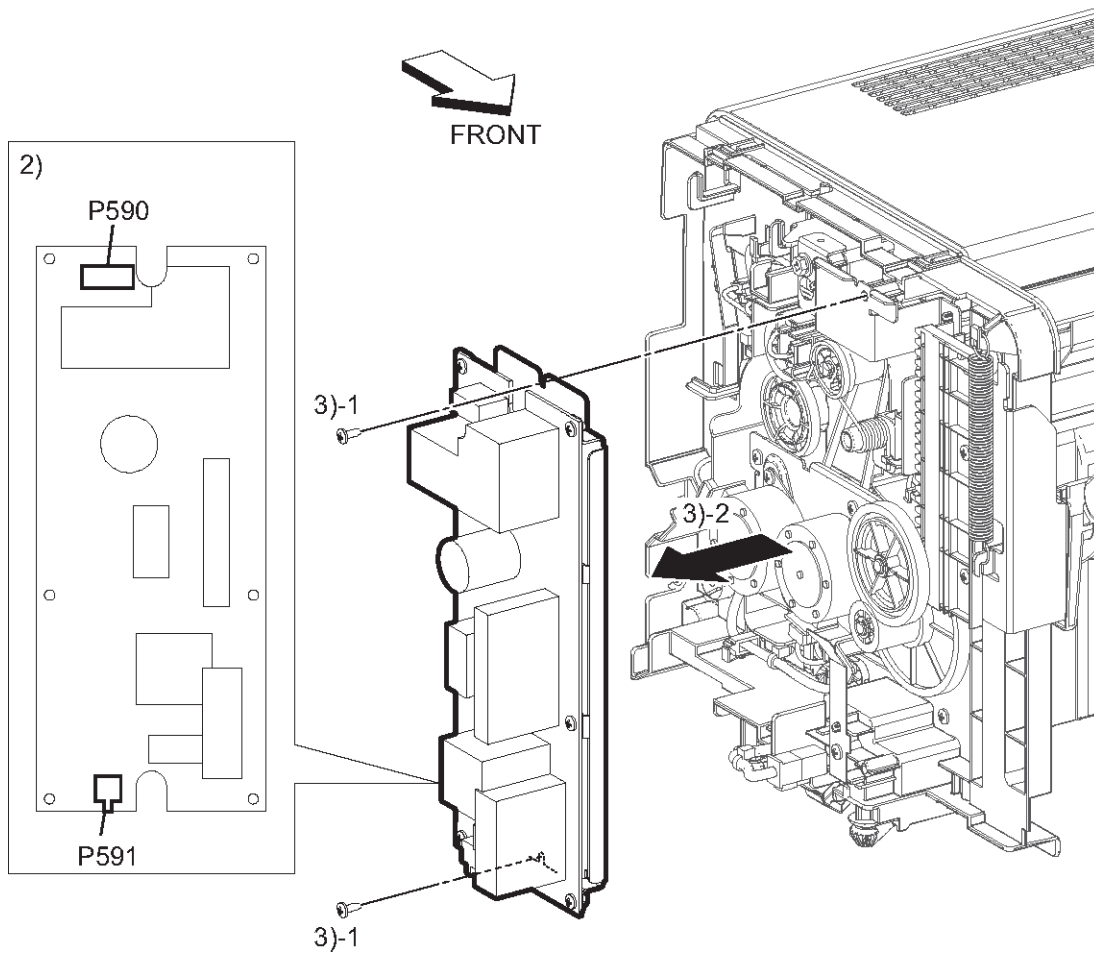
- When reversing the Finisher, be careful not to fall the Finisher on the floor.

1. Remove the Lower Cover. (**Lower Cover**)
2. Reverse the Finisher as shown below.
3. Disengage the connectors (P/J8860, P/J8861, P/J8862, P/J8863, P/J8864, P/J8865, P/J8866, P/J8867, P/J8868, P/J8869, P/J8874, P/J8875, P/J8876, P/J8877, P/J8878).
4. Remove six screws (Silver, M3X6mm), and remove the Finisher Controller Board (PCB50).



1.7 FINISHER LVPS (PCB51)

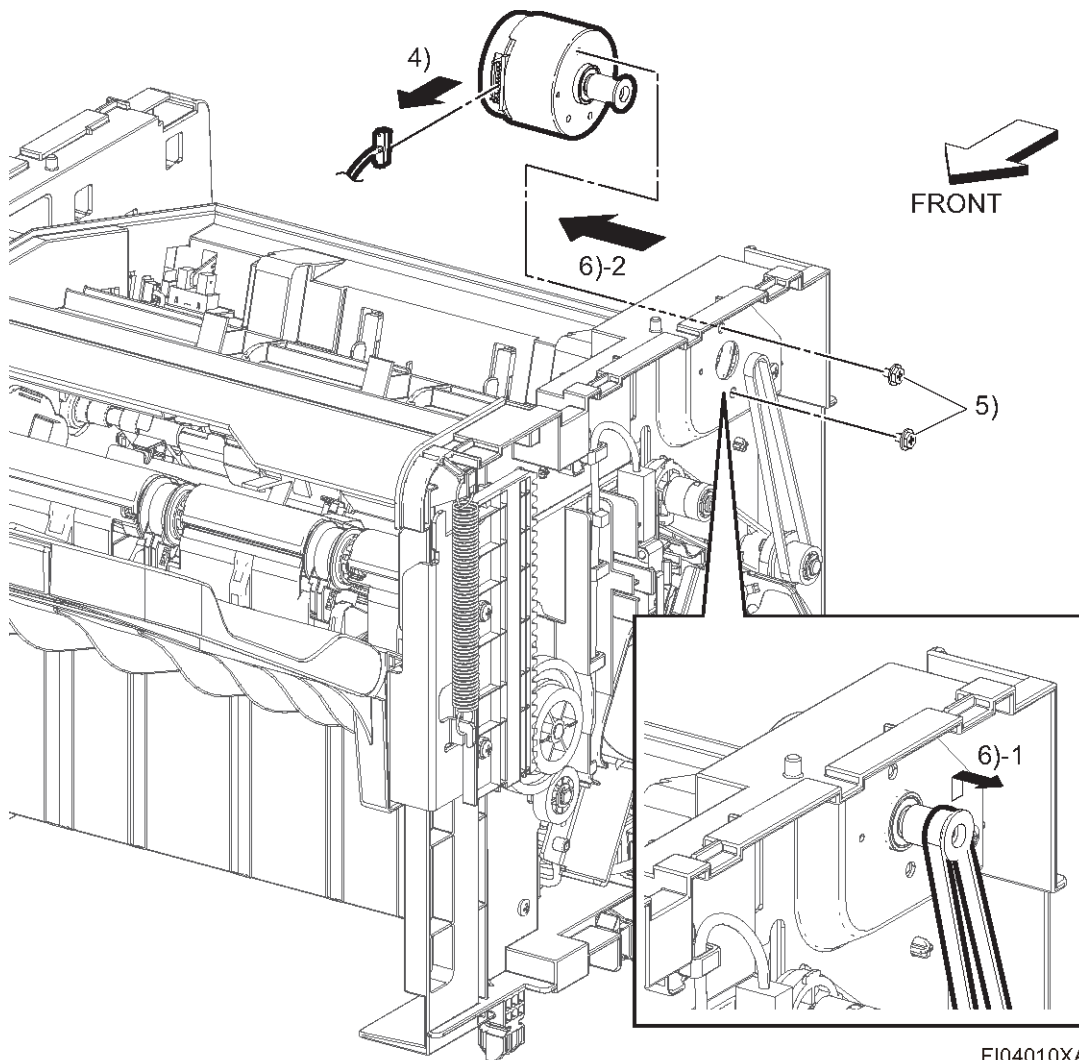
1. Remove the Left Cover. (*Left Cover*)
2. Disengage two connectors (P/J590, P/J591).
3. Remove two screws (Silver, tapping, M3X8mm), and remove the Finisher LVPS (PCB51).



FI04009XA

1.8 FINISHER TRANSPORT MOTOR (M52)

1. Remove the Left Cover. (**Left Cover**)
2. Remove the Right Cover/Staple Cover. (**Right Cover/ Staple Cover**)
3. Remove the Top Cover. (**Top Cover**)
4. Disengage the connector (P/J8910).
5. Remove two screws (Blue, M3X4mm).
6. Remove the Finisher Transport Motor (M52), while releasing the belt from the pulley.



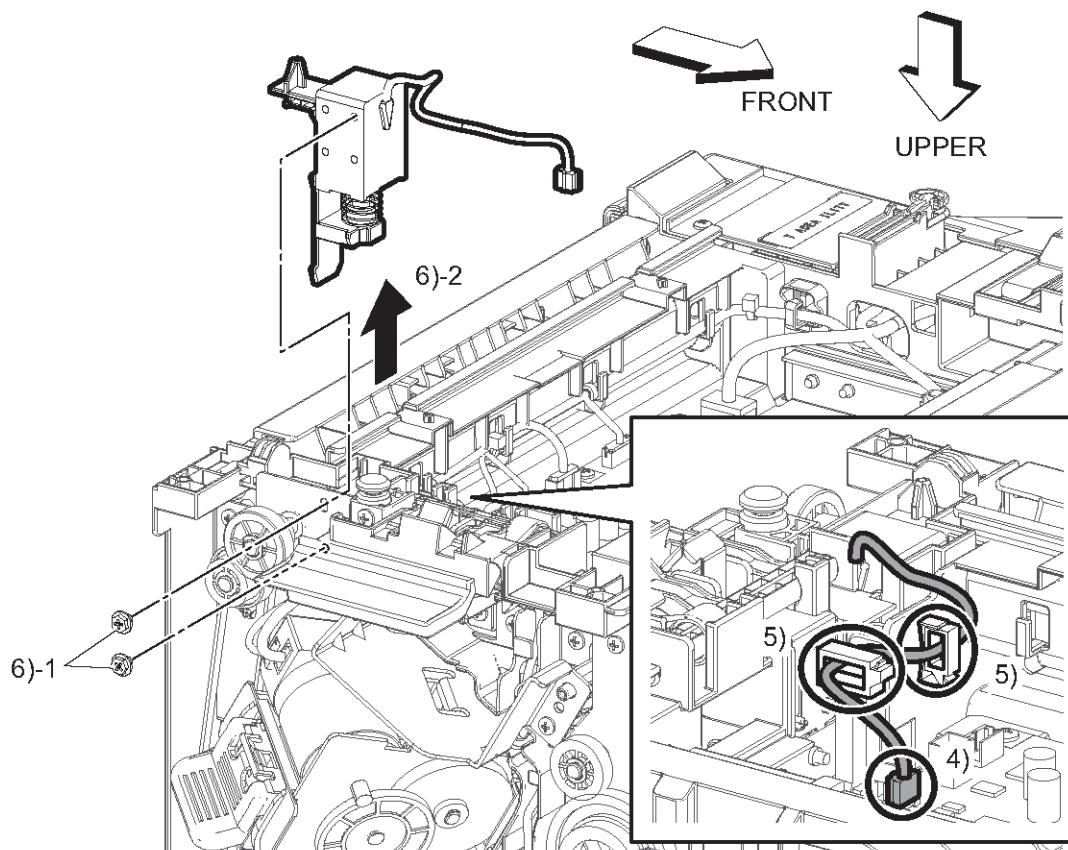
FI04010XA

1.9 JUNCTION GATE SOLENOID (SOL50)

⚠ CAUTION

- When reversing the Finisher, be careful not to fall the Finisher on the floor.

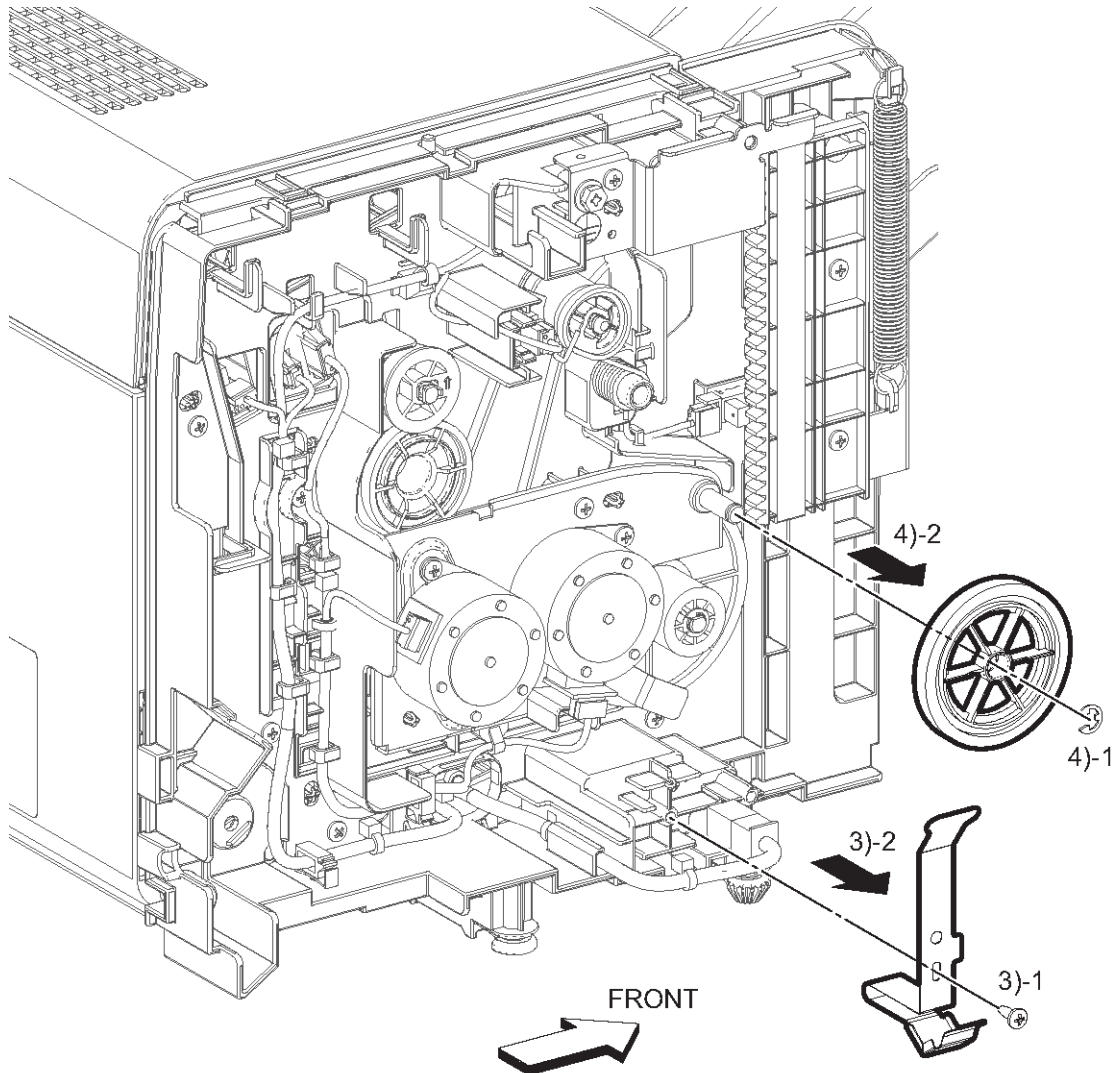
- 1.** Remove the Staple Cover. (*Right Cover/ Staple Cover*)
- 2.** Remove the Lower Cover. (*Lower Cover*)
- 3.** Reverse the Finisher as shown below.
- 4.** Disengage the connector (P/J8869).
- 5.** Release the harness of the Junction Gate Solenoid (SOL50) from two clamps.
- 6.** Remove two screws (Blue, M3X4mm) to remove the Junction Gate Solenoid (SOL50).



FI04011XA

1.10 MOTOR GEAR ASSY

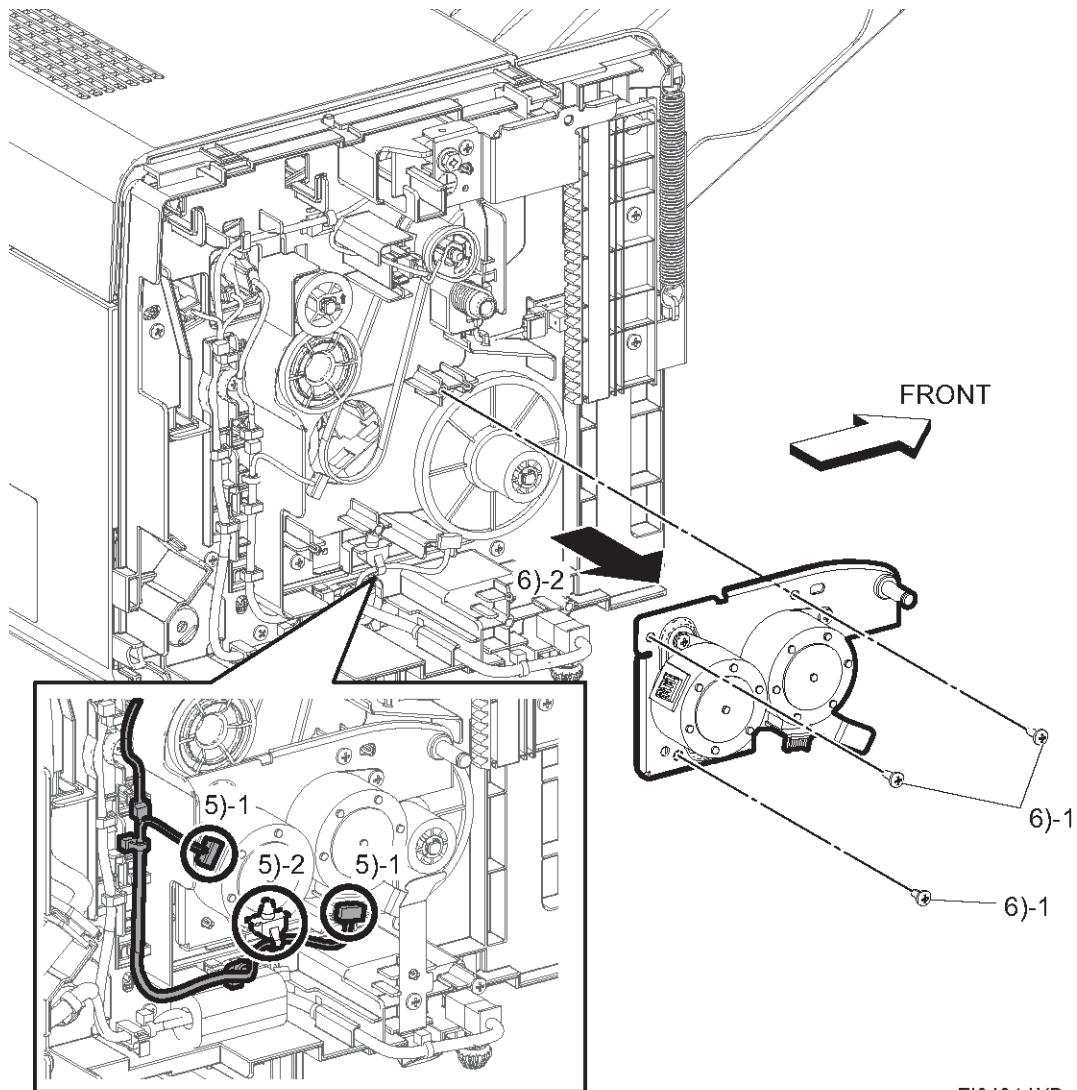
- 1.** Remove the Left Cover. (*Left Cover*)
- 2.** Remove the Finisher LVPS. (*Finisher LVPS (PCB51)*)
- 3.** Remove one screw (Silver, tapping, M3X8mm), and remove the grounding plate.
- 4.** Remove one E-ring, and remove the gear.



FI04013XA

- 5.** Disengage two connectors (P/J8906, P/J8907), and release the push tie of the harness to the Motor Gear Assy.
- 6.** Remove two screws (Silver, tapping, M3X8mm) and one screw (Silver, M3X6mm), and remove the

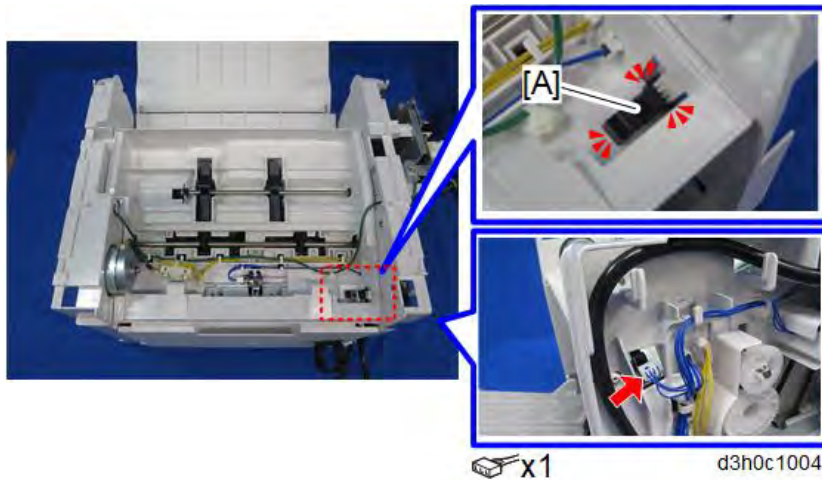
Motor Gear Assy.



FI04014XB

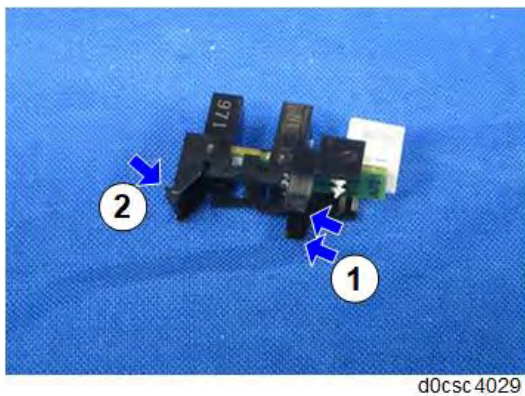
1.11 REAR COVER INTERLOCK SENSOR (S53)

1. Remove the Left Cover. (*Left Cover*)
2. Remove the Right Cover. (*Right Cover/ Staple Cover*)
3. Remove the Top Cover. (*Top Cover*)
4. Disconnect the connector, and then remove the Rear Cover Interlock Sensor (S53) [A].



Note

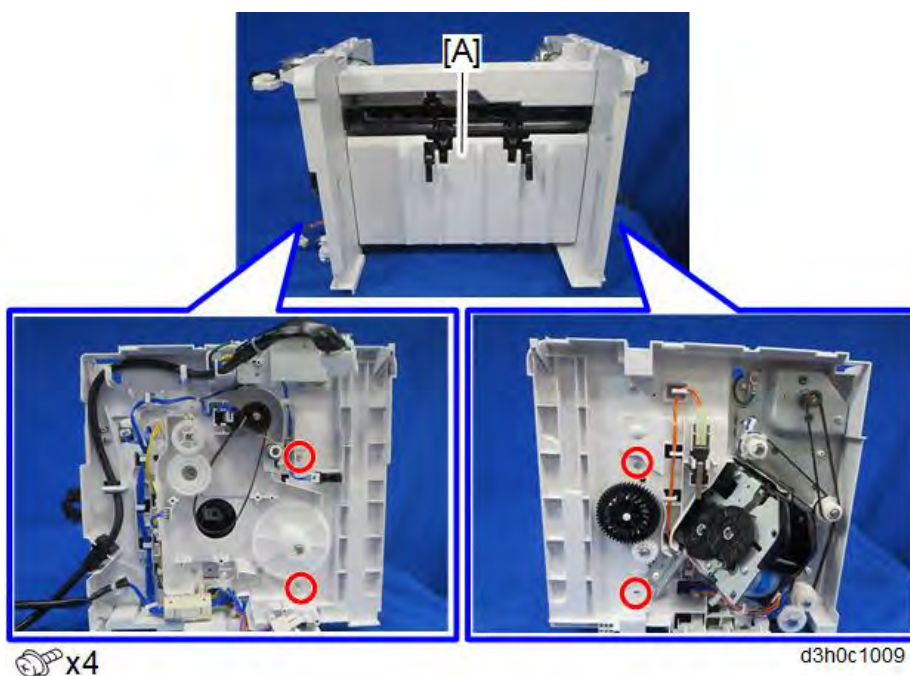
- When removing the sensor, lift the sensor on the connector side to release the hooks (1), and then slide the sensor to remove the hook on the opposite side (2).



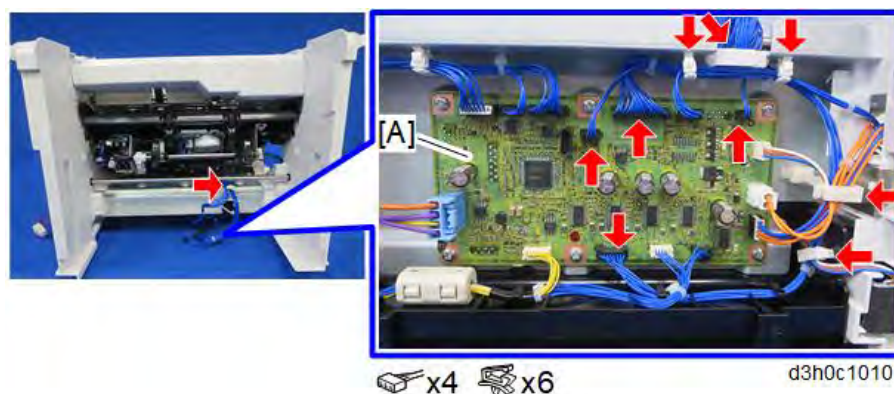
d0csc4029

1.12 STACKER TRAY ASSY

1. Remove the Left Cover. (**Left Cover**)
2. Remove the Finisher LVPS. (**Finisher LVPS (PCB51)**)
3. Remove the Right Cover. (**Right Cover/ Staple Cover**)
4. Remove the Top Cover. (**Top Cover**)
5. Remove the Base Tray Assy. (**Base Tray Assy**)
6. Remove the Lower Cover. (**Lower Cover**)
7. Remove the end fence [A].



8. Disconnect four connectors (P/J8861, P/J8865, P/J8874, P/J8875) on Finisher Controller Board (PCB50) [A] and release the clamps.



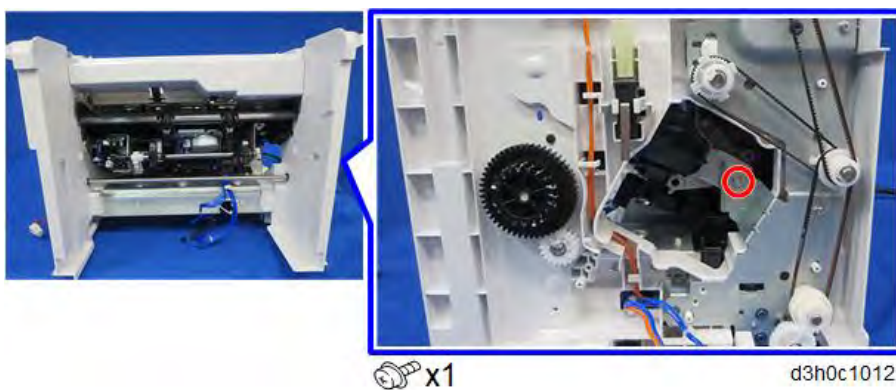
9. Release the hook to remove the gear [A].

- 10.** Pull out the gear [B].

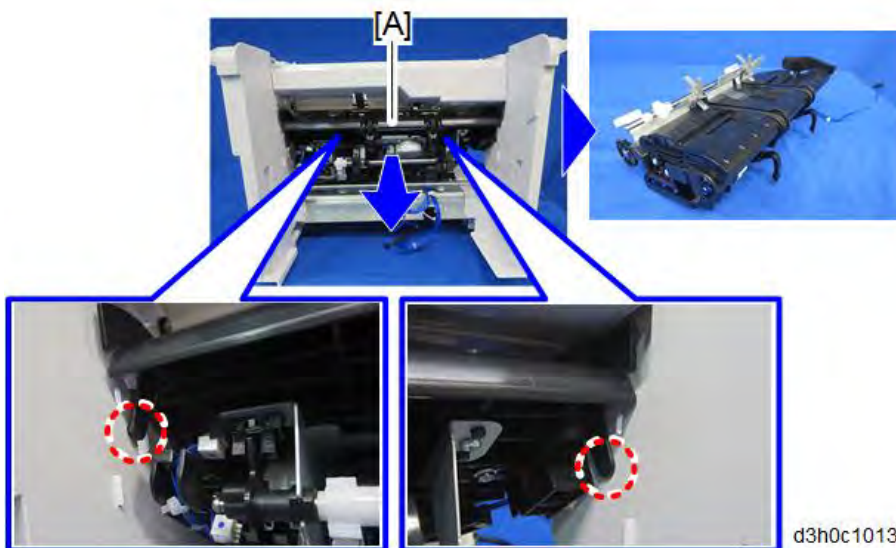


- 11.** Remove the Stapler Assy. (**Stapler Assy**)

- 12.** Remove the screw on right side of the Finisher.

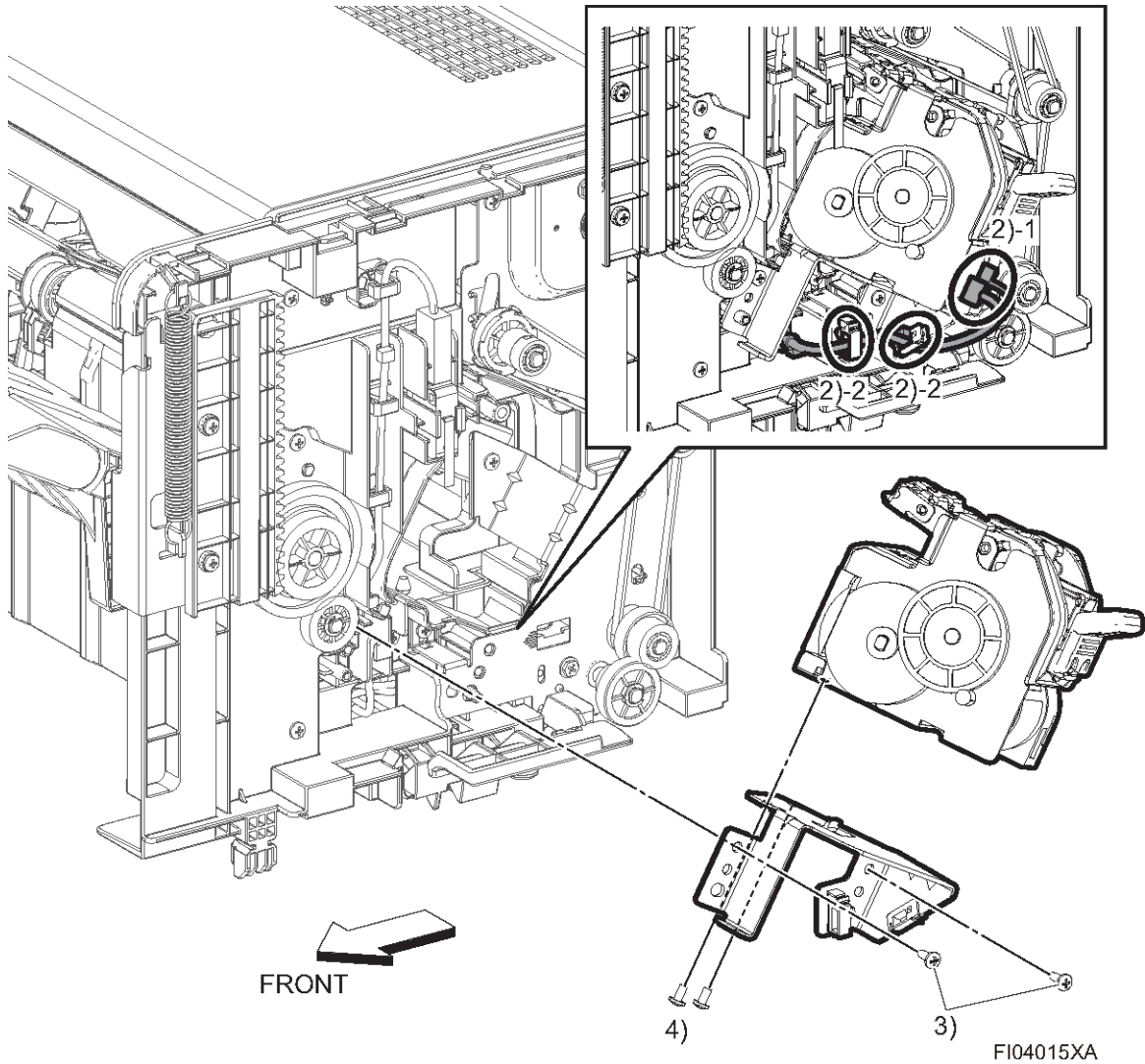


- 13.** Release the bosses on both side, and remove the Stacker Tray Assy [A]



1.13 STAPLER ASSY

- 1.** Remove the Right Cover. (*Right Cover/ Staple Cover*)
- 2.** Disengage two connectors (P/J8897, P/J8908), and release the harness of the Stapler Assy from two clamps.
- 3.** Remove two screws (Silver, tapping, M3X8mm), and remove Stapler Assy with the bracket.
- 4.** Remove two screws (Silver, M3X6mm), and remove Stapler Assy from the bracket.



1.14 SUB PADDLE SHAFT ASSY

1. Remove the Left Cover. (**Left Cover**)
2. Remove the Right Cover. (**Right Cover/ Staple Cover**)
3. Remove the Top Cover. (**Top Cover**)
4. Remove the Finisher LVPS. (**Finisher LVPS (PCB51)**)
5. Remove the spring and actuator.

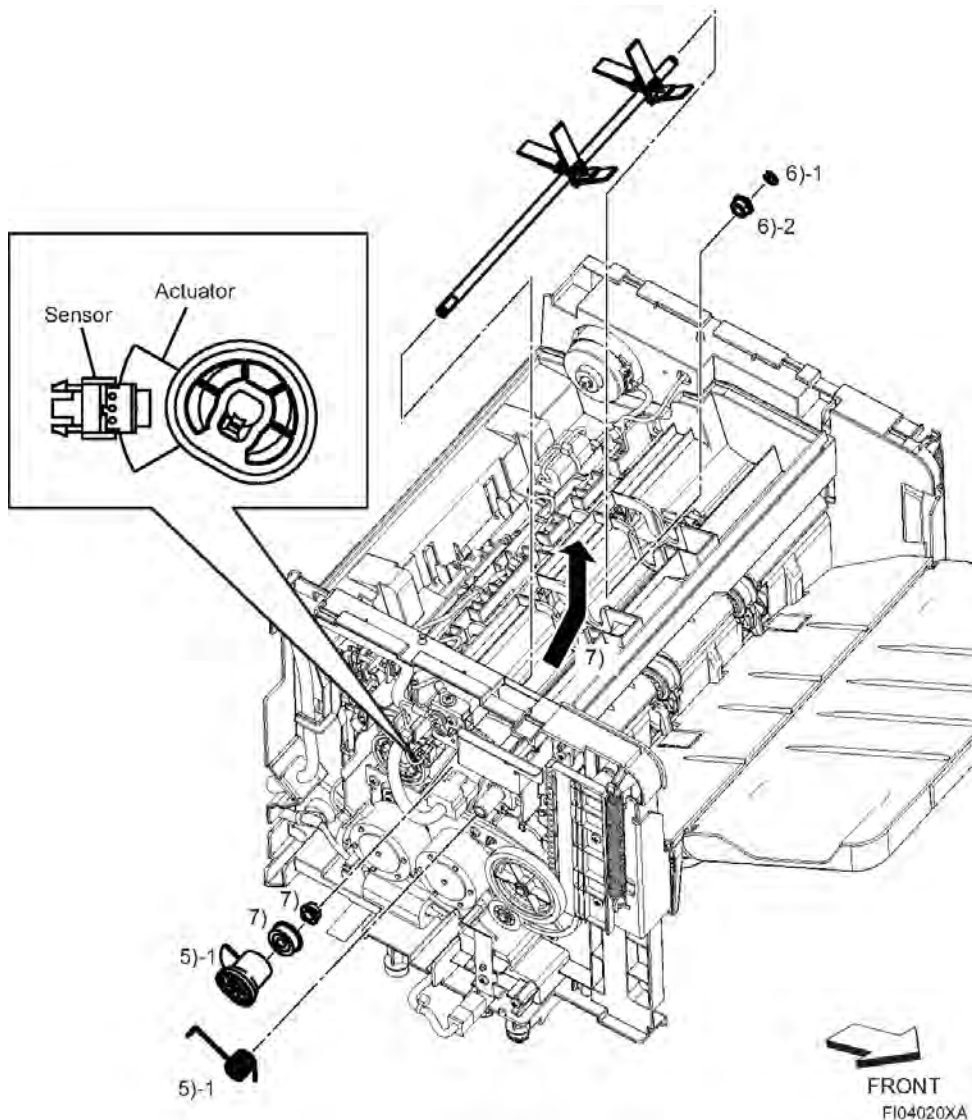
Note

- Be careful so as not to make actuator damage a sensor.

6. Remove the e-ring and bearing.
7. Slide the Sub Paddle Shaft Assy to remove it in the direction of the arrow.

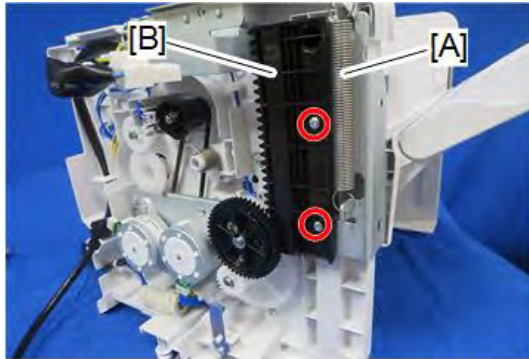
Note

- When removing Sub Paddle Shaft Assy, the pulley and bearing come off at the same time.



1.15 BASE TRAY ASSY

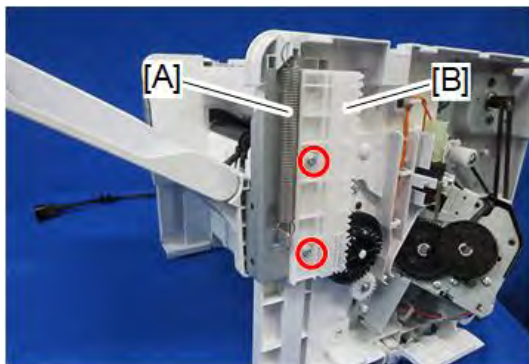
1. Remove the Left Cover. (**Left Cover**)
2. Remove the Right Cover/Staple Cover. (**Right Cover/ Staple Cover**)
3. Remove the Top Cover. (**Top Cover**)
4. Remove the spring [A] and gear plate [B] on left side of the Finisher.



 x2

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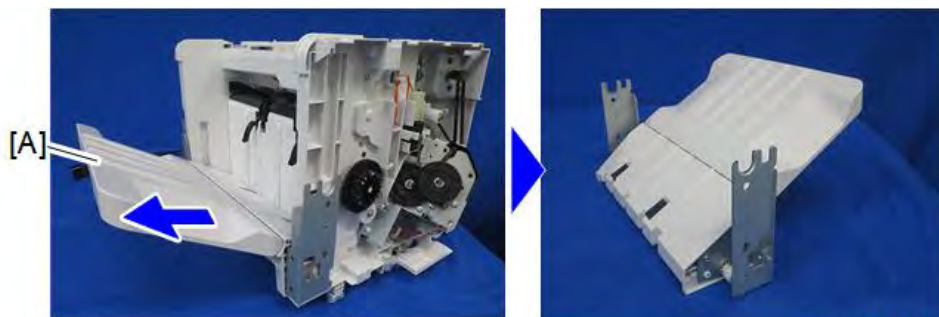
5. Remove the spring [A] and gear plate [B] on right side of the Finisher.



 x2

d3h0c1007

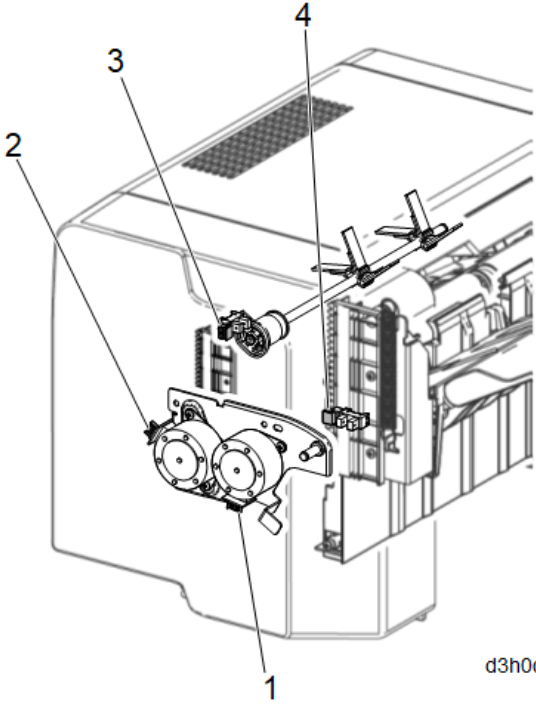
6. Lower the tray to the bottom, and then remove the Base Tray Assy [A].



d3h0c1008

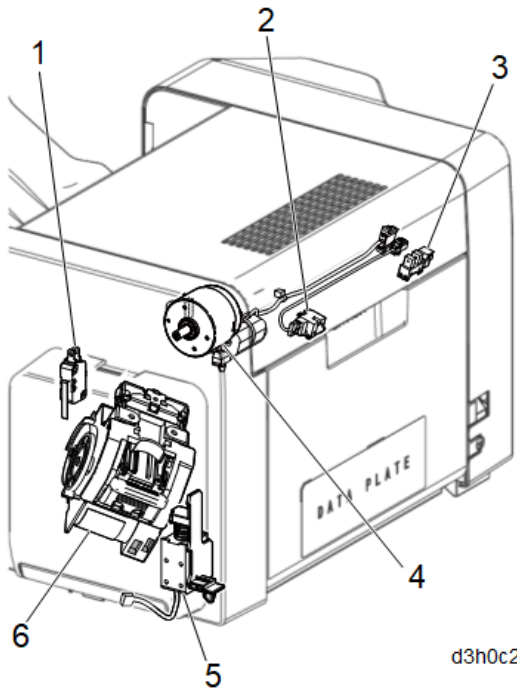
2. DETAILED DESCRIPTIONS

2.1 COMPONENT LAYOUT

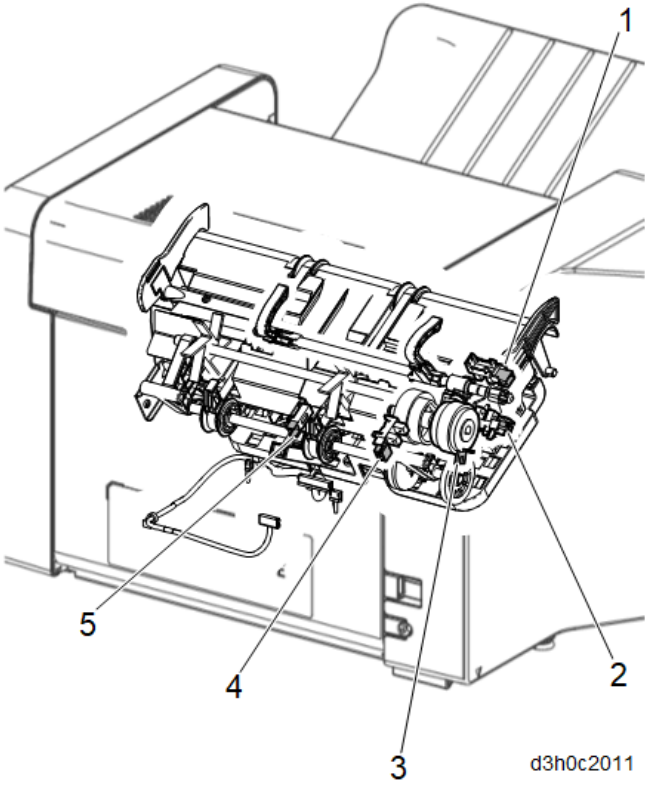


d3h0c2009

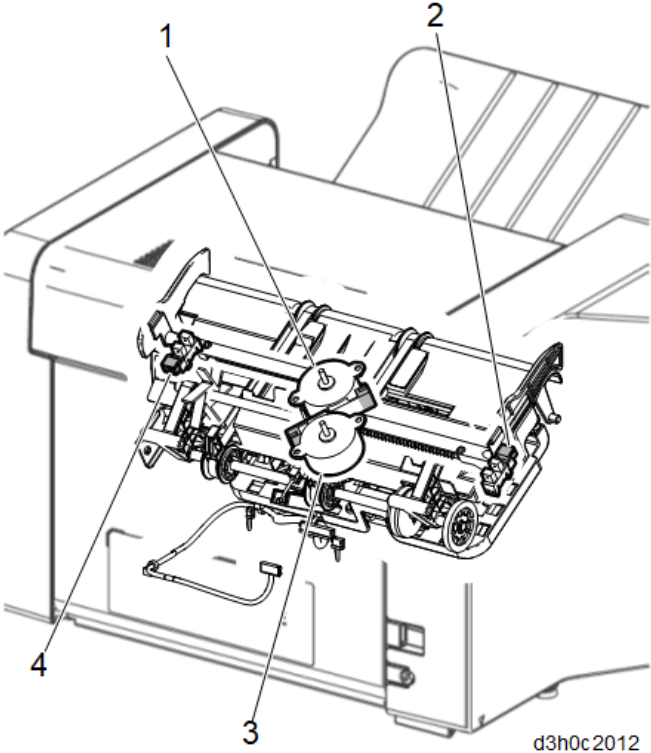
No.	Part name	No.	Part name
1	Stacker Motor (M50)	3	Sub Paddle Home Sensor (S51)
2	Eject Belt Motor (M51)	4	Tray Paper End/Full Sensor (S50)



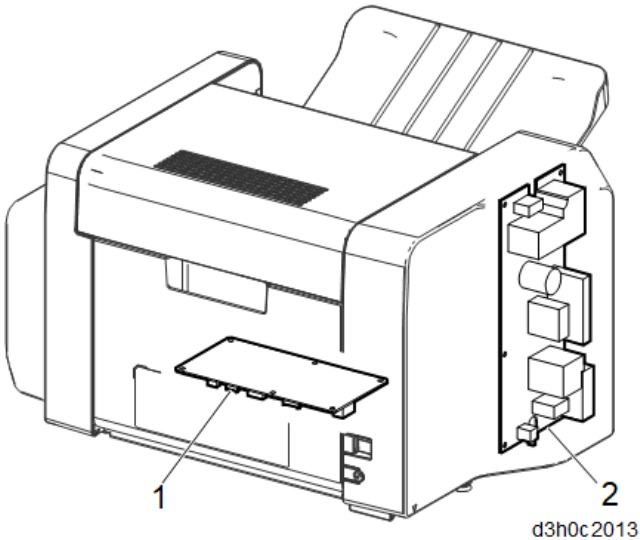
No.	Part name	No.	Part name
1	Staple Cover Interlock Switch (SW50)	4	Finisher Transport Motor (M52)
2	Stacker Exit Sensor (S52)	5	Junction gate Solenoid (SOL50)
3	Rear Cover Interlock Sensor (S53)	6	Stapler Assy



No.	Part name	No.	Part name
1	Stacker Height Sensor 1 (S56)	4	Set Clamp Home Sensor (S55)
2	Stacker Height Sensor 2 (S57)	5	Eject Home Sensor (S54)
3	Set Clamp Clutch (CL50)		



No.	Part name	No.	Part name
1	Right Jogger Motor (M53)	3	Left Jogger Fence Home Sensor (S59)
2	Left Jogger Motor (M54)	4	Right Jogger Fence Home Sensor (S58)

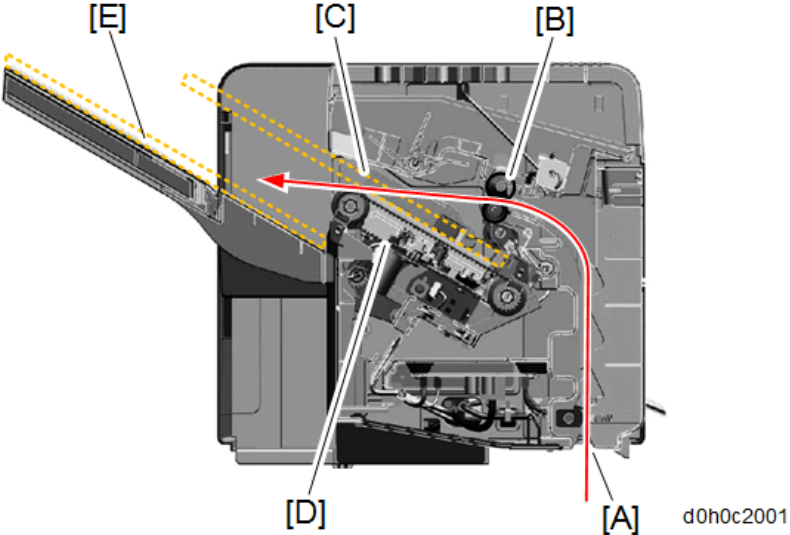


No.	Part name	No.	Part name
1	Finisher Controller Board (PCB50)	2	Finisher LVPS (PCB51)

2.2 MECHANISM DETAILS

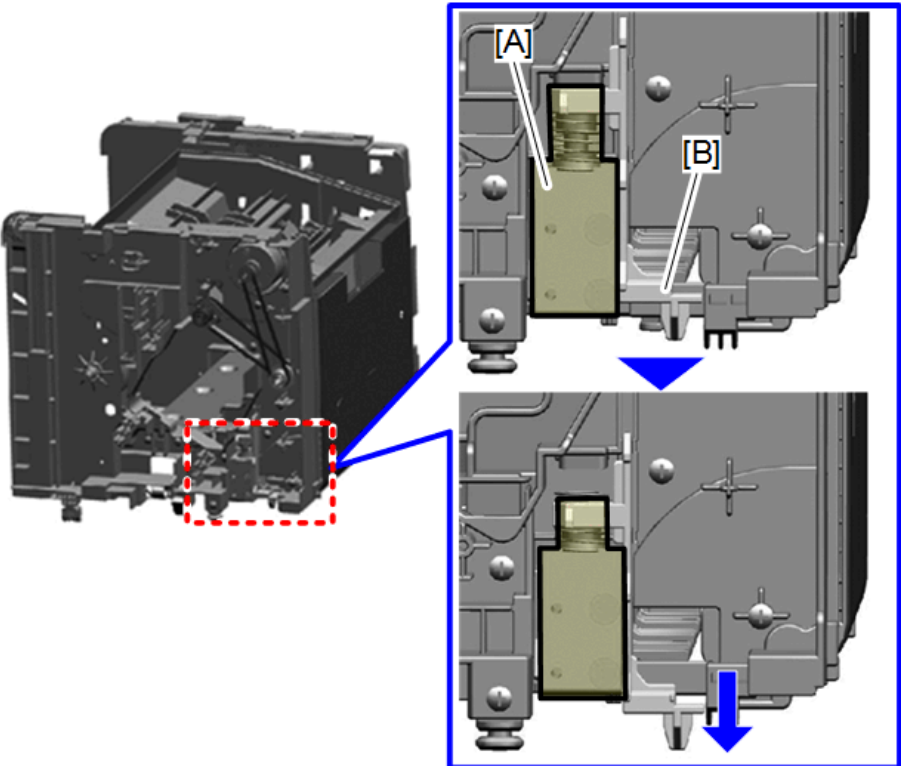
Basic Operation

The paper sent from the paper entrance [A] passes exit roller [B], and then is sent to staple tray [C]. After the specified number of sheets have stacked in the staple tray, the pawl on the output belt [D] presses the trailing edges of the stack and pushes it onto the output tray [E].

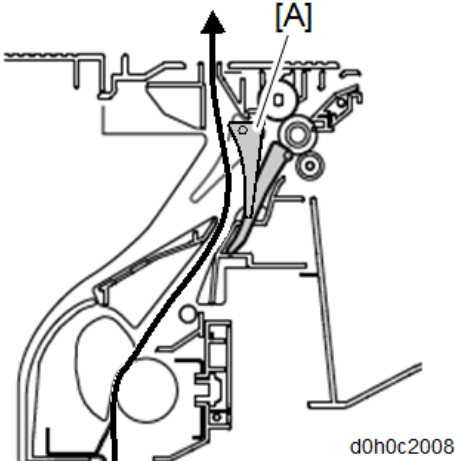


Main Machine-to-Finisher Entrance Paper Transport Switch Mechanism

A Junction Gate Solenoid (SOL50) [A], located at the paper entrance of the finisher, switches ON and the lever [B] pushes down the button on the main machine.

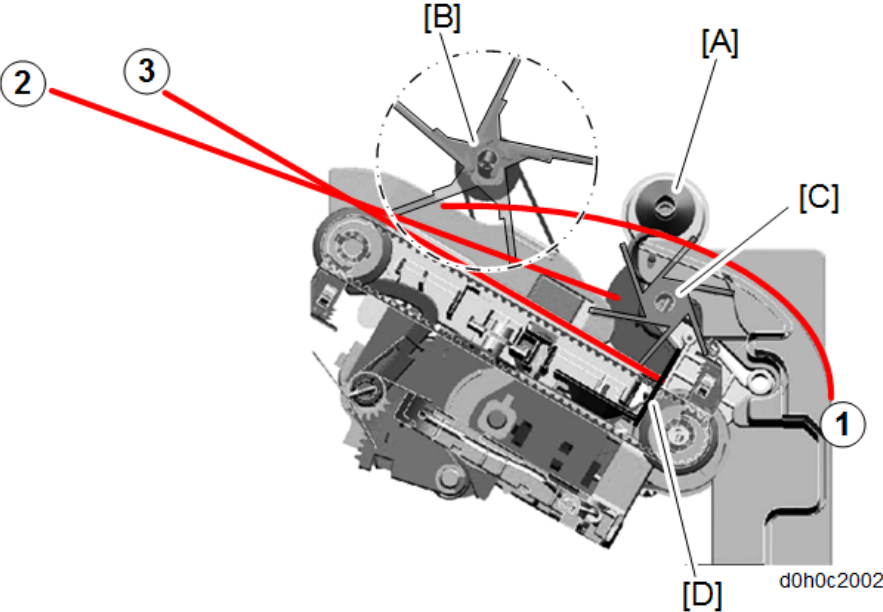


As a result, the Exit Upper Gate [A] in the main machine is pushed down, and the paper is transported to the paper entrance of the finisher.



Trailing Edge Alignment Mechanism

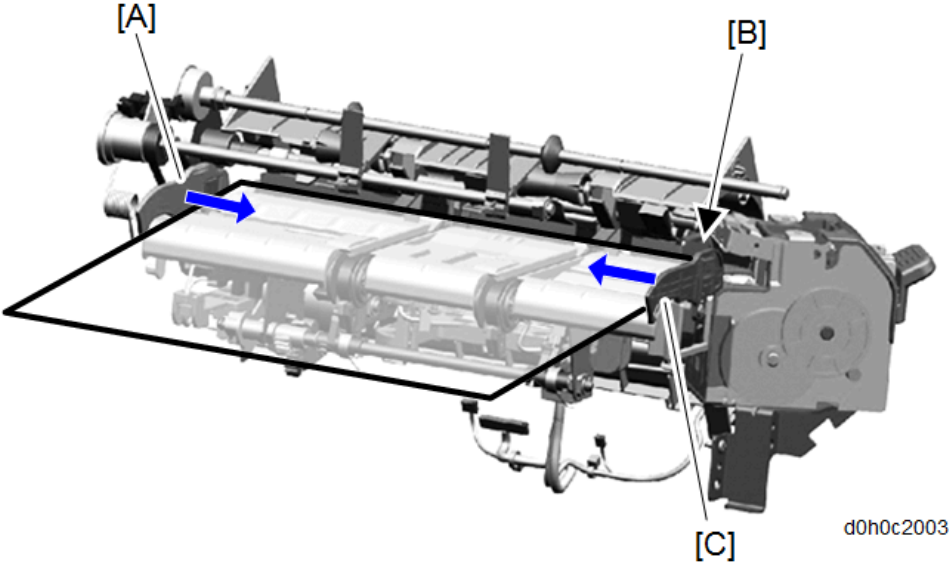
The paper sent from the exit roller [A] is pulled back by sub paddle [B]. Next, main paddle [C] pushes the trailing edge so it strikes positioning fence [D] to align the trailing edge.



Jog Mechanism

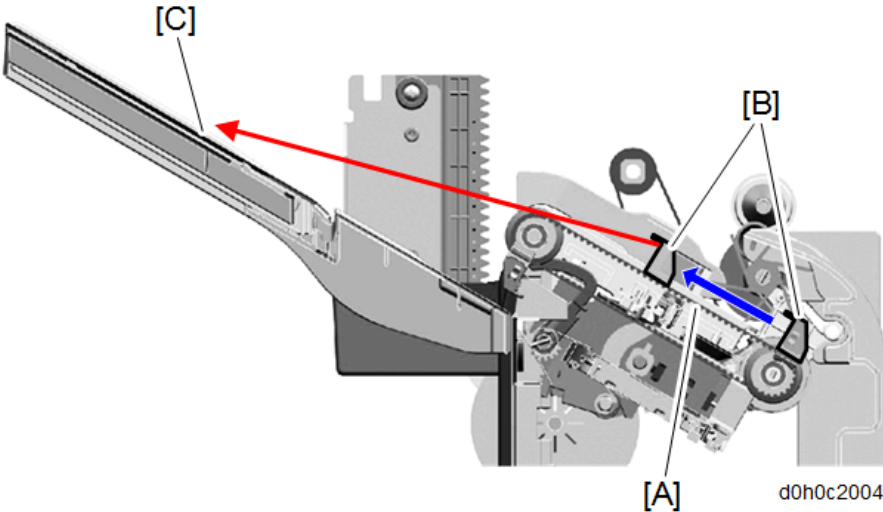
Jogger fence (L) [A] positions the paper with the trailing edge aligned at stapling position [B]. The stack is stapled after the specified number of pages have arrived and been aligned.

Next, the stapled stack remains at its current position (or is shifted by jogger fence (R) [C]) before it exits.

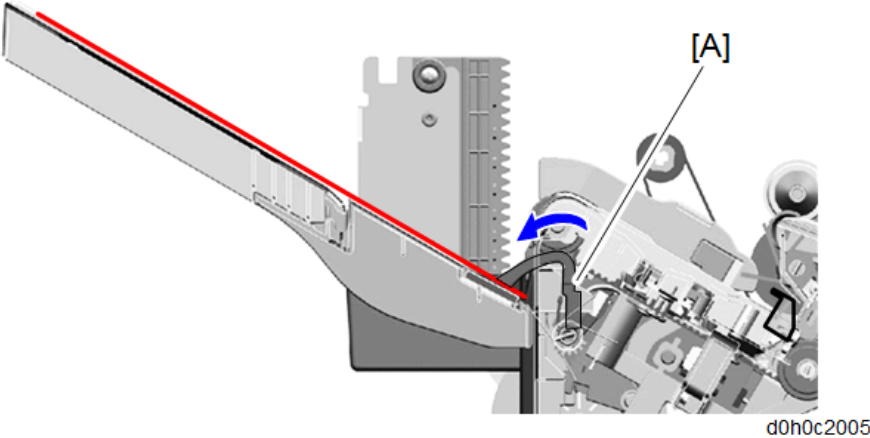


Output Mechanism

The output belt [A] catches the stack in the staple tray with its output pawl [B], and then pushes the stack out onto output tray [C].



When the stack arrives on the output tray, the paper clamp [A] pushes the trailing edge of the stack in order to rotate the stack, and then push it out. The paper clamp continues to push on the stack, and then moves back to the retract position just before the next stack arrives.



Tray Height Adjustment Mechanism

The trailing edge paper clamp [A] touches the top of the stack in output tray [B]. The height of the stack in the output tray is detected by the angle of the trailing edge paper clamp, and the unit lowers the tray to the correct position so stacking can continue.

