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Learning ◆ Knowledge ◆ Performance

M022/M024/M026/M028
SERVICE MANUAL

006178MIU

MAINFRAME

LANIER RICOH SAVIN

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SERVICE MANUAL

(MAINFRAME)

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Ricoh Americas Corporation

LEGEND

PRODUCT CODE	COMPANY			
	GESTETNER	LANIER	RICOH	SAVIN
M022	MP C300	LD130C	Aficio MP C300	C230
M024	MP C300SR	LD130CSR	Aficio MP C300SR	C230SR
M025	MP C400	LD140C	Aficio MP C400	C240
M026	MP C400SR	LD140CSR	Aficio MP C400SR	C240SR

DOCUMENTATION HISTORY

REV. NO.	DATE	COMMENTS
*	01/2011	Original Printing

M022/M024/M026/M028

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Read This First

Important Safety Notices

Responsibilities of the Customer Engineer

Customer Engineer

Maintenance shall be done only by trained customer engineers who have completed service training for the machine and all optional devices designed for use with the machine.

Reference Material for Maintenance

- Maintenance shall be done using the special tools and procedures prescribed for maintenance of the machine described in the reference materials (service manuals, technical bulletins, operating instructions, and safety guidelines for customer engineers).
- In regard to other safety issues not described in this document, all customer engineers shall strictly obey procedures and recommendations described the "CE Safety Guide".
- Use only consumable supplies and replacement parts designed for use of the machine.

Before Installation, Maintenance

Shipping and Moving the Machine

⚠CAUTION

- Work carefully when lifting or moving the machine. If the machine is heavy, two or more customer engineers may be required to prevent injuries (muscle strains, spinal injuries, etc.) or damage to the machine if it is dropped or tipped over.
- Personnel moving or working around the machine should always wear proper clothing and footwear. Never wear loose fitting clothing or accessories (neckties, loose sweaters, bracelets, etc.) or casual footwear (slippers, sandals, etc.) when lifting or moving the machine.
- Always unplug the power cord from the power source before you move the product. Before you move the product, arrange the power cord so it will not fall under the product.

Power

⚠WARNING

- Always disconnect the power plug before doing any maintenance procedure. After switching off the machine, power is still supplied to the main machine and other devices. To prevent electrical shock, switch the machine off, wait for a few seconds, then unplug the machine from the power source.
- Before you do any checks or adjustments after turning the machine off, work carefully to avoid injury. After removing covers or opening the machine to do checks or adjustments, never touch electrical components or moving parts (gears, timing belts, etc.).
- After turning the machine on with any cover removed, keep your hands away from electrical components and moving parts. Never touch the cover of the fusing unit, gears, timing belts, etc.

Installation, Disassembly, and Adjustments

⚠CAUTION

- After installation, maintenance, or adjustment, always check the operation of the machine to make sure that it is operating normally. This ensures that all shipping materials, protective materials, wires and tags, metal brackets, etc., removed for installation, have been removed and that no tools remain inside the machine. This also ensures that all release interlock switches have been restored to normal operation.
- Never use your fingers to check moving parts causing spurious noise. Never use your fingers to lubricate moving parts while the machine is operating.

Special Tools

⚠CAUTION

- Use only standard tools approved for machine maintenance.
- For special adjustments, use only the special tools and lubricants described in the service manual. Using tools incorrectly, or using tools that could damage parts, could damage the machine or cause injuries.

During Maintenance

General

⚠CAUTION

- Before you begin a maintenance procedure: 1) Switch the machine off, 2) Disconnect the power plug from the power source, 3) Allow the machine to cool for at least 10 minutes.
- Avoid touching the components inside the machine that are labeled as hot surfaces.

Safety Devices

⚠WARNING

- Never remove any safety device unless it requires replacement. Always replace safety devices immediately.
- Never do any procedure that defeats the function of any safety device. Modification or removal of a safety device (fuse, switch, etc.) could lead to a fire and personal injury. Always test the operation of the machine to ensure that it is operating normally and safely after removal and replacement of any safety device.
- For replacements use only the correct fuses or circuit breakers rated for use with the machine. Using replacement devices not designed for use with the machine could lead to a fire and personal injuries.

Organic Cleaners

⚠CAUTION

- During preventive maintenance, never use any organic cleaners (alcohol, etc.) other than those described in the service manual.
- Make sure the room is well ventilated before using any organic cleaner. Use organic solvents in small amounts to avoid breathing the fumes and becoming nauseous.
- Switch the machine off, unplug it, and allow it to cool before doing preventive maintenance. To avoid fire or explosion, never use an organic cleaner near any part that generates heat.
- Wash your hands thoroughly after cleaning parts with an organic cleaner to contamination of food, drinks, etc. which could cause illness.
- Clean the floor completely after accidental spillage of silicone oil or other materials to prevent slippery surfaces that could cause accidents leading to hand or leg injuries. Use "My Ace" Silicone Oil Remover (or dry rags) to soak up spills. For more details, please refer to Technical Bulletin "Silicone Oil Removal" (A024-50).

Lithium Batteries

⚠WARNING

- Always replace a lithium battery on a PCB with the same type of battery prescribed for use on that board. Replacing a lithium battery with any type other than the one prescribed for use on the board could lead to an explosion or damage to the PCB.
- Never discard used batteries by mixing them with other trash. Remove them from the work site and dispose of them in accordance with local laws and regulations regarding the disposal of such items.

Power Plug and Power Cord

⚠WARNING

- Before serving the machine (especially when responding to a service call), always make sure that the power plug has been inserted completely into the power source. A partially inserted plug could lead to heat generation (due to a power surge caused by high resistance) and cause a fire or other problems.
- Always check the power plug and make sure that it is free of dust and lint. Clean it if necessary. A dirty plug can generate heat which could cause a fire.
- Inspect the length of the power cord for cuts or other damage. Replace the power cord if necessary. A frayed or otherwise damaged power cord can cause a short circuit which could lead to a fire or personal injury from electrical shock.
- Check the length of the power cord between the machine and power supply. Make sure the power cord is not coiled or wrapped around any object such as a table leg. Coiling the power cord can cause excessive heat to build up and could cause a fire.
- Make sure that the area around the power source is free of obstacles so the power cord can be removed quickly in case of an emergency.
- Make sure that the power cord is grounded (earthed) at the power source with the ground wire on the plug.
- Connect the power cord directly into the power source. Never use an extension cord.
- When you disconnect the power plug from the power source, always pull on the plug, not the cable.

After Installation, Servicing

Disposal of Used Items

⚠WARNING

- Never incinerate used toner or toner cartridges.
- Toner or toner cartridges thrown into a fire can ignite or explode and cause serious injury. At the work site always carefully wrap used toner and toner cartridges with plastic bags to avoid spillage before disposal or removal.

⚠CAUTION

- Always dispose of used items (developer, toner, toner cartridges, OPC drums, etc.) in accordance with the local laws and regulations regarding the disposal of such items.
- To protect the environment, never dispose of this product or any kind of waste from consumables at a household waste collection point. Dispose of these items at one of our dealers or at an authorized collection site.
- Return used selenium drums to the service center for handling in accordance with company policy regarding the recycling or disposal of such items.

Points to Confirm with Operators

At the end of installation or a service call, instruct the user about use of the machine. Emphasize the following points.

- Show operators how to remove jammed paper and troubleshoot other minor problems by following the procedures described in the operating instructions.
- Point out the parts inside the machine that they should never touch or attempt to remove.
- Confirm that operators know how to store and dispose of consumables.
- Make sure that all operators have access to an operating instruction manual for the machine.
- Confirm that operators have read and understand all the safety instructions described in the operating instructions.
- Demonstrate how to turn off the power and disconnect the power plug (by pulling the plug, not the cord) if any of the following events occur: 1) something has spilled into the product, 2) service or repair of the product is necessary, 3) the product cover has been damaged.
- Caution operators about removing paper fasteners around the machine. They should never allow paper clips, staples, or any other small metallic objects to fall into the machine.

Special Safety Instructions for Toner

Accidental Physical Exposure

⚠CAUTION

- Work carefully when removing paper jams or replacing toner bottles or cartridges to avoid spilling toner on clothing or the hands.
- If toner is inhaled, immediately gargle with large amounts of cold water and move to a well ventilated location. If there are signs of irritation or other problems, seek medical attention.
- If toner gets on the skin, wash immediately with soap and cold running water.
- If toner gets into the eyes, flush the eyes with cold running water or eye wash. If there are signs of irritation or other problems, seek medical attention.
- If toner is swallowed, drink a large amount of cold water to dilute the ingested toner. If there are signs of any problem, seek medical attention.
- If toner spills on clothing, wash the affected area immediately with soap and cold water. Never use hot water! Hot water can cause toner to set and permanently stain fabric.

Handling and Storing Toner

⚠WARNING

- Toner, used toner, and developer are extremely flammable.
- Never store toner, developer, toner cartridges, or toner bottles (including empty toner bottles or cartridges) in a location where they will be exposed to high temperature or an open flame.

⚠CAUTION

- Always store toner and developer supplies such as toner and developer packages, cartridges, and bottles (including used toner and empty bottles and cartridges) out of the reach of children.
- Always store fresh toner supplies or empty bottles or cartridges in a cool, dry location that is not exposed to direct sunlight.

Toner Disposal

⚠WARNING

- Never attempt to incinerate toner, used toner, or empty toner containers (bottles or cartridges). Burning toner can explode and scatter, causing serious burns.
- Always wrap used toner and empty toner bottles and cartridges in plastic bags to avoid spillage. Follow the local laws and regulations regarding the disposal of such items.
- Dispose of used toner and toner cartridges at one of our dealers or at an authorized collection site. Always dispose of used toner cartridges and toner bottles in accordance with the local laws and regulations regarding the disposal of such items.

Safety Instructions for this Machine

Prevention of Physical Injury

1. Before disassembling or assembling parts of the machine and peripherals, make sure that the machine and peripheral power cords are unplugged.
2. The plug should be near the machine and easily accessible.
3. Note that some components of the machine and the paper tray unit are supplied with electrical voltage even if the main power switch is turned off.
4. If any adjustment or operation check has to be made with exterior covers off or open while the main switch is turned on, keep hands away from electrified or mechanically driven components.
5. If the [Start] key is pressed before the machine completes the warm-up period (the [Start] key starts blinking red and green), keep hands away from the mechanical and the electrical components as the machine starts making copies as soon as the warm-up period is completed.
6. The inside and the metal parts of the fusing unit become extremely hot while the machine is operating. Be careful to avoid touching those components with your bare hands.
7. To prevent a fire or explosion, keep the machine away from flammable liquids, gases, and aerosols.
8. When a thick book or three-dimensional original is placed on the exposure glass and the ARDF cover is lowered, the back side of the ARDF rises up to accommodate the original. Therefore, when closing the ARDF, please be sure to keep your hands away from the hinges at the back of the ARDF.

Health Safety Conditions

1. Never operate the machine without the ozone filters installed.
2. Always replace the ozone filters with the specified types at the proper intervals.
3. Toner and developer are non-toxic, but if you get either of them in your eyes by accident, it may cause temporary eye discomfort. Try to remove with eye drops or flush with water as first aid. If unsuccessful, get medical attention.

Observance of Electrical Safety Standards

1. The machine and its peripherals must be installed and maintained by a customer service representative who has completed the training course on those models.
2. The NVRAM on the system control board has a lithium battery which can explode if replaced incorrectly. Replace the NVRAM only with an identical one. The manufacturer recommends replacing the entire NVRAM. Do not recharge or burn this battery. Used NVRAM must be handled in accordance with local regulations.

Safety and Ecological Notes for Disposal

1. Do not incinerate toner bottles or used toner. Toner dust may ignite suddenly when exposed to an open flame.
2. Dispose of used toner, developer, and organic photoconductors in accordance with local regulations. (These are non-toxic supplies.)
3. Dispose of replaced parts in accordance with local regulations.
4. When keeping used lithium batteries in order to dispose of them later, do not put more than 100 batteries per sealed box. Storing larger numbers or not sealing them apart may lead to chemical reactions and heat build-up.

⚠CAUTION

- The danger of explosion exists if a battery of this type is incorrectly replaced.
- Replace only with the same or an equivalent type recommended by the manufacturer. Discard used batteries in accordance with the manufacturer's instructions.

Laser Safety

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

⚠WARNING

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

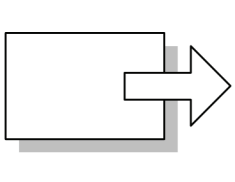
⚠WARNING

- **WARNING**: Turn off the main switch before attempting any of the procedures in the Laser Optics Housing Unit section. Laser beams can seriously damage your eyes.
- **CAUTION MARKING:**

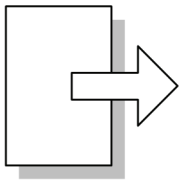
Symbols, Abbreviations and Trademarks

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

	See or Refer to
	Clip ring
	Screw
	Connector
	Clamp
	E-ring
SEF	Short Edge Feed
LEF	Long Edge Feed



Short Edge Feed (SEF)



Long Edge Feed (LEF)

m022v701

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PRODUCT INFORMATION

REVISION HISTORY		
Page	**Date**	**Added/Updated/New**
		None

1. PRODUCT INFORMATION

1.1 SPECIFICATIONS

See "Appendices" for the following information:

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

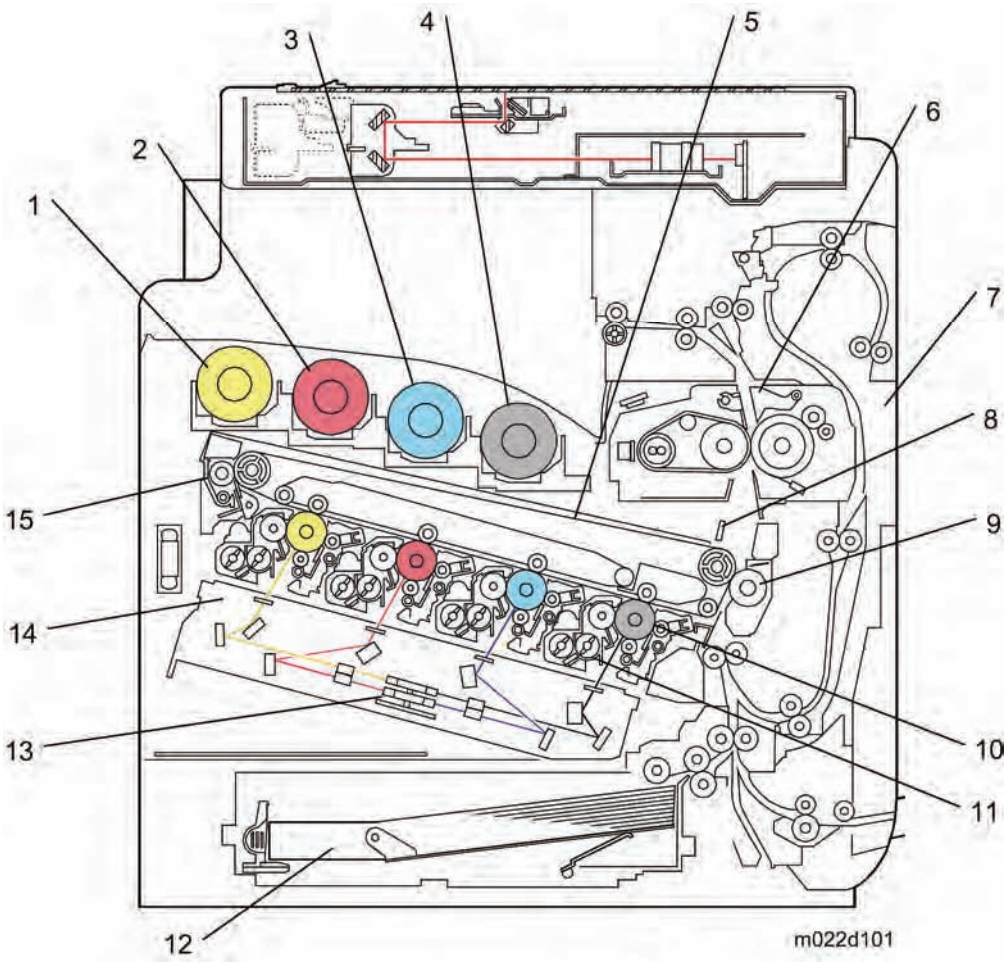
1.2 MACHINE CONFIGURATION

1.2.1 MACHINE CONFIGURATION

Item	Machine Code	Remarks
Main Unit	M022/M024/ M026/M028	M022: C1a (Standard model), M024: C1a (Finisher model), M026: C1b (Standard model), M028: C1b (Finisher model)
One-Tray Paper Feed Unit	M367	-
Two-Tray Paper Feed Unit	M368	-
Side Tray	M369	-
1-bin Tray	M370	-
Fax Option	D483-01 (NA) D483-02 (EU) D483-03 (AA)	-
Memory Unit Type B	G578-17	SAF memory: Requires the Fax Option.
Browser Unit	D430-05 (NA) D430-06 (EU) D430-07 (AA)	In SD card slot 2
Wireless LAN (IEEE 802.11a/g)	D377-01 (NA) D377-02 (EU/AA)	I/F slot A
File Format Converter	D377-04	I/F slot B
Gigabit Ethernet	D377-21	I/F slot C
Copy Data Security Unit	B829-07	-
Optional Counter Interface Unit	B870-11	-

1.3 OVERVIEW

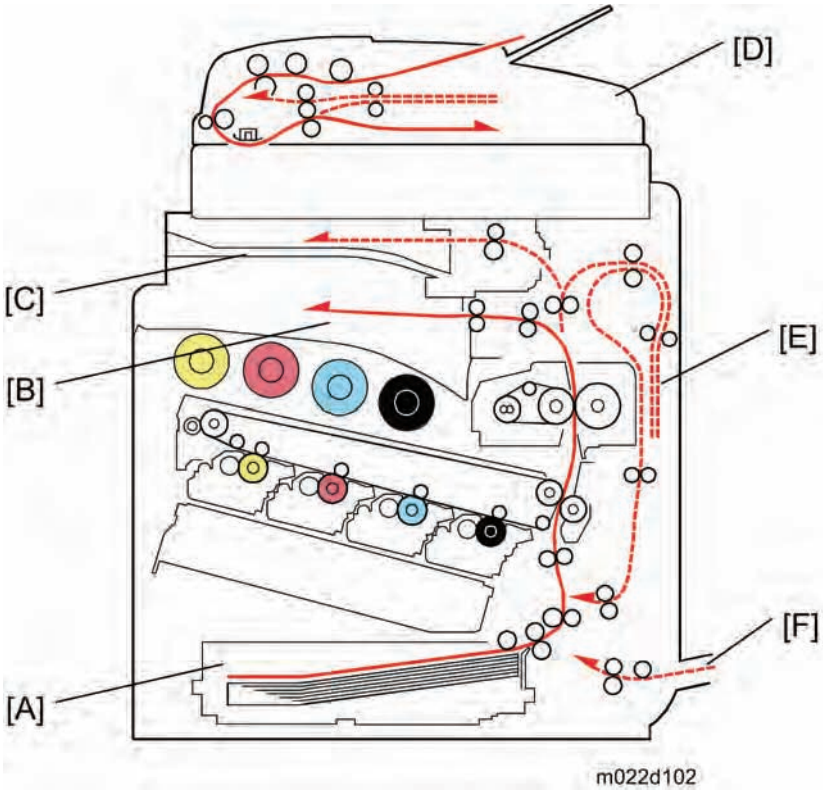
1.3.1 COMPONENT LAYOUT



1. Toner Bottle [Y] 2. Toner Bottle [M] 3. Toner Bottle [C] 4. Toner Bottle [K] 5. Image Transfer Belt Unit 6. Fusing Unit 7. Duplex Unit 8. ID Sensor	9. Paper Transfer roller 10. PCU (Photo Conductor Unit) 11. Development Unit 12. Standard Paper Feed Tray (Tray 1) 13. Polygon Mirror Motor 14. LDU 15. Image Transfer Belt Cleaning Unit

1.3.2 PAPER PATH

Standard model (Basic)



[A]: Standard Paper Feed Tray (Tray 1)

[B]: Standard Paper Exit Tray

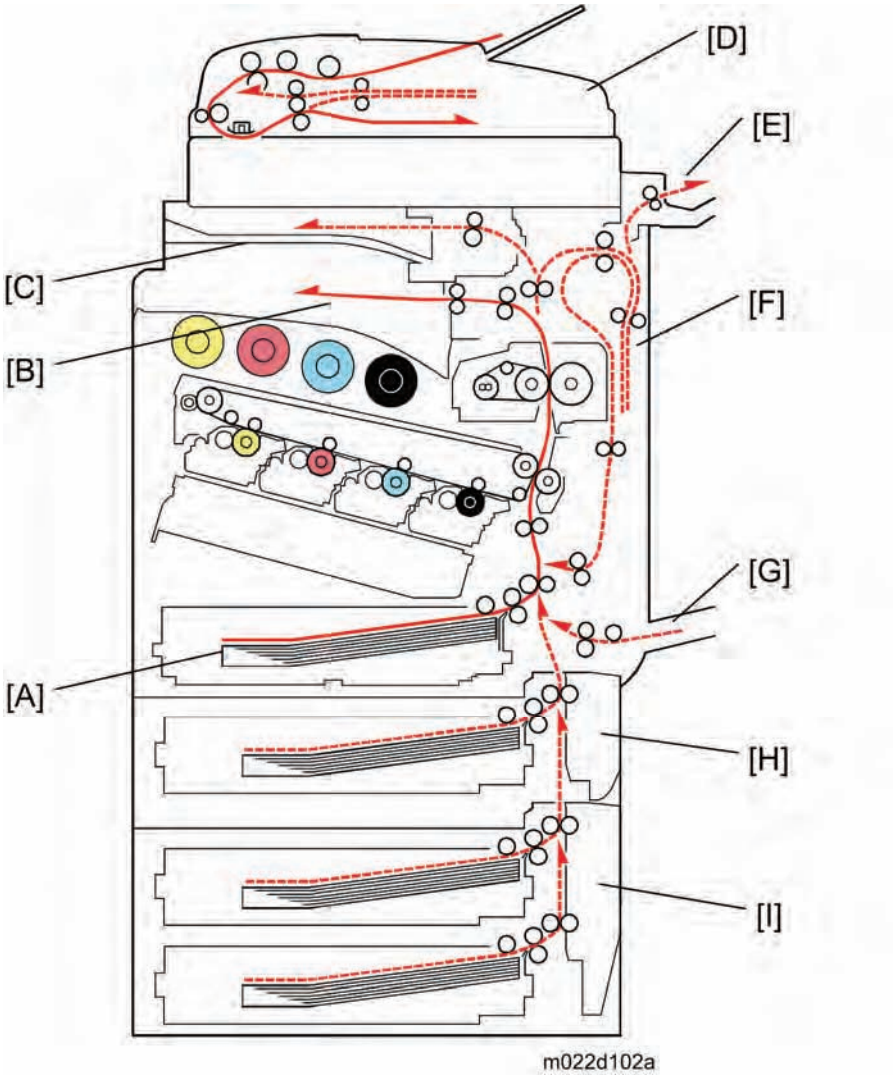
[C]: 1 Bin Tray

[D]: ARDF

[E]: Duplex Unit

[F]: By-pass Tray

Standard model (Full option)



[A]: Standard Paper Feed Tray (Tray 1)

[B]: Standard Paper Exit Tray

[C]: 1 Bin Tray

[D]: ARDF

[E]: Side Tray

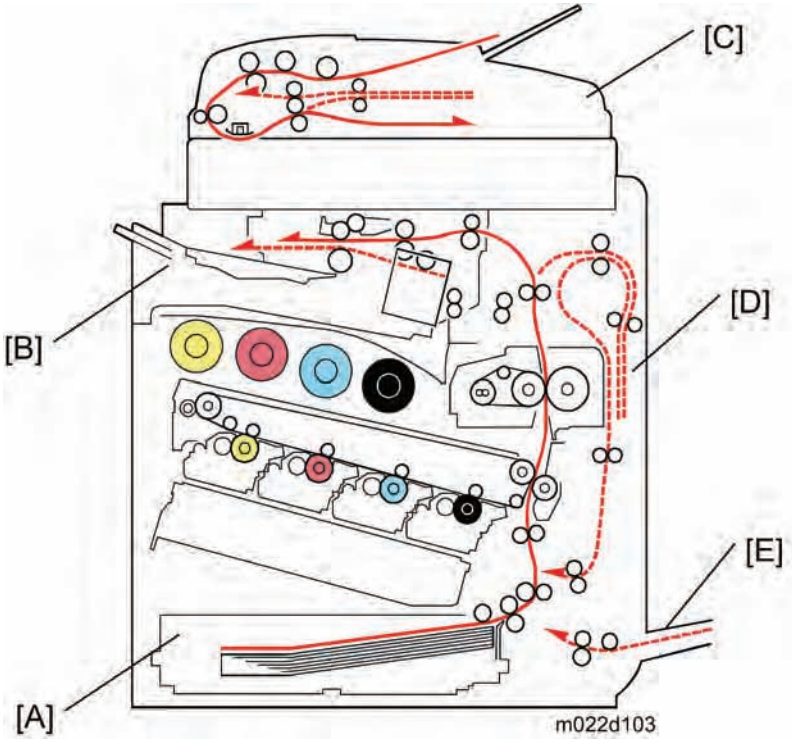
[F]: Duplex Unit

[G]: By-pass Tray

[H]: One Tray Paper Feed Unit (Option)

[I]: Two Tray Paper Feed Unit (Option)

Finisher model (Basic)



[A]: Standard Paper Feed Tray (Tray 1)

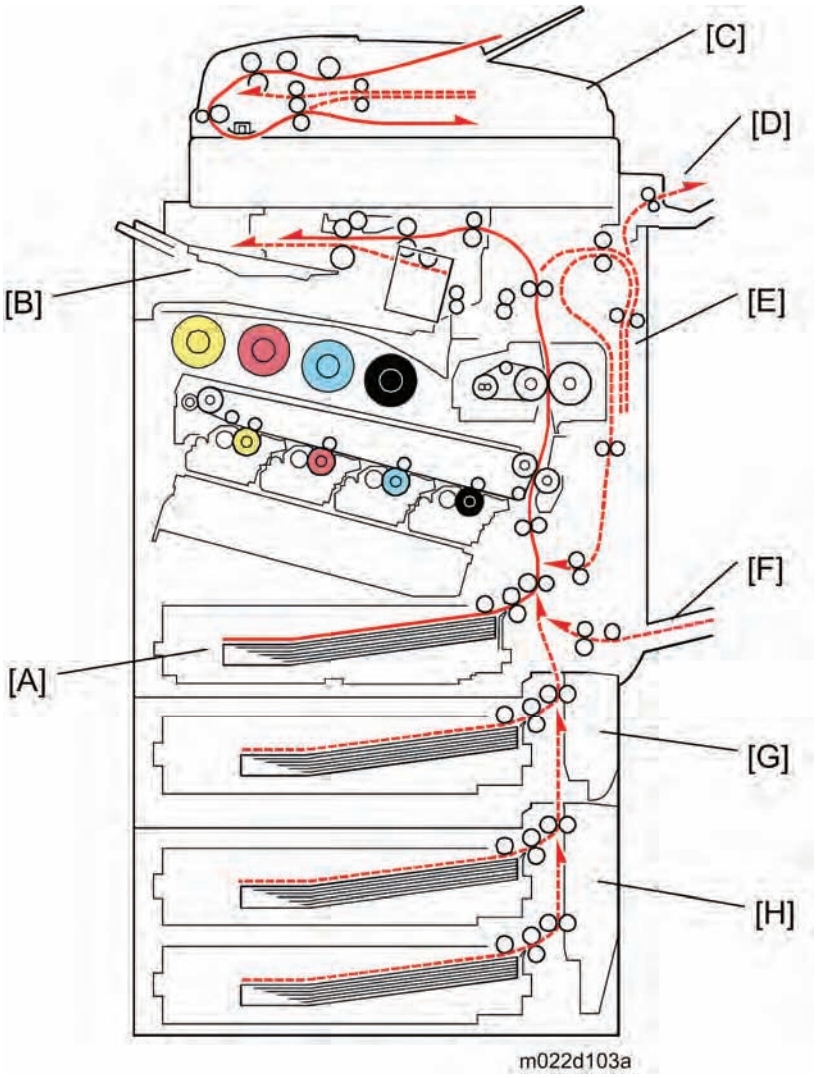
[B]: Internal Finisher

[C]: ARDF

[D]: Duplex Unit

[E]: By-pass Tray

Finisher model (Full option)



[A]: Standard Paper Feed Tray (Tray 1)

[B]: Internal Finisher

[C]: ARDF

[D]: Side Tray

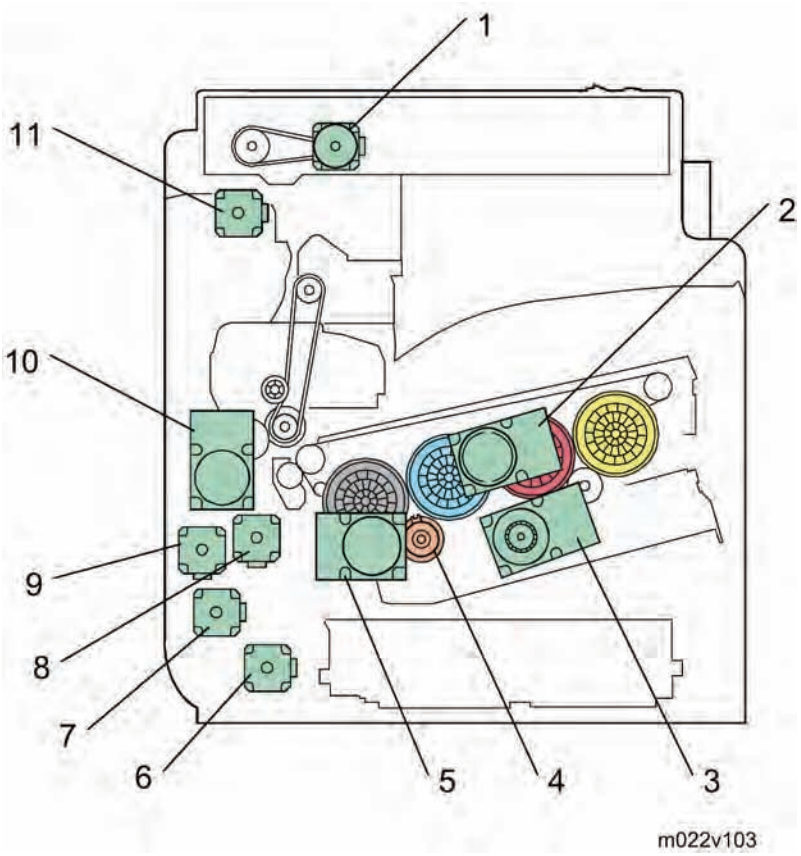
[E]: Duplex Unit

[F]: By-pass Tray

[G]: One Tray Paper Feed Unit (Option)

[H]: Two Tray Paper Feed Unit (Option)

1.3.3 DRIVE LAYOUT



1. Scanner Motor:
   Drives the scanner unit.
2. Drum Motor: CMY:
   This controls the OPCs for cyan, magenta, and yellow.
3. Development Motor: CMY:
   This controls the color development units (cyan/ magenta/ yellow).
4. Development Clutch: K:
   This controls the drive power to the development unit-K.
5. ITB Unit/ Drum: K/ Development: K Motor:
   This controls the black OPC, development unit for black, and ITB unit.
6. Paper Feed Motor:
   This controls the paper feed mechanisms (tray 1).
7. Vertical Transport Motor:
   This controls the vertical transport roller.
8. Registration Motor:
   This controls the registration rollers.

9. Duplex/ By-pass Motor:
   This controls the duplex entrance, relay, exit, by-pass and separation rollers.
10. Fusing/ Paper Exit Motor:
    This controls the fusing unit and paper exit rollers.
11. Inverter Motor:
    This controls the inverter roller.

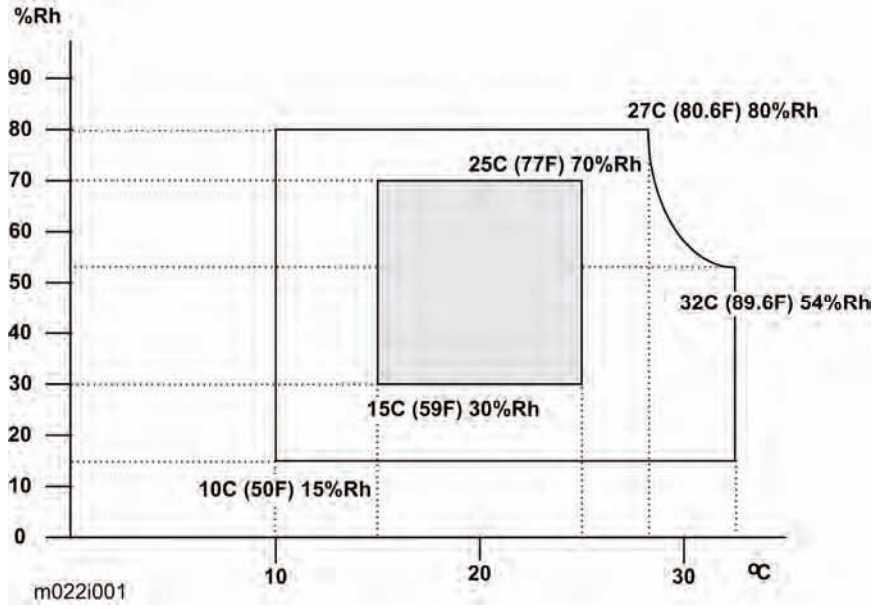
INSTALLATION

REVISION HISTORY		
Page	**Date**	**Added/Updated/New**
12 ~ 31	1/27/2011	Installing the PCDU
83 ~ 84	6/13/2011	Browser Unit Type E

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. Do not let the machine get exposed 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. Install the machine at locations lower than 2,000 m (6,500 ft.) above sea level.
8. Install the machine on a strong, 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 LEVEL

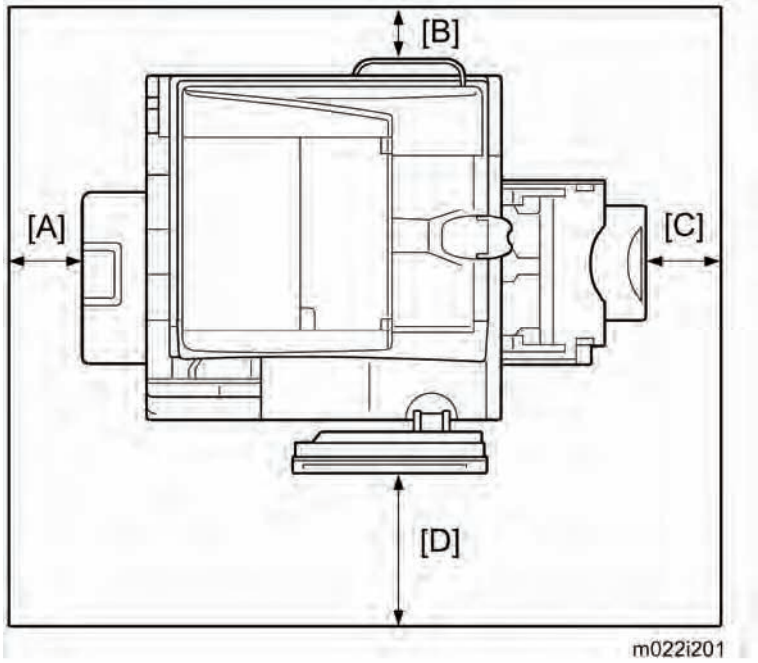
Front to back: Within 5 mm (0.2")

Right to left: Within 5 mm (0.2")

2.1.3 MACHINE SPACE REQUIREMENTS

⚠CAUTION

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



A: Over 100 mm (3.9")

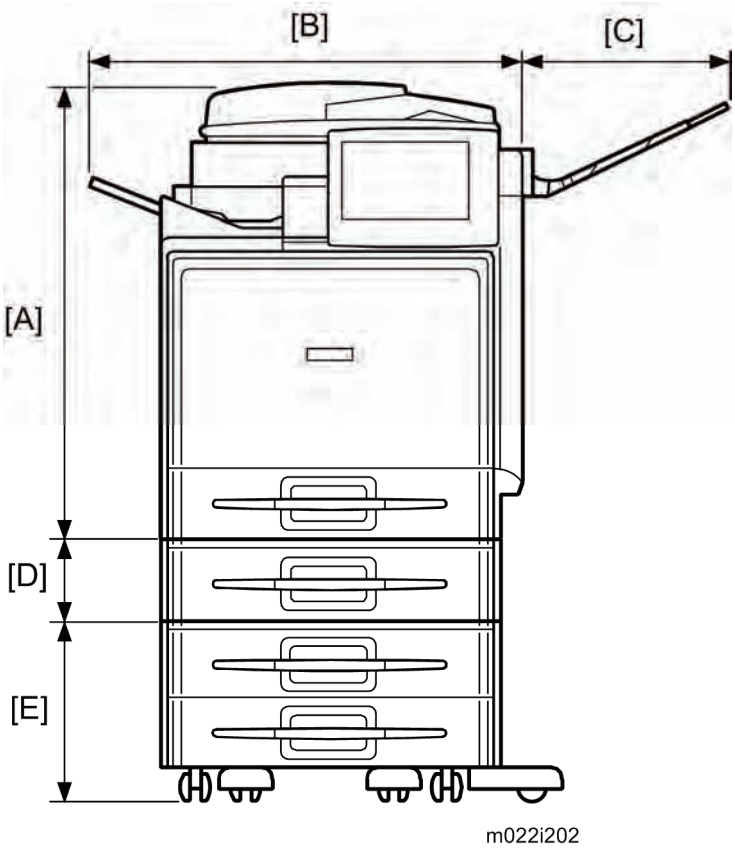
B: Over 100 mm (3.9")

C: Over 315 mm (12.4")

D: Over 400 mm (15.7")

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

2.1.4 MACHINE DIMENSIONS



[A]: 710 mm

[B]: 580 mm

[C]: 315 mm

[D]: 120 mm

[E]: 270 mm

2.1.5 POWER REQUIREMENTS

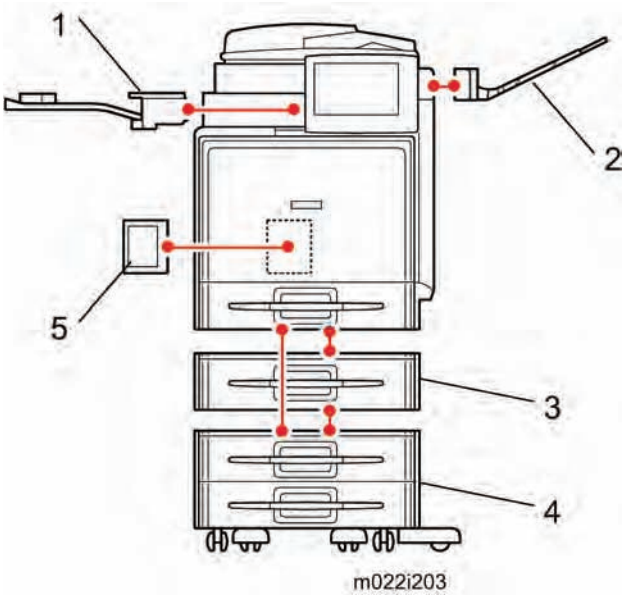
⚠CAUTION

- Insert the plug firmly in 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/AA: 198 V (220 V-10%) - 264 V (240 V+10 %)
3. Do not put things on the power cord.

2.2 OPTIONAL UNIT COMBINATIONS

2.2.1 MACHINE OPTIONS



No.	Options		Remarks
	M022/M026	M024/M028	
1	1-bin tray unit	-	-
2	Side Tray	Side Tray	-
3	One-tray paper feed unit	One-tray paper feed unit	-
4	Two-tray paper feed unit	Two-tray paper feed unit	
5	Fax unit	Fax unit	-

2.2.2 CONTROLLER OPTIONS

No.	Options		Remarks
	M022/M026	M024/M028	
1	IEEE 802.11a/g	IEEE 802.11a/g	I/F slot A
2	File Format Converter	File Format Converter	I/F slot B
3	Gigabit Ethernet	Gigabit Ethernet	I/F slot C
4	Browser Unit	Browser Unit	SD card slot 2 (during installation only)

2.2.3 FAX OPTIONS

No.	Options		Remarks
	M022/M026	M024/M028	
1	Fax Option Type C400	Fax Option Type C400	-
2	Memory Unit Type B 32MB	Memory Unit Type B 32MB	-

2.2.4 OTHER OPTIONS

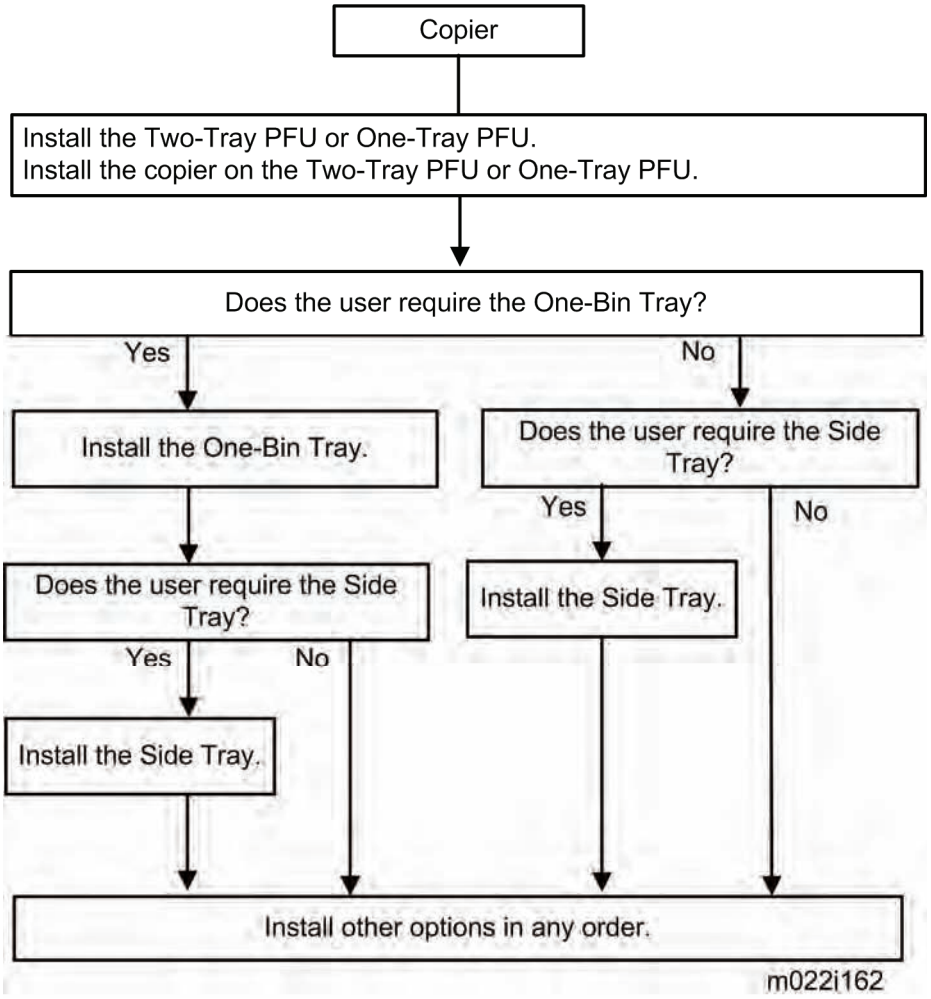
No.	Options		Remarks
	M022/M026	M024/M028	
1	Copy Data Security Unit	Copy Data Security Unit	-
2	Optional Counter Interface Unit	Optional Counter Interface Unit	-

2.3 COPIER INSTALLATION

2.3.1 INSTALLATION FLOW CHART

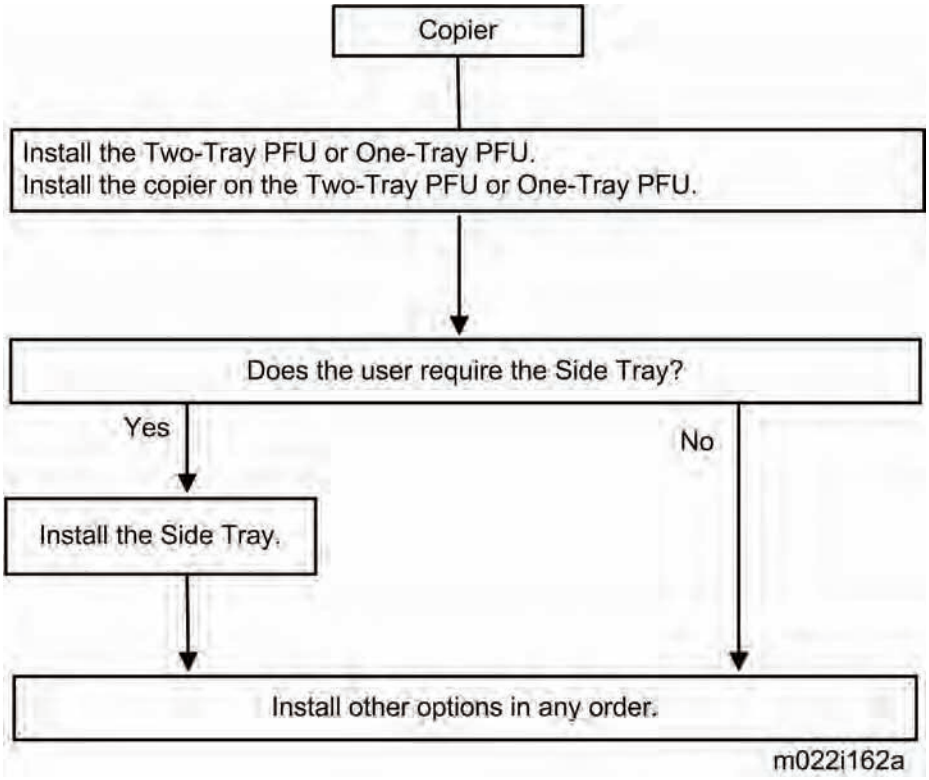
Basic model

This flow chart shows the best procedure for installation.

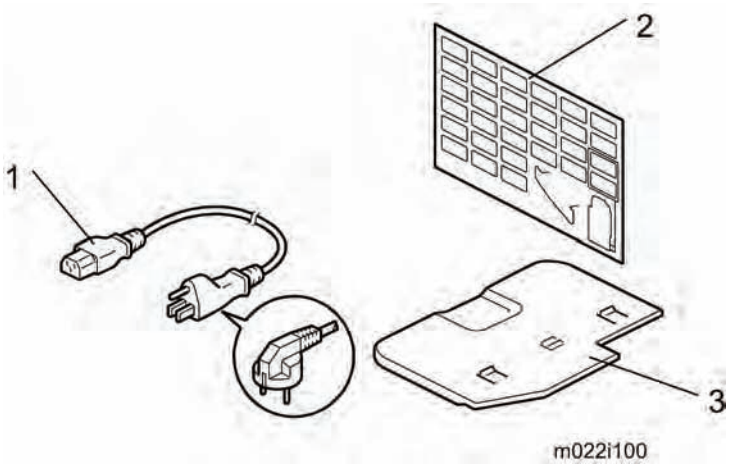


Finisher model

This flow chart shows the best procedure for installation.



2.3.2 ACCESSORY CHECK



Check the quantity and condition of these accessories.

For M022/M026

No.	Description	Q'ty
1	Power Supply Cord	1
2	Decal - Paper Size	1
-	SD card (VM/ App 2 Me)	1

For M024/M028

No.	Description	Q'ty
1	Power Supply Cord	1
2	Decal - Paper Size	1
3	Left tray	1
-	SD card (VM/ App 2 Me)	1

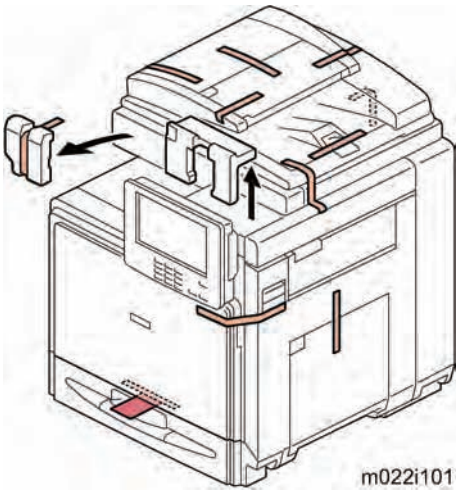
2.3.3 INSTALLATION PROCEDURE

Put the machine on the paper tray unit first if you install an optional paper feed unit at the same time. Then install the machine and other options.

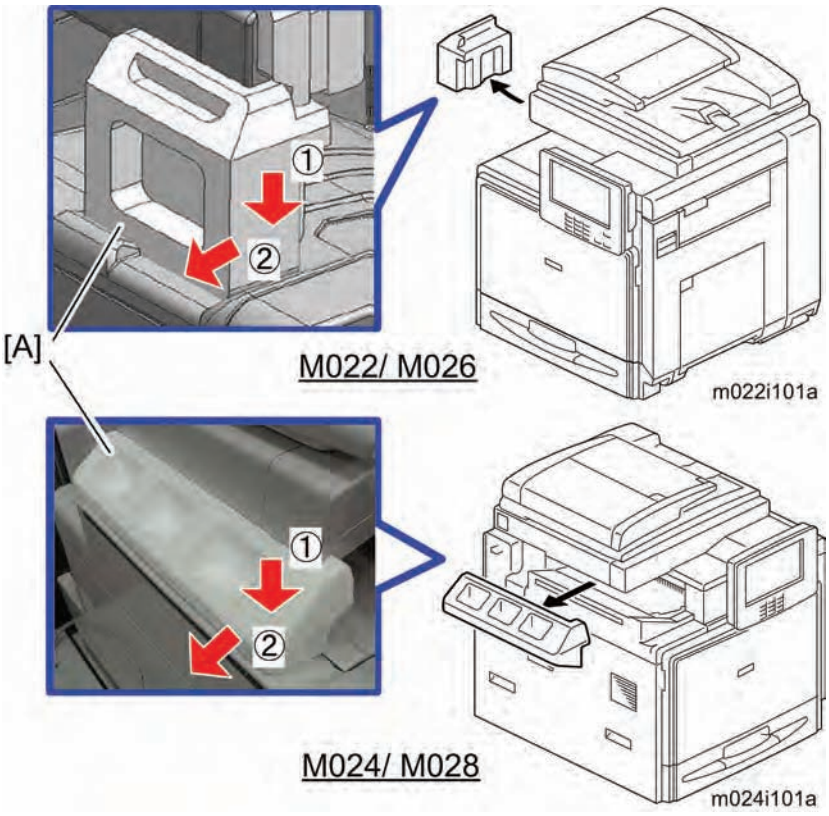
Note

- Keep the shipping retainers after you install the machine. You may need them in the future if you transport the machine to another location.

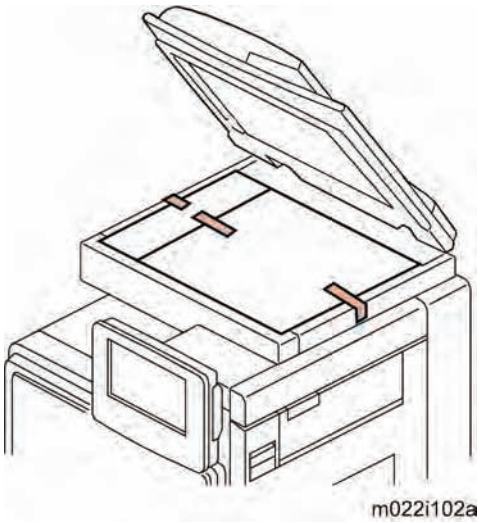
Tapes, Retainers and Toner Bottles



1. Remove the tapes and the retainers on the machine.

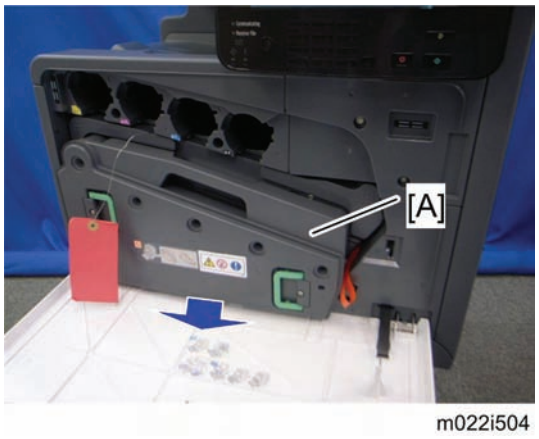


2. Push the retainer [A] down, and then pull it to the left.
3. Remove all the tapes and retainers in the tray.



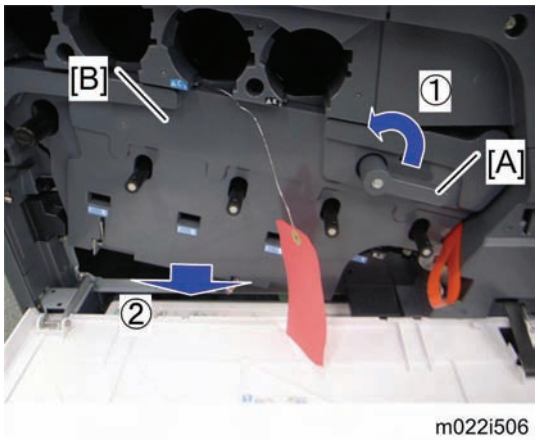
4. Open the ADF, and then remove all the retainers.

5. Open the front door [A].

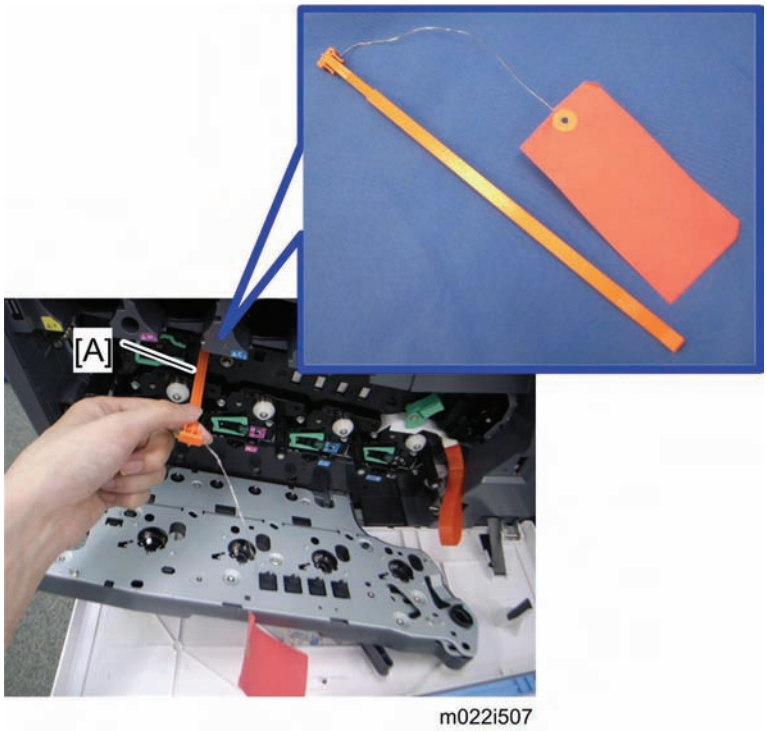


6. Remove the waste toner bottle [A].

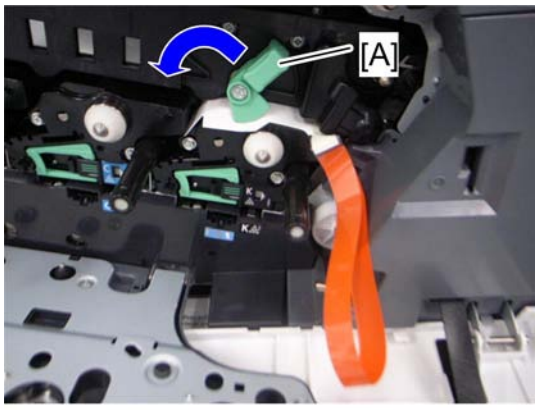
7. Remove the long screw.



8. Turn the lock lever [A] counterclockwise, and then open the drum securing plate [B].

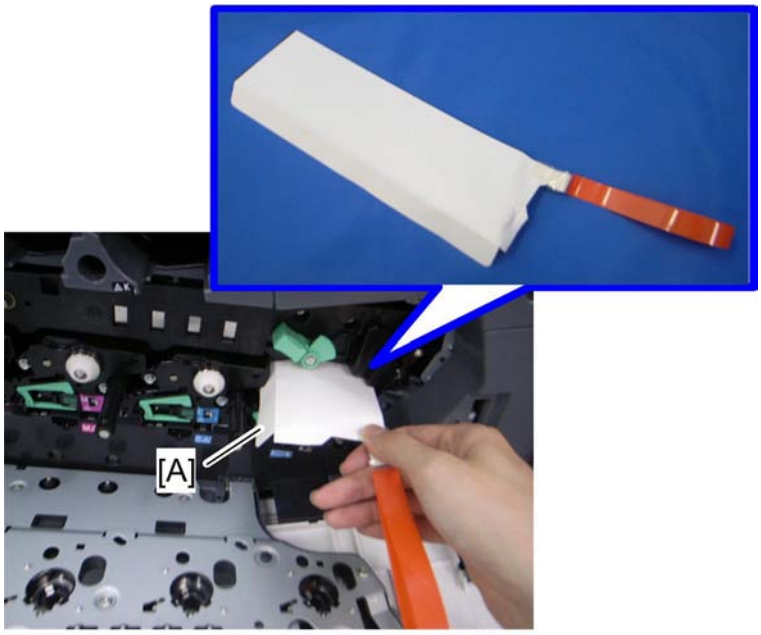


9. Pull out the securing pin [A].



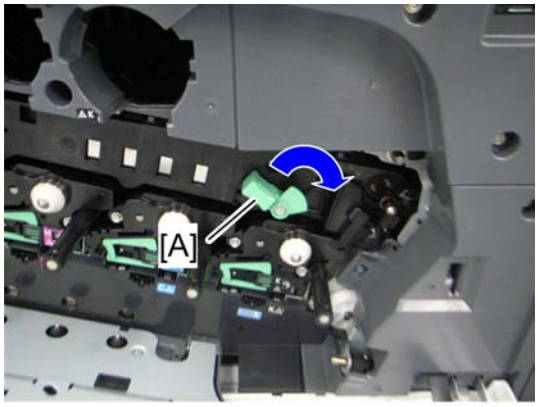
m022i509

10. Turn the ITB lock lever [A] counterclockwise.



m022i508

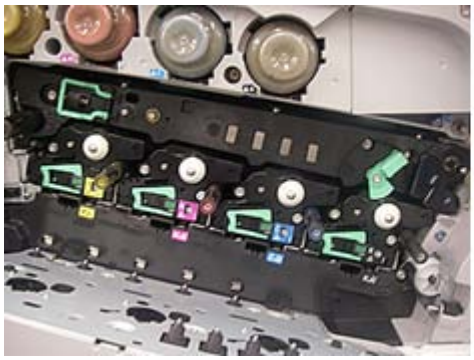
11. Pull out the sheet of paper [A].



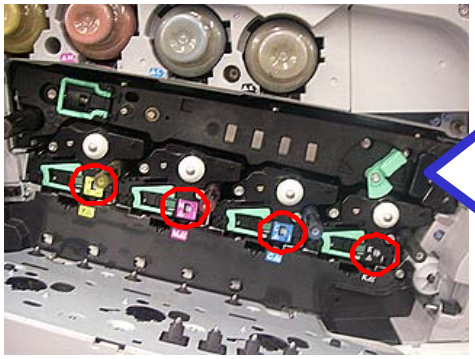
m022i510

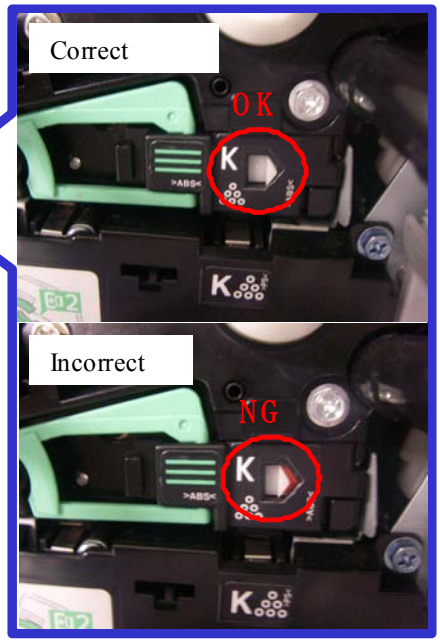
12. Turn the ITB lock lever [A] clockwise.

⇒13. Push the green PCDU lever with your finger, **as far as it will go** (at least until you hear a click).

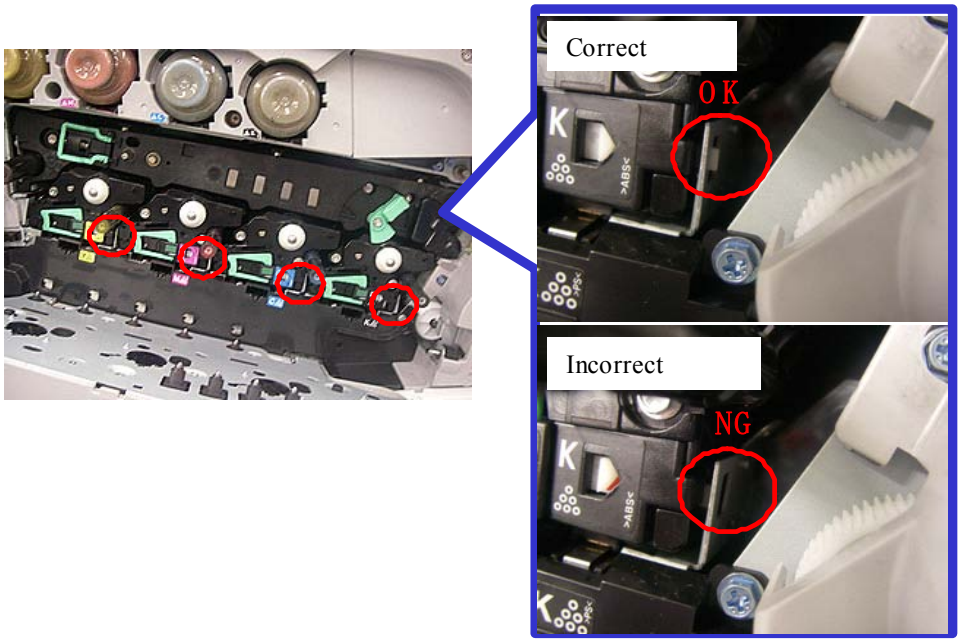


⇒14. Check the pentagon-shaped window for all four colors. If you can see a red area, as shown in the “Incorrect” photo below, this means the unit was not *installed* correctly.

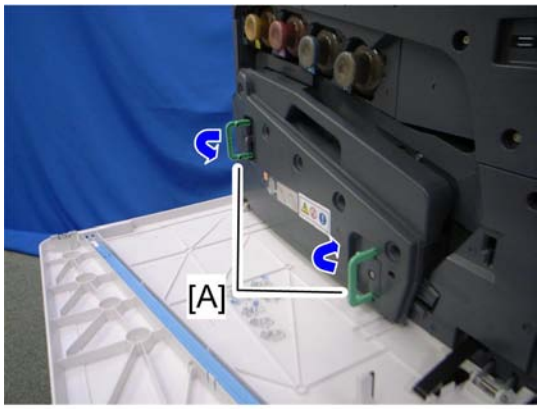




⇒15. Make sure that the white locking tab on the PDCU (circled in red below) is inside the hole of the bracket. Do this for all four PDCUs.

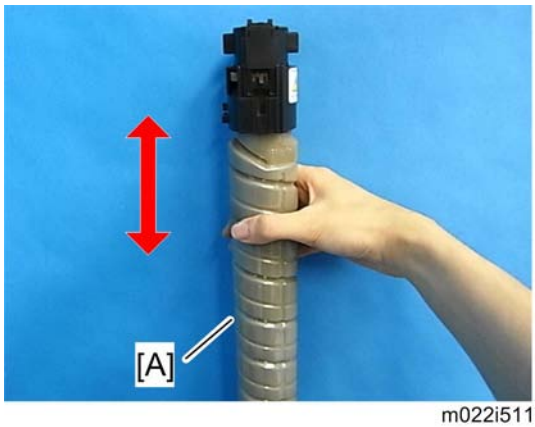


16. Close the drum securing plate(x 1), and then close the front cover.
17. Attach the waste toner bottle.



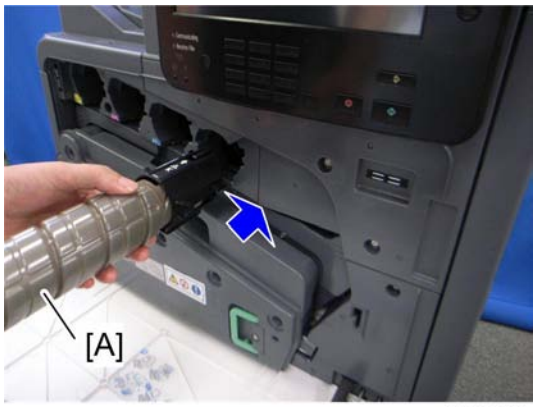
m022r503c

18. Close the handles [A].



m022i511

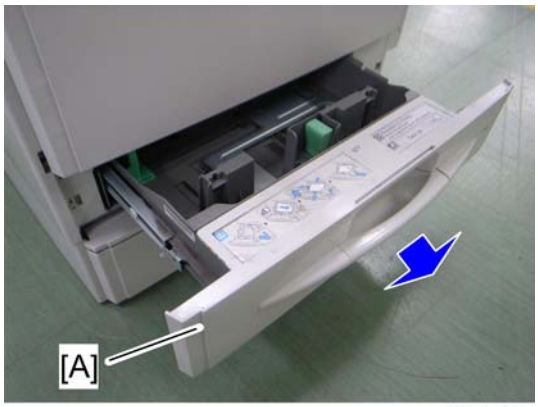
19. Shake each toner bottle [A] five or six times.



m022i513

20. Install each toner bottle [A] in the machine.
21. Close the front door.
22. Connect the power cord to the machine.

Paper Tray



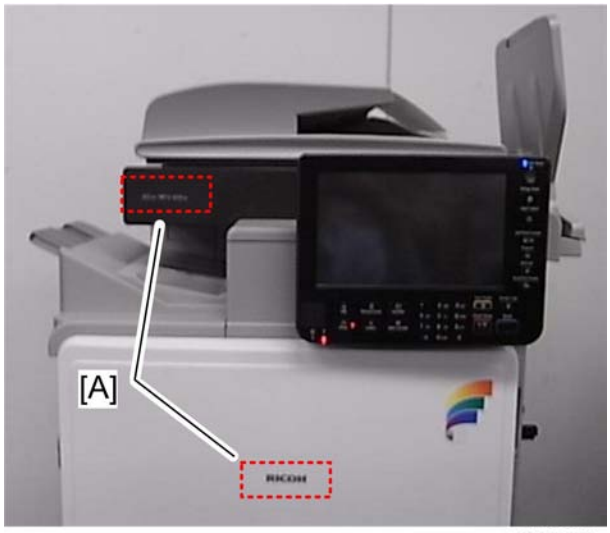
m367i502

1. Pull out the paper tray [A]. Then adjust the side guides and end guide to match the paper size.

Note

- To move the side guides, first pull out the tray fully. Then push down the green lock at the rear inside the tray.

Decals



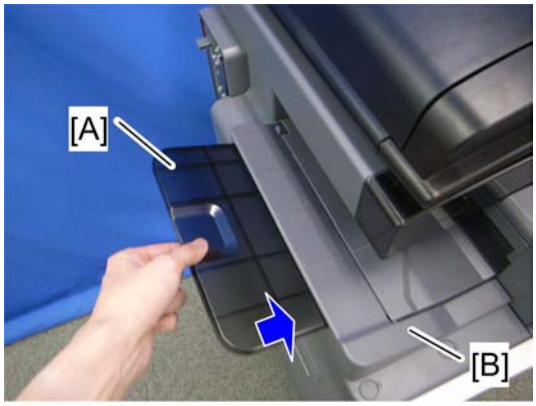
m022i538a

1. Attach the decals [A] to the front door and the scanner front cover of the machine, if the decals are not attached.
2. Attach the correct paper tray number and size decals to the paper trays.

Note

- Paper tray number and size decals are also used for the optional paper tray. Keep these decals for use with these optional units.

Left Tray Setting for M024 and M028



m022i514

For the finisher versions of the machine (M024 and M028), set the left tray [A] in the internal finisher [B].

Initialize the Developer

1. Plug in the machine.
2. Make sure that the platen or ARDF is closed and the main power is turned off.
3. Turn the main power switch on. The machine automatically starts the initialization procedure. The LED turns blue when this procedure has finished.
4. Make copies of image samples (text, photo, and text/photo modes).
5. Do the Automatic Color Calibration process (ACC) for each mode (Copy mode, Printer 600 x 600 dpi, Printer 900 x 600 dpi, Printer 1800 x 600 dpi, and Printer 1200 x 1200 dpi) as follows:
   - 1) Print the ACC test pattern (User tools > Maintenance > Printer Function > Execute > Print).
   - 2) Put the printout on the exposure glass.
   - 3) Put 10 sheets of white paper on top of the test chart.
   - 4) Close the ARDF or the platen cover.
   - 5) Press "Scan" on the LCD panel. The machine starts the ACC.
6. Check that the sample image has been copied normally.
7. Do the user's color registration procedure (press Color Registration on the display panel).

Settings Relevant to the Service Contract

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

Note

- You must select one of the counter methods (developments/prints) in accordance with the contract (SP5045-001).

Counting method		
SP No.	Function	Default
SP5-045-001	Specifies if the counting method used in meter charge mode is based on developments or prints. NOTE: You can set this one time only. You cannot change the setting after you have set it for the first time.	"0": Developments
Service Tel. No. Setting		
SP No.	Function	Default
SP5-812-001 through 004	5812-002 programs the service station fax number. The number is printed on the counter list when the meter charge mode is selected. This lets the user fax the counter data to the service station.	

Settings for @Remote Service

Note

- Prepare and check the following check points before you visit the customer site. For details, ask the @Remote key person.

Check points before making @Remote settings

1. The setting of SP5816-201 in the mainframe must be "0".
2. Print the SMC with SP5990-002 and then check if a device ID2 (SP5811-003) must be correctly programmed.
   - 6 spaces must be put between the 3-digit prefix and the following 8-digit number (e.g. xxx_____xxxxxxxx).
   - ID2 (SP5811-003) and the serial number (SP5811-001) must be the same (e.g. ID2: A01_____23456789 = serial No. A0123456789)
3. The following settings must be correctly programmed.
   - Proxy server IP address (SP5816-063)
   - Proxy server Port number (SP5816-064)
   - Proxy User ID (SP5816-065)
   - Proxy Password (SP5816-066)

4. Get a Request Number

Execute the @Remote Settings

1. Enter the SP mode.
2. Input the Request number which you have obtained from @Remote Center GUI, and then enter [OK] with **SP5816-202**.
3. Confirm the Request number, and then click [EXECUTE] with **SP5816-203**.
4. Check the confirmation result with **SP5816-204**.

Value	Meaning	Solution/ Workaround
0	Succeeded	-
1	Request number error	Check the request number again.
3	Communication error (proxy enabled)	Check the network condition.
4	Communication error (proxy disabled)	Check the network condition.
5	Proxy error (Illegal user name or password)	Check Proxy user name and password.
6	Communication error	Check the network condition.
8	Other error	See "SP5816-208 Error Codes" below this.
9	Request number confirmation executing	Processing… Please wait.

5. Make sure that the screen displays the Location Information with **SP5816-205** only when it has been input at the Center GUI.
6. Click [EXECUTE] to execute the registration with **SP5816-206**.
7. Check the registration result with **SP5816-207**.

Value	Meaning	Solution/ Workaround
0	Succeeded	-
1	Request number error	Check the request number again.

Value	Meaning	Solution/ Workaround
2	Already registered	Check the registration status.
3	Communication error (proxy enabled)	Check the network condition.
4	Communication error (proxy disabled)	Check the network condition.
5	Proxy error (Illegal user name or password)	Check Proxy user name and password.
8	Other error	See "SP5816-208 Error Codes" below this.
9	Request number confirmation executing	Processing… Please wait.

8. Exit the SP mode.

SP5816-208 Error Codes

Cause	Code	Meaning	Solution/ Workaround
Operation Error, Incorrect Setting	-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	Execute registration.

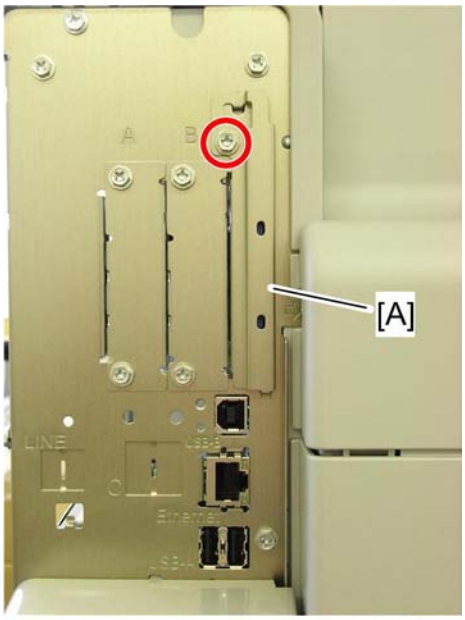
Cause	Code	Meaning	Solution/ Workaround
		made after the confirmation had been already completed.	
	-12007	The request number used at registration was different from the one used at confirmation.	Check Request No.
	-12008	Update certification failed because mainframe was in use.	Check the mainframe condition. If the mainframe is in use, try again later.
Error Caused by Response from GW URL	-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.

2.3.4 VM CARD INSTALLATION

The App2Me application must be enabled before it can be used. The VM SD card including App2Me is provided with the main machine.

Do the following procedure if a customer wants to use "App2Me".

1. Turn off the machine if it is in use.



m022i151b

2. Remove the SD slot cover [A] (x 1).
3. Insert the VM SD card in slot 2 (lower).
4. Attach the SD slot cover [A] (x 1).
5. Turn on the machine.

2.3.5 ENABLING APP2ME

The following procedure basically should be done by a customer.

1. Press the [User Tools] key on the operation panel.
2. Touch the "Extended Feature Settings" button twice.
3. Touch the "App2Me" line under the Startup Setting tab.
4. Touch the "Extended Feature Info" tab on the LCD.
5. Touch the "App2Me" line.
6. Set "Auto Start" to "On".
7. Touch the "Exit" button.
8. Exit the "User Tools" settings.

Important

- Do not remove the VM card from Slot 2 (lower slot). The VM card must remain in the machine.

2.3.6 SECURITY AND ENCRYPTION CARD

The machine is shipped from the factory with the security and encryption card already in installed in slot 1 (the upper slot), but the data overwrite security unit and HDD encryption must be enabled before it can be used.

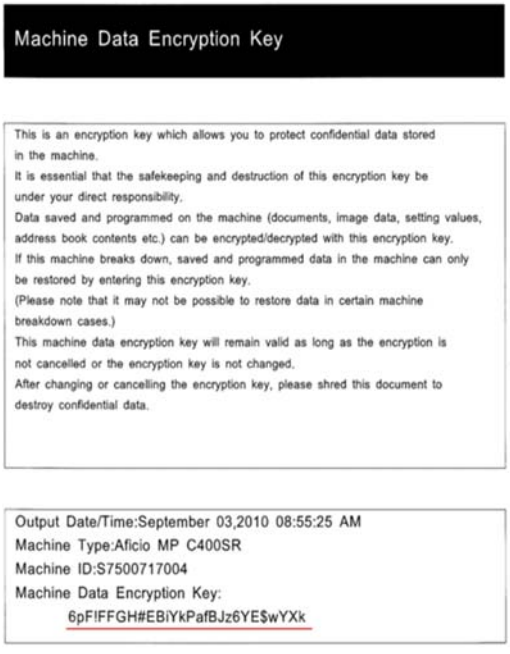
See the "Security Reference" operation instructions manual.

Important

- Immediately after encryption is enabled, the encryption setting process will take several minutes to complete before you can begin using the machine.
- If encryption is enabled after data has been stored on the disk, or if the encryption key is changed, this process can take up to three and a half hours or more.
- Keep the Encryption Key in a safe place.
- If the machine loses the Encryption Key due to damaged components, the controller board, hard disk, NVRAM and this SD Card must all be replaced at the same time.

Encryption key sample:

When the user enables encryption with the user tools, the machine automatically prints the Encryption Key on a sheet of paper. The user must keep this printout of the Encryption Key. The Encryption Key is printed out like the example shown below.



m022i540

Installation

To use HDD encryption, the user must enable encryption and print the encryption key.

See Operating Instructions > Security Reference > 5. Securing Information Sent over the Network or Stored on Hard Disk > Encrypting Data on the Hard Disk

Important

- If the customer wishes to activate the Security Unit on a machine that is already running, it is recommended to activate the unit by selecting "All Data". Selecting "All Data" will preserve the data that has already been saved to the hard drive. (If "Format All Data" is selected, all user data saved to the hard drive up to that point will be erased).

Note

- If you are installing a new machine, it is recommended to activate the Security Unit by selecting "Format All Data". This method is recommended because there is no user data on the hard drive yet (Address Book data, image data, etc.).

Note

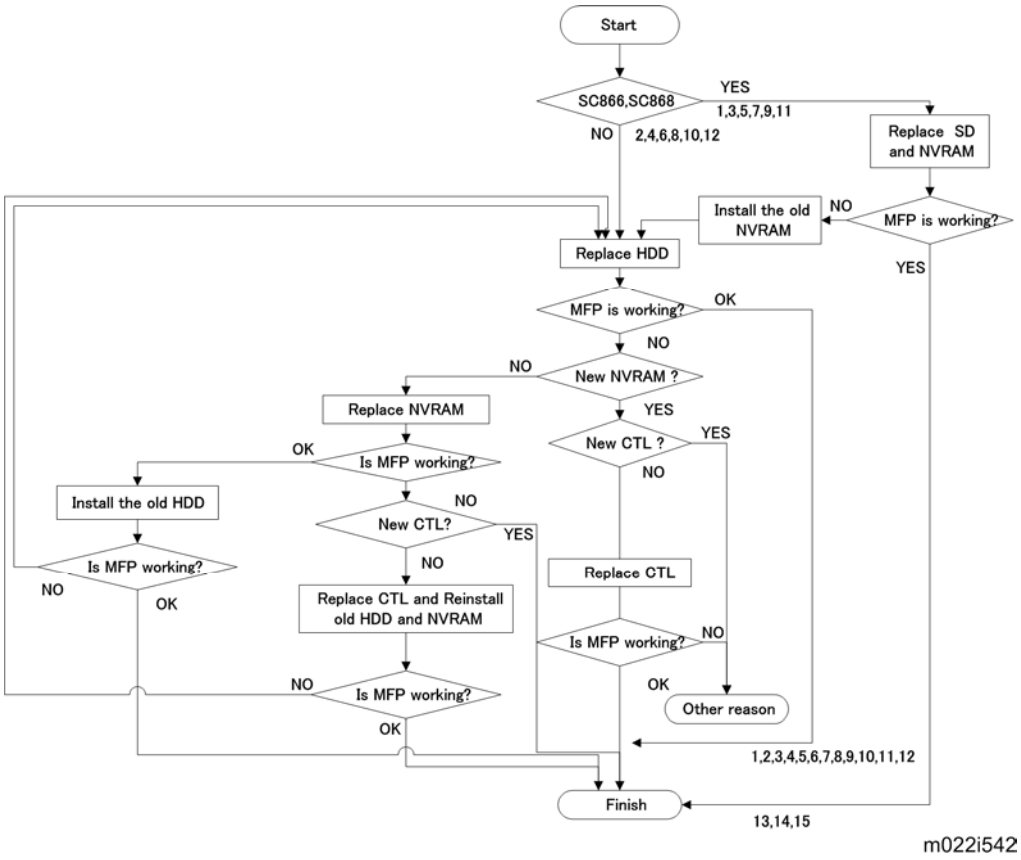
- The machine cannot be operated while data is being encrypted.
- Once the encryption process begins, it cannot be stopped.
- Make sure that the machine's main power is not turned off while the encryption process is in progress.
- If the machine's main power is turned off while the encryption process is in progress, the hard disk will be damaged and all data on it will be unusable. The hard disk must be replaced (see case 5 in the troubleshooting table below).
- When the user enables encryption with the user tools, the machine automatically prints the Encryption Key on a sheet of paper. The user must keep this printout of the Encryption Key.

When a security and encryption card causes a problem

This section explains troubleshooting for the following symptoms:

- SC 861 to 865 (defective HDD)
- Any SC that indicates a defective controller board
- "Please wait" remains on the display

Test the machine using this flow chart, to determine which parts are causing the problem:



The following table shows what to do in each case:

For example, if only the controller and HDD were found to be defective, then it is case 4 in the table below.

Encryption OFF:

CTL	HDD	NVRAM	SD Card	Action	No
X	X	X	X	Replace CTL/ HDD/ SDCARD / NVRAM	1
X	X	X	(X)	Replace CTL/ HDD/ SDCARD / NVRAM	2
X	X	(X)	X	Replace CTL/ HDD/ SDCARD / NVRAM	3
X	X	O	O	Replace CTL/ HDD	4
X	O	X	X	Replace CTL/ SDCARD/ NVRAM	5
X	O	X	(X)	Replace CTL/ SDCARD/ NVRAM	6
X	O	(X)	X	Replace CTL/ SDCARD/ NVRAM	7
X	O	O	O	Replace CTL	8
O	X	X	X	Replace CTL/ SDCARD/ NVRAM	9

O	X	X	(X)	Replace CTL/ SDCARD/ NVRAM	10
O	X	(X)	X	Replace CTL/ SDCARD/ NVRAM	11
O	X	O	O	Replace HDD	12
O	O	X	X	Replace SDCARD/ NVRAM	13
O	O	X	(X)	Replace SDCARD/ NVRAM	14
O	O	(X)	X	Replace SDCARD/ NVRAM	15

Encryption ON:

CTL	HDD	NVRAM	SD Card	Action	No
X	X	X	X	Replace CTL/ HDD/ SDCARD / NVRAM	1
X	X	X	(X)	Replace CTL/ HDD/ SDCARD / NVRAM	2
X	X	(X)	X	Replace CTL/ HDD/ SDCARD / NVRAM	3
X	O	O	O	Replace CTL/ HDD	4
X	O	X	X	Replace CTL/ SDCARD/NVRAM, then the HDD is automatically formatted	5
X	O	X	(X)	Replace CTL/ SDCARD/NVRAM, then the HDD is automatically formatted	6
X	O	(X)	X	Replace CTL, then restore the old encryption key, then replace SDCARD/NVRAM.	7
X	X	O	O	Replace CTL, then restore the old encryption key.	8
O	X	X	X	Replace HDD/ SDCARD/NVRAM	9
O	X	X	(X)	Replace HDD/ SDCARD/NVRAM	10
O	X	(X)	X	Replace HDD/ SDCARD/NVRAM	11
O	X	O	O	Replace HDD	12
O	O	X	X	Replace SDCARD/NVRAM	13

O	O	X	(X)	Replace SDCARD/NVRAM	14
O	O	(X)	X	Replace SDCARD/NVRAM	15

O: Not defective parts

X: Defective parts, must replace

(X): Not defective parts but must be replaced

If the SD card is replaced, the NVRAM must be replaced.

If the NVRAM is replaced, the SD card must be replaced.

If the SD card and NVRAM are replaced, the HDD encryption unit and the Data Overwrite Security unit must both be re-installed after you complete the actions in the above table. See the procedures below.

When reinstalling the Data Overwrite Security Unit:

Before You Begin the Procedure

1. Confirm that the Data Overwrite Security unit SD card is the correct type for the machine.
2. Make sure that the following settings are not at their factory default values:
   - Supervisor login password
   - Administrator login name
   - Administrator login password

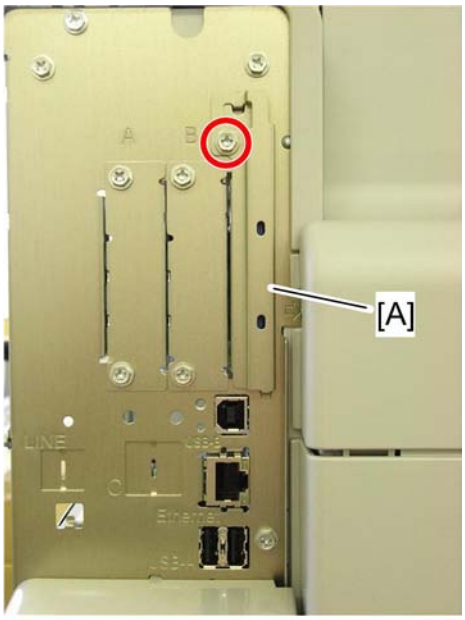
   Important
   - These settings must be set up by the customer before the HDD Encryption unit can be installed.
3. Make sure that “Admin. Authentication” is ON.
   [System Settings] - [Administrator Tools] - [Administrator Authentication Management] - [Admin. Authentication]
   If this setting is OFF, tell the customer this setting must be ON before you do the installation procedure.
4. Make sure that “Administrator Tools” is enabled (selected).
   [System Settings] - [Administrator Tools] - [Administrator Authentication Management] - [Available Settings]
   If this setting is disabled (not selected), tell the customer this setting must be enabled (selected) before you do the installation procedure.

Installation Procedure:

⚠CAUTION

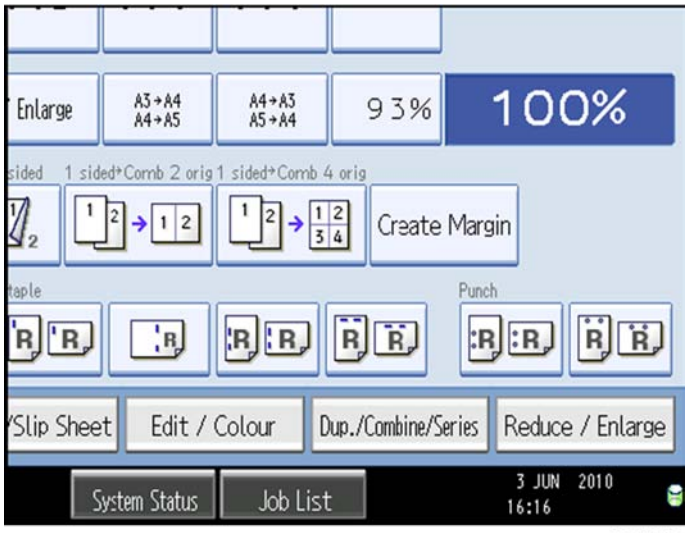
- Unplug the main machine power cord before you do the following procedure.

1. Turn off the main power switch if the machine is turned on.
2. Disconnect the network cable if it is connected.



m022i151b

3. Remove the slot cover [A] for SD cards.
4. Turn the SD-card label face to the rear of the machine. Then push it slowly into slot 1 until you hear a click.
5. Connect the network cable if it needs to be connected.
6. Turn on the main power switch.
7. Go into the SP mode and push “EXECUTE” with SP5-878-001.
8. Exit the SP mode and turn off the operation switch. Then turn off the main power switch.
9. Turn on the machine power.
10. Do SP5990-005 (SP print mode Diagnostic Report).
11. Go into the User Tools mode, and select System Settings> Administrator Tools> Auto Erase Memory Setting> On.
12. Exit the User Tools mode.



m022i541

	Dirty	This icon is lit when there is temporary data to be overwritten, and blinks during overwritting
	Clear	This icon is lit when there is no temporary data to be overwritten.

When reinstalling HDD Encryption Unit:

Before You Begin the Procedure

1. Make sure that the following settings are not at the factory default settings:
   - Supervisor login password
   - Administrator login name
   - Administrator login password

   Important
   - These settings must be set up by the customer before the HDD Encryption unit can be installed.
2. Confirm that "Admin. Authentication" is on:
   [User Tools] > "System Settings"> "Administrator Tools"> "Administrator Authentication Management"> "Admin. Authentication"> "On"
   If this setting is "Off", tell the customer that this setting must be "On" before you can do the installation procedure.
3. Confirm that "Administrator Tools" is selected and enabled:
   [User Tools]> "System Settings"> "Administrator Tools"> "Administrator Authentication Management"> "Available Settings"

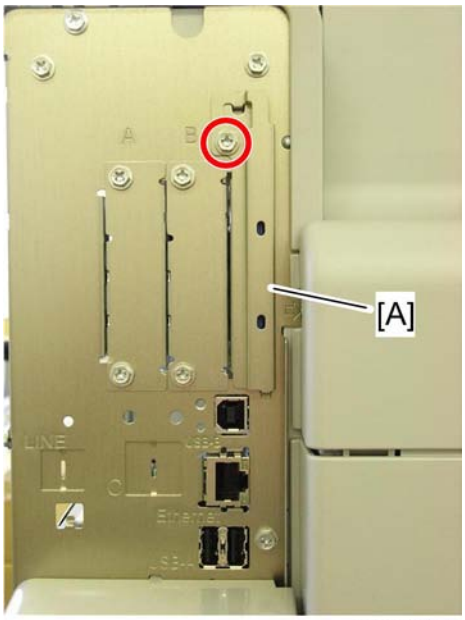
   Note
   - "Available Settings" is not displayed until Step 2 is done.

   If this setting is not selected, tell the customer that this setting must be selected before you can do the installation procedure.

- Installation Procedure

  CAUTION
  - Unplug the main machine power cord before you do the following procedure.

1. Turn off the main power switch if the machine is turned on.
2. Disconnect the network cable if it is connected.



m022i151b

3. Remove the SD card slot cover [A].
4. Turn the SD-card label to face the rear of the machine. Then push it slowly into slot 2 until you hear a click.
5. Turn on the main power switch, and then enter the SP mode.
6. Select SP5878-002, and then press "Execute" on the LCD.
7. Exit the SP mode after "Completed" is displayed on the LCD.
8. Turn off the main power switch.
9. Remove the SD card from slot 2.
10. Attach the SD card slot cover.

The user must now enable encryption and print the new encryption key, as explained earlier in this section.

2.3.7 MOVING THE MACHINE

This section shows you how to manually move the machine. See the section "Transporting the Machine" if you have to pack the machine and move it a longer distance.

- Remove all trays from the optional paper feed unit.

2.3.8 TRANSPORTING THE MACHINE

Main Frame

1. Do SP 4806-001 to move the scanner carriage from the home position. This prevents dust from falling into the machine during transportation.
2. Make sure there is no paper left in the paper trays. Then fix down the bottom plates with a sheet of paper and tape.

3. Do one of the following:
   - Attach shipping tape to the covers and doors.
   - Shrink-wrap the machine tightly.

Note

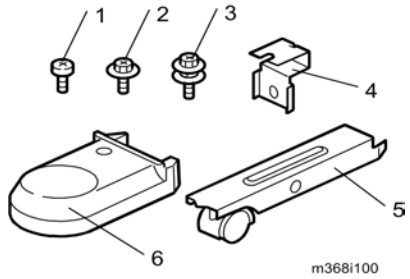
- After you move the machine, Make sure you do the "Forced Line Position Adjustment" as follows. This optimizes color registration.
- Do the "Forced Line Position Adj. Mode c" (SP2-111-3).
- Then do the "Forced Line Position Adj. Mode a" (SP2-111-1).
  To check if SP 2-111-1 was successful, watch the screen during the process. A message is displayed at the end. Also, you can check the result with SP 2-194-10 to -12.
- Make sure that the side fences in the trays are correctly positioned to prevent color registration errors.

2.4 PAPER FEED UNIT (M368)

2.4.1 COMPONENT CHECK

Check the quantity and condition of the accessories against the following list.

No.	Description	Q'ty
1	Screw (M3 x 6)	6
2	Screw (M4 x 10)	2
3	Spring washer screw	1
4	Securing bracket	2
5	Caster stand	6
6	Stand cover	6

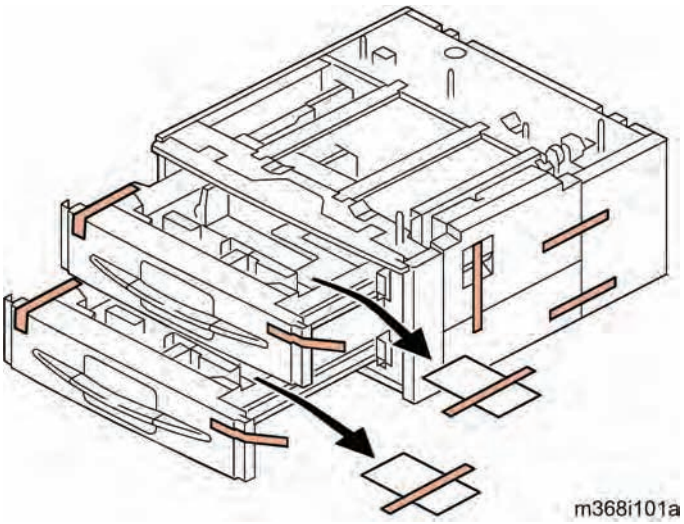


2.4.2 INSTALLATION PROCEDURE

CAUTION

- Unplug the machine power cord before starting the following procedure.
- The handles of the main machine for lifting must be inserted inside the machine and locked, unless these handles are used for the installation or relocation of the main machine.
- You need two or more persons to lift the copier. The copier is highly unstable when lifted by one person, and may cause human injury or property damage.

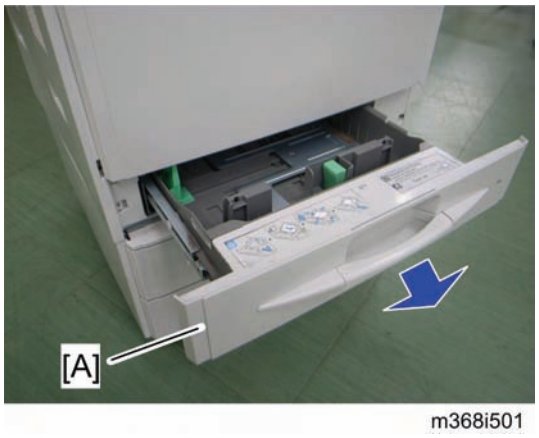
For installing the paper feed unit (M368) only



1. Remove all tapes on the paper feed unit.
2. Remove the paper tray and remove all tapes and padding.
3. Lift the copier and install it on the paper feed unit.

Note

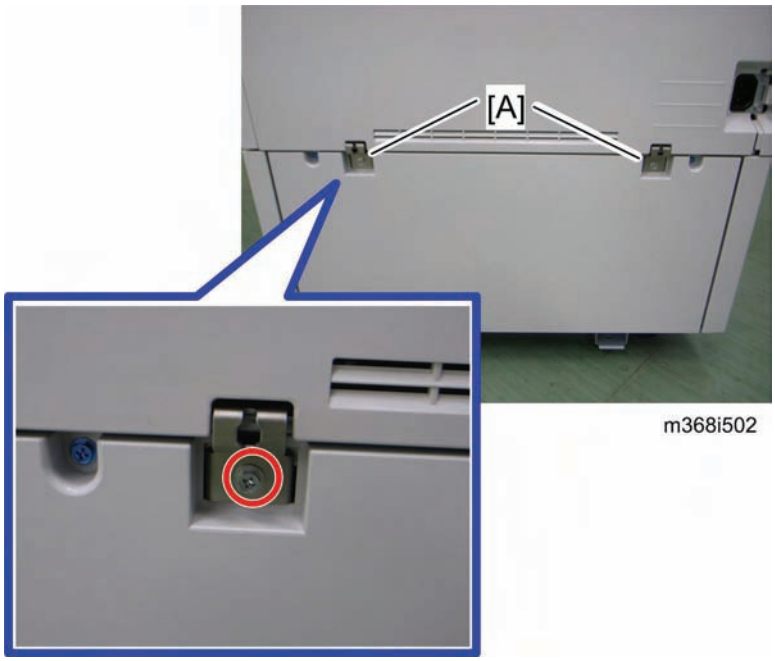
- Hold the handle and grips of the machine when you lift and move the machine.



4. Remove the paper tray [A] of the machine.

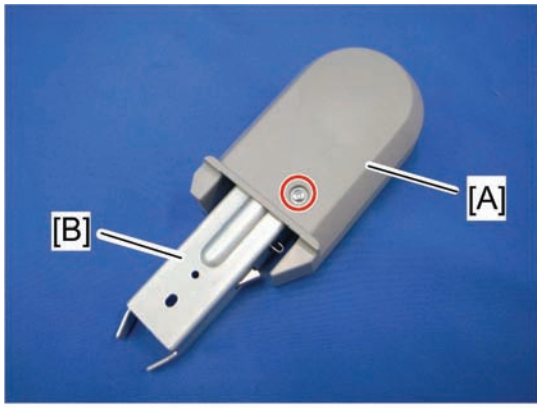
m368i503

5. Attach a screw (spring washer screw), using a securing bracket [A] to tighten the screw.



m368i502

6. Attach a securing bracket [A] to each side of the paper tray unit, as shown (x 1: M4 x 10 each).
7. Reinstall the paper tray.



m368i504

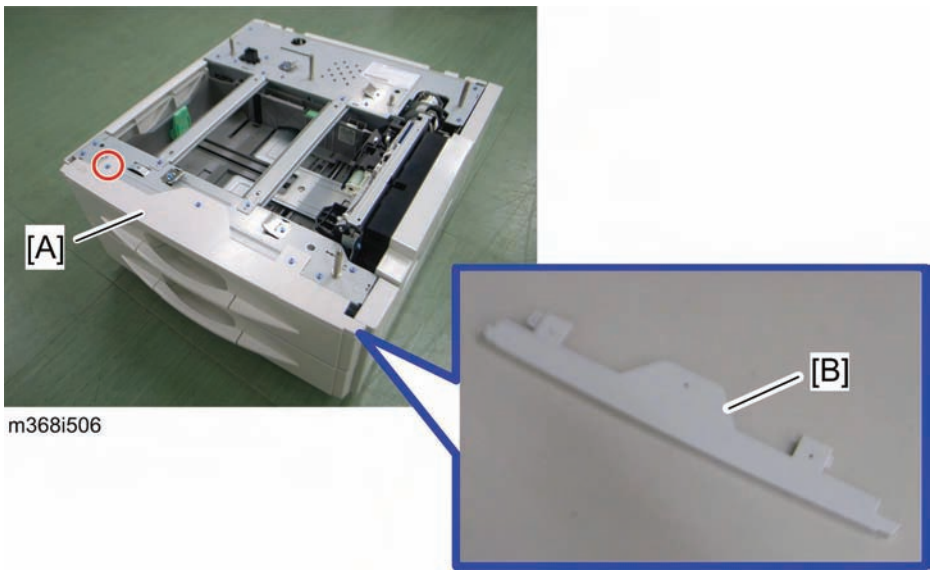
8. Attach the stand covers [A] to the caster stands [B].

m368i505

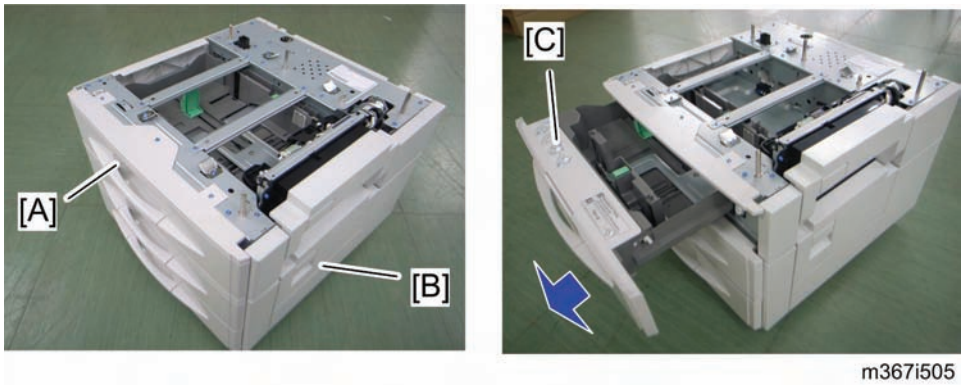
9. Attach the caster stands [A].
10. Load paper into the paper feed unit.
11. Turn on the main power switch of the machine.
12. Adjust the registration for each tray (☛ p.4-3 "Image Adjustment").
    - For tray 2, use SP1002-003
    - For tray 3, use SP1002-004
13. Check the paper feed unit operation and copy quality.

For installing with the paper feed unit (M367)

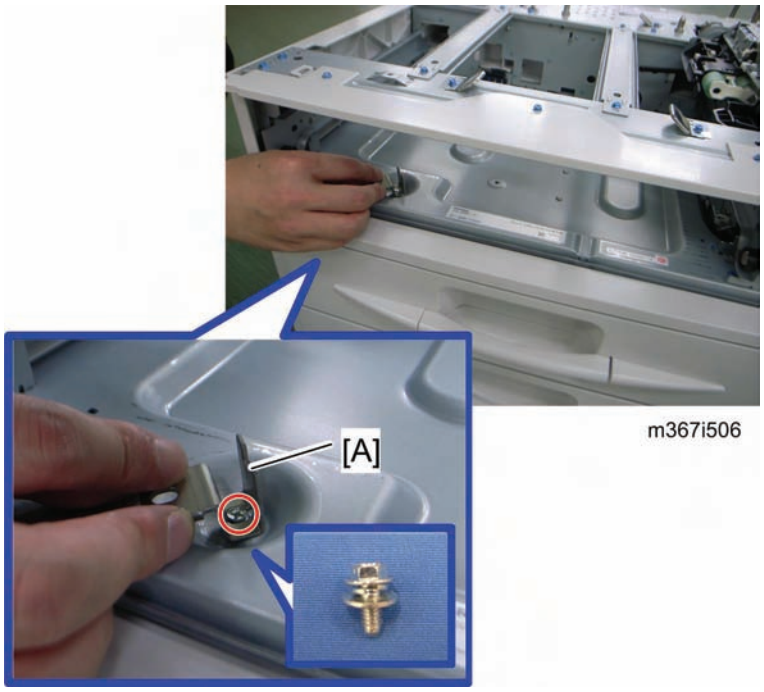
1. Remove the strips of tape.



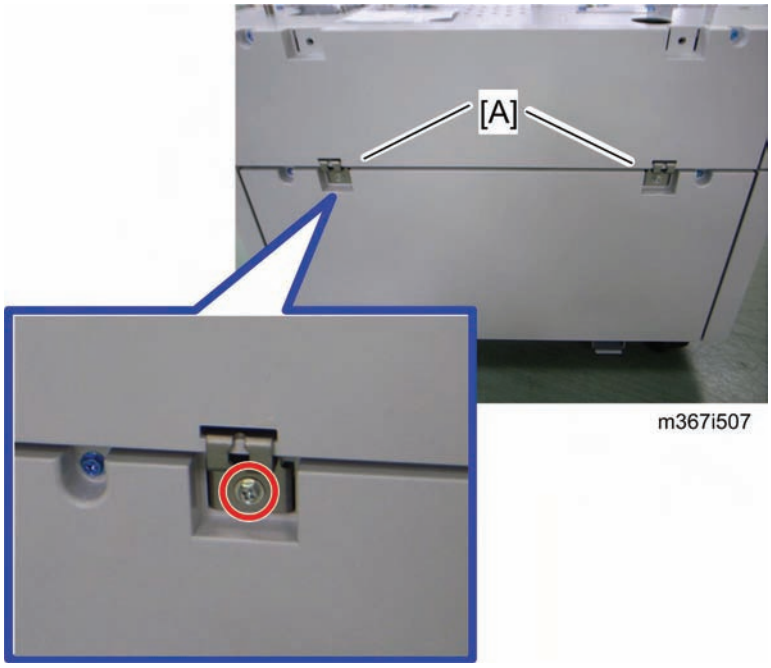
2. Replace the upper front cover [A] with another cover [B] (provided with the M367) (x 1).



3. Lift the M367 [A] and install it on the M368 [B].
4. Remove the paper tray [C] (for M367).



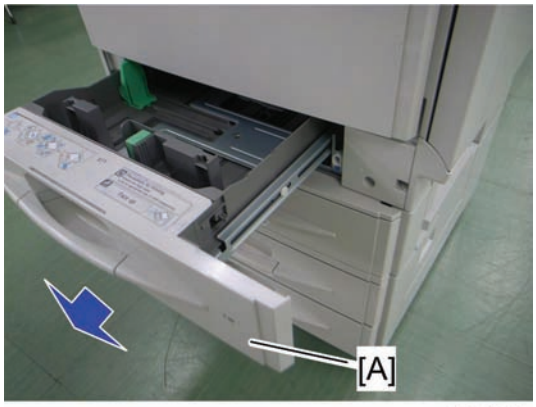
5. Attach a screw (spring washer screw), using a securing bracket [A] to tighten the screw.



6. Attach a securing bracket [A] to each side of the paper tray unit, as shown (x 1: M4 x 10 each).
7. Reinstall the paper tray.
8. Lift the copier and install it on the paper feed unit.

Note

- Hold the handle and grips of the machine when you lift and move the machine.

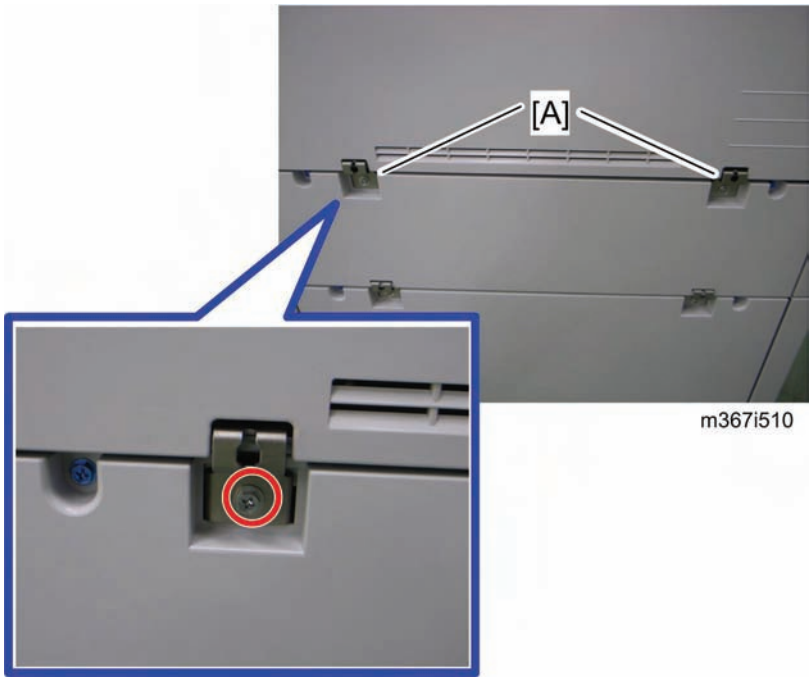


m367i508

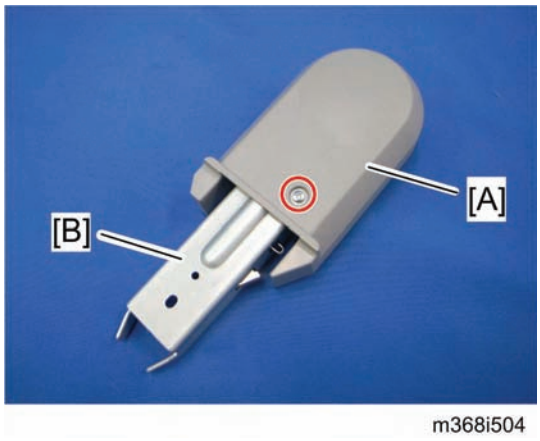
9. Remove the paper tray [A] of the machine.

m367i509

10. Attach a screw (spring washer screw), using a securing bracket [A] to tighten the screw.



11. Attach a securing bracket [A] to each side of the paper tray unit, as shown (x 1: M4 x 10 each).
12. Reinstall the paper tray.



13. Attach the stand covers [A] to the caster stands [B].

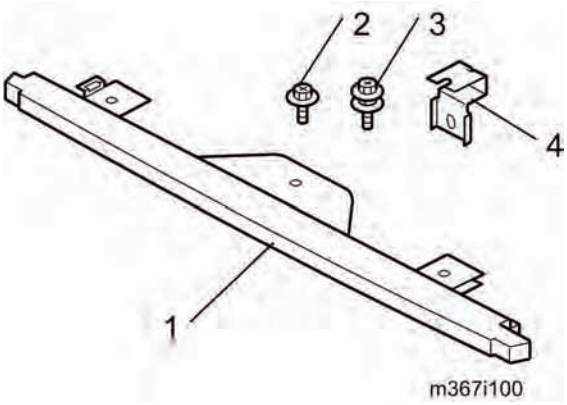
14. Attach the caster stands [A].
15. Load paper into the paper feed unit.
16. Turn on the main power switch of the machine.
17. Adjust the registration for each tray (☛ p.4-3 "Image Adjustment").
    - For tray 2, use SP1002-003
    - For tray 3, use SP1002-004
    - For tray 4, use SP1002-005
18. Check the paper feed unit operation and copy quality.

2.5 PAPER FEED UNIT (M367)

2.5.1 COMPONENT CHECK

Check the quantity and condition of the accessories against the following list.

No.	Description	Q'ty
1	Upper front cover	1
2	Screw (M4 x 10)	2
3	Spring washer screw	1
4	Securing bracket	2

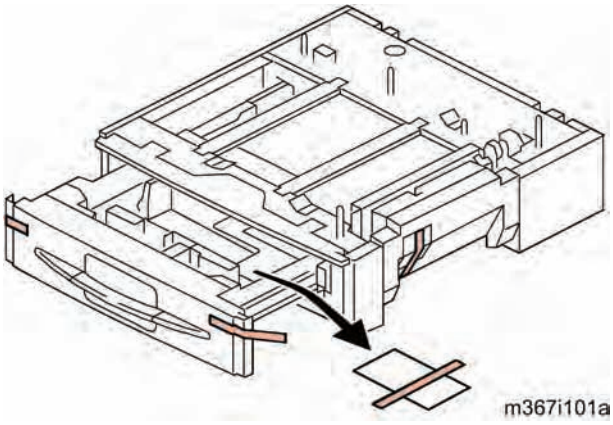


2.5.2 INSTALLATION PROCEDURE

⚠CAUTION

- Turn off the main switch of the copier and unplug the power cord before you start the installation procedure.
- You need two or more persons to lift the copier. The copier is highly unstable when lifted by one person, and may cause human injury or property damage.
- Do not lift the copier with the paper feed unit installed. The handle and grips may be damaged.

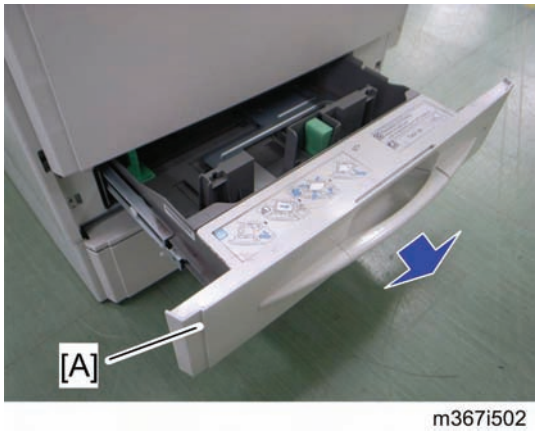
For installing the paper feed unit (M367) only



1. Remove all tapes on the paper feed unit.
2. Remove the paper tray and remove all tapes and padding.
3. Lift the copier and install it on the paper feed unit.

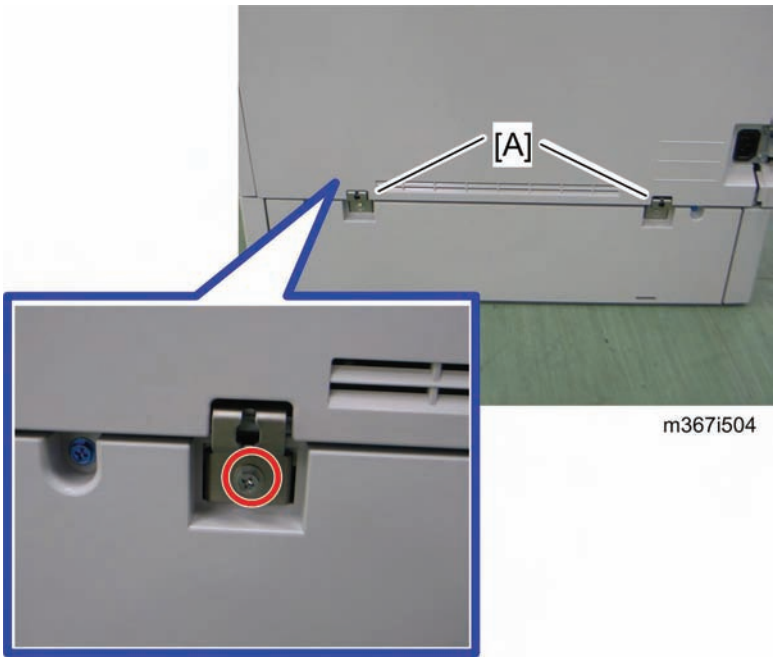
Note

- Hold the handle and grips of the machine when you lift and move the machine.



4. Remove the paper tray [A] of the machine.

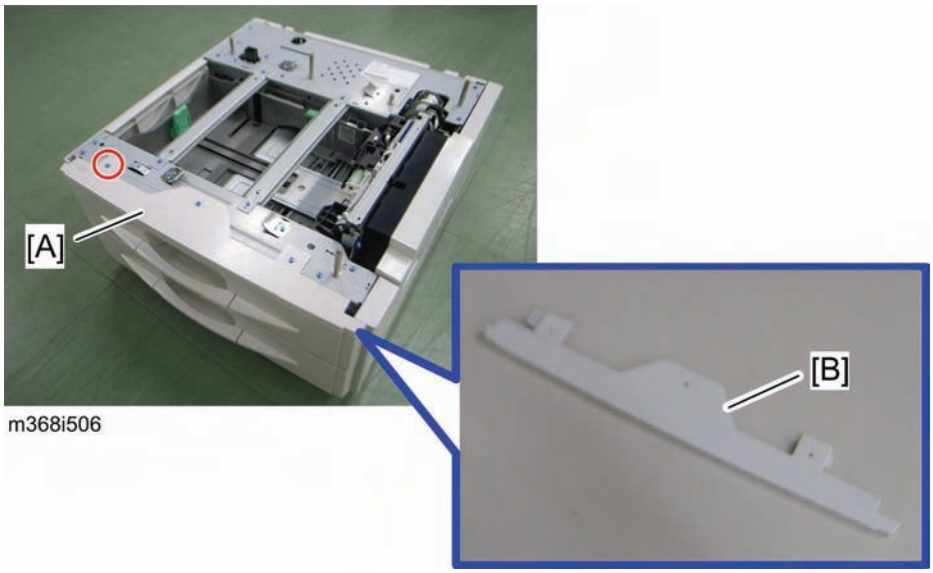
5. Attach a screw (spring washer screw), using a securing bracket [A] to tighten the screw.



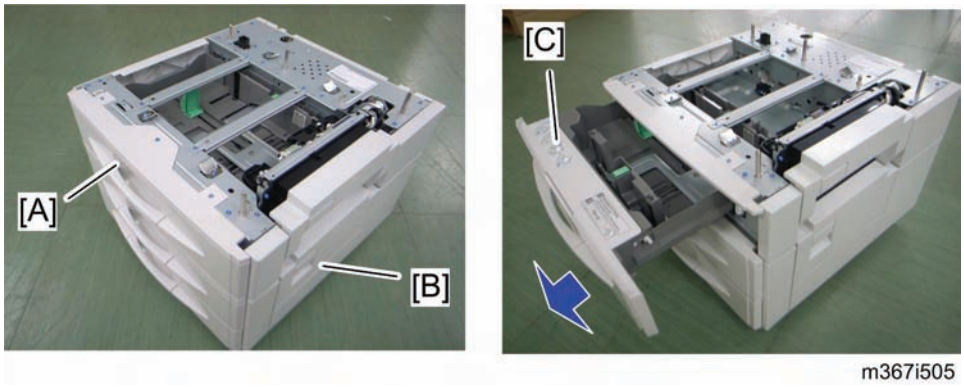
6. Attach a securing bracket [A] to each side of the paper tray unit, as shown (x 1: M4 x 10 each).
7. Reinstall the paper tray.
8. Load paper into the paper feed unit.
9. Turn on the main power switch of the machine.
10. Adjust the registration for each tray (☛ p.4-3 "Image Adjustment").
    - Use SP1002-003
11. Check the paper feed unit operation and copy quality.

For installing with the paper feed unit (M368)

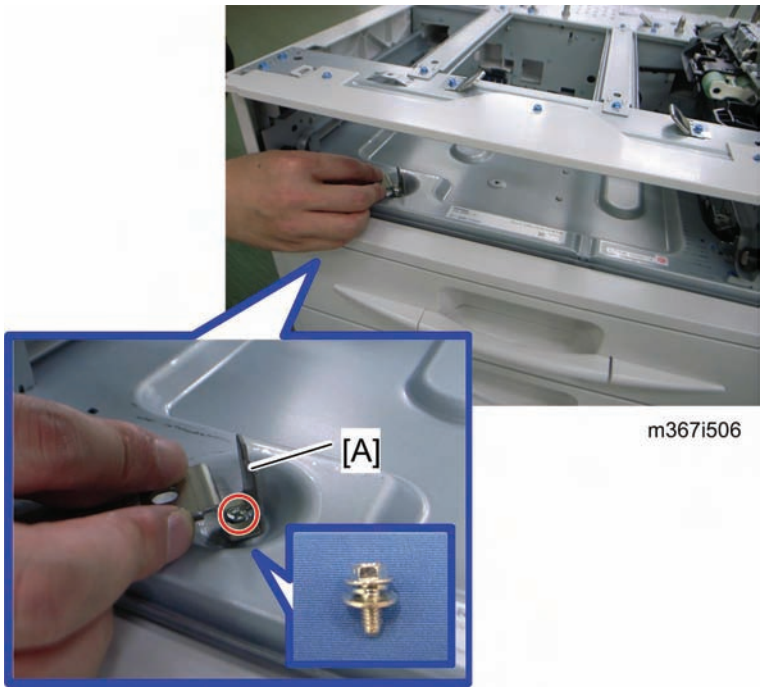
1. Remove the strips of tape.



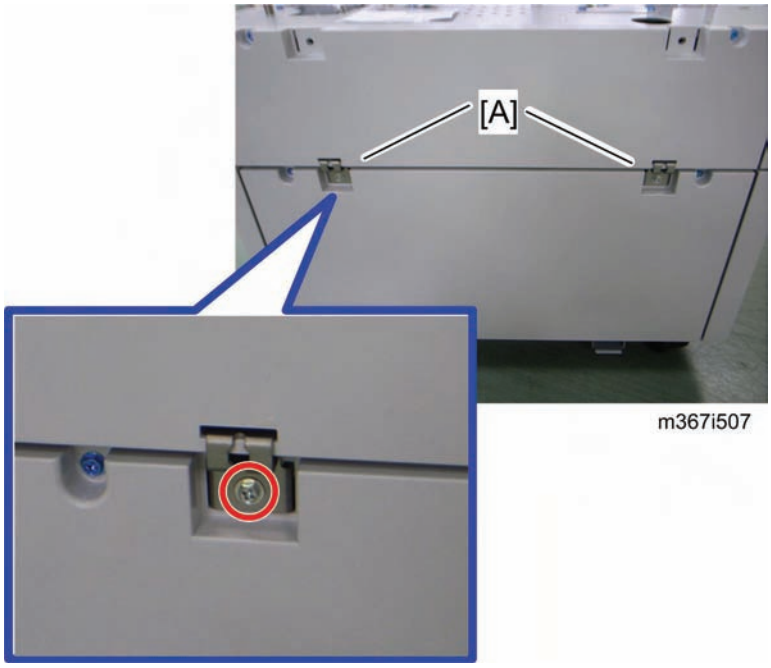
2. Replace the upper front cover [A] with another cover [B] (provided with the M368) (x 1).



3. Lift the M367 [A] and install it on the M368 [B].
4. Remove the paper tray [C] (for M367).



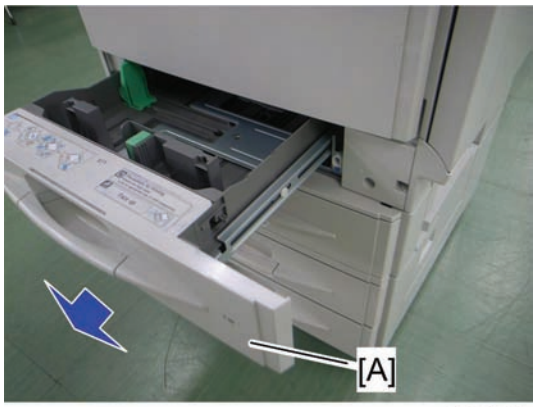
5. Attach a screw (spring washer screw), using a securing bracket [A] to tighten the screw.



6. Attach a securing bracket [A] to each side of the paper tray unit, as shown (x 1: M4 x 10 each).
7. Reinstall the paper tray.
8. Lift the copier and install it on the paper feed unit.

Note

- Hold the handle and grips of the machine when you lift and move the machine.

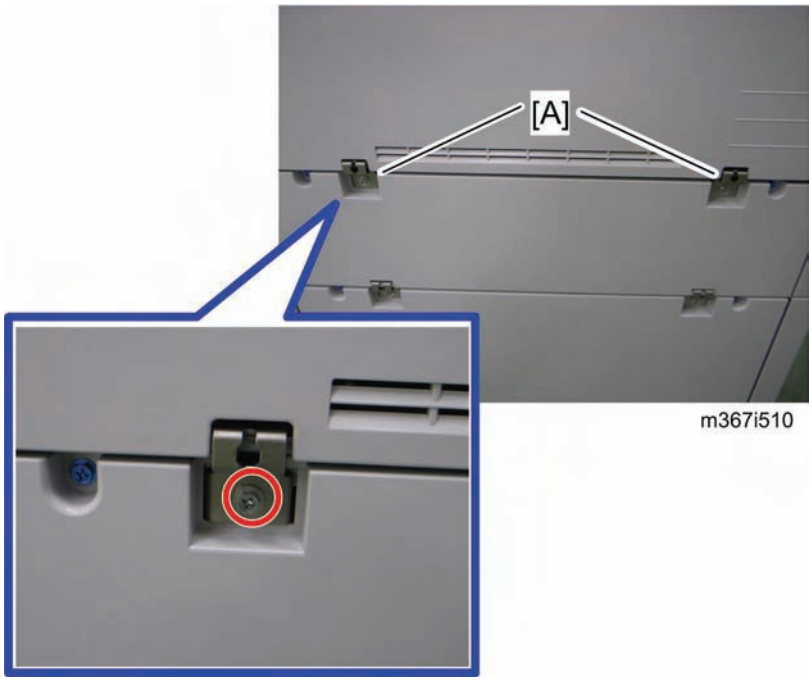


m367i508

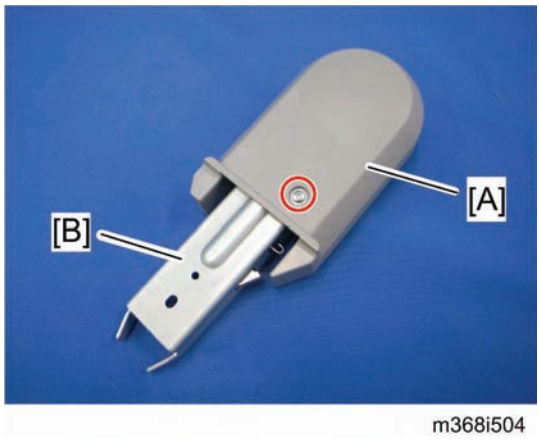
9. Remove the paper tray [A] of the machine.

m367i509

10. Attach a screw (spring washer screw), using a securing bracket [A] to tighten the screw.



11. Attach a securing bracket [A] to each side of the paper tray unit, as shown (x 1: M4 x 10 each).
12. Reinstall the paper tray.



13. Attach the stand covers [A] to the caster stands [B].

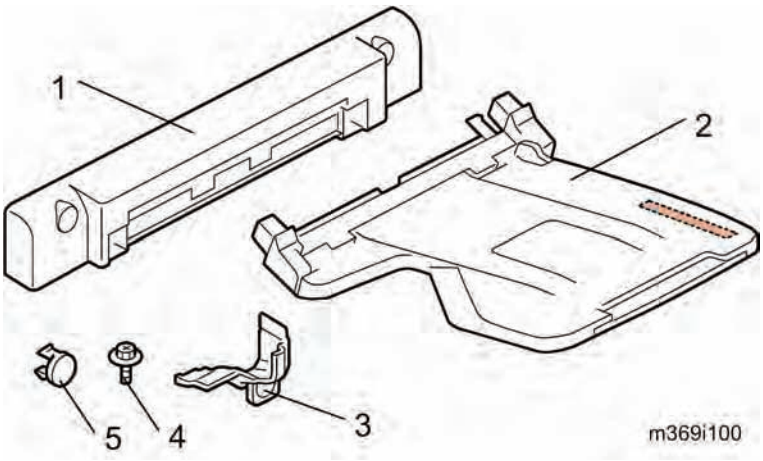
14. Attach the caster stands [A].
15. Load paper into the paper feed unit.
16. Turn on the main power switch of the machine.
17. Adjust the registration for each tray (☛ p.4-3 "Image Adjustment").
    - For tray 2, use SP1002-003
    - For tray 3, use SP1002-004
    - For tray 4, use SP1002-005
18. Check the paper feed unit operation and copy quality.

2.6 SIDE TRAY (M369)

2.6.1 COMPONENT CHECK

Check the quantity and condition of the components against the following list.

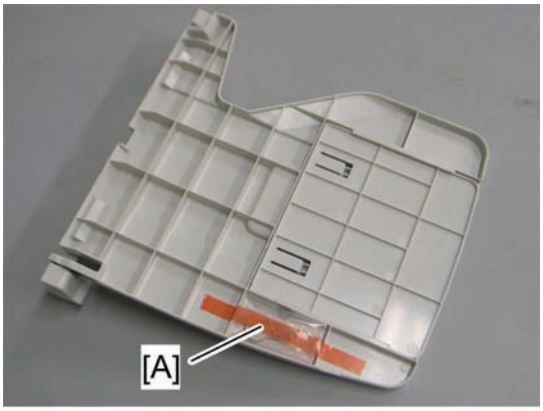
No.	Description	Q'ty
1.	Side Tray Paper Exit Unit	1
2.	Side Tray	1
3.	Inner Cover	1
4.	Screw: M4x8	2
5.	Cap	2



2.6.2 INSTALLATION PROCEDURE

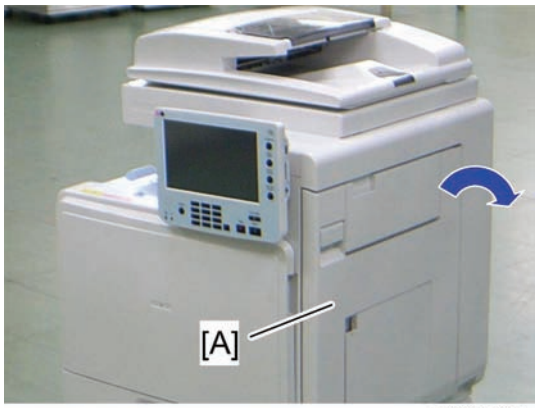
CAUTION

- **Unplug the copier power cord before starting the following procedure.**



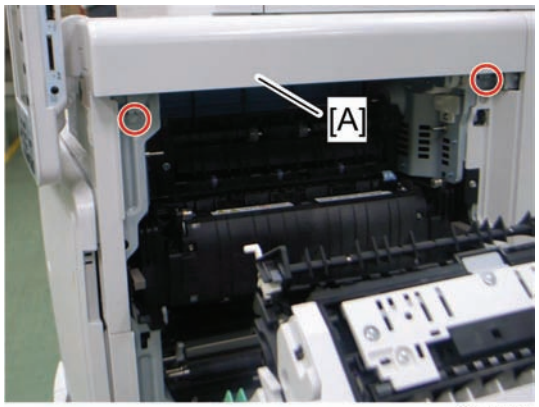
m369i501

1. Remove the tape [A] on the side tray.



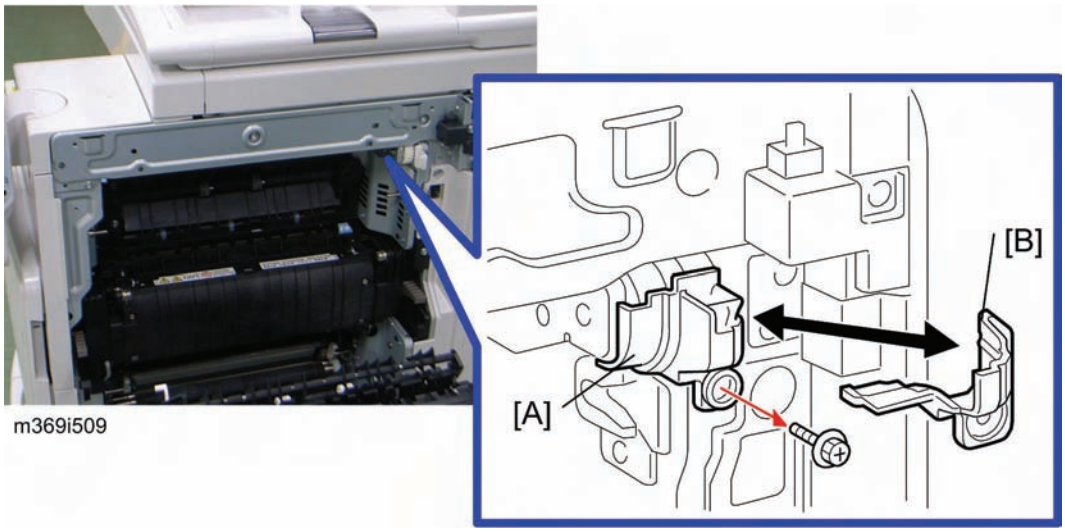
m369i507

2. Open the duplex unit [A].

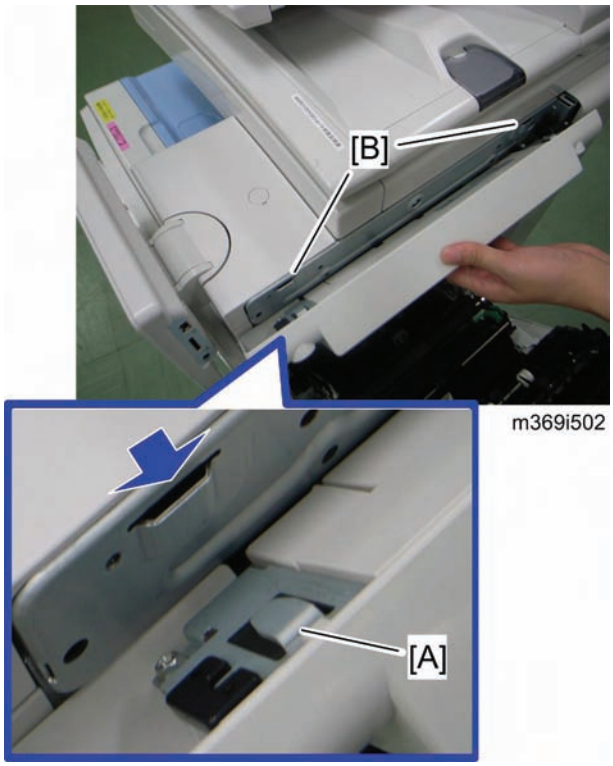


m369i503

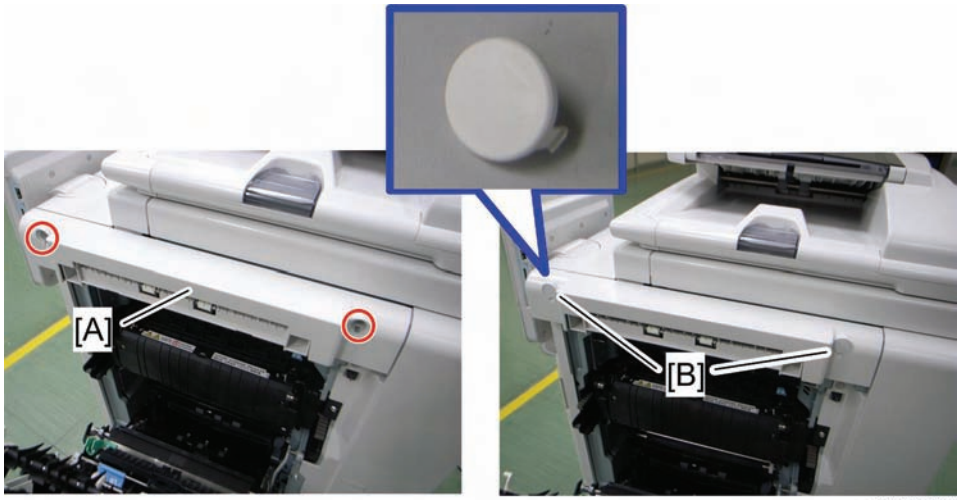
3. Remove the right upper cover [A] (x 2).



4. Right upper inner cover [A] (x 1).
5. Attach the right upper inner cover [B] (provided with M369) (x 1: removed in step 4).

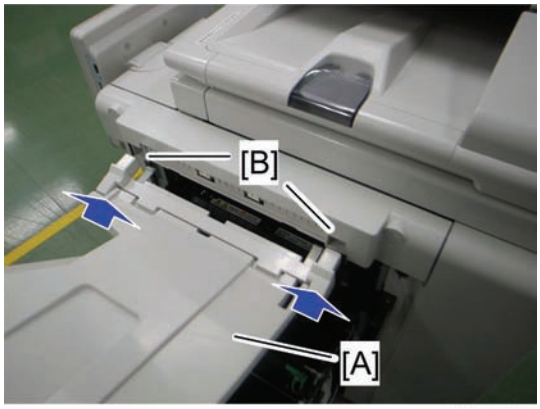


6. Set the two hooks [A] into the holes [B] in the machine.



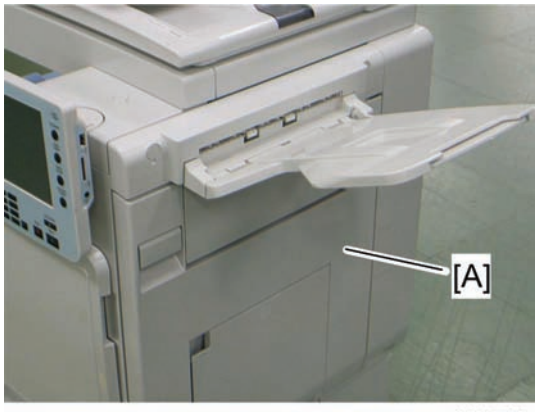
m369i504

7. Install the side tray paper exit unit [A] (x 2).
8. Attach the two caps [B].



m369i505

9. Set the two tabs of the side tray [A] into the holes [B] in the machine.



m369i506

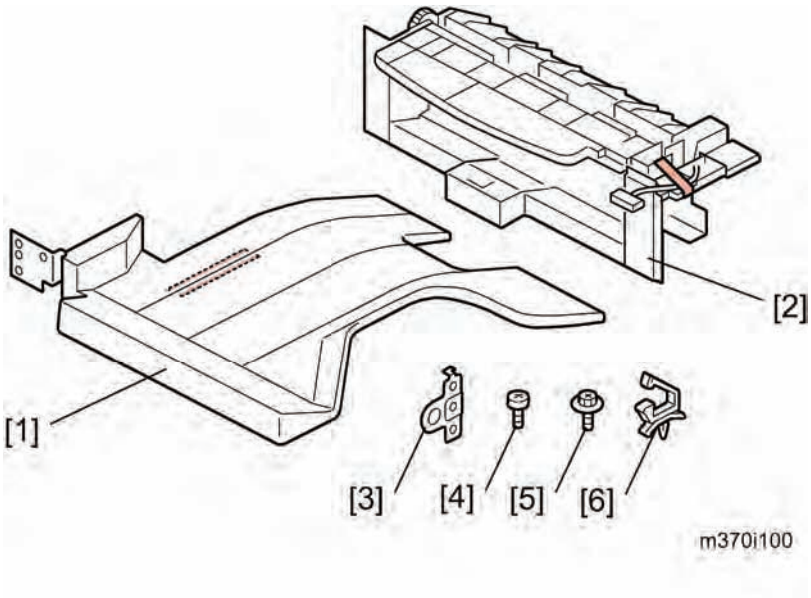
10. Close the duplex unit [A].
11. Turn on the main power switch of the machine.
12. Check the side tray operation.

2.7 1-BIN TRAY UNIT (M370)

2.7.1 COMPONENT CHECK

Check the quantity and condition of the components against the following list.

No.	Description	Q'ty
1	Tray	1
2	1-Bin Tray Unit	1
3	Bracket	1
4	Bind Screw (M3 x 6)	1
5	Screw (M3 x 8)	2
6	Harness clamp	3

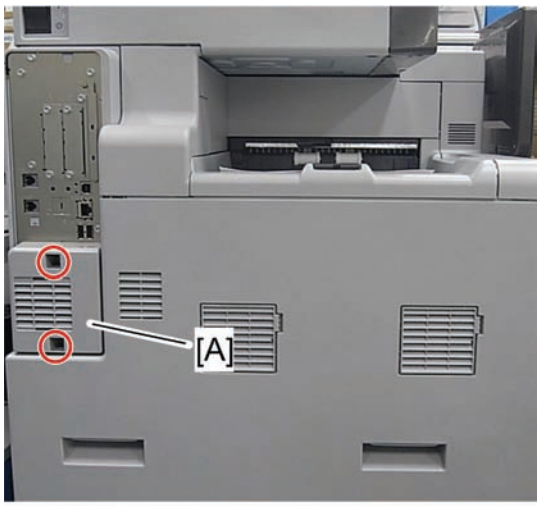


2.7.2 INSTALLATION PROCEDURE

CAUTION

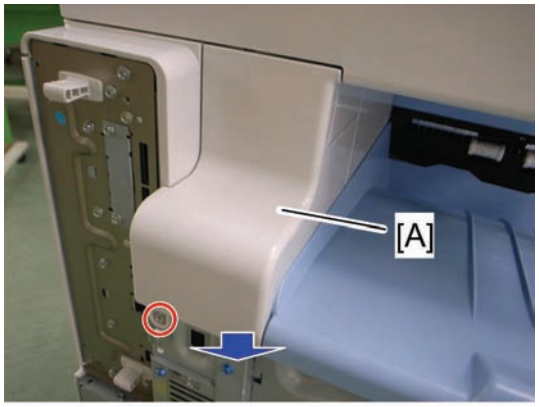
- Unplug the copier power cord before starting the following procedure.

1. Remove all tapes.



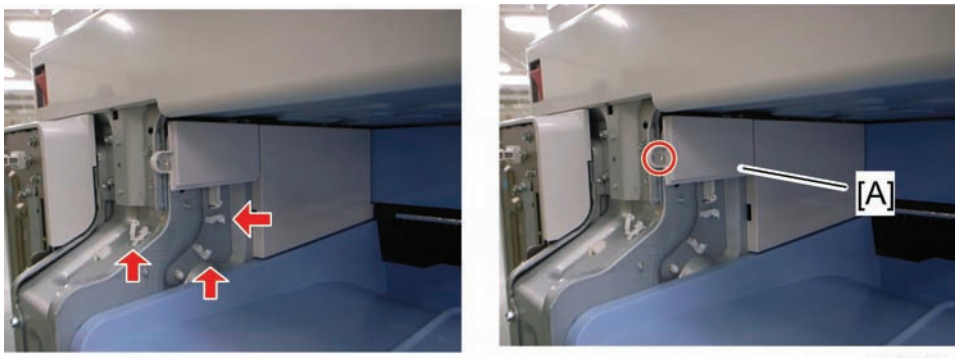
m022r782

2. Left rear cover [A] (x 2)
3. Left cover [A] (p.4-18)



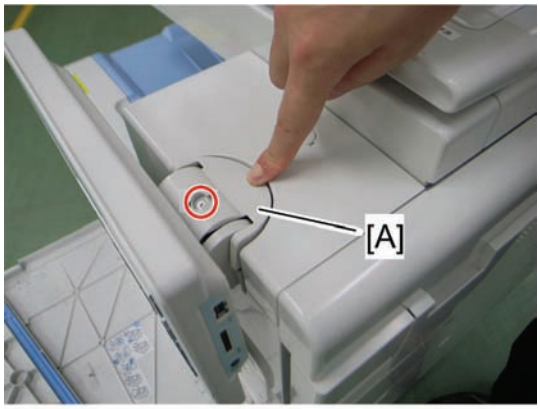
m370i502

4. Left upper cover [A] (x 1)



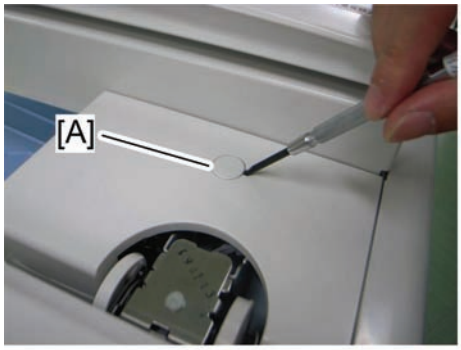
m370i503

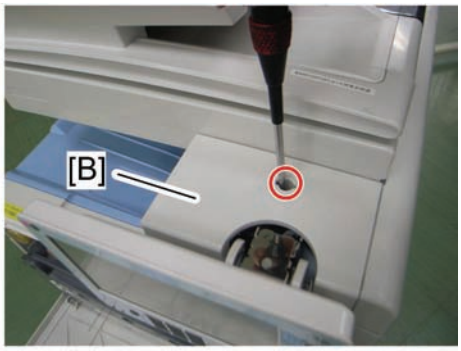
5. Attach the three harness clamps.
6. Inner rear left cover [A] (x 1)



m370i504

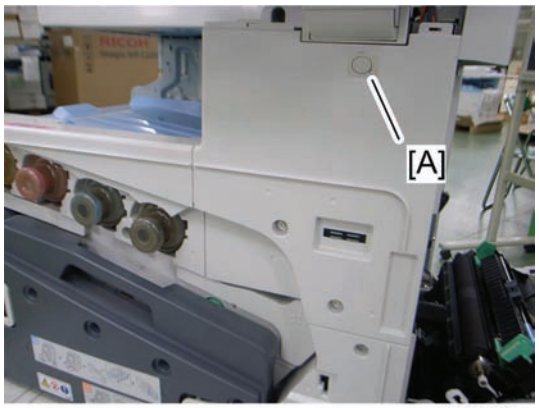
7. Operation panel arm cover [A]





m370i505

8. Upper front cover cap [A]
9. Upper front cover [B] (x 1)
10. Open the duplex unit.

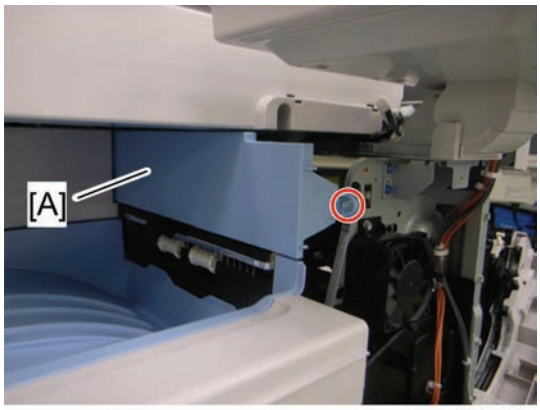


m370i506a

11. Inner right cover cap [A]

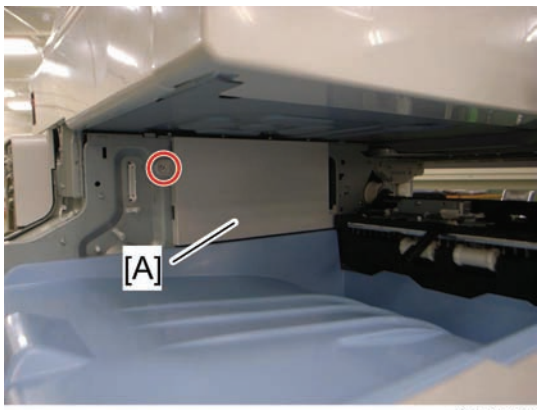
m370i506

12. Inner right cover [A] (x 3)



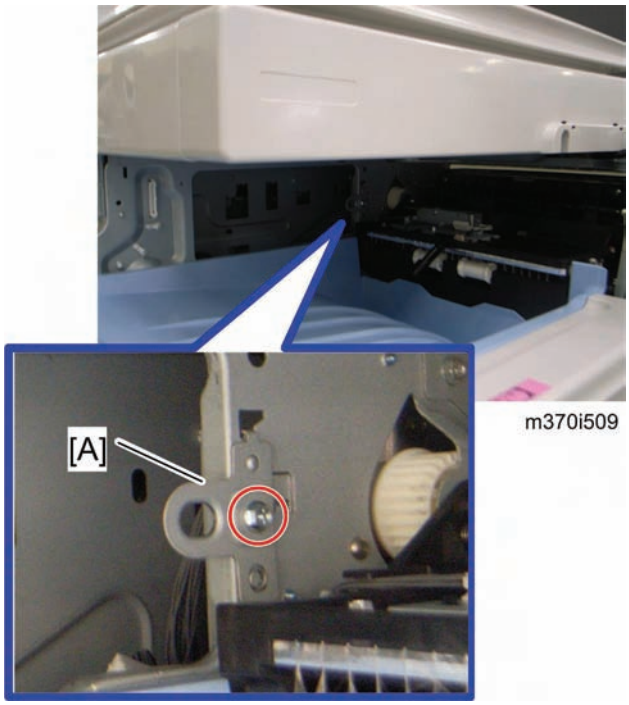
m370i507

13. Paper exit cover [A] (x 1)



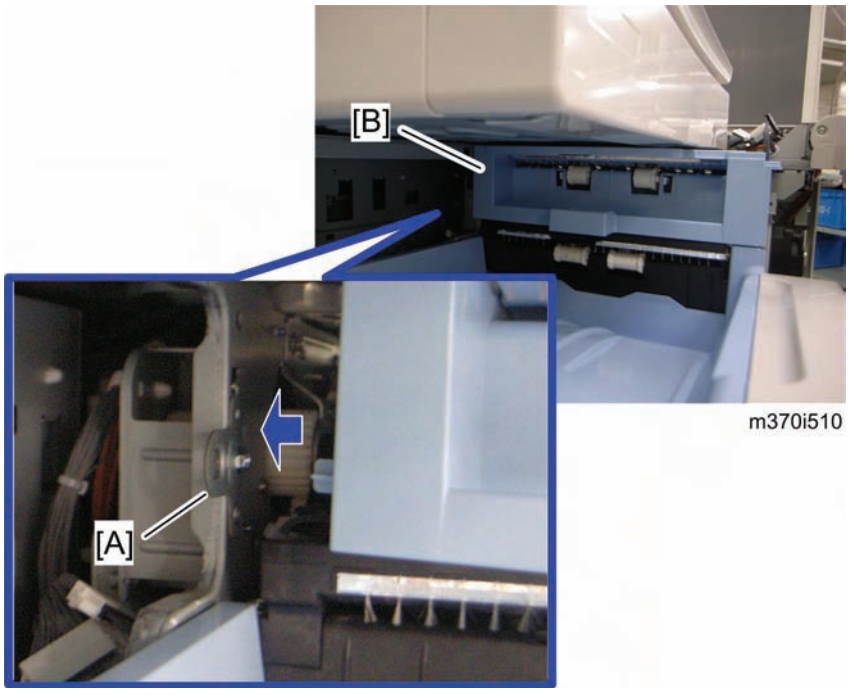
m370i508

14. Inner rear right cover [A] (x 1)



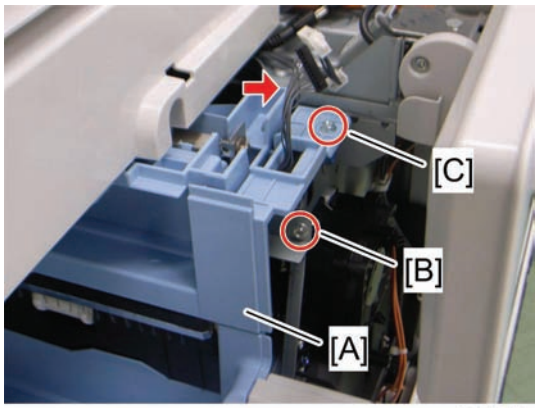
m370i509

15. Attach the bracket [A] (x 1: M3x8).



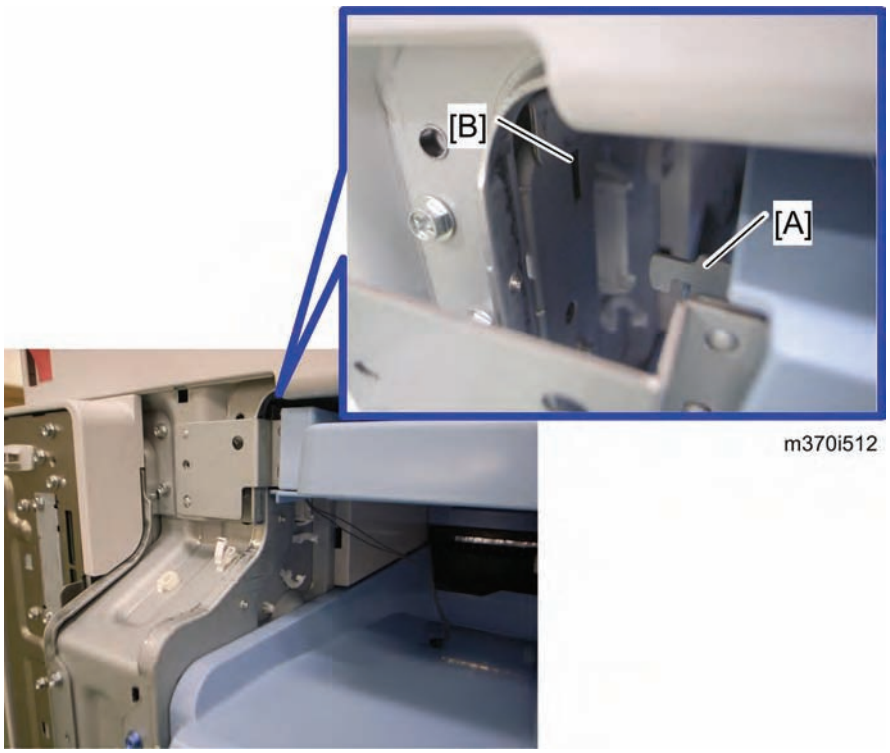
m370i510

16. Set the shaft of the 1-bin tray unit [B] into the hole in the bracket [A].



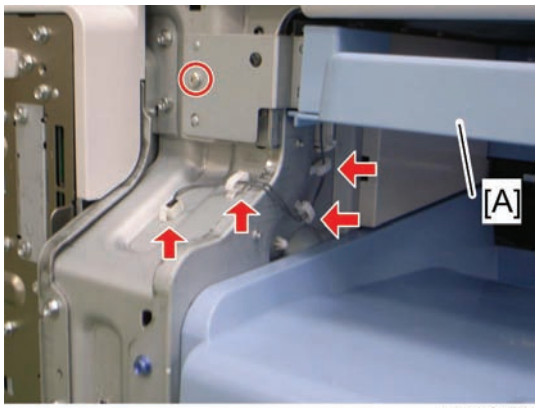
m370i511

17. Install the 1-bin tray unit [A] (x 2: screw [B]: removed in step 12, screw [C]:M3x8, x 1).



m370i512

18. Set the hook [A] of the 1-bin tray into the hole [B] in the machine.



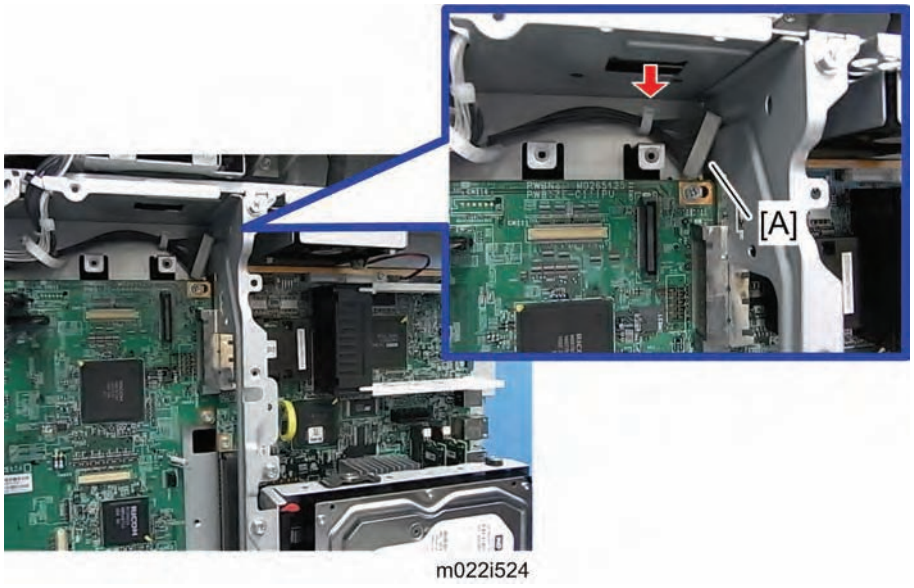
m370i513

19. Install the 1-bin tray [A] (x 1: bind screw: M3x6, x 1, x 3).
20. Reassemble the machine.
21. Turn on the main power switch of the machine, and check the 1-bin tray unit operation.

2.8 OPTIONAL COUNTER INTERFACE UNIT (B870)

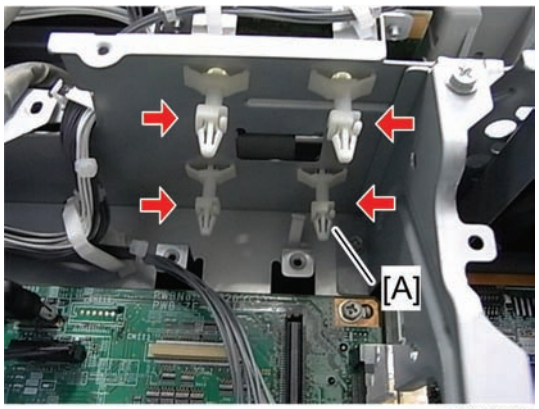
2.8.1 INSTALLATION PROCEDURE

1. Rear cover (☛ p.4-19)
2. Controller box cover (☛ p.4-194)



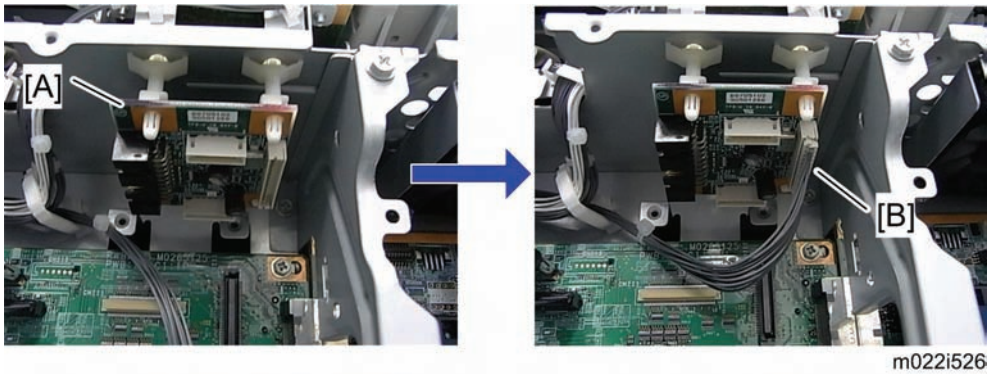
m022i524

3. Release the harness [A] from the clamp.



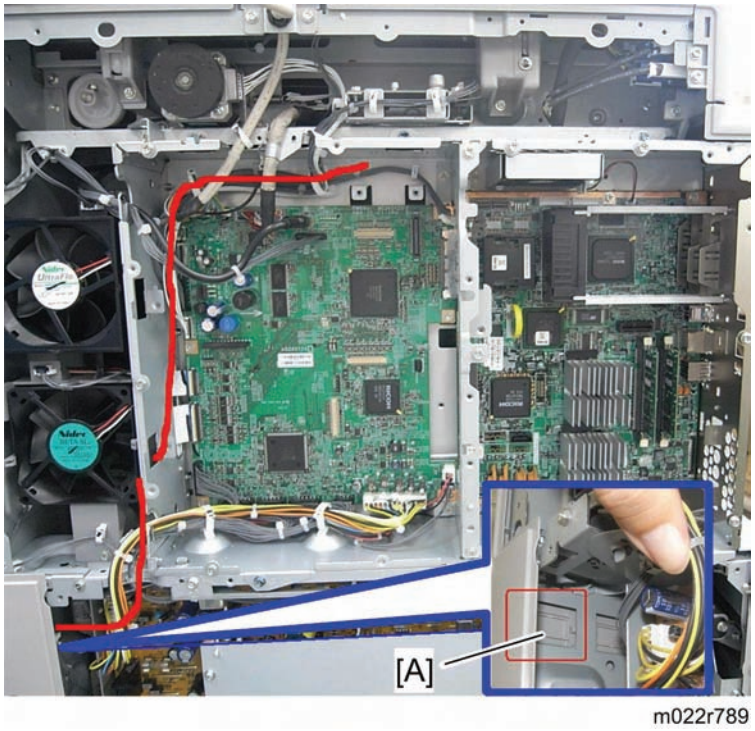
m022i525

4. Install the four studs [A] in the controller box.



m022i526

5. Install the key counter interface board [A] on the four studs.
6. Connect the harness [B] to the key counter interface board [A].
7. Connect the harness from the counter device to CN4 on the key counter interface board.



8. Route the harness.

Note

- Remove the cover [A], and route the harness as shown above.

9. Reassemble the machine.

Note

- Remove the optional counter interface unit when opening or removing the controller box.

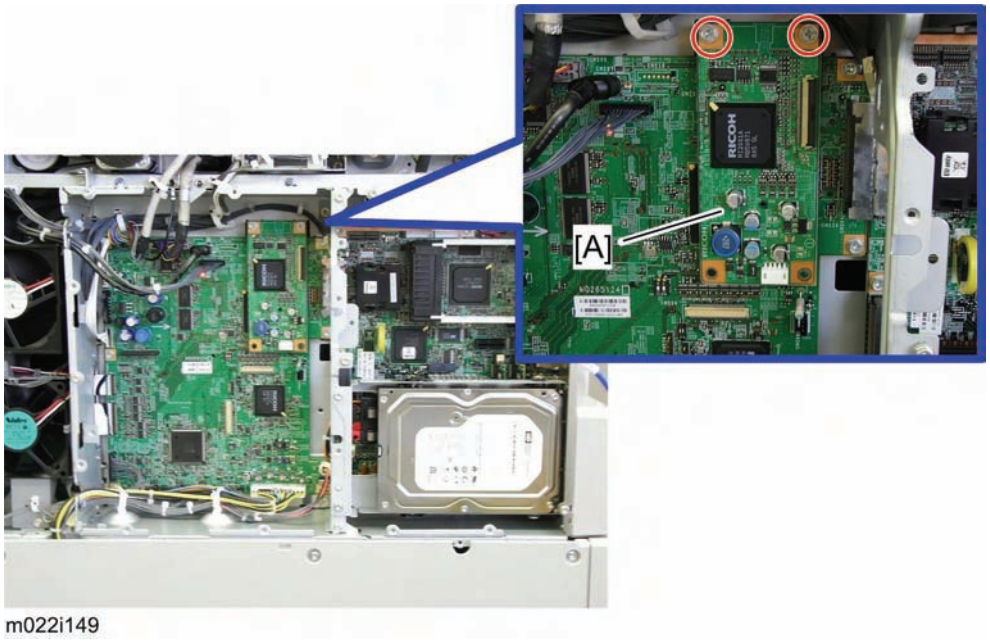
2.9 COPY DATA SECURITY UNIT (B829)

2.9.1 INSTALLATION

⚠CAUTION

- Unplug the main machine power cord before you do the following procedure.

1. Rear cover (☛ p.4-19)
2. Controller box cover (☛ p.4-194)



m022i149

3. Attach the ICIB-3 (copy data security board) [A] to CN 212 on the IPU (🔩 x 2).
4. Reassemble the machine.

User Tool Setting

1. Plug in and turn on the main power switch.
2. Go into the User Tools mode, and select System Settings > Administrator Tools > Copy Data Security Option > "On".
3. Exit User Tools.
4. Check the operation.

Note

- The machine will issue an SC165 error if the machine is powered on with the ICIB-3 removed and the "Data Security for Copying" feature set to "ON".
- The machine will issue an uncertain SC165 error if the machine is powered on with the defective ICIB-3 and the "Data Security for Copying" feature set to "OFF".
- When you remove this option from the machine, first set the setting to "OFF" with the user tool before removing this board. If you forget to do this, "Data Security for Copying" feature cannot appear in the user tool setting. And then SC165 will appear every time the machine is switched on, and the machine cannot be used.

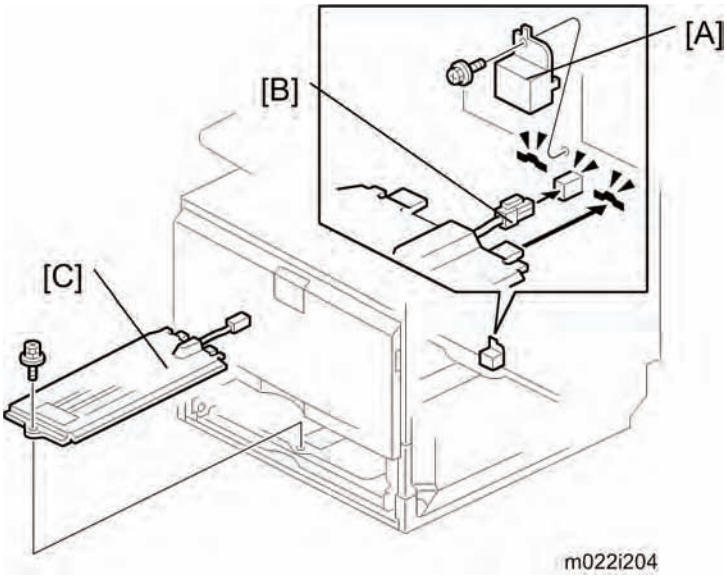
Make sure that the machine can recognize the option (see "Check All Connections" at the end of this section).

2.10 TRAY HEATER (MAINFRAME)

2.10.1 INSTALLATION PROCEDURE

Note

- This heater is supplied as a spare part.



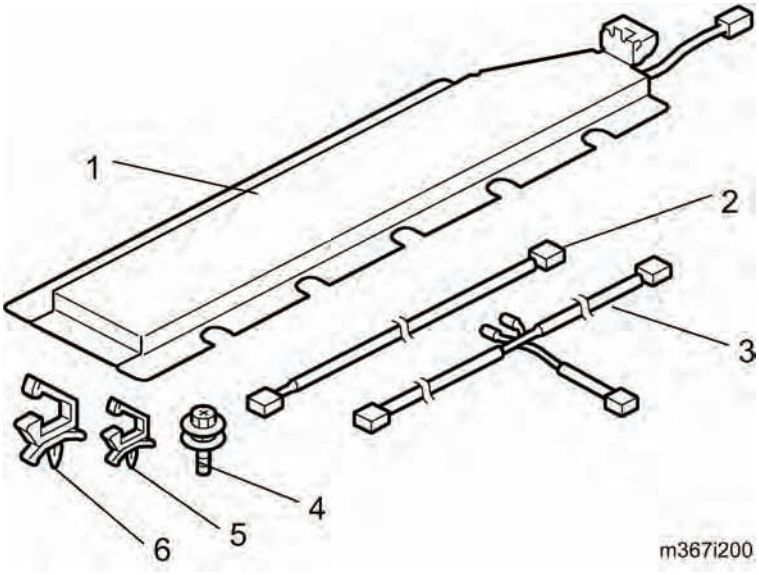
1. Remove tray 1 from the machine.
2. Remove the connector cover [A] (x 1).
3. Connect the connector [B] of the heater to the connector of the main machine.
4. Install the heater [C] inside the machine (x 1).
5. Reassemble the machine.

2.11 TRAY HEATER (OPTIONAL UNIT)

2.11.1 COMPONENT CHECK

Check the quantity and condition of the accessories against the following list.

No.	Description	Q'ty
1	Tray heater	1
2	Harness 1	1
3	Harness 2	1
4	Screw (M4 x 10)	1
5	Clamp 1	3
6	Clamp 2	1

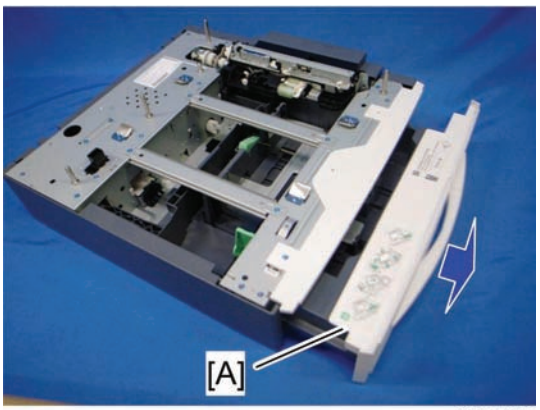


2.11.2 INSTALLATION PROCEDURE

CAUTION

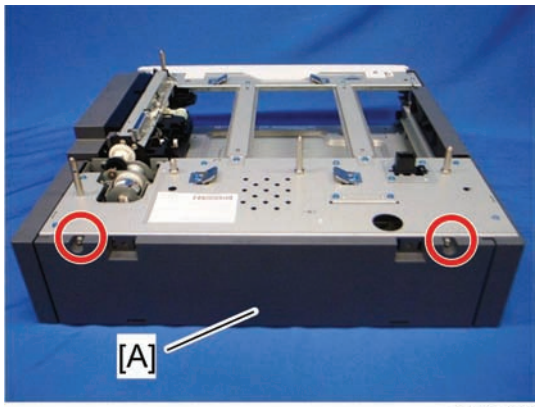
- Unplug the machine power cord before starting the following procedure.
- Do the following procedure not to damage any harnesses.
- Check that harnesses are not damaged or pinched after installation.

For Installing the Tray Heater in M367



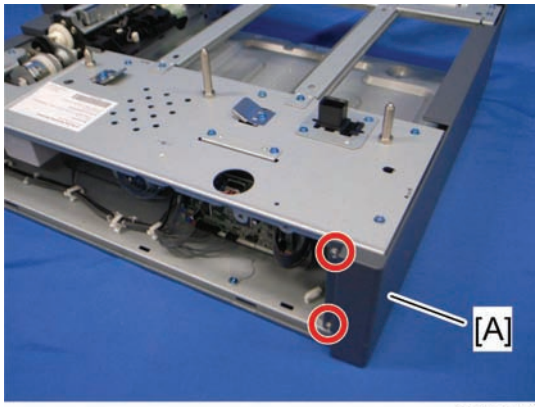
m367i512

1. Pull out the tray [A] in the optional paper tray.



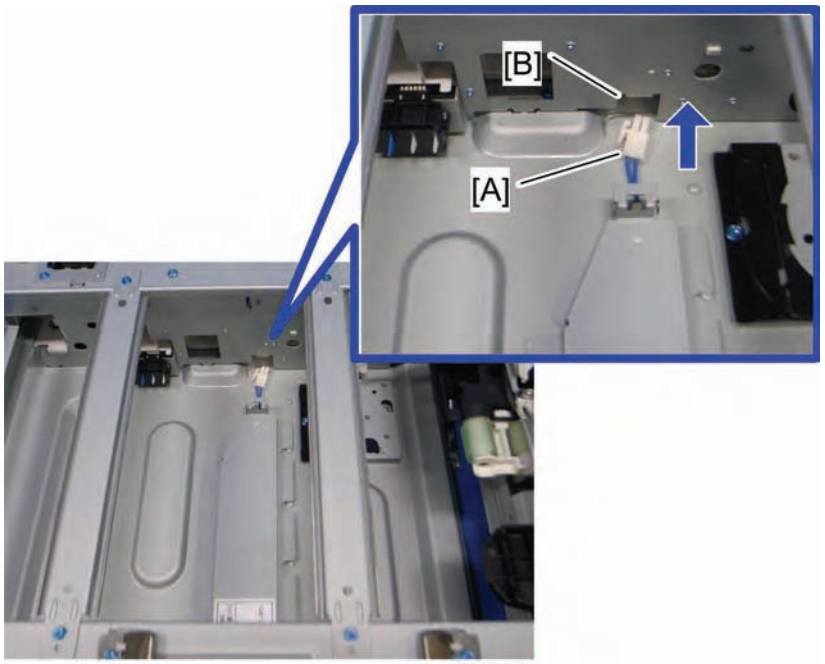
m367i513

2. Rear cover [A] (x 2)



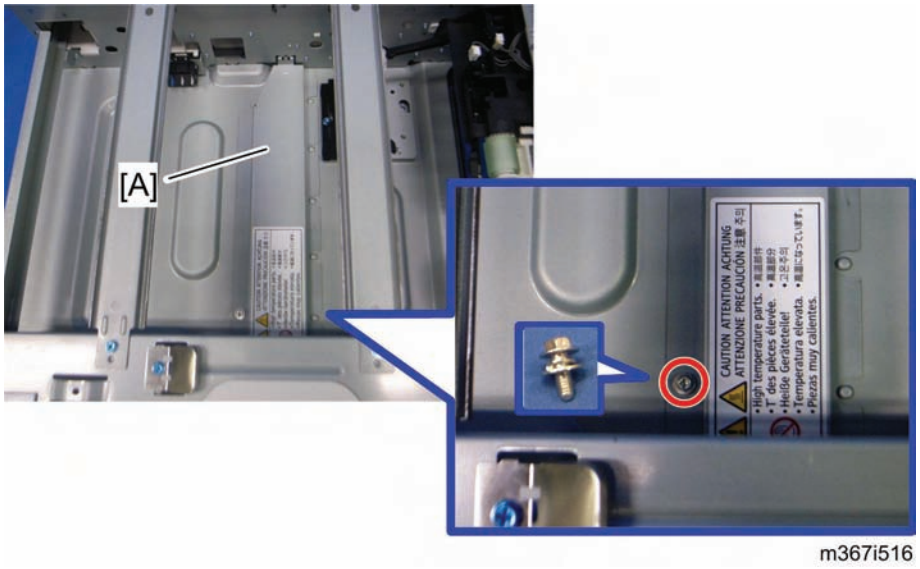
m367i514

3. Left cover [A] (x 2)



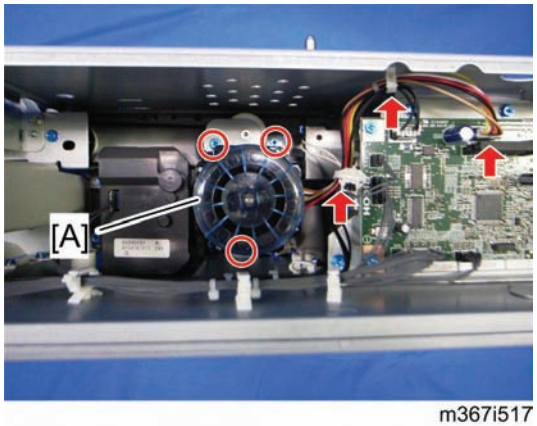
m367i515

4. Pass the heater harness [A] through the square hole [B].



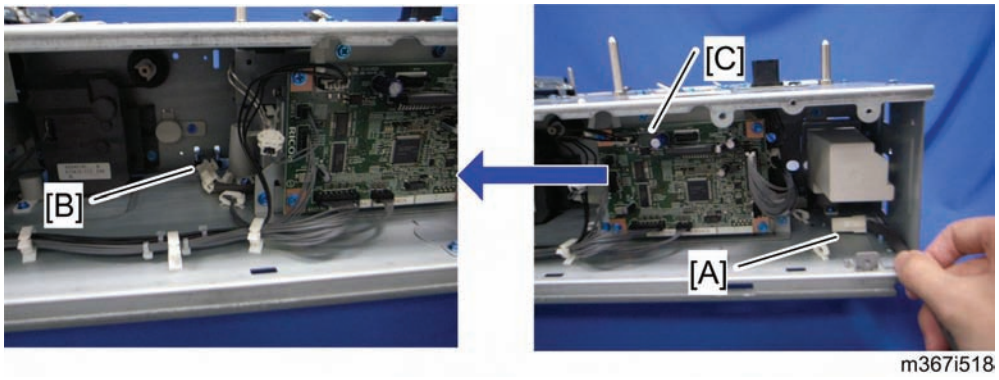
m367i516

5. Install the tray heater [A] in the paper feed unit (x 1).



m367i517

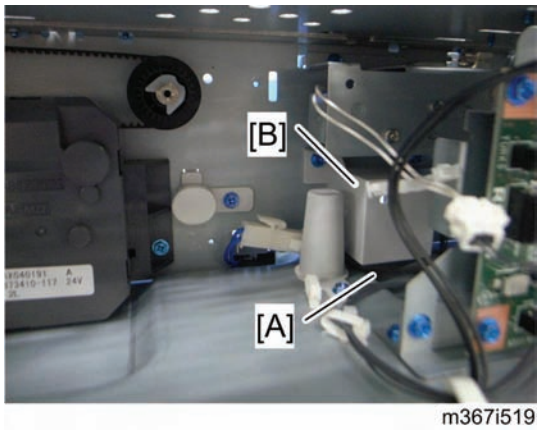
6. Paper feed motor bracket [A] (x 3, x 1, x 2)



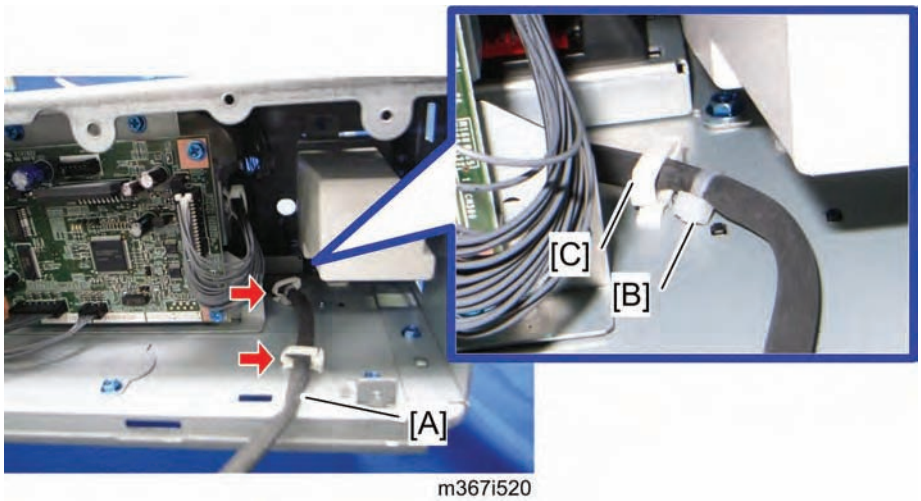
7. Connect the relay harness (harness 2) [A] to the heater harness [B].

Note

- Pass the relay harness (harness 2) [A] behind the drive board [C] as shown above.



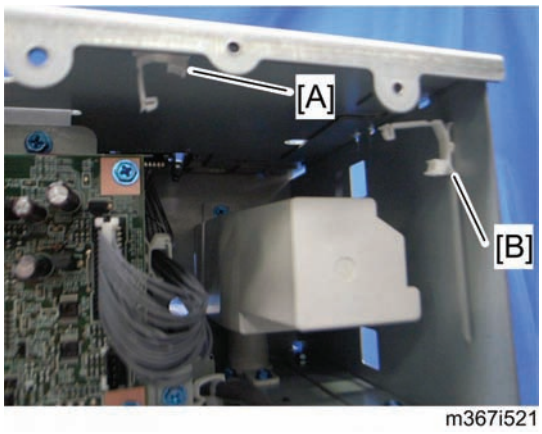
8. Locate the relay harness (harness 2) [A] under the inner cover [B] as shown above.



9. Clamp the relay harness (harness 2) [A] (x 2)

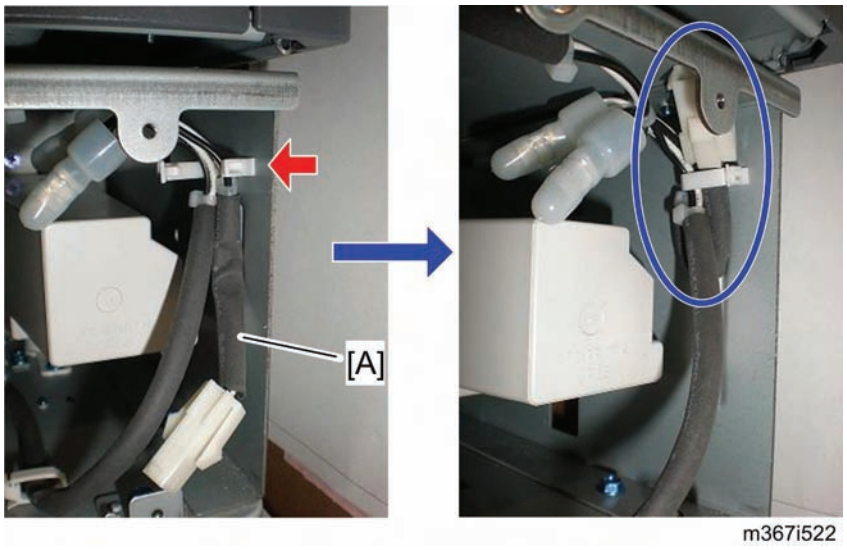
Note

- Make sure that the binding [B] is in front of the clamp [C] as shown above.



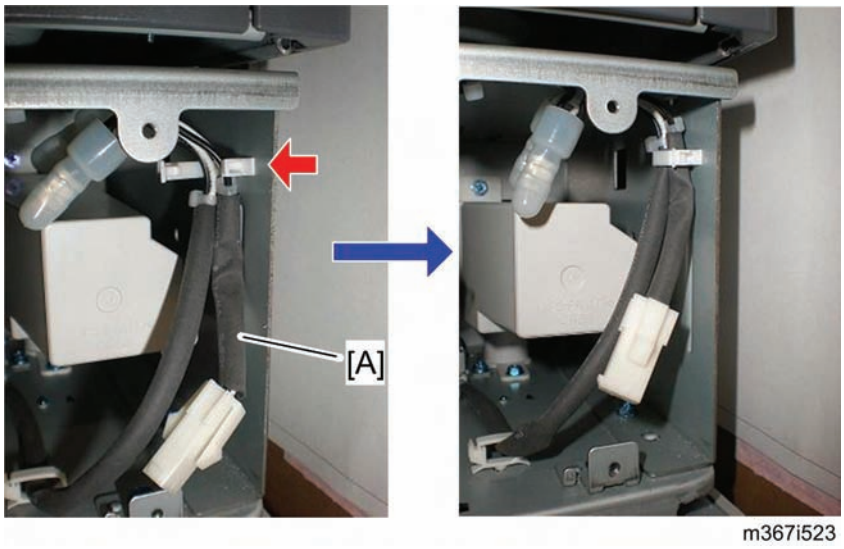
m367i521

10. Attach the clamp 1 [A] and the clamp 2 [B].



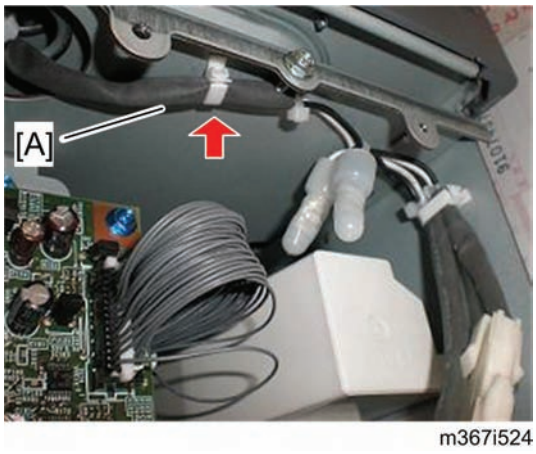
m367i522

11. If you do not install M368, fold the relay harness (harness 2) [A], and then clamp it as shown above.
    Go to step 12 if you install M368 below M367. If not, go to step 13.



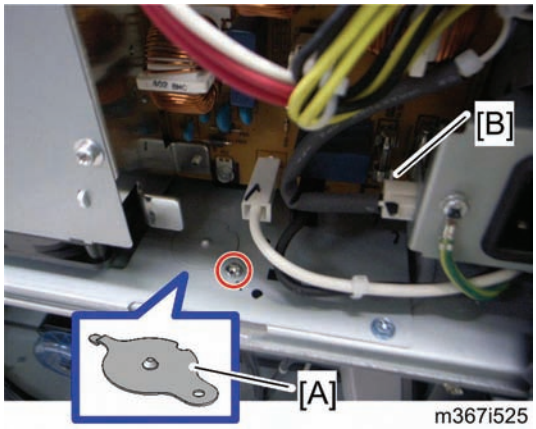
m367i523

12. Clamp the relay harness (harness 2) [A].



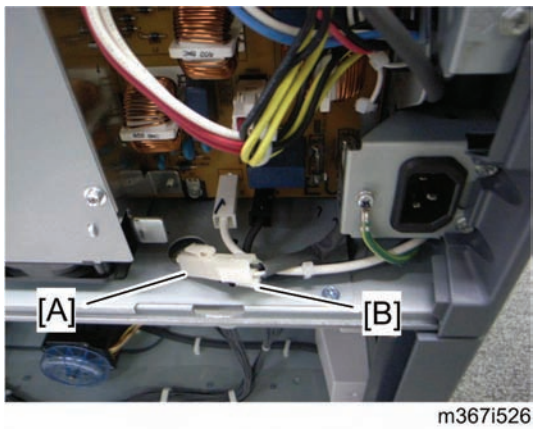
m367i524

13. Clamp the relay harness (harness 2) [A].
14. Remove the rear lower cover of the machine (x 3).



m367i525

15. Remove the harness cover bracket [A] (x 1)
16. Remove the connector [B] of the machine.



m367i526

17. Connect the harness [A] to the connector [B] of the machine.
18. Reassemble the machine.

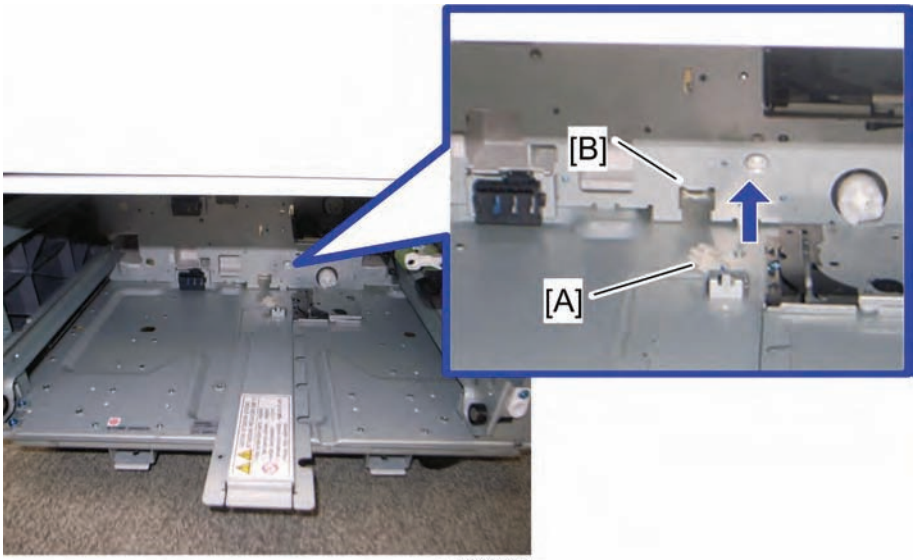
For Installing the Tray Heater in M368

m368i509

1. Pull out the trays [A] in the optional paper tray.

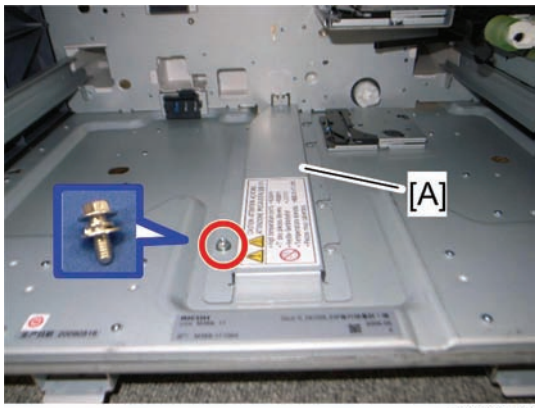
m368i510

2. Rear cover [A] (x 2)



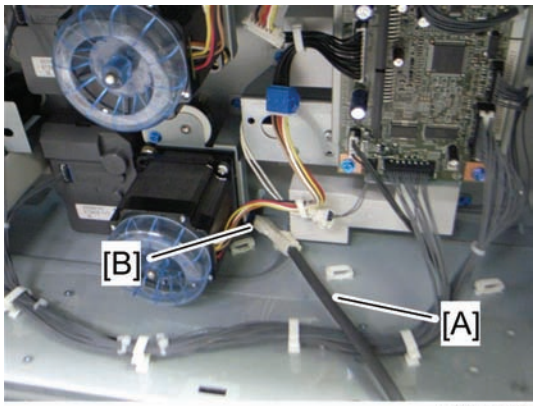
m368i511

3. Pass the heater harness [A] through the square hole [B].



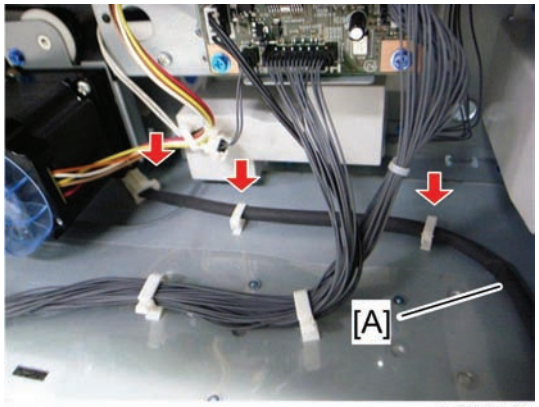
m368i512

4. Install the tray heater [A] in the paper feed unit (x 1).



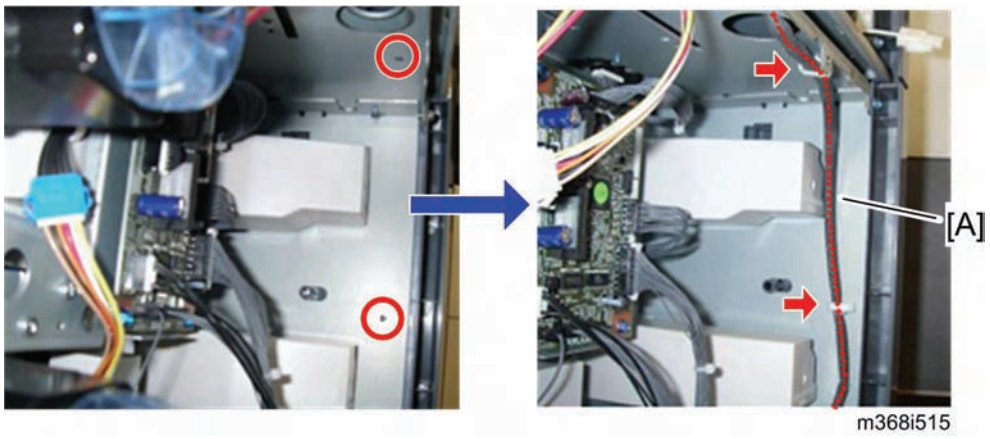
m368i513

5. Connect the relay harness (harness 1) [A] to the heater harness [B].

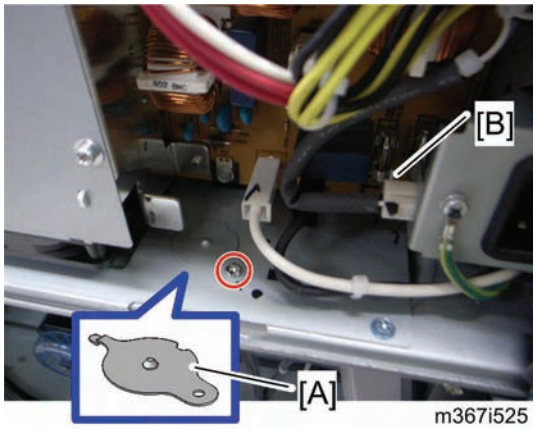


m368i514

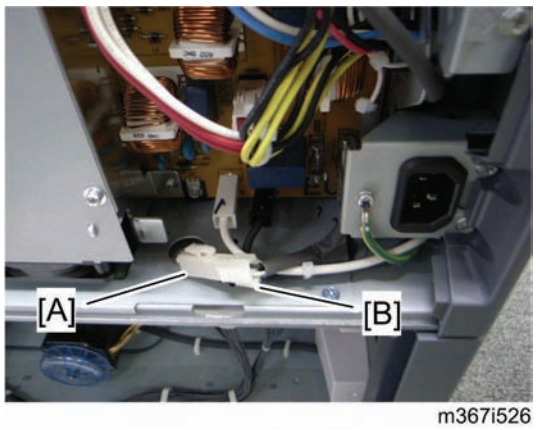
6. Clamp the relay harness (harness 1) [A] (x 3).



7. Remove the rear lower cover of the machine (x 3).
8. Attach the two clamps (clamp 1), and then clamp the relay harness (harness 1) [A] (x 2).



9. Remove the harness cover bracket [A] of the machine.
10. Remove the connector [B] of the machine.



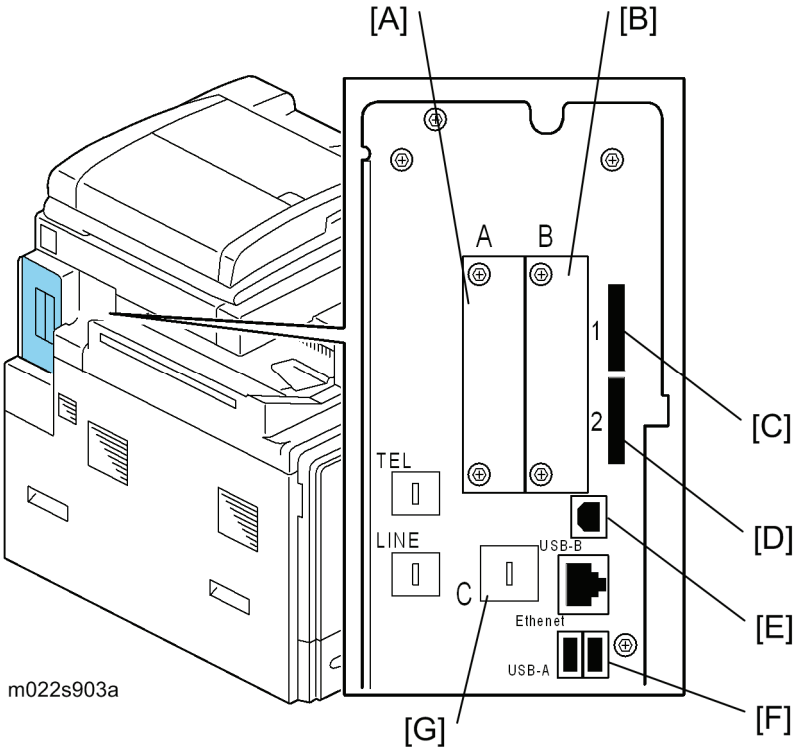
11. Connect the harness [A] to the connector [B] of the machine.

12. Make sure that the harness (harness 1) [A] is placed securely as shown above.
13. Reassemble the machine.

2.12 CONTROLLER OPTIONS

2.12.1 OVERVIEW

This machine has I/F card slots for optional I/F connections and SD card slot applications. After you install an option, check that the machine can recognize it (see “Check All Connections” at the end of this section).



I/F Card Slots

- I/F slot A [A] is used for IEEE802.11a/g (Wireless LAN).
- I/F slot B [B] is used for File Format Converter.
- I/F slot C [G] is used for Gigabit Ethernet.

SD Card Slots

- Slot 1 (upper) [C] is used for application. It contains the Security and Encryption Unit when shipped form the factory
- Slot 2 (lower) [D] is used for activating VM/ App 2 Me, installing the Browser Unit or for service procedures (for example, updating the firmware).

USB Slots

- Upper USB slot [E]: Used for connecting a USB2.0 interface cable
- Lower USB slot [F]: Used for connecting a digital camera

2.12.2 SD CARD APPLI MOVE

Overview

The service program “SD Card Appli Move” (SP5-873) lets you copy application programs from one SD card to another SD card.

Slot 1 (upper) and Slot 2 (lower) is used to store application programs. You cannot run application programs from Slot 2 (lower). However you can move application programs from Slot 2 (lower) to Slot 1 (upper) with the following procedure.

Make sure that the target SD card has enough space.

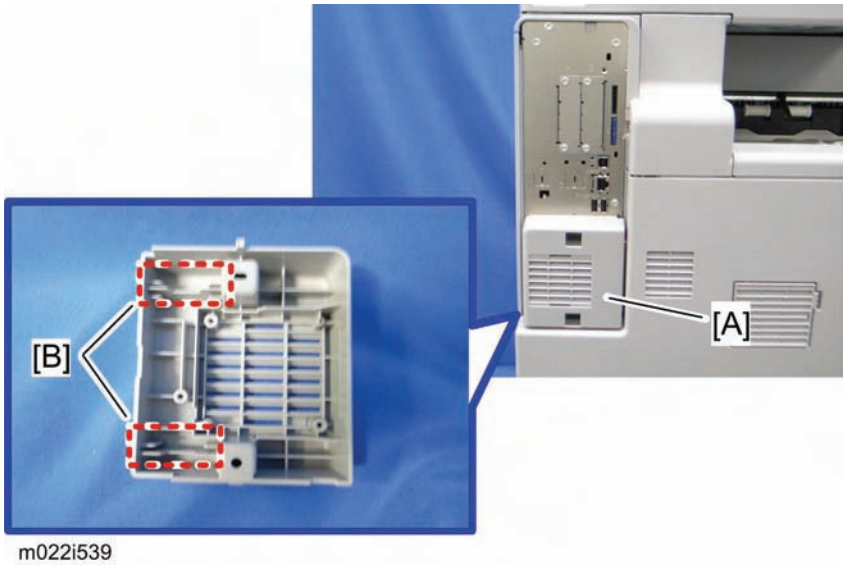
1. Remove SD card (VM/App 2 me) from SD card Slot 2 (lower).
2. Insert SD card in Slot 2 (lower).
3. Enter SP5873 “SD Card Appli Move”.
4. Then move the application from the SD Card in Slot 2 (lower) to the SD Card in Slot 1 (upper).

   Note

   - Do steps 1-2 again if you want to move another application program.
5. Exit the SP mode.

Be very careful when you do the SD Card Appli Move procedure:

- The data necessary for authentication is transferred with the application program from an SD card to another SD card. Authentication fails if you try to use the SD card after you copy the application program from one card to another card.
- Do not use the SD card if it has been used before for other purposes. Normal operation is not guaranteed when such an SD card is used.



m022i539

- Remove the SD card cover [A] (x 2), and then keep the SD card in the places [B] after you copy the application program from one card to another card. This is done for the following reasons:

1) The SD card can be the only proof that the user is licensed to use the application program.
2) You may need to check the SD card and its data to solve a problem in the future.

Move Exec

The menu “Move Exec” (SP5-873-001) lets you copy application programs from the original SD card to another SD card.

Important

- Do not turn ON the write protect switch of the system SD card or application SD card on the machine. If the write protect switch is ON, a download error (e.g. Error Code 44) occurs during a firmware upgrade or application merge.

1. Turn the main switch off.
2. Make sure that an SD card is in SD Card Slot 1. The application program is copied to this SD card.
3. Insert the SD card with the application program in SD Card Slot 2.The application program is copied from this SD card.
4. Turn the main switch on.
5. Start the SP mode.
6. Select SP5-873-001 “Move Exec.”
7. Follow the messages shown on the operation panel.
8. Turn the main switch off.
9. Remove the SD card from SD Card Slot 2.
10. Turn the main switch on.
11. Check that the application programs run normally.

Undo Exec

"Undo Exec" (SP5-873-002) lets you copy back application programs from an SD card to the original SD card. You can use this program when, for example, you have mistakenly copied some programs by using Move Exec (SP5-873-001).

Important

- Do not turn ON the write protect switch of the system SD card or application SD card on the machine. If the write protect switch is ON, a download error (e.g. Error Code 44) occurs during a firmware upgrade or application merge.

1. Turn the main switch off.
2. Insert the original SD card in SD Card Slot 2. The application program is copied back into this card.
3. Insert the SD card with the application program in SD Card Slot 1.The application program is copied back from this SD card.
4. Turn the main switch on.
5. Start the SP mode.
6. Select SP5-873-002 "Undo Exec."
7. Follow the messages shown on the operation panel.
8. Turn the main switch off.
9. Remove the SD card from SD Card Slot 2.

Note

- This step assumes that the application programs in the SD card are used by the machine.

10. Turn the main switch on.
11. Check that the application programs run normally.
12. Make sure that the machine can recognize the option (see 'Check All Connections' at the end of this section).

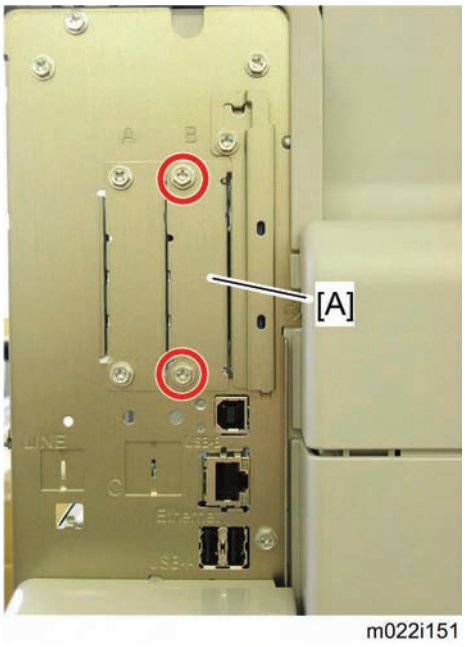
When you want to install one or more SDK applications

1. Remove the security card from slot 1, and put the VM card in slot 1.
2. Put the SD card with the SDK application into slot 2.
3. Merge from slot 2 to slot 1. The VM card now has the SDK application on it.
4. Then put the VM/SDK card in slot 2, and put the security card back in slot 1.

2.12.3 FILE FORMAT CONVERTER TYPE E

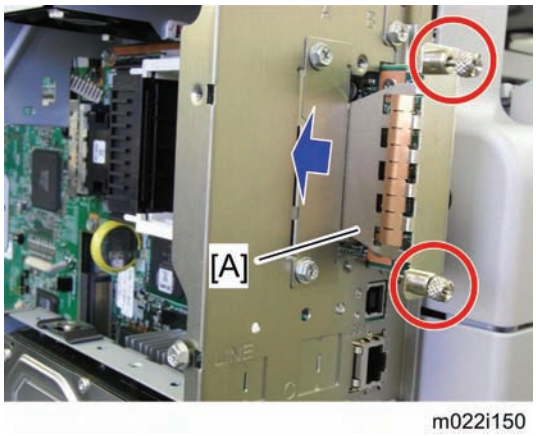
CAUTION

- Unplug the main machine power cord before you do the following procedure.



m022i151

1. Remove the slot B cover [A] (x 2).



m022i150

2. Install the file format converter [A] into slot B and then fasten it with screws.
3. Plug in and turn on the main power switch.
4. Check or set the following SP codes with the values shown below.

SP No.	Title	Setting
SP5-836-001	Capture Function (0:Off 1:On)	"1"
SP5-836-002	Panel Setting	"0"

5. Check the operation.

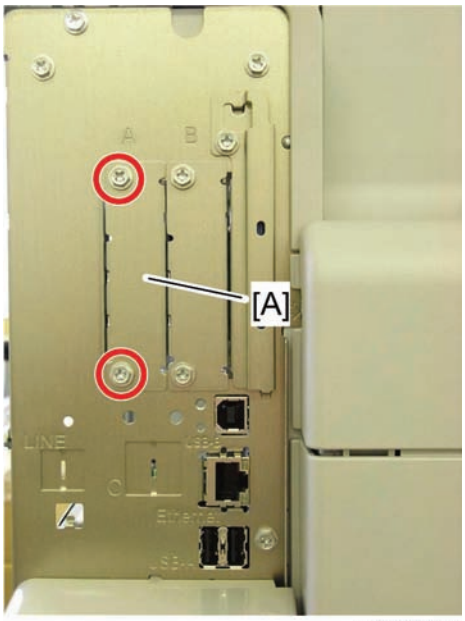
6. Make sure that the machine can recognize the option (see 'Check All Connections' at the end of this section).

2.12.4 IEEE 802.11 A/G (WIRELESS LAN)

Installation Procedure

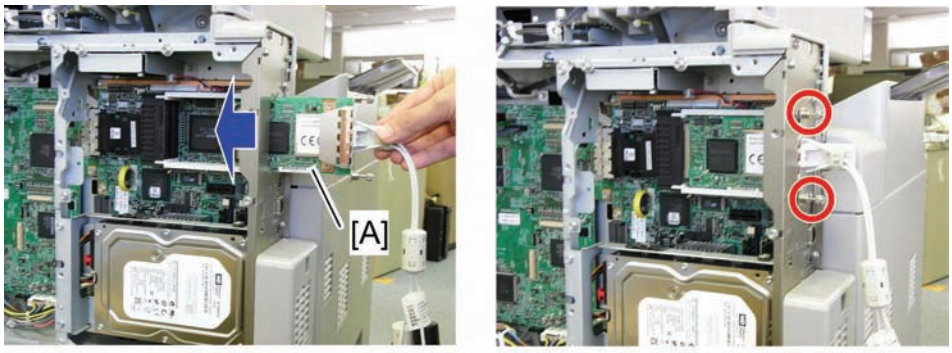
⚠CAUTION

- Unplug the main machine power cord before you do the following procedure.



m022i151a

1. Remove the I/F-slot cover [A] from the I/F-slot (x 2).



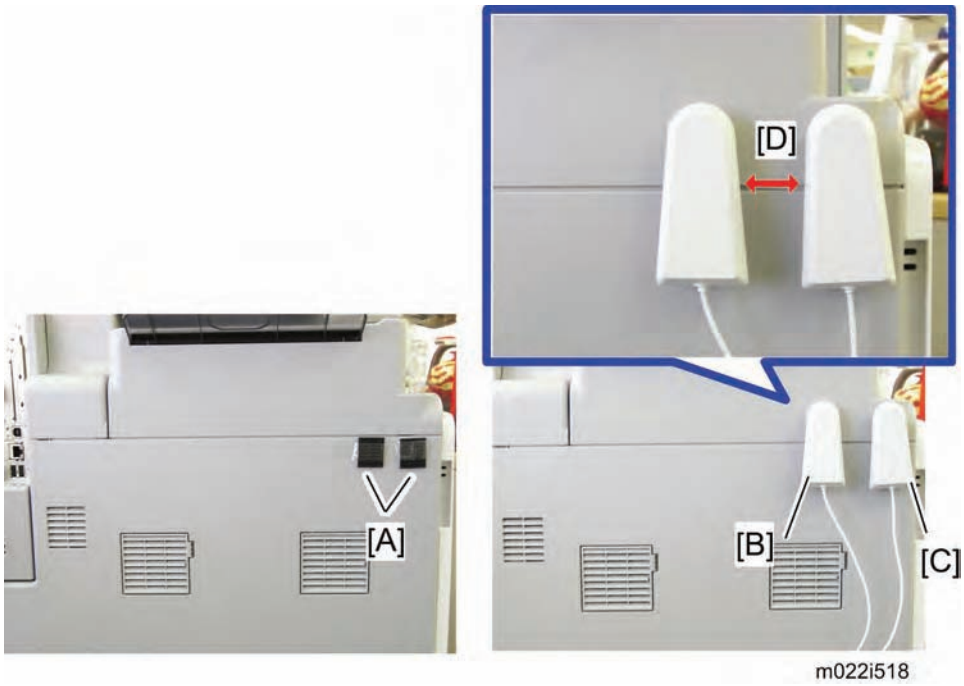
m022i517

2. Install the wireless LAN board [A] (Knob-screw x 2) into the I/F-slot.

Note

- Fasten the knob-screws firmly with a screwdriver.

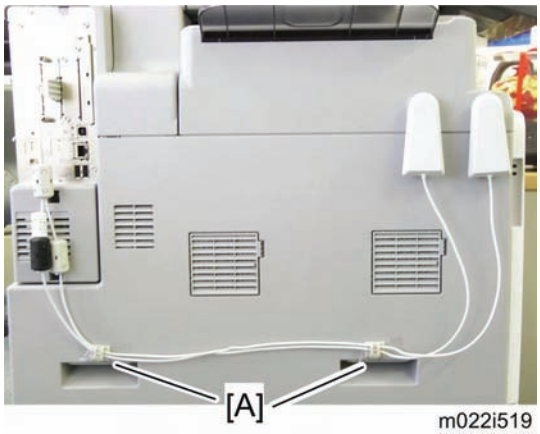
3. Make sure that the machine can recognize the option (see 'Check All Connections' at the end of this section).



4. Peel off the double-sided tapes on the Velcro fasteners [A], and then attach them at the front left of the machine.
5. Attach "ANT1" (having a black ferrite core) [B].
6. Attach "ANT2" (having a white ferrite core) [C].

Note

- "ANT1" is a transmission/reception antenna and "ANT2" is a reception antenna. Do not attach them at the wrong places.
- Leave a space of at least 5mm at [D].



7. Attach the clamps [A] as shown above.
8. Wire the cables and clamp them (x 2).

Note

- Make sure that the cables are not slack. Keep them wired tightly along the covers.

You may have to move the machine if the reception is not clear.

- Make sure that the machine is not located near an appliance or any type of equipment that generates strong magnetic fields.
- Put the machine as close as possible to the access point.

UP Mode Settings for Wireless LAN

Enter the UP mode. Then do the procedure below to perform the initial interface settings for IEEE 802.11 a/g, g. These settings take effect every time the machine is powered on.

Note

- You cannot use the wireless LAN if you use Ethernet.

1. Press the “User Tools/Counter” key.
2. On the touch panel, press “System Settings”.

   Note

   - The Network I/F (default: Ethernet) must be set for either Ethernet or wireless LAN.
3. Select “Interface Settings”.
4. Press “Wireless LAN”. Only the wireless LAN options show.
5. Communication Mode. Select either “802.11 Ad hoc”, or “Infrastructure”.
6. SSID Setting. Enter the SSID setting. (The setting is case sensitive.)
7. Channel. You need this setting when Ad Hoc Mode is selected.

   Range:

   Region A (mainly Europe and Asia)

   Range: 1-13, 36, 40, 44 and 48 channels (default: 11)

   In some countries, only the following channels are available:

   Range: 1-11 channels (default: 11)

   Region B (mainly North America)

   Range: 1-11, 36, 40, 44 and 48 channels (default: 11)

   Note

   - The allowed range for the channel settings may vary for different countries.
8. WEP (Encryption) Setting. The WEP (Wired Equivalent Privacy) setting is designed to protect wireless data transmission. The same WEP key is required on the receiving side in order to unlock encoded data. There are 64 bit and 128 bit WEP keys.

   WEP:

   Selects “Active” or “Inactive” (“Inactive” is default.).

   Range of Allowed Settings:

   64 bit: 10 characters

   128 bit: 26 characters
9. Press “Return to Default” to initialize the wireless LAN settings.

   Press “Yes” to initialize the following settings:

- Transmission mode
- Channel
- Transmission Speed
- WEP
- SSID
- WEP Key

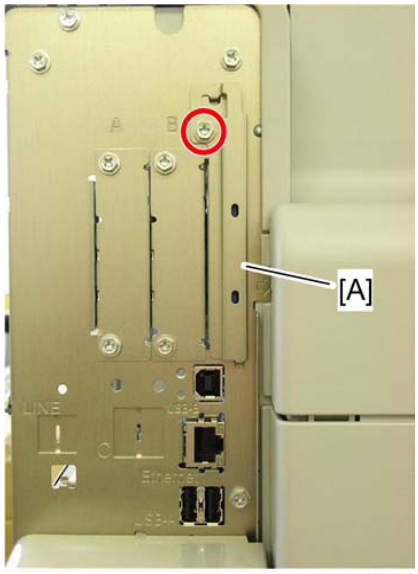
SP Mode and UP Mode Settings for IEEE 802.11 a/g, g Wireless LAN

The following SP commands and UP modes can be set for IEEE 802.11 a/g, g.

SP No.	Name	Function
5840-006	Channel MAX	Sets the maximum range of the channel settings for the country.
5840-007	Channel MIN	Sets the minimum range of the channels settings allowed for your country.
5840-008	Transmission speed	Sets the transmission speed Auto, 54 Mbps, 48 Mbps, 36 Mbps, 24 Mbps, 18 Mbps, 12 Mbps, 9 Mbps, 6 Mbps, 11 Mbps, 5.5 Mbps, 2 Mbps, 1 Mbps (default: Auto).
5840-011	WEP Key Select	Used to select the WEP key (Default: 00).
UP mode	Name	Function
	SSID	Used to confirm the current SSID setting.
WEP Key		Used to confirm the current WEP key setting.
WEP Mode		Used to show the maximum length of the string that can be used for the WEP Key entry.

⇒ 2.12.5 BROWSER UNIT TYPE E

Installation Procedure



m022i151b

1. For models which have the VM card, do the following. Then continue with step 3:
   - Press “User tools” button to enter the User Tools mode.
   - Press “Extended Feature Settings” on the LCD.
   - Press “Extended Feature Settings” on the LCD again.
   - Press “Start up” tab.
   - Stop all SDK applications with touching application lines.
   - Exit UP mode, turn off the machine and unplug the power cord
   - Remove the slot cover for SD cards.
   - Remove the SD card (VM/JAVA) from SD slot 2.
2. Turn off the machine and unplug the main machine power cord.
3. Turn the Browser SD card label face to the rear of the machine. Then push it slowly into the slot until you hear a click.
4. Plug in and turn on the main power switch
5. Push the “User Tools” key.
   If an administrator setting is registered for the machine, steps 6 and 7 are required. Otherwise, skip to step 8.
6. Push the “Login/Logout” key
7. Login with the administrator user name and password.
8. Touch “Extended Feature Settings” twice on the LCD.

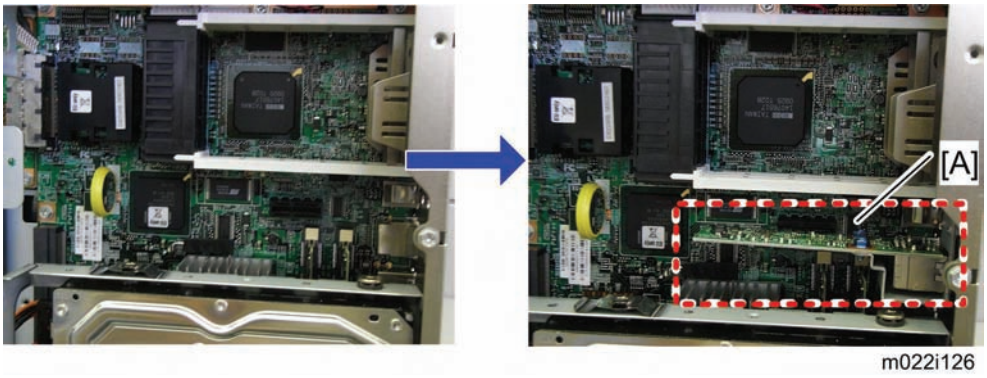
9. Touch “Install” on the LCD.
10. Touch “SD card”.
11. Touch the “Browser” line.
12. Under “Install to”, touch “Machine HDD” and touch “Next”.
13. When you see “Ready to Install”, check the information on the screen to confirm your previous selection.
14. Touch “OK”. You will see “Installing the extended feature… Please wait.” and then “Completed”.
15. Touch “Exit” to go back to the setting screen.
16. Touch “Change Allocation”.
17. Touch “Browser” line.
18. Press one of the hard keys, which you want to use for the Browser Unit. By default, this function is assigned to the “Other Functions” key (bottom key of the function keys).
19. Touch “OK”.
20. Touch “Exit” twice to go back to the copy screen.
21. Turn off the main power switch.
22. Install the function key for “Browser Unit” to the place you chose in step 18.
23. Turn on the main power switch.
24. When the reaches the Ready condition, press the key that you installed in Step 22.
    Note: A message will be displayed confirming that the Browser Option was successfully installed.
25. Turn off the main power switch.
26. Remove the SD card from slot 2.
27. Reinstall the JAVA card in slot 2
28. Attach the slot cover.
29. Ask the customer to keep the SD card in a safe place after you have installed the application program from the card to the HDD. This is because:

    - The SD card is the only proof that the user is licensed to use the application program.
    - You may need to check the SD card and its data to solve a problem in the future.

2.12.6 GIGABIT ETHERNET

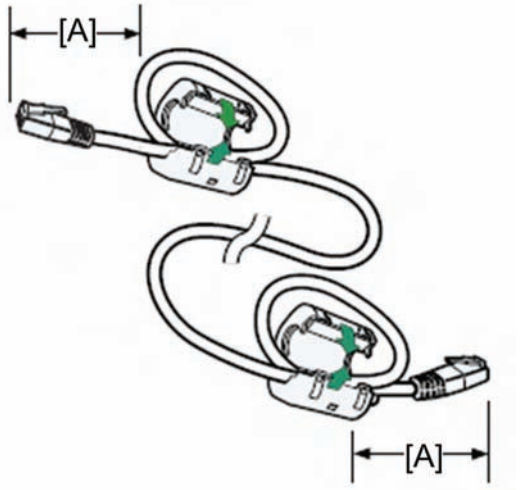
⚠CAUTION

- Unplug the main machine power cord before you do the following procedure.



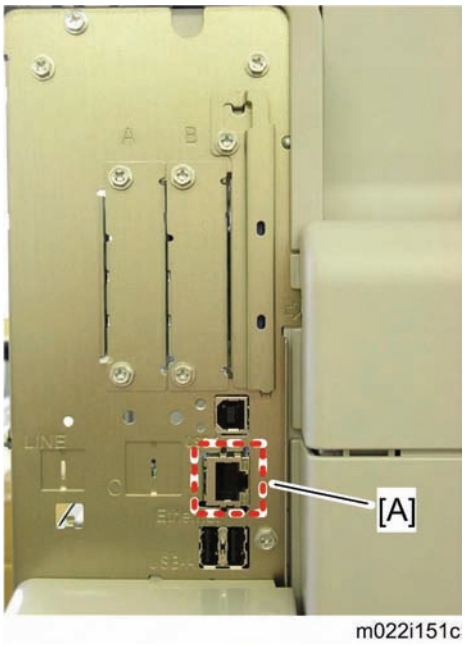
m022i126

1. Controller box cover (☛ p.4-194)
2. Install the Gigabit Ethernet board [A] (🔩 x 2).
3. Reassemble the machine.



m022i547

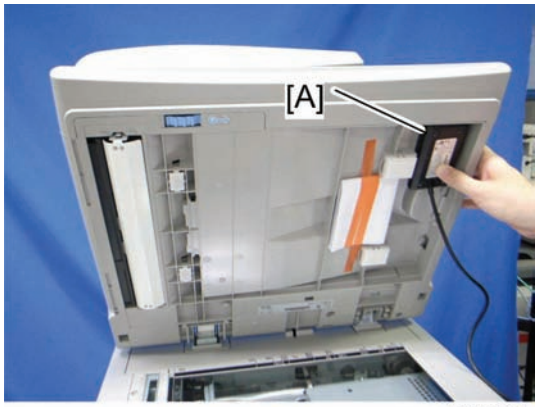
4. Make a loop at both ends of the Ethernet interface cable 5 cm [A] from the end, and install the ferrite core.



5. Attach the port cap to the Gigabit Ethernet port [A].
6. Check the operation of Gigabit Ethernet.

2.12.7 IC CARD READER

1. ARDF rear cover (☛ p.4-160)

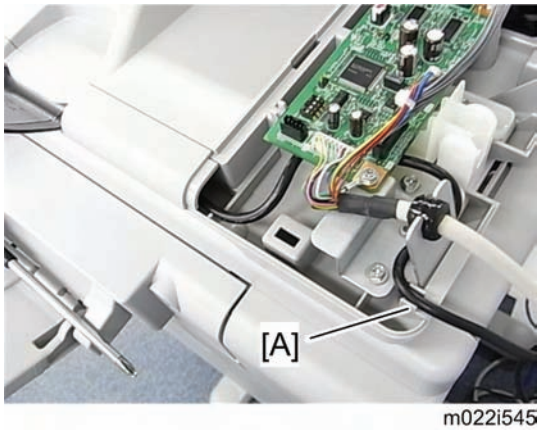


m022i136a

2. Attach the IC card reader [A].

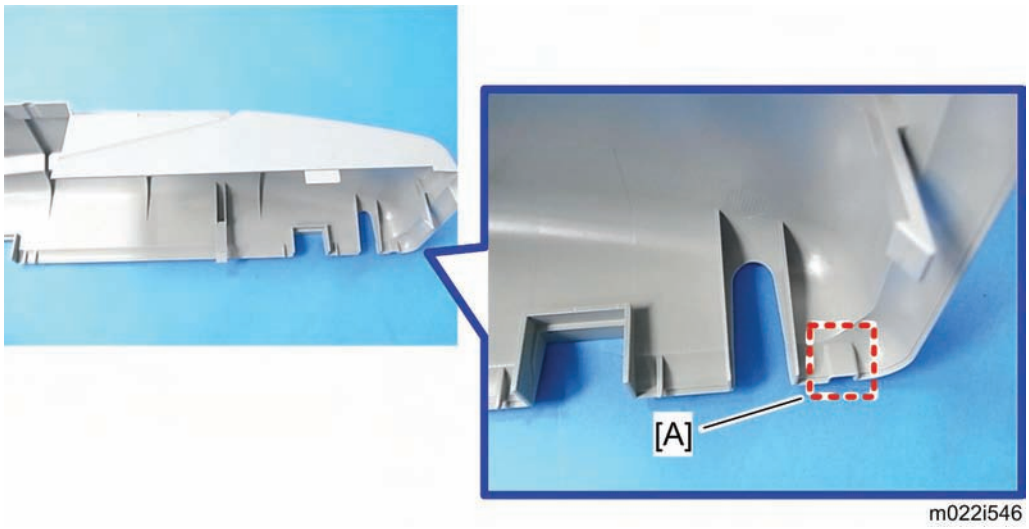
m022i544

3. Release the hook, and then put the cable outside.



m022i545

4. Route the cable [A] as shown above.



5. Remove the part [A] of the ARDF rear cover with nippers or a similar tool.
6. Reassemble the machine.

2.12.8 CHECK ALL CONNECTIONS

1. Plug in the power cord. Then turn on the main switch.
2. Enter the printer user mode. Then print the configuration page.
   User Tools > Printer Settings > List Test Print > Config. Page

All installed options are shown in the “System Reference” column.

PREVENTIVE MAINTENANCE

3. PREVENTIVE MAINTENANCE

3.1 MAINTENANCE TABLES

See "Appendices" for the following information:

- Maintenance Tables

3.2 PM PARTS SETTINGS

3.2.1 BEFORE REMOVING THE OLD PM PARTS

1. Enter the SP mode.
2. Output the SMC logging data with SP5-990-004.
3. Set the following SPs to "1" before you turn the power off. Then, the machine will reset the PM counters automatically. In the case of developer, the developer initialization will also be done automatically.
4. Exit the SP mode.

Item	SP
Development unit	Black: 3902-001 Cyan: 3902-002 Magenta: 3902-003 Yellow: 3902-004
PCU	Black: 3902-009 Cyan: 3902-0010 Magenta: 3902-011 Yellow: 3902-012
Fusing unit	3902-014
Fusing roller	3902-015
Fusing belt	3902-016
Image Transfer Belt Unit	3902-013
Image Transfer Belt Cleaning Unit	3902-017
Paper Transfer Roller Unit	3902-018
Waste Toner Bottle (if not full or near-full)	3902-020

For the following units, there is a new unit detection mechanism. It is not necessary to reset PM counters.

- PCDU
- Image Transfer Belt Unit
- Fusing unit

- Waste Toner Bottle (if full or near full)

3.2.2 AFTER INSTALLING THE NEW PM PARTS

1. Turn on the main power switch.
2. Output the SMC logging data with SP5-990-004 and check the counter values.
3. Make sure that the PM counters for the replaced units are "0" with SP7-803. If the PM counter for a unit was not reset, then reset that counter with SP 7-804.
4. Make sure that the exchange counter counts up with SP7-853.
5. Make sure that the counters for the previous units (SP7-906) on the new SMC logging data list (from step 2 above) are equal to the counters (SP7-803) for these units on the previous SMC logging data list (the list that was output in the "Before removing the old parts" section).
6. Make sure that the unit replacement date is updated with SP7-950.

3.2.3 PREPARATION BEFORE OPERATION CHECK

1. Clean the exposure glasses (for DF and book scanning).
2. Enter the user tools mode.
3. Do the "Automatic Color Calibration(ACC)" for the copier mode & printer mode as follows:
   - Print the ACC test pattern (User Tools > Maintenance > ACC > Start).
   - Put the printout on the exposure glass.
   - Put 10 sheets of white paper on the test chart. This ensures the precise ACC adjustment.
   - Close the ARDF or the platen cover.
   - Press "Start Scanning" on the LCD. Then, the machine starts the ACC.
4. Exit the User Tools mode, and then enter the SP mode.
5. Do the "Forced line position adjustment" as follows.
   - First do SP2-111-3 (Mode c).
   - Then do SP2-111-1 (Mode a).
   - To check if SP 2-111-1 was successful, watch the screen during the process. A message is displayed at the end. Also, you can check the result with SP 2-194-10 to -12.
6. Exit the SP mode.

3.2.4 OPERATION CHECK

Check if the sample image has been copied normally.

REPLACEMENT AND ADJUSTMENT

REVISION HISTORY		
Page	**Date**	**Added/Updated/New**
61	1/27/2011	Reinstalling the PCDU
83 ~ 110	5/4/2011	Removing the ITB encoder

4. REPLACEMENT AND ADJUSTMENT

4.1 BEFOREHAND

⚠CAUTION

- Before installing options, please do the following:
- If there is a fax unit in the machine, print out all messages stored in the memory, the lists of user-programmed items, and the system parameter list.
- If there are printer jobs in the machine, print out all jobs in the printer buffer.
- Turn off the main switch and disconnect the power cord, the telephone line, and the network cable.

Important

- Always touch a grounded surface to discharge static electricity from your hands before you handle SD cards, printed circuit boards, or memory boards.

Note

- Before you start to remove components from the machine, turn off the main power switch, check that the shutdown process has finished, then unplug the machine.
- After the main power switch of the machine has been turned off, the power relay board (SDB) keeps the power supply to the controller until the HDD unit has been shutdown safely.

4.2 SPECIAL TOOLS

Part Number	Description	Q'ty
B645 5010	SD Card	1
B645 6705	PCMCIA Card Adapter	1
B645 6820	USB Reader/Writer	1
VSSM9000	Digital Multimeter – FLUKE87	1
G021 9350	Loop-back Connector – Parallel (Note1)	1
C401 9503	20X Magnification Scope	1
A257 9300	Grease Barrierta – S552R	1
5203 9502	Silicone Grease G-501	1
B679 5100	Plug – IEEE1284 Type C	1
D015 9500	G104 Yellow Toner	1
A184 9501	Optics Adjustment Tool (2 pcs/set)	1
A092 9503	C4 Color Test Chart	1

Note

- Loop-back Connector - Parallel (item 5) requires Plug - IEEE1284 Type C (item 11).
- A PC (Personal Computer) is required for creating the Encryption key file to an SD card (Security & Encryption Unit) when replacing the controller board for a model in which HDD encryption has been enabled.

4.3 IMAGE ADJUSTMENT

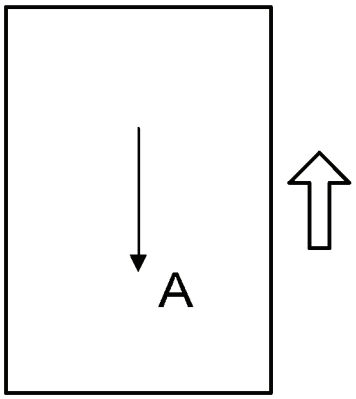
4.3.1 SCANNING

Check the printing registration/side-to-side adjustment and the blank margin adjustment before you do the following scanner adjustments.

Note

- Use C-4 test chart to do the following adjustments.

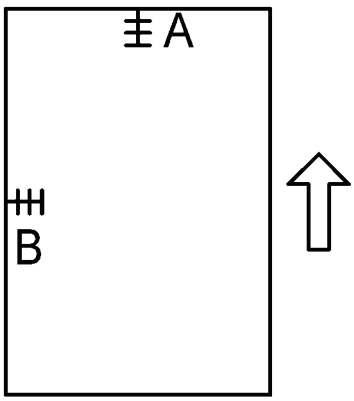
Scanner sub-scan magnification



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. Adjust with SP4-008 if necessary.
   Standard: ±1.0%.

Scanner leading edge and side-to-side registration



A: Leading Edge Registration

1. Put the test chart on the exposure glass. Then make a copy from one of the feed

stations.

2. Check the leading edge and side-to-side registration. Adjust the following SP modes if necessary.
   Standard: 0 ± 2mm for the leading edge registration, 0 ± 2.5mm for the side-to-side registration.

	SP mode
Leading Edge Registration	SP4-010-001
Side-to-Side Registration	SP4-011-001

4.3.2 ARDF

ARDF side-to-side, leading edge registration and trailing edge

Use A4/LT paper to make a temporary test chart as shown above.

1. Put the temporary test chart on the ARDF. Then make a copy from one of the feed stations.
2. Check the registration. Check the leading edge and side-to-side registration. Adjust the following SP modes if necessary.
   Standard: 4.2 ± 2 mm for the leading edge registration, 2 ± 1 mm for the side-to-side registration. Use the following SP modes to adjust if necessary.

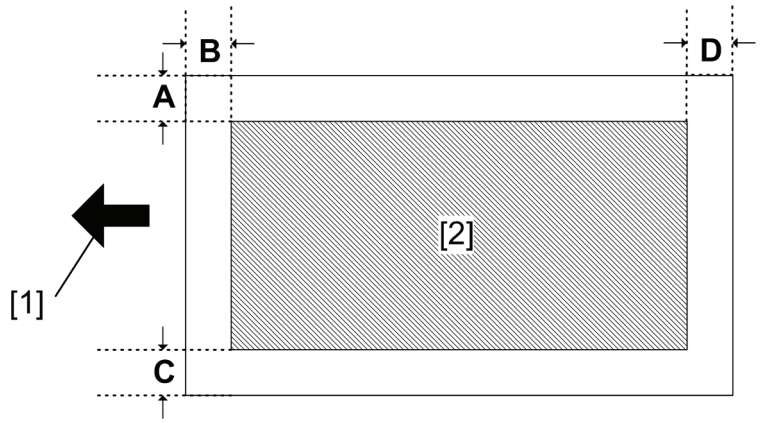
SP Code	What It Does	Adjustment Range
SP6-006-001	Side-to-Side Regist: 1st	± 3.0 mm
SP6-006-003	Leading Edge Registration	± 5.0 mm
SP6-006-006	Buckle: Duplex 2nd	± 5 mm
SP6-006-007	Rear Edge Erase (Trailing Edge)	± 5 mm

ARDF sub-scan magnification

1. Put the temporary test chart on the ARDF. Then make a copy from one of the feed stations.
2. Check the magnification ratio. Adjust with SP6-017-001 if necessary.
   - Standard: ±5.0%
   - Reduction mode: ±1.0%
   - Enlargement mode: ±1.0%

4.3.3 REGISTRATION

Image Area



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

A = C = 2.0 mm, B = D = 4.2 mm

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

Leading Edge

Adjusts the leading edge registration for each paper type and process line speed.

Side to Side

Adjusts the side-to-side registration for each paper feed station. Use SP mode (SP1-002) to adjust the side-to-side registration for the optional paper feed unit and duplex unit.

Adjustment Standard

- Leading edge (sub-scan direction): 4.2 ± 1.5 mm
- Trailing edge (sub-scan direction): 4.2 ± 2.7 mm
- Side to side (main-scan direction): 2 ± 1.5 mm

Paper Registration Standard

The registration in both main- and sub-scan directions can change within the following tolerance.

- Sub-scan direction: 0 ± 2 mm
- Main-scan direction: 0 ± 2 mm

Adjustment Procedure

1. Enter SP2-109-003.
2. Print out the test pattern (14: 1-dot trimming pattern) with SP2-109-003.

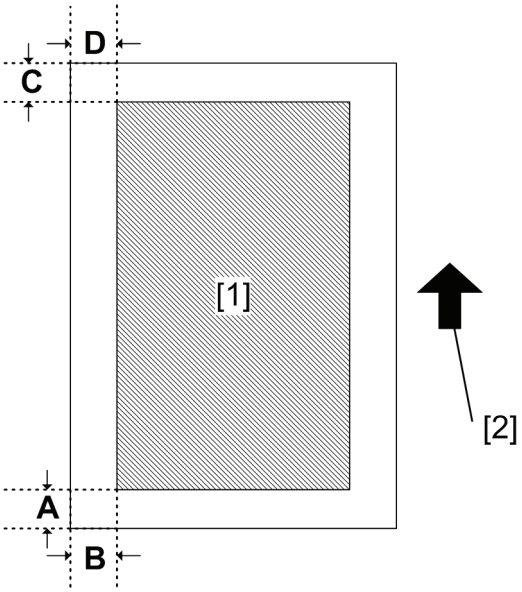
   Note

   - Registration can change slightly as shown on the previous page. Print some pages of the 1-dot trimming pattern for step 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 and adjust it with SP1-001.
   2) Select the adjustment conditions (paper type and process line speed).
   3) Input the value. Then press the # key.
   4) 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 and adjust it with SP1-002.
   2) Select the adjustment conditions (paper feed station).
   3) Input the value. Then press the # key.
   4) Generate a trim pattern to check the leading edge adjustment.

4.3.4 ERASE MARGIN ADJUSTMENT

Note

- Adjust the erase margin C and D only if the registration (main scan and sub scan) cannot be adjusted within the standard values. Do the registration adjustment after adjusting the erase margin C and D, and then adjust the erase margin A and B.



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

1. Enter SP2-109-003.
2. Print out the test pattern (14: 1-dot trimming pattern) with SP2-109-003.
3. Check the erase margin A and B. Adjust them with SP2-103-001 to -004 if necessary.
   - Leading edge: 0.0 to 9.9 mm (default: 4.2 mm)
   - Side-to-side: 0.0 to 9.9 mm (default: 2.0 mm)
   - Trailing edge: 0.0 to 9.9 mm (default: 4.2 mm)

4.3.5 COLOR REGISTRATION

Line Position Adjustment

The automatic line position adjustment usually is done for a specified condition to get the best color prints.

Do the following if color registration shifts:

- Do "Auto Color Registration" as follows to do the forced line position adjustment.

1. First do SP2-111-3.
2. Then do SP2-111-1.

   To check if SP 2-111-1 was successful, watch the screen during the process. A message is displayed at the end. Also, you can check the result with SP 2-194-10 to -12.

- You should also do the line position adjustment at these times:
  - After you transport or move the machine (you should do the forced line position adjustment if you install the machine at the user location.) if the machine is pre-installed at the workshop and moved to the user location,
  - When you open the drum positioning plate
  - When you remove or replace the motors, clutches, and/or gears related to the drum/development/transfer sections
  - When you remove or replace the image transfer belt, image transfer belt unit or laser optical housing unit

4.3.6 PRINTER GAMMA CORRECTION

Note

- The ACC is usually sufficient to adjust the color balance to get the best print output. You only need the printer gamma correction to fine-tune to meet user requirements.

Use SP modes if you want to modify the printer gamma curve created with ACC. You can adjust the gamma data for the following:

- Highlight
- Middle
- Shadow areas
- IDmax.

The adjustable range is from 0 to 30 (31 steps).

Copy Mode

- KCMY Color Balance Adjustment -

The adjustment uses only "Offset" values.

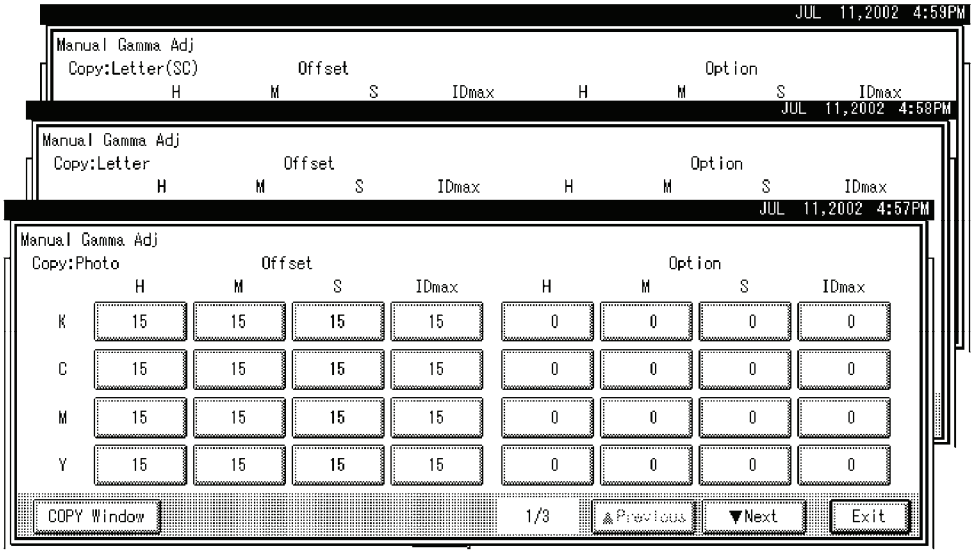
Note

- Never change "Option" values (default value is 0).

Highlight (Low ID)	Levels 2 through 5 in the C4 chart 10-level scale
Middle (Middle ID)	Levels 3 through 7 in the C4 chart 10-level scale
Shadow (High ID)	Levels 6 through 9 in the C4 chart 10-level scale
ID max	Level 10 in the C4 chart 10-level scale (affects the entire image density.)
Offset	The higher the number in the range associated with the low ID, middle ID, high ID, and ID max, the greater the density.

There are four adjustable modes (can be adjusted with SP4-918-009):

- Copy Photo mode
- Copy Letter mode
- Copy Letter (Single Color) mode
- Copy Photo (Single Color) mode



- Adjustment Procedure -

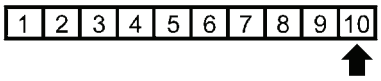
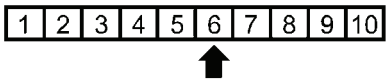
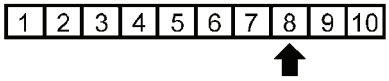
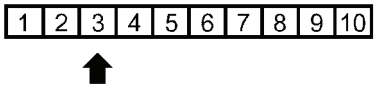
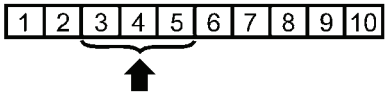
1. Copy the C-4 chart in the mode that you want to adjust.
2. Enter the SP mode.
3. Select "System SP."
4. Select SP4-918-009.
5. Adjust the offset values until the copy quality conforms to the standard (see the table below).

Note

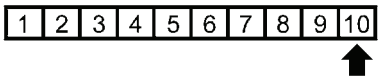
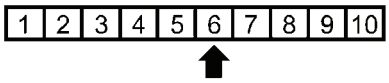
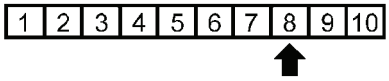
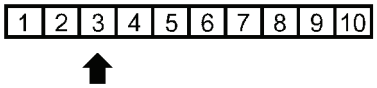
- 1. Never change "Option" value (default value is "0").
- 2. Adjust the density in this order: "ID Max", "Middle", "Shadow", "Highlight".

-

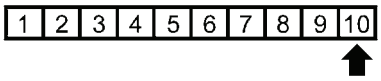
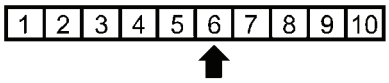
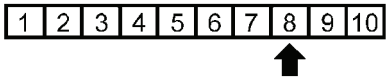
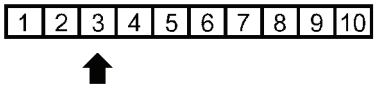
Photo Mode, Full Color -

	Item to Adjust	Level on the C-4 chart	Adjustment Standard
1	ID max: (K, C, M, and Y)		Adjust the offset value so that the density of level 10 matches that of level 10 on the C-4 chart.
2	Middle (Middle ID) (K, C, M, and Y)		Adjust the offset value so that the density of level 6 matches that of level 6 on the C-4 chart.
3	Shadow (High ID) (K, C, M, and Y)		Adjust the offset value so that the density of level 8 matches that of level 8 on the C-4 chart.
4	Highlight (Low ID) (K, C, M, and Y)		Adjust the offset value so that dirty background does not show on the copy and the density of level 3 is slightly lighter than that of level 3 on the C-4 chart.
5	K Highlight (Low ID) (C,M, and Y) <on the full color copy>		Adjust the offset value so that the color balance of black scale levels 3 through 5 in the copy is seen as gray (no C, M, or Y should be visible). If the black scale contains C, M, or Y, do steps 1 to 4 again.

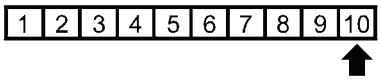
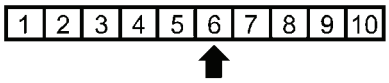
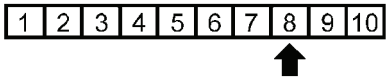
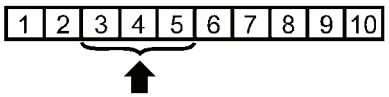
- Photo Mode, Single Color -

	Item to Adjust	Level on the C-4 chart	Adjustment Standard
1	ID max: (K)		Adjust the offset value so that the density of level 10 matches that of level 10 on the C-4 chart.
2	Middle (Middle ID) (K)		Adjust the offset value so that the density of level 6 matches that of level 6 on the C-4 chart.
3	Shadow (High ID) (K)		Adjust the offset value so that the density of level 8 matches that of level 8 on the C-4 chart.
4	Highlight (Low ID) (K)		Adjust the offset value so that dirty background does not show on the copy and the density of level 3 is slightly lighter than that of level 3 on the C-4 chart.

- Text (Letter) Mode, Full Color -

	Item to Adjust	Level on the C-4 chart (K)	Adjustment Standard
1	ID max: (K, C, M, and Y)		Adjust the offset value so that the density of level 10 matches that of level 10 on the C-4 chart.
2	Middle (Middle ID) (K, C, M, and Y)		Adjust the offset value so that the density of level 6 matches that of level 6 on the C-4 chart.
3	Shadow (High ID) (K, C, M, and Y)		Adjust the offset value so that the density of level 8 matches that of level 8 on the C-4 chart.
4	Highlight (Low ID) (K, C, M, and Y)		Adjust the offset value so that dirty background does not show on the copy and the density of level 3 is slightly lighter than that of level 3 on the C-4 chart.

- Text (Letter) Mode, Single Color -

	Item to Adjust	Level on the C-4 chart (K)	Adjustment Standard
1	ID max: (K)		Adjust the offset value so that the density of level 10 matches that of level 10 on the C-4 chart.
2	Middle (Middle ID) (K)		Adjust the offset value so that the density of level 6 matches that of level 6 on the C-4 chart.
3	Shadow (High ID) (K)		Adjust the offset value so that the density of level 8 matches that of level 8 on the C-4 chart.
4	Highlight (Low ID) (K)		Adjust the offset value so that dirty background does not show on the copy and the density of level 3 is slightly lighter than that of level 3 on the C-4 chart.

Note

- Text parts of the test pattern cannot be printed clearly after you adjust "shadow" as shown above. At this time, check if the 5 line/mm pattern at each corner is printed clearly. If it is not, adjust the offset value of "shadow" again until it is.

Printer Mode

There are six adjustable modes (select these modes with printer SP1-102-001):

- 1200 x 1200 photo mode
- 1200 x 1200 text mode
- 2400 x 600 photo mode
- 2400 x 600 text mode
- 1800 x 600 photo mode
- 1800 x 600 text mode
- 600 x 600 photo mode
- 600 x 600 text mode

	K	C	M	Y
Highlight	SP1-104-1	SP1-104-21	SP1-104-41	SP1-104-61
Shadow	SP1-104-2	SP1-104-22	SP1-104-42	SP1-104-62
Middle	SP1-104-3	SP1-104-23	SP1-104-43	SP1-104-63
IDmax	SP1-104-4	SP1-104-24	SP1-104-44	SP1-104-64

- Adjustment Procedure -

1. Do ACC for the printer mode.
2. Turn the main power off and on.
3. Enter SP mode.
4. Select "Printer SP".
5. Select SP1-102-001. Then select the necessary print mode to adjust.
6. Choose SP1-103-1 to print out a tone control test sheet if you want to examine the image quality for these settings.
7. Adjust the color density with SP1-104. Compare the tone control test sheet with the C4 test chart.

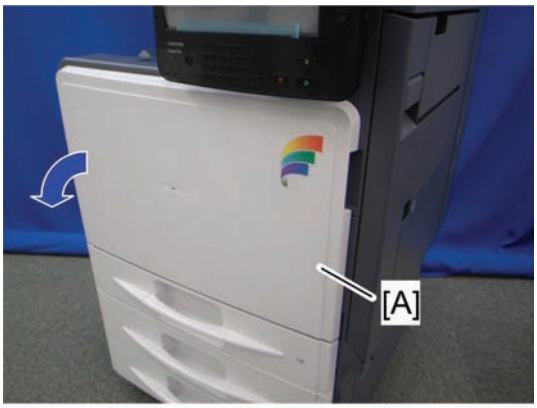
   Note

   - Adjust the density in this order: "ID Max", "Shadow", "Middle", "Highlight".
8. Use SP1-105-001 to keep the adjusted settings.

4.4 EXTERIOR COVERS

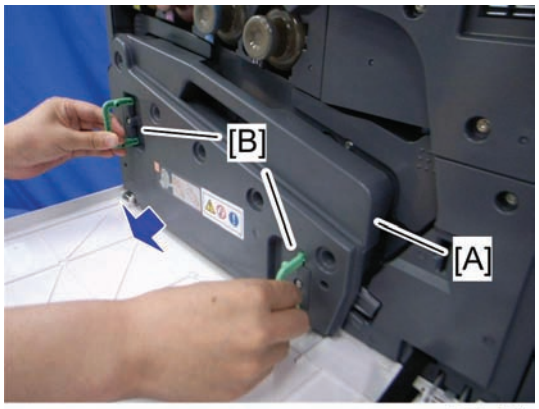
4.4.1 TONER COLLECTION BOTTLE

If you replace a bottle, then you must reset the PM counter for this unit. To do this, set SP 3902 020 to 1 before you start to work on the machine.



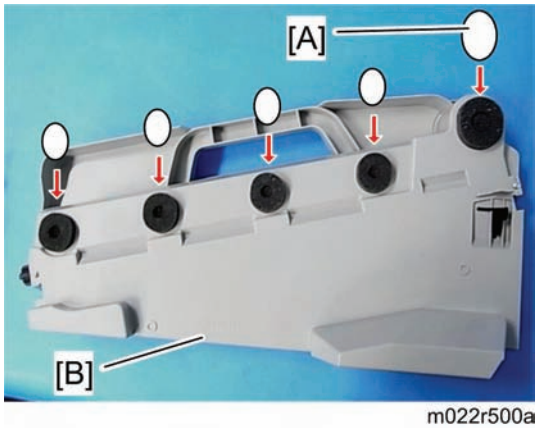
m022i503

1. Open the front door [A].



m022r501

2. Pull out the toner collection bottle [A] while holding the handles [B].



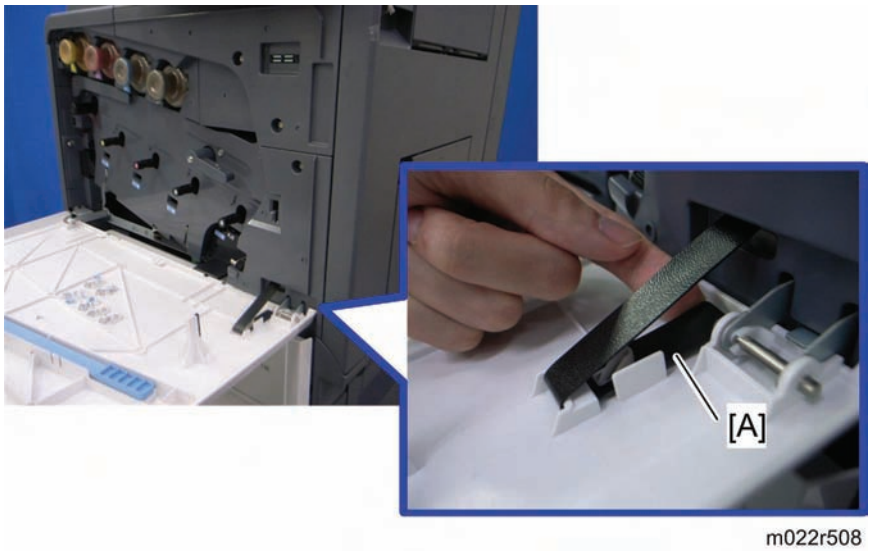
m022r500a

3. Attach the seals (provided with the new toner collection bottle) [A] to the five sponge pads. This closes the toner bottle.
4. Remove the toner collection bottle [B].

5. Put the toner collection bottle [B] into the supplied plastic bag to prevent toner from leaking out of the bottle, and then seal the bag.

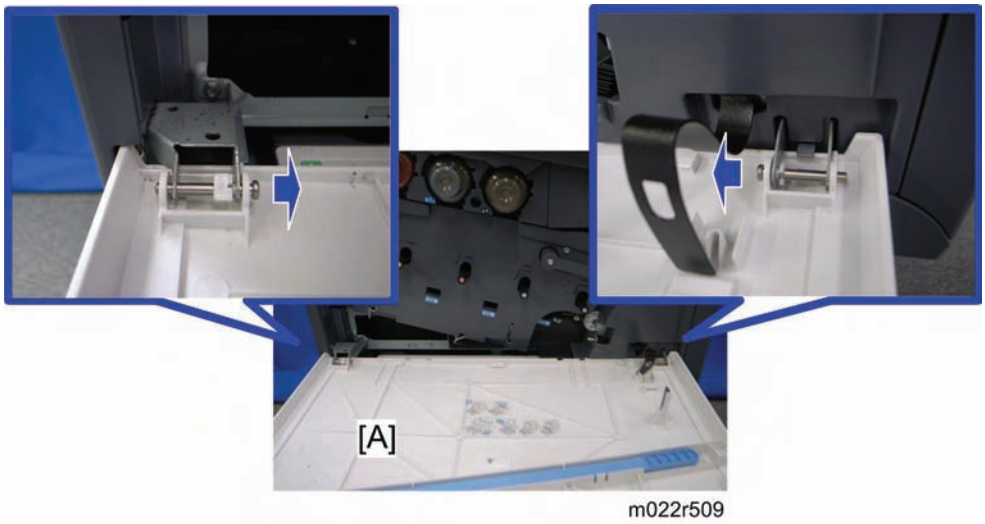
4.4.2 FRONT DOOR

1. Open the front door.
2. Toner collection bottle (☛ p.4-16)



m022r508

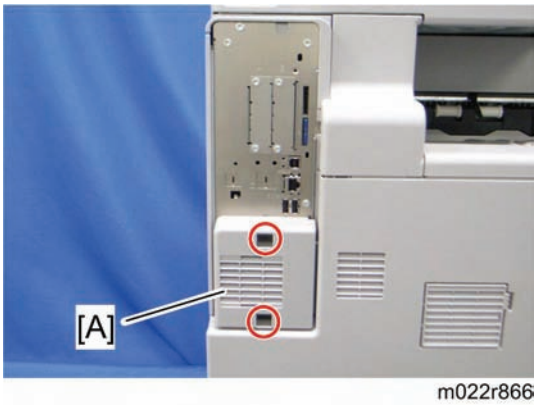
3. Release the belt [A].



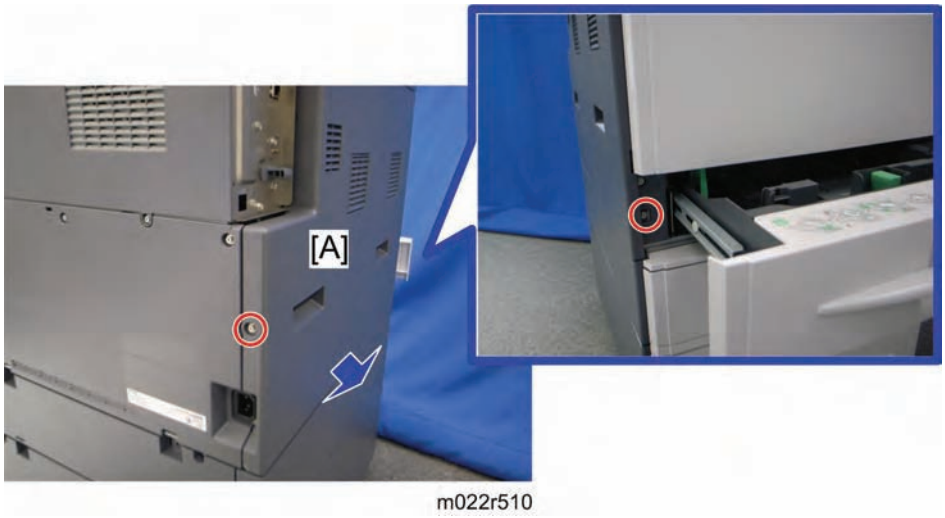
m022r509

4. Front door [A] (⟲ x 2, pin x 2)

4.4.3 LEFT COVER

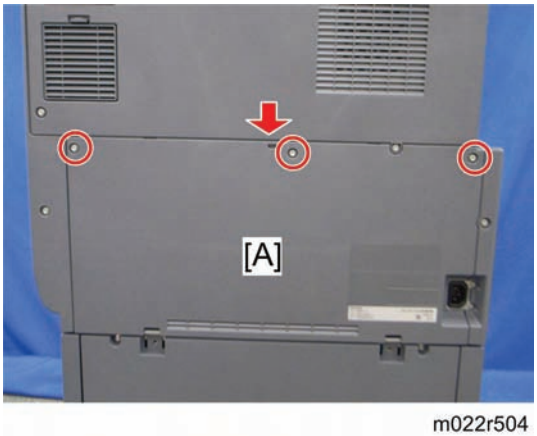


1. SD card cover [A] (x 2)
2. Pull out the tray.



3. Left cover [A] (x 2)

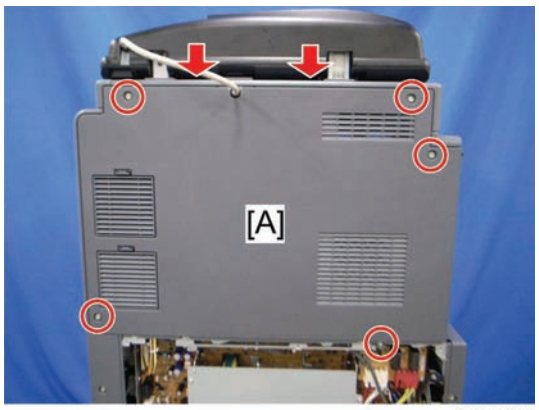
4.4.4 REAR LOWER COVER



1. Rear lower cover [A] (x 3, hook x 1)

4.4.5 REAR COVER

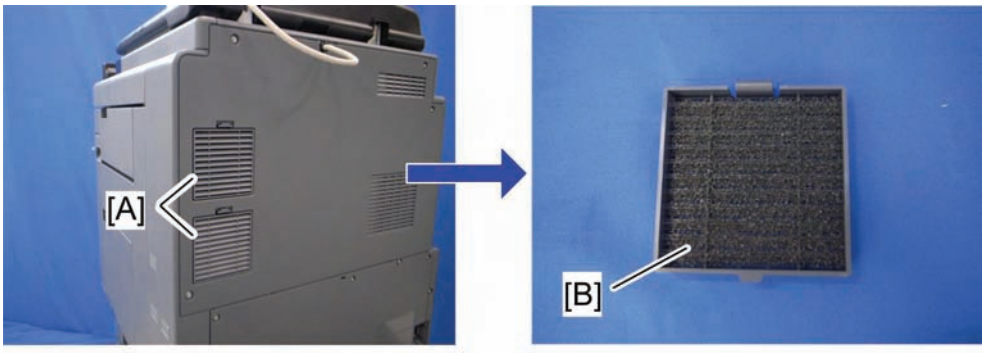
1. Rear lower cover (☛ p.4-18)



m022r505

2. Rear cover [A] (🔩 x 5, hooks)

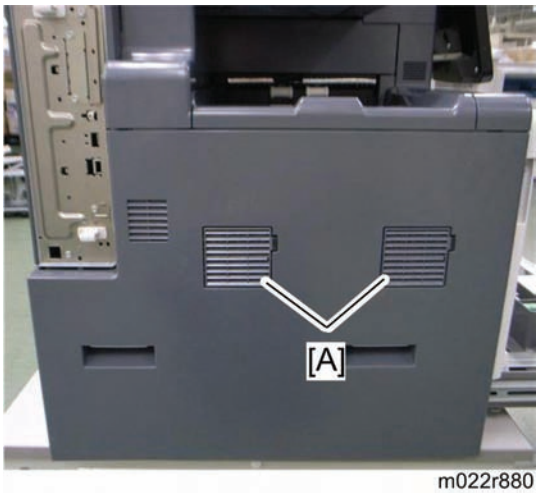
4.4.6 DUST FILTER



m022r511

1. Dust filter covers [A]
2. Dust filter [B]

4.4.7 EXHAUST FILTER

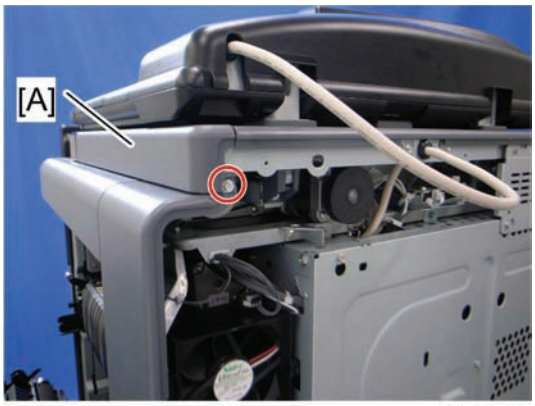


m022r880

1. Exhaust filters [A]

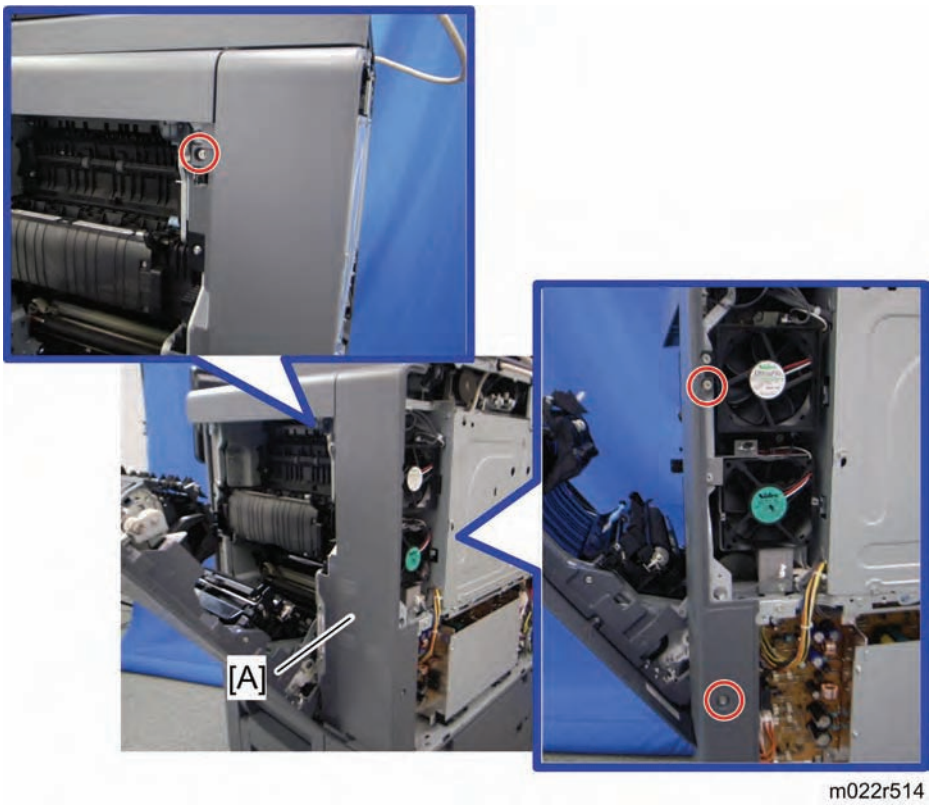
4.4.8 RIGHT REAR COVER

1. Rear lower cover (☛ p.4-18)
2. Rear cover (☛ p.4-19)
3. Open the duplex unit.



m022r513

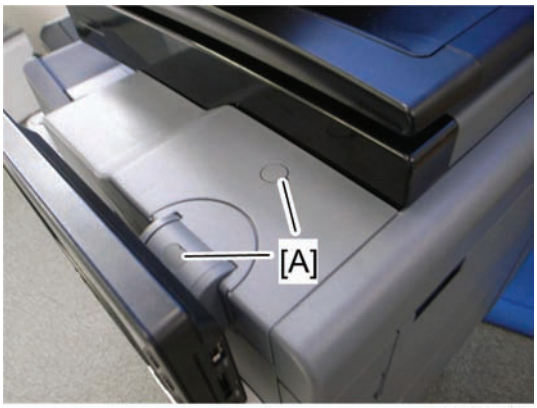
4. Release the scanner right cover [A] (🔩 x 1)



m022r514

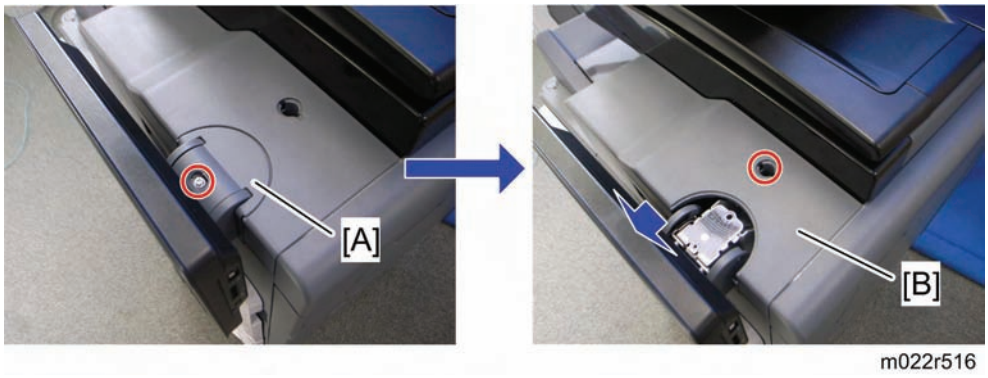
5. Right rear cover [A] (🔩 x 3)

4.4.9 OPERATION PANEL



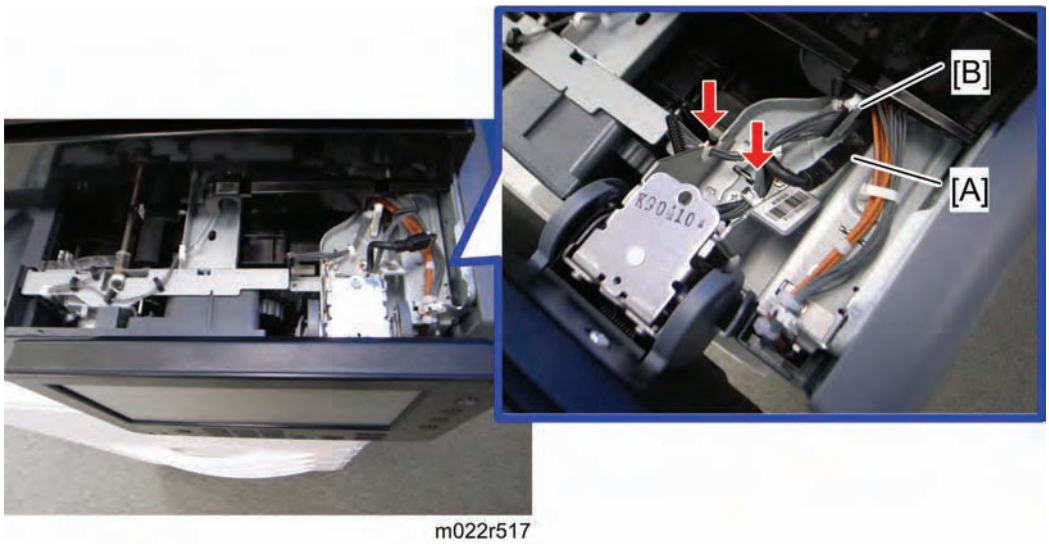
m022r515

1. Remove the two cover caps [A].



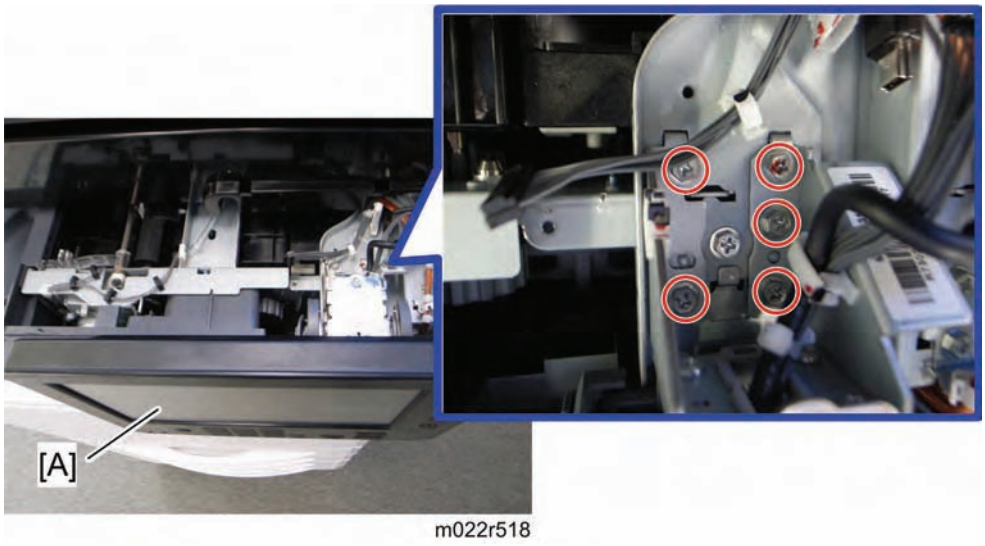
m022r516

2. Operation panel arm cover [A] (x 1)
3. Upper front cover [B] (x 1)



m022r517

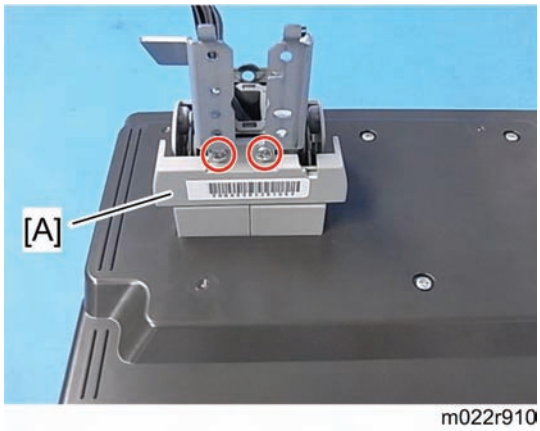
4. Disconnect the USB cable [A] and the harness [B] (x 2).



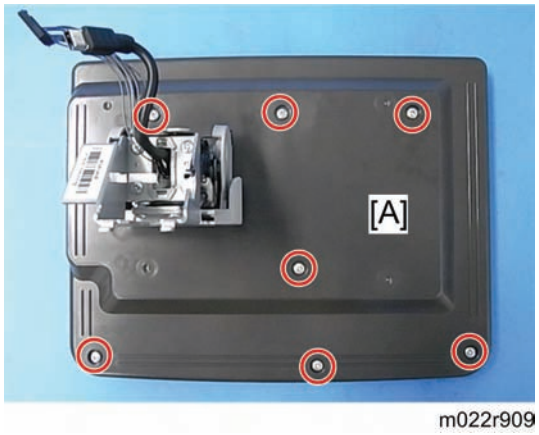
5. Operation panel [A] (x 5)

Key Tops

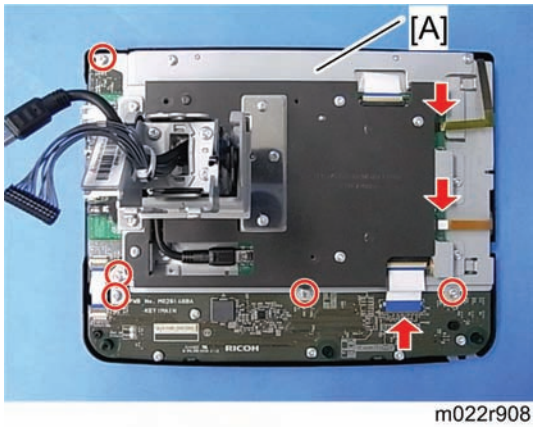
1. Operation panel (p.4-21)



2. Operation panel arm holder [A] (x 2)

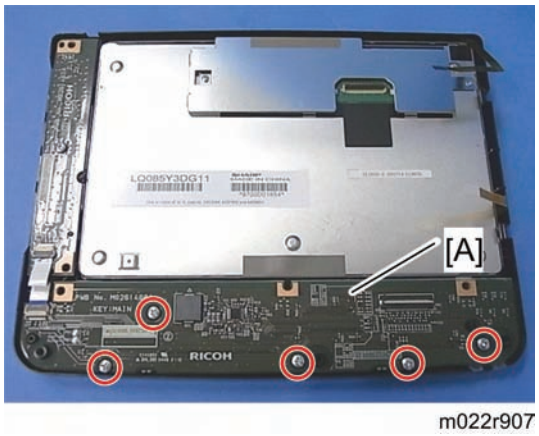


3. Operation panel rear cover [A] (x 7)



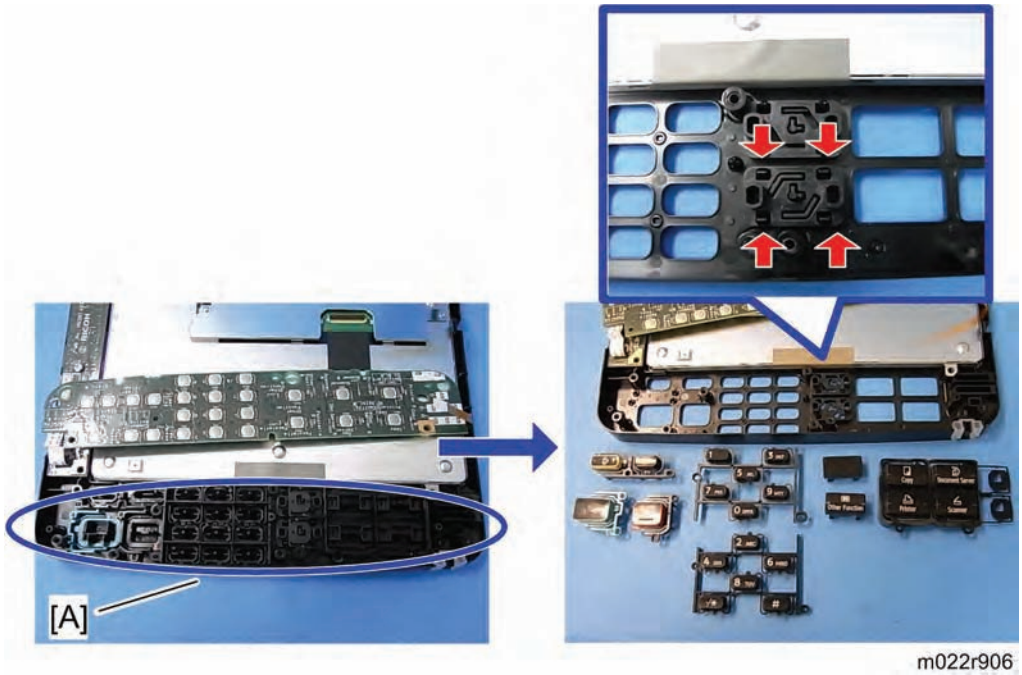
m022r908

4. Operation panel bracket [A] (x 5, x 3)



m022r907

5. Release the Key: main board [A] (x 5)



m022r906

6. Key tops [A] (hooks)

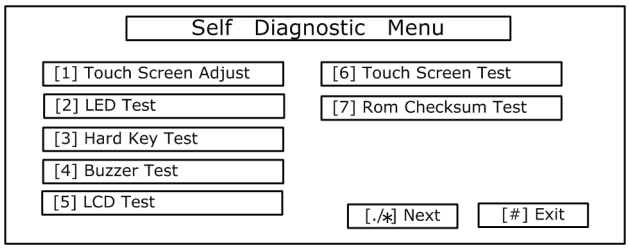
4.4.10 TOUCH PANEL POSITION ADJUSTMENT

Note

- It is necessary to calibrate the touch panel at the following times:
- When you replace the operation panel.
- When you replace the controller board.
- When the touch panel detection function does not operate correctly

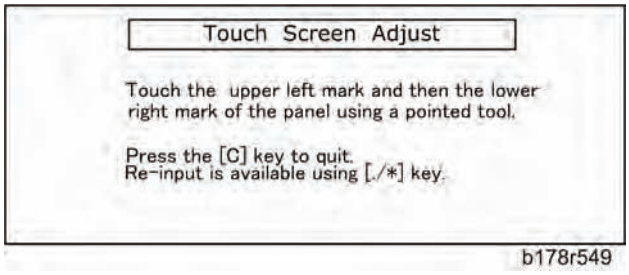
Do not use items [2] to [9] on the Self-Diagnostic Menu. These items are for design use only.

1. Press , press "1" "9" "9" "3" key, press "Clear/Stop" key 5 times to open the Self-Diagnostics menu.



b178r548

2. On the touch screen press “Touch Screen Adjust” (or press "1" key).
3. Use a pointed (not sharp) tool to press the upper left mark.



b178r549

4. Press the lower right mark when “ ” shows.
5. Press [#] OK on the screen (or press) when you are finished.
6. Touch [#] Exit on the screen to close the Self-Diagnostic menu. Save the calibration settings.

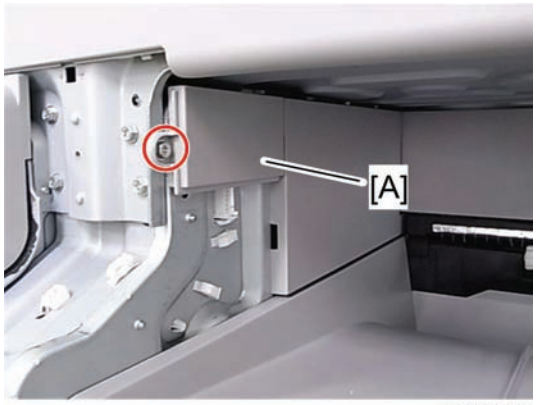
4.4.11 PAPER EXIT TRAY

Basic model only

1. Left cover (☛ p.4-18)

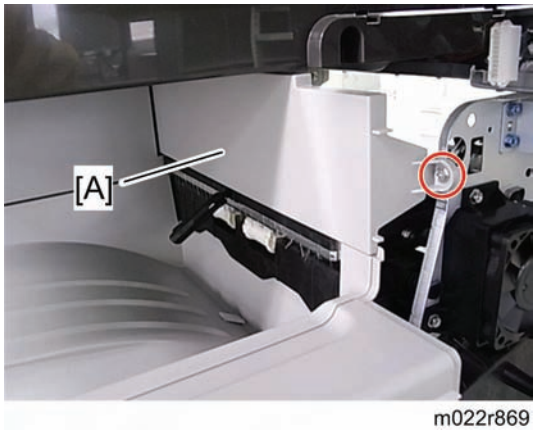
m022r867

2. Left upper cover [A] (🔩 x 1)



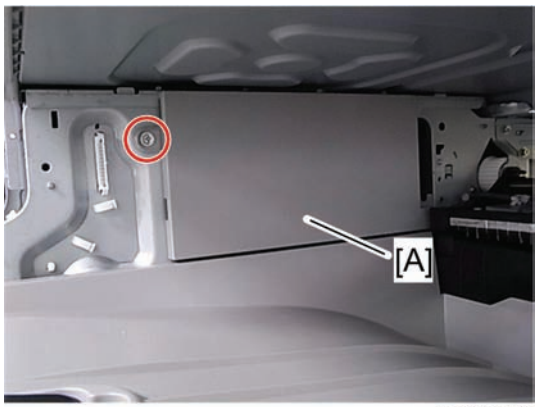
m022r868

3. Inner rear left cover [A] (🔩 x 1)



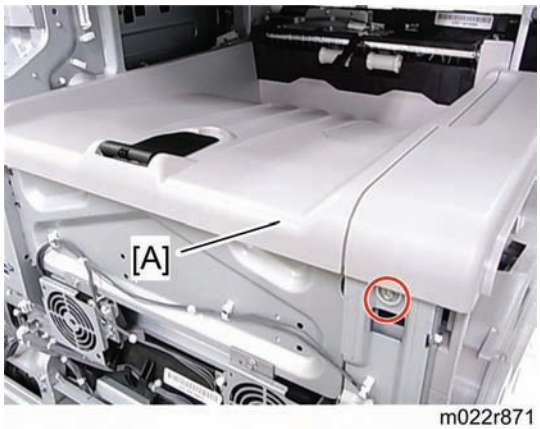
m022r869

4. Paper exit cover [A] (🔩 x 1)



m022r870

5. Inner rear right cover [A] (x 1)

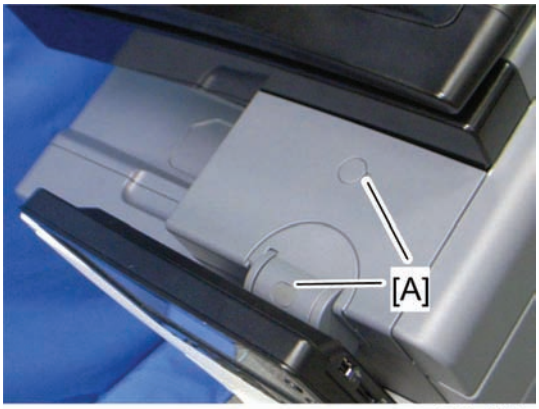


m022r871

6. Paper exit tray [A] (x 1)

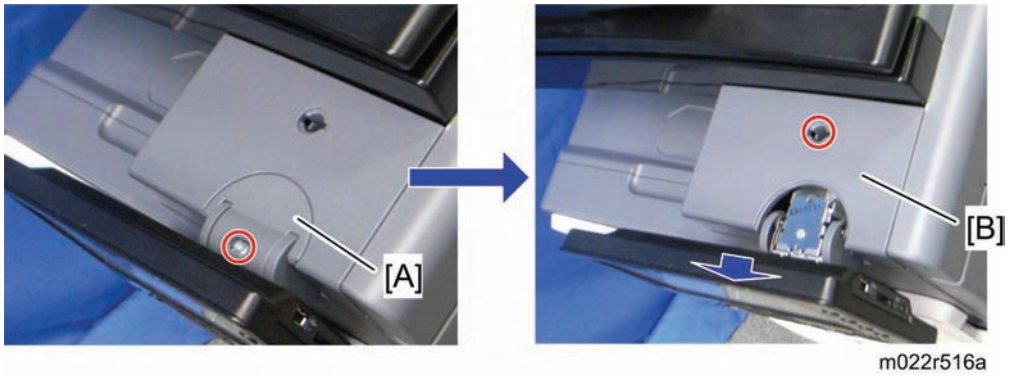
4.4.12 INNER RIGHT COVER

Basic model



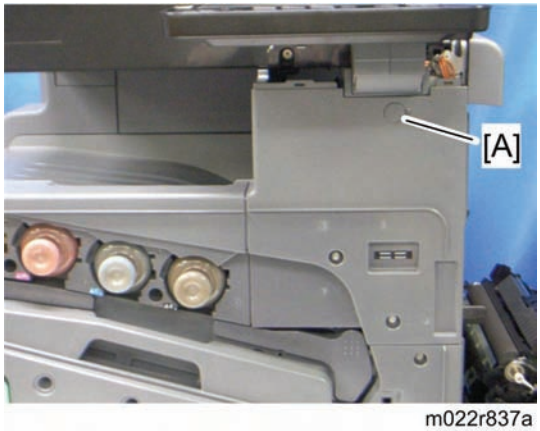
m022r515a

1. Remove the two cover caps [A].



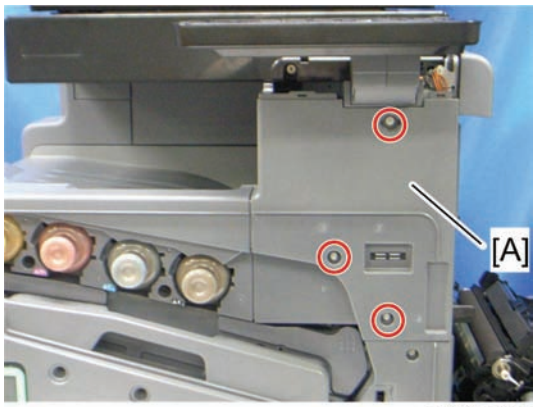
m022r516a

2. Operation panel arm cover [A] (x 1)
3. Upper front cover [B] (x 1)
4. Open the duplex unit.
5. Open the front door.



m022r837a

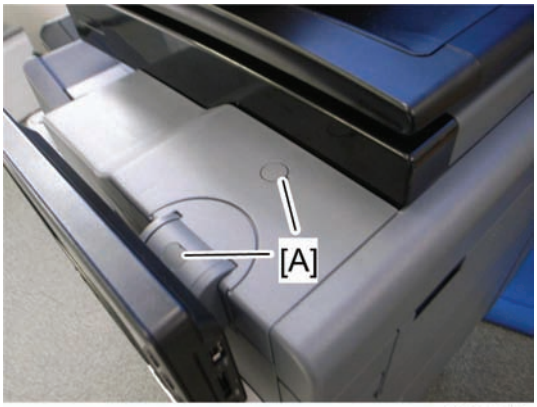
6. Remove the cover cap [A].



m022r838a

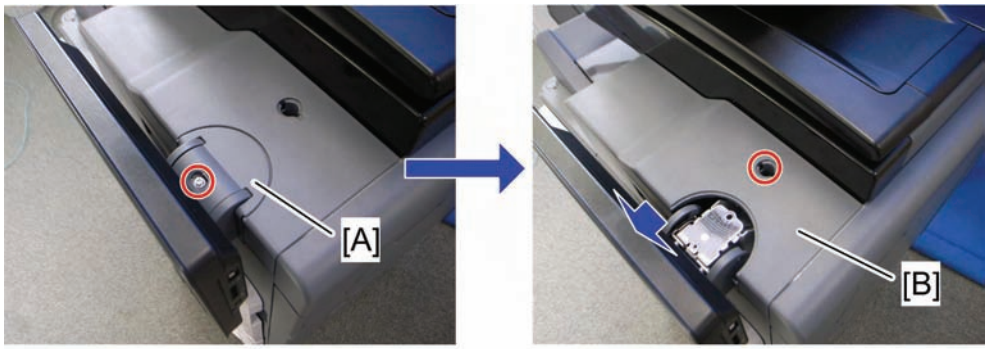
7. Inner right cover [A] (x 3)

Finisher model



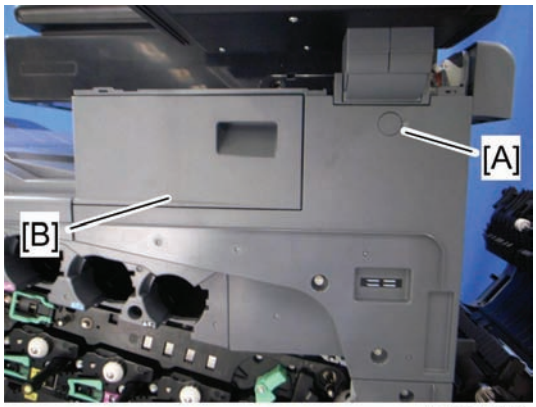
m022r515

1. Remove the two cover caps [A].



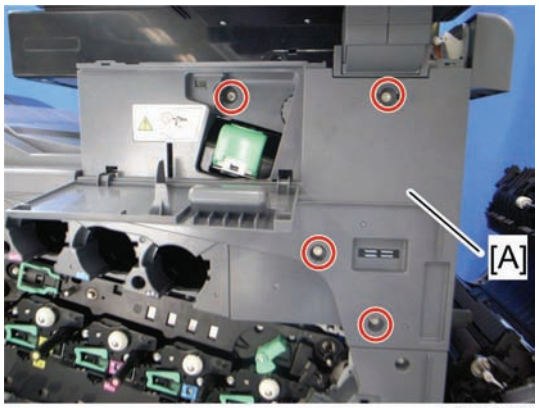
m022r516

2. Operation panel arm cover [A] (x 1)
3. Upper front cover [B] (x 1)
4. Open the duplex unit.
5. Open the front door.



m022r837

6. Remove the cover cap [A].
7. Open the cover [B].

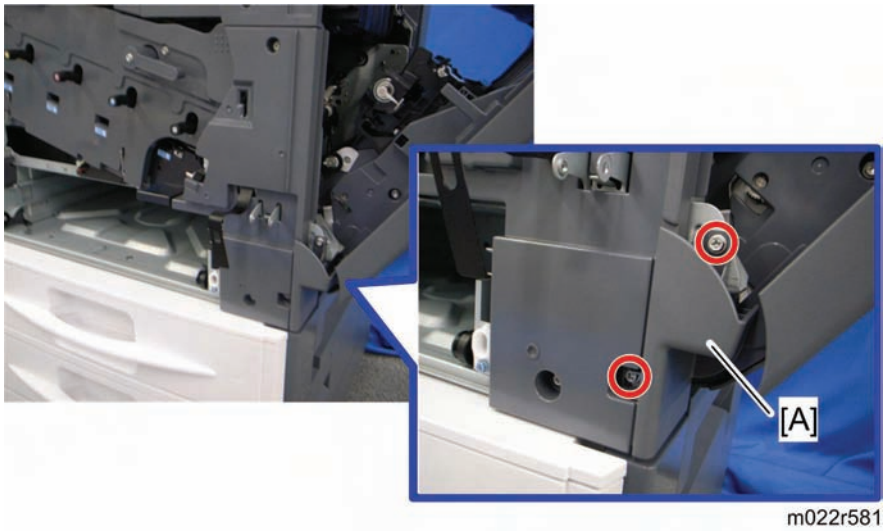


m022r838

8. Inner right cover [A] (x 4)

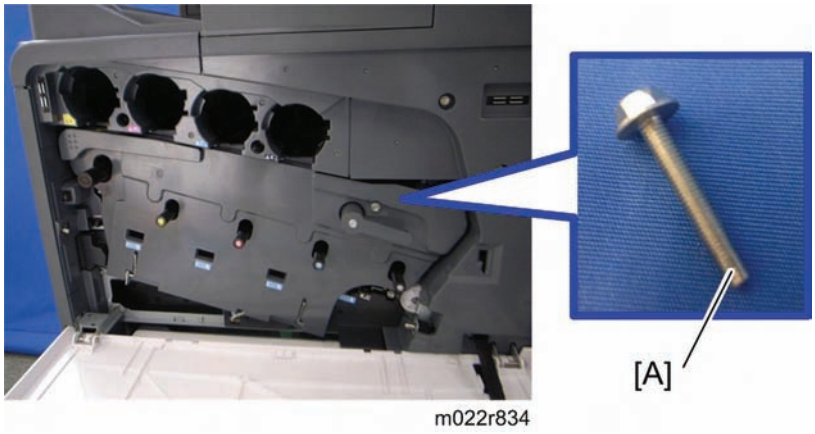
4.4.13 INNER RIGHT LOWER COVER

1. Pull out the paper tray.
2. Toner collection bottle (☛ p.4-16)
3. Front door (☛ p.4-17)
4. Open the duplex unit.



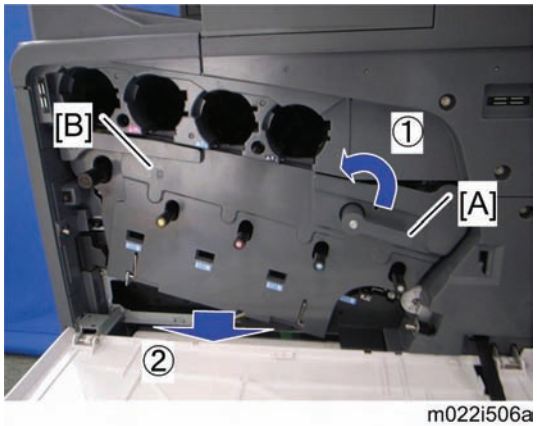
m022r581

5. Right front lower cover [A] (🔩 x 2)



m022r834

6. Remove the long screw [A].

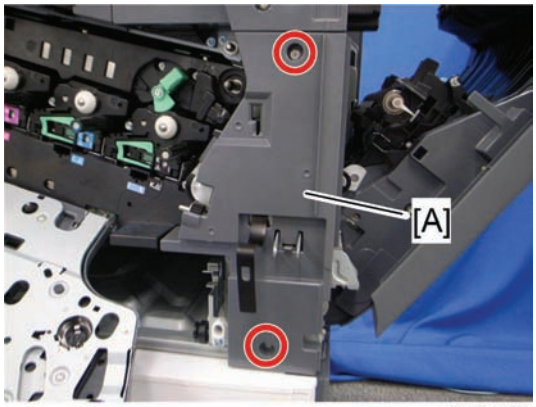


m022i506a

7. Turn the lock lever [A] counterclockwise, and then open the drum securing plate [B].

Note

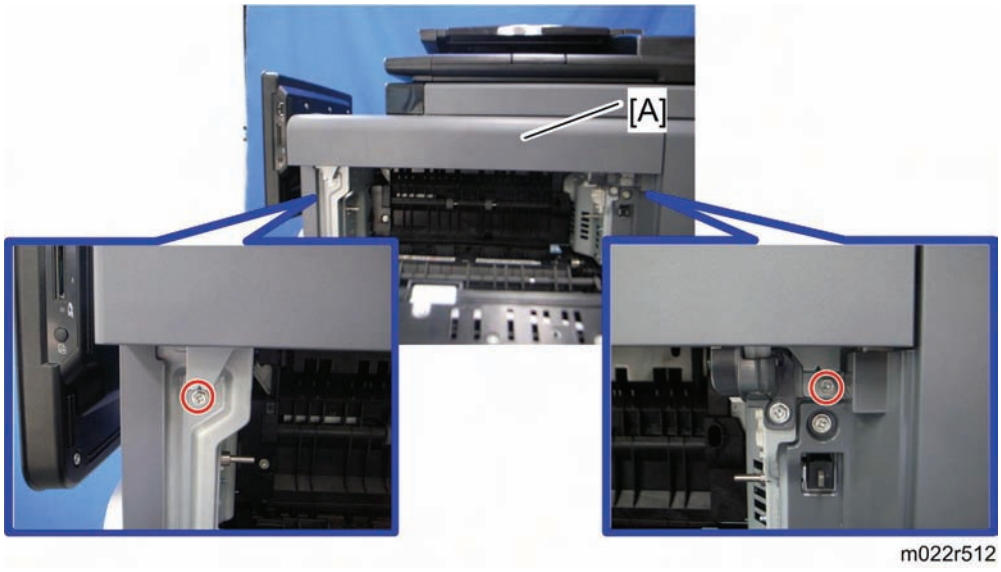
- Make sure that the lock lever [A] is at home position when reassembling.



8. Inner right lower cover [A] (x 2)

4.4.14 RIGHT UPPER COVER

1. Open the duplex unit.

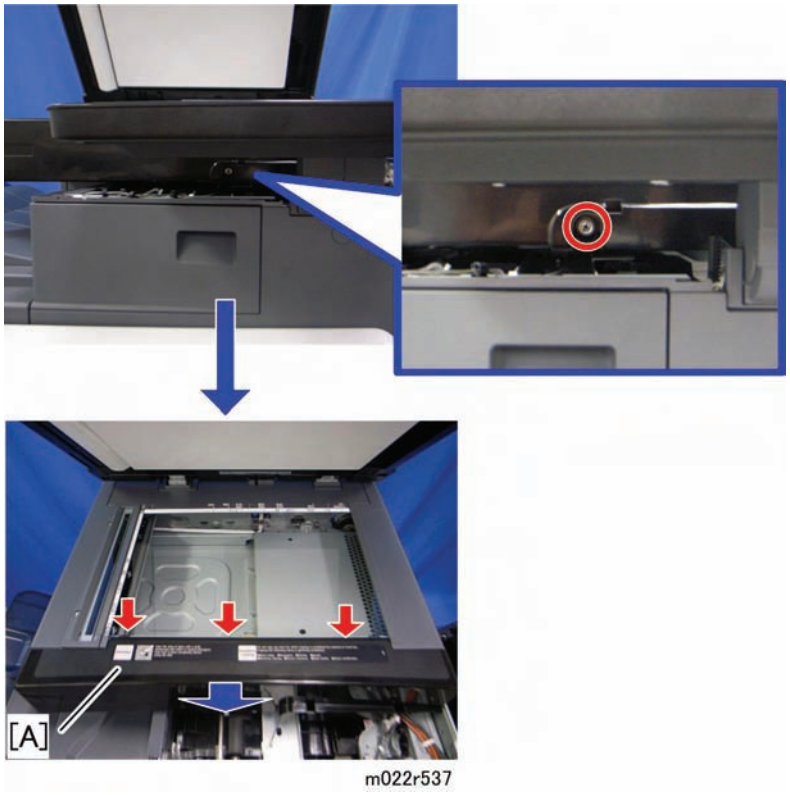


2. Right upper cover [A] (x 2)

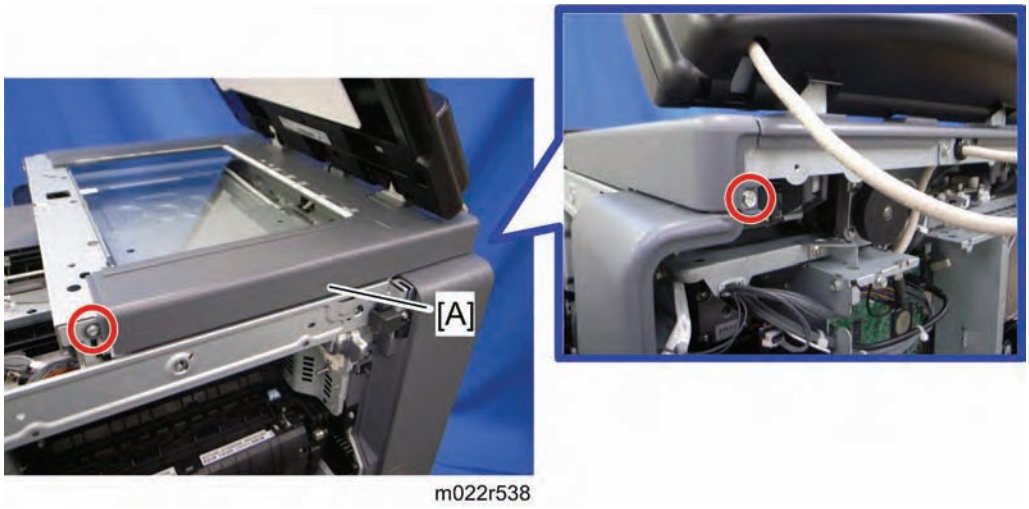
4.5 SCANNER UNIT

4.5.1 EXPOSURE GLASS

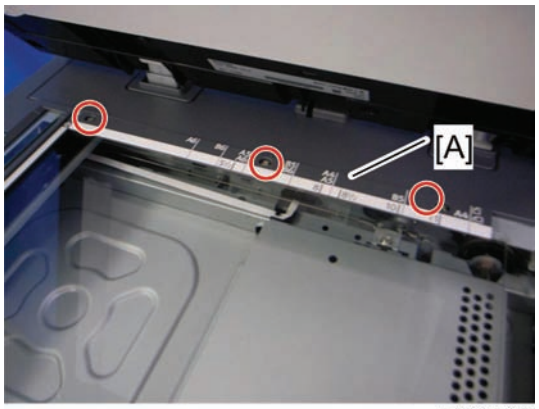
1. Rear lower cover (☛ p.4-18)
2. Rear cover (☛ p.4-19)
3. Right upper cover (☛ p.4-31)
4. Upper front cover (☛ p.4-21 "Operation Panel")
5. Open the ARDF.



6. Scanner front cover [A] (x 1, hooks)

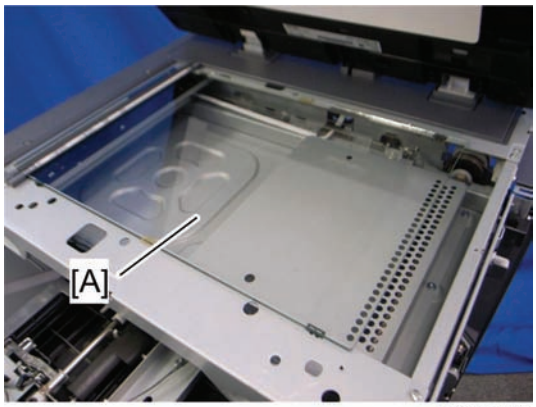


7. Scanner right cover [A] (x 2)



m022r539

8. Rear scale [A]

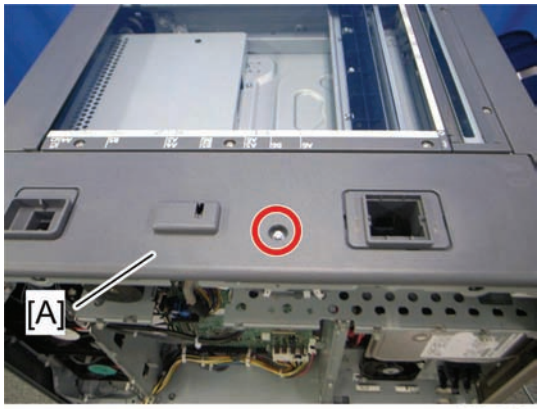


m022r540

9. Exposure glass [A]

4.5.2 ARDF EXPOSURE GLASS

1. ARDF (☛ p.4-158)

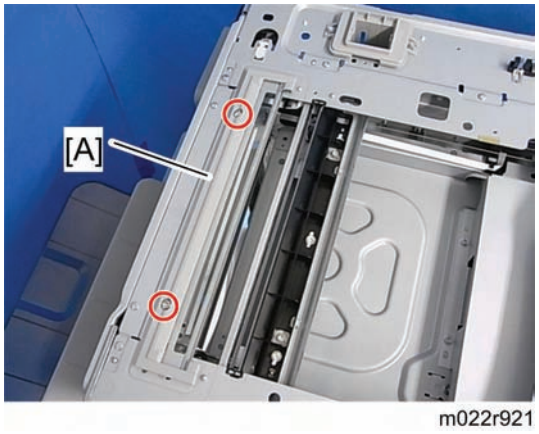


m022r549

2. Scanner rear cover [A] (☞ x 1).
3. Exposure glass (☛ p.4-32)

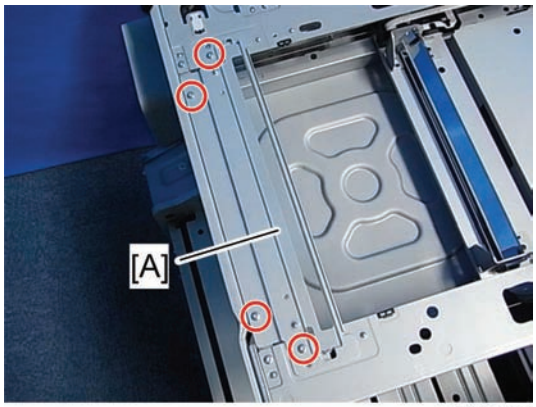
m022r922

4. Scanner left cover (☞ x 2)



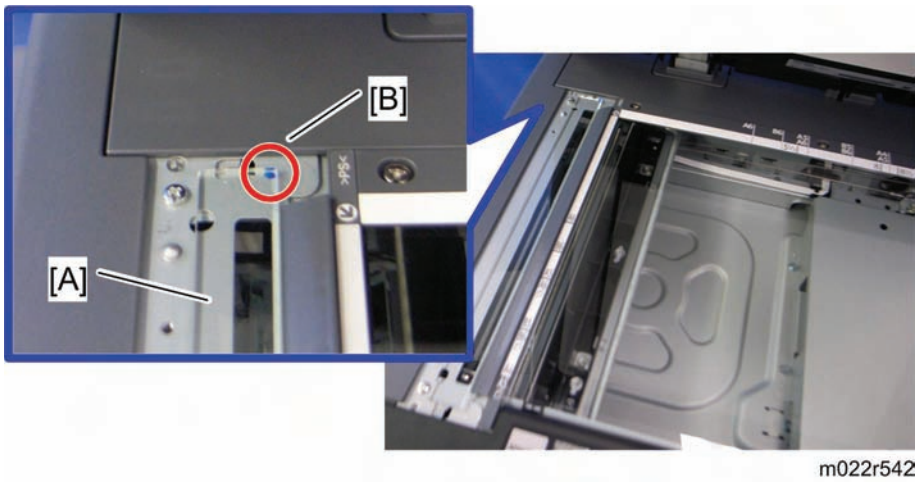
m022r921

5. ARDF exposure glass cover [A] (☞ x 2)



m022r887

6. ARDF exposure glass [A] with bracket (x 4).



m022r542

Note

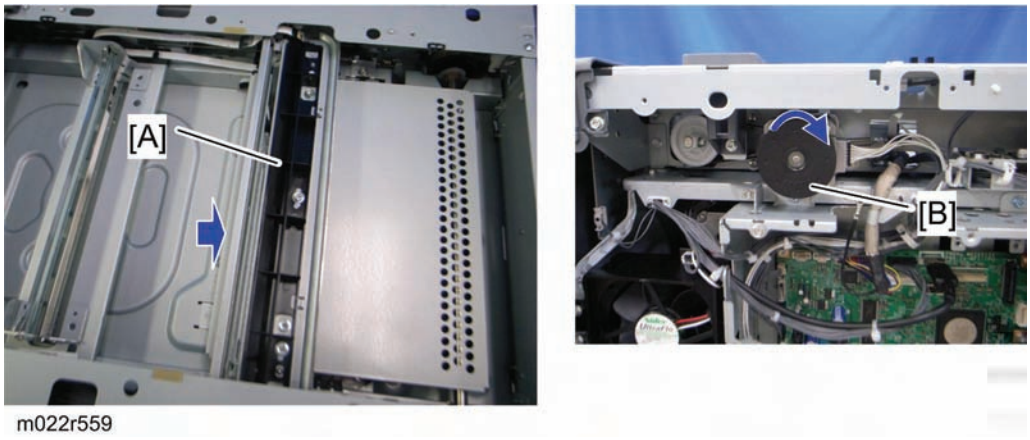
- Position the blue marker [B] at the rear-right corner when you reattach the ARDF exposure glass [A].

4.5.3 LED BOARD

Note

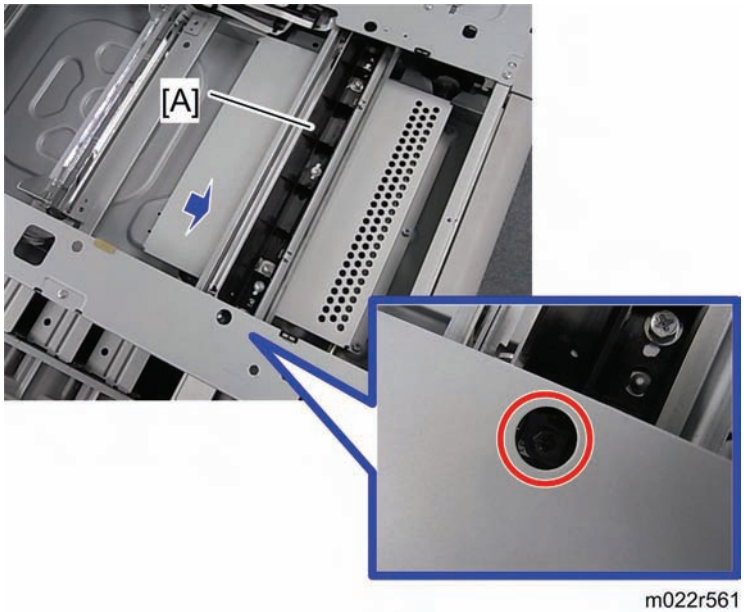
- Do not touch the new LED board directly by hand. Grease spots will cause poor scanning quality.

1. ARDF (☛ p.4-158)
2. Scanner rear cover (☛ p.4-34 "ARDF Exposure Glass")
3. Exposure glass (☛ p.4-32)



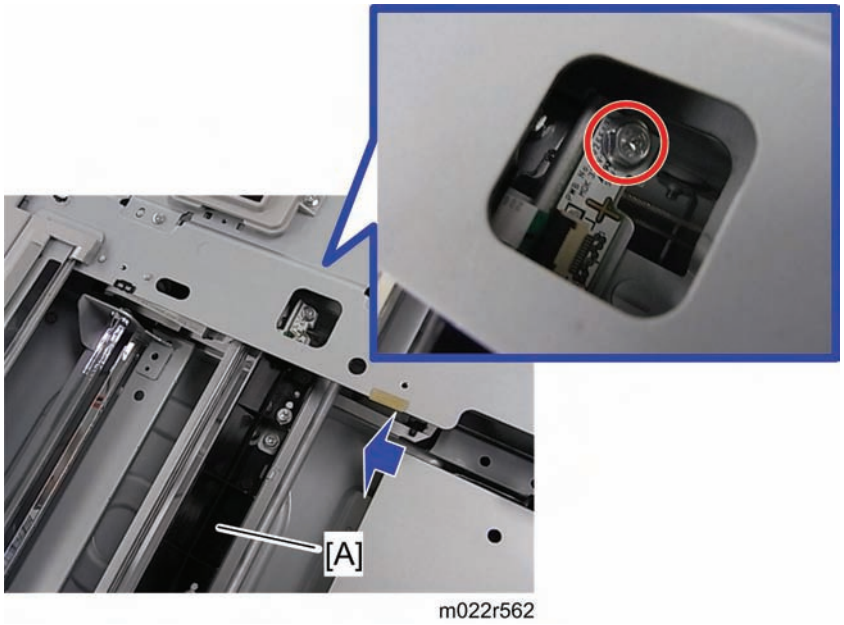
m022r559

4. Move the 1st scanner carriage [A] to the right side by rotating the scanner motor [B] clockwise.



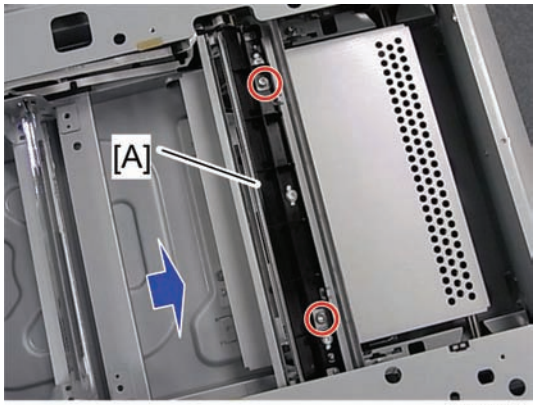
m022r561

5. Move the 1st scanner carriage [A] to the right side by rotating the scanner motor clockwise, and then remove the screw at the front side.



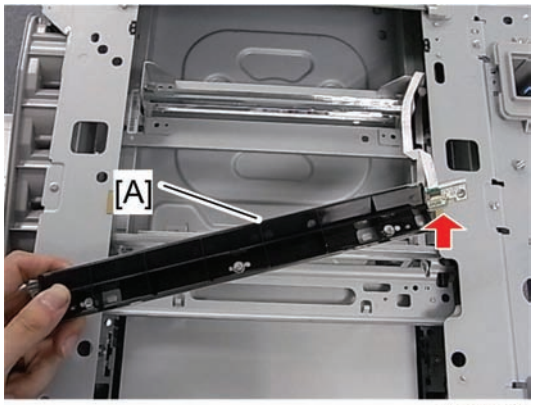
m022r562

6. Move the 1st scanner carriage [A] to the left side by rotating the scanner motor counterclockwise, and then remove the screw at the rear side.



m022r563

7. Move the 1st scanner carriage [A] to the right side by rotating the scanner motor clockwise.

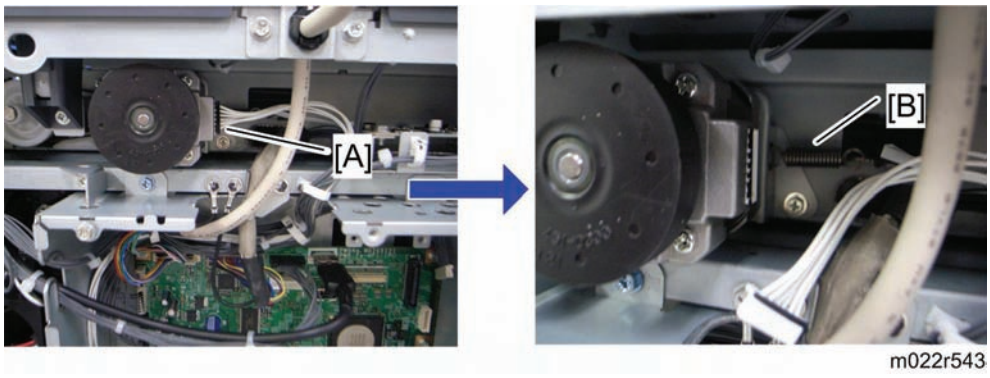


m022r833

8. LED board [A] (x 1)

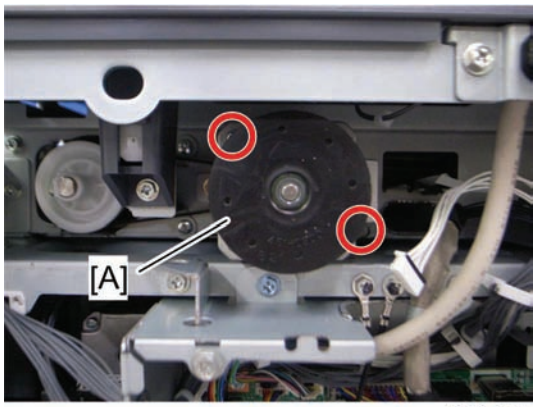
4.5.4 SCANNER MOTOR

1. Rear lower cover (☛ p.4-18)
2. Rear cover (☛ p.4-19)



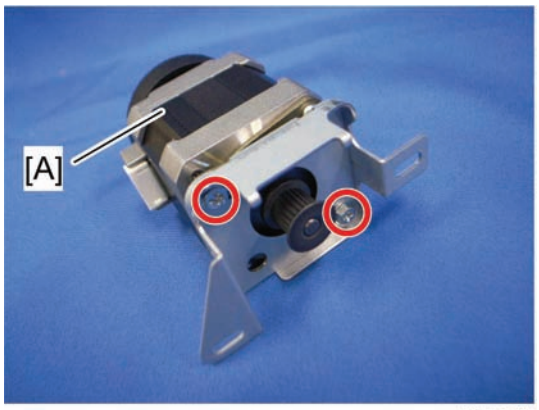
m022r543

3. Disconnect the harness [A] and remove the spring [B].



m022r544

4. Scanner motor assembly [A] (🔩 x 2, timing belt x 1)



m022r545

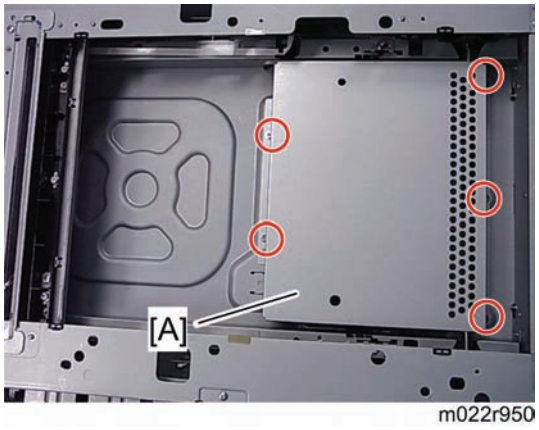
5. Scanner motor [A] (🔩 x 2)

Note

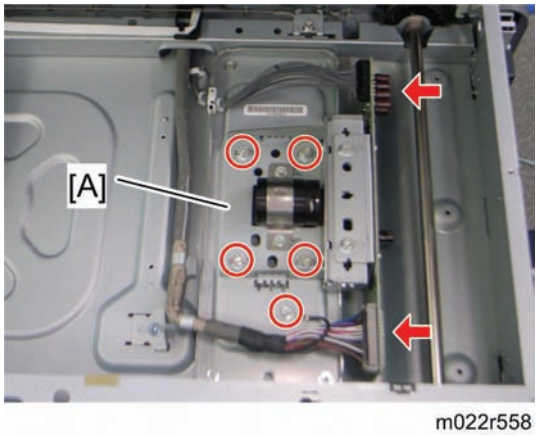
- Do the scanner image adjustment after replacing the scanner motor (see "Image Adjustment")

4.5.5 SENSOR BOARD UNIT (SBU)

1. Exposure glass (☛ p.4-32)



2. Bracket [A] (x 5)



3. Sensor board unit [A] (x 4, ground screw x 1, x 2)

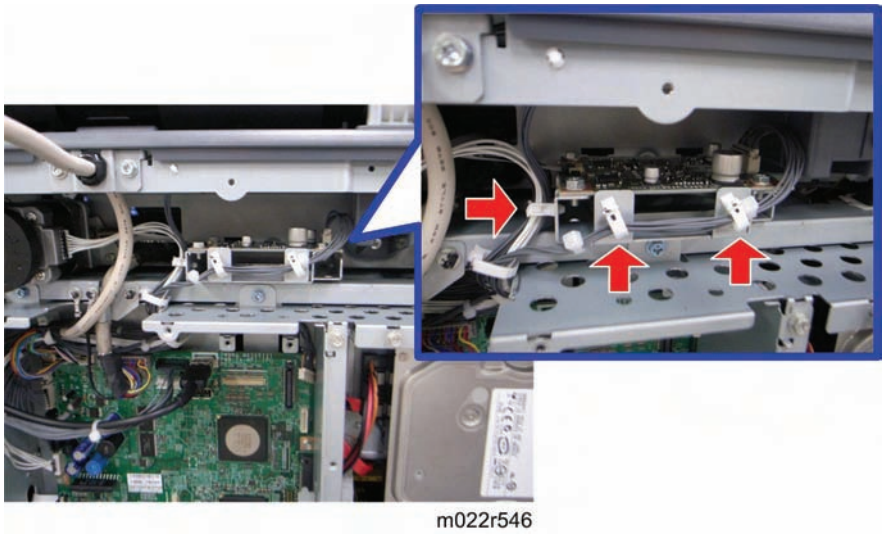
When reassembling

Adjust the following SP modes after you replace the sensor board unit:

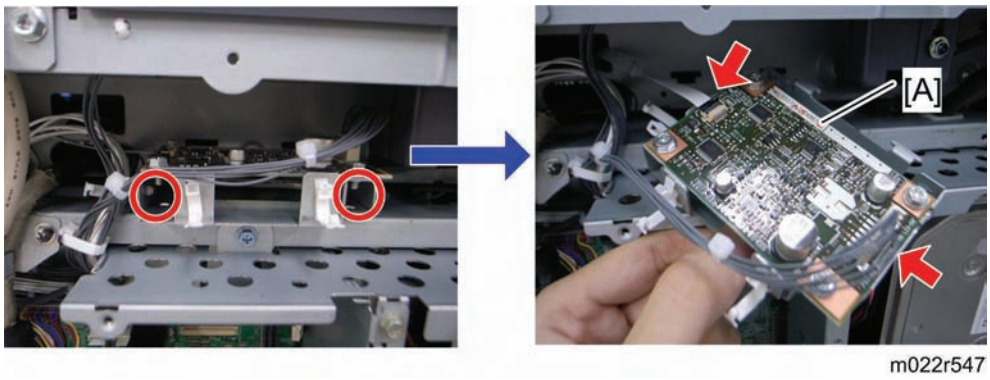
- SP4–008 (Sub Scan Mag): See "Image Adjustment: Scanning"(☛ p.4-3 "Image Adjustment").
- SP4–010 (Sub Mag Reg.): See "Image Adjustment: Scanning"(☛ p.4-3 "Image Adjustment").
- SP4–011 (Main Scan Reg): See "Image Adjustment: Scanning"(☛ p.4-3 "Image Adjustment").
- SP4–688 (DF: Density Adjustment): Use this to adjust the density level if the ID of outputs made in the DF and Platen mode is different.

4.5.6 LED-DB

1. Rear lower cover (☛ p.4-18)
2. Rear cover (☛ p.4-19)

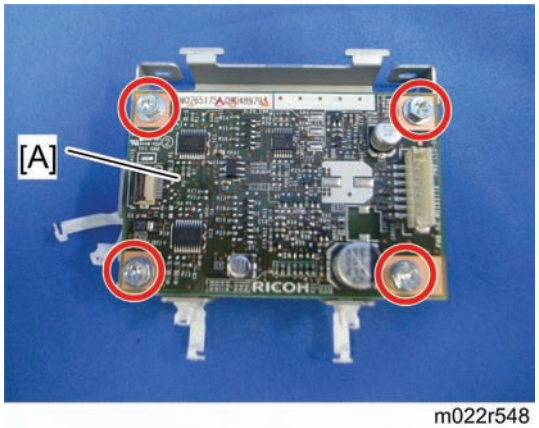

m022r546

3. Release the three clamps.



m022r547

4. LED-DB assembly [A] (x 2, x 2)

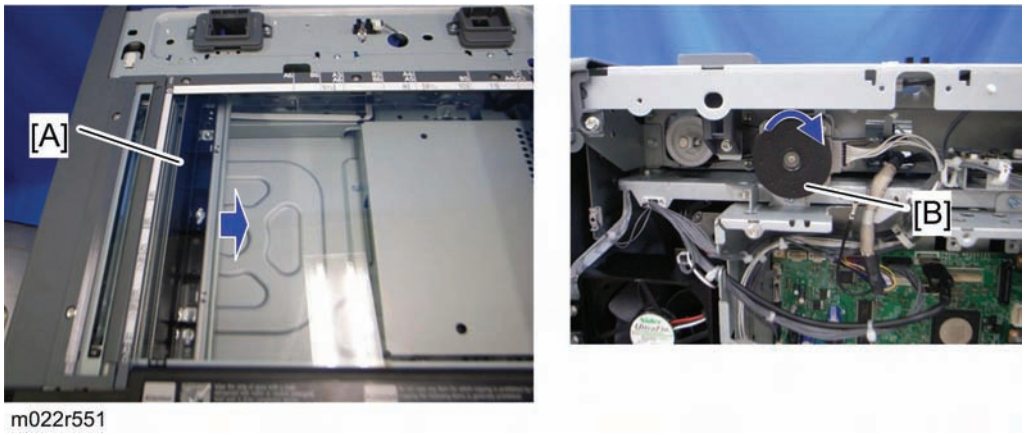


m022r548

5. LED-DB [A] (x 4)

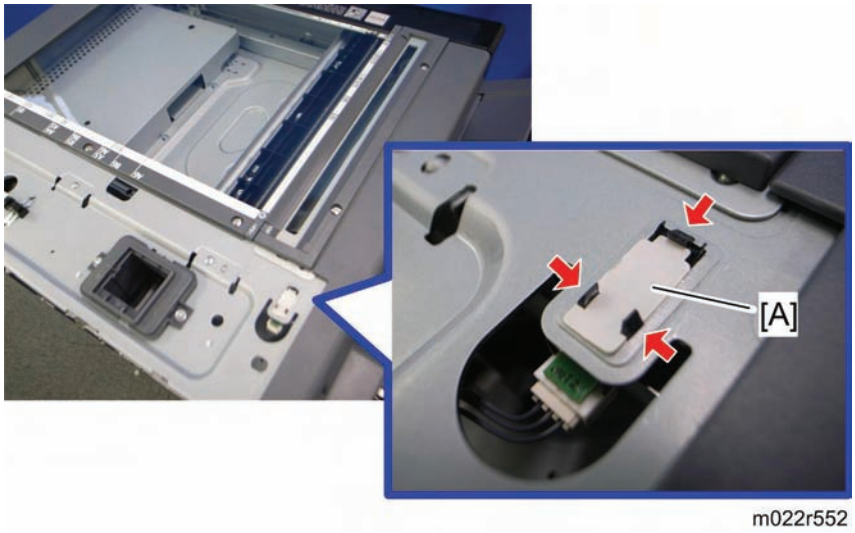
4.5.7 SCANNER HP SENSOR

1. ARDF (☛ p.4-158)
2. Scanner rear cover (☛ p.4-34 "ARDF Exposure Glass")



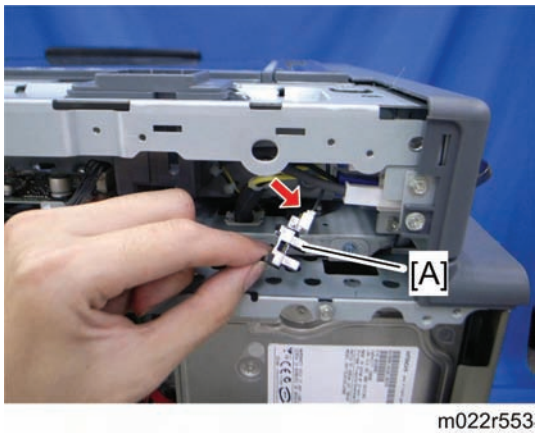
m022r551

3. Move the 1st scanner carriage [A] to the right side by rotating the scanner motor [B] clockwise.



m022r552

4. Remove the mylar [A].
5. Release the three hooks.

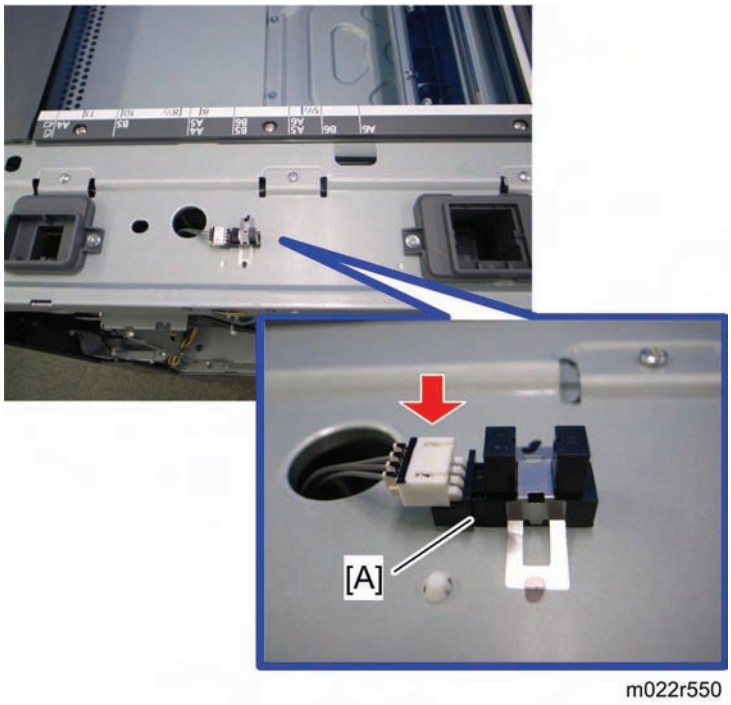


m022r553

6. Scanner HP sensor [A] (☛ x 1).

4.5.8 COVER SENSOR

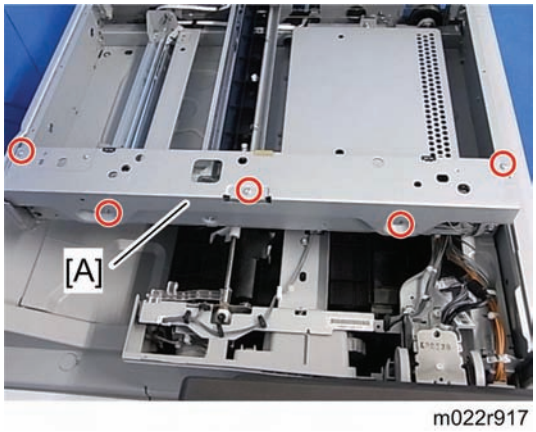
1. ARDF (☛ p.4-158)
2. Scanner rear cover (☛ p.4-34 "ARDF Exposure Glass")



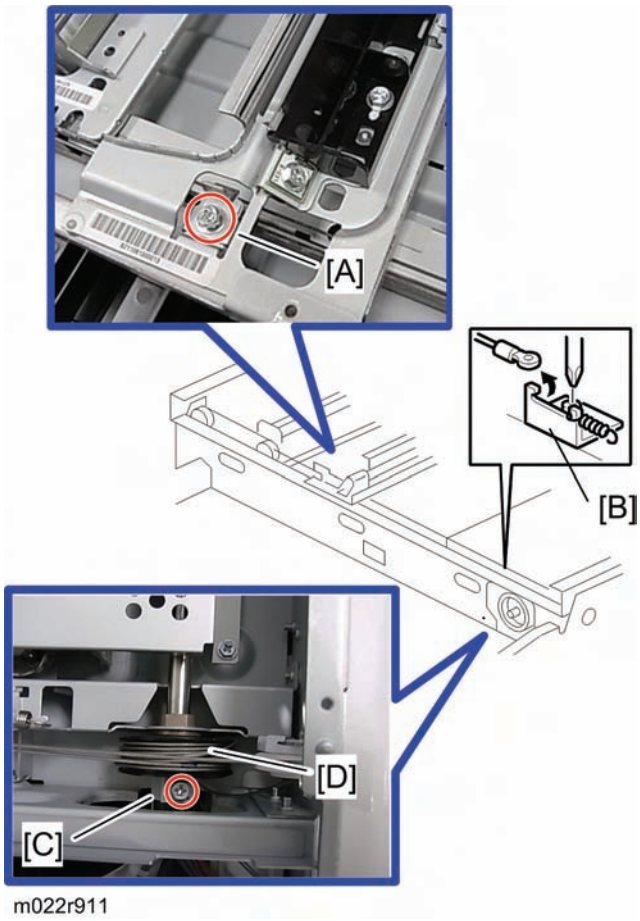
3. Cover sensor [A] (☞ x 1, hooks)

4.5.9 FRONT SCANNER WIRE

1. ARDF (☛ p.4-158)
2. Scanner front cover (☛ p.4-32 "Exposure Glass")
3. Scanner right cover (☛ p.4-32 "Exposure Glass")
4. Scanner left cover (☛ p.4-34 "ARDF Exposure Glass")

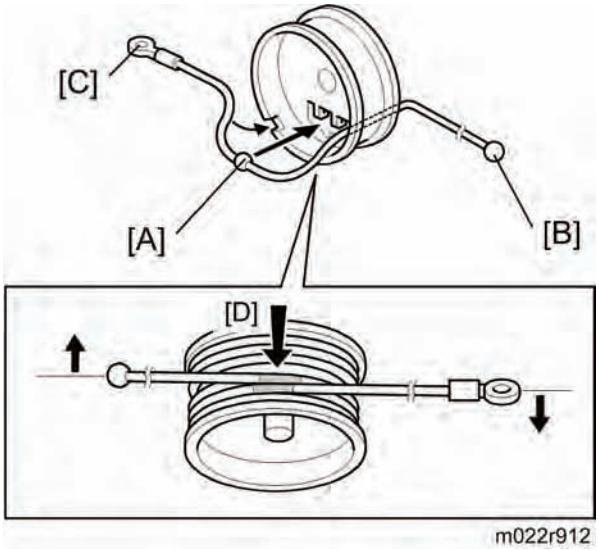


5. Scanner front frame [A] (☞ x 5)



6. Front scanner wire holder [A] (x 1)
7. Front scanner wire bracket [B] (x 1)
8. Front scanner wire, white clip [C] and scanner drive pulley [D] (x 1)

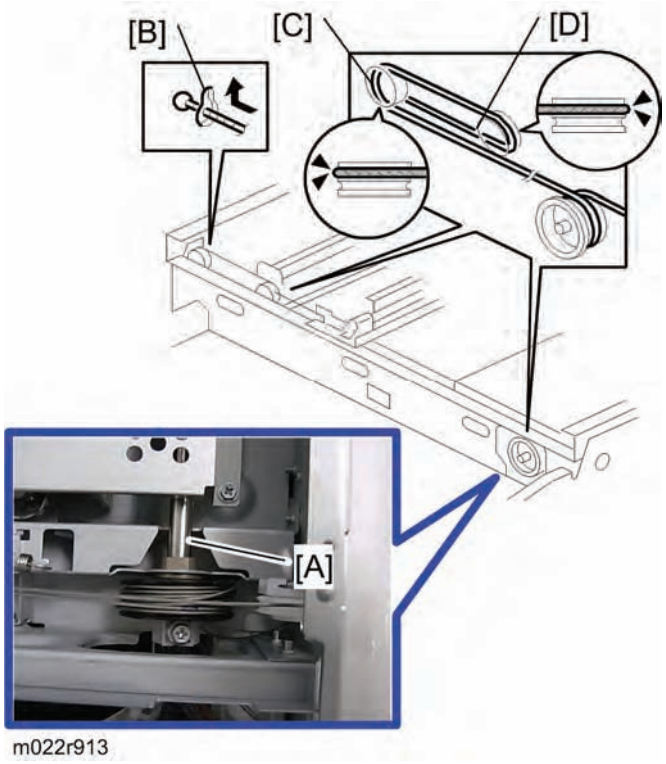
Reinstalling the Front Scanner Wire



1. Position the center ball [A] in the middle of the forked holder.
2. Pass the right end (with the ball) [B] through the square hole. Pass the left end (with the ring) [C] through the notch.
3. Wind the right end counterclockwise (shown from the machine's front). Wind the left end clockwise.

Note

- The two blue marks [D] come together when you have done this. Stick the wire to the pulley with tape. This lets you easily handle the assembly at the time of installation.

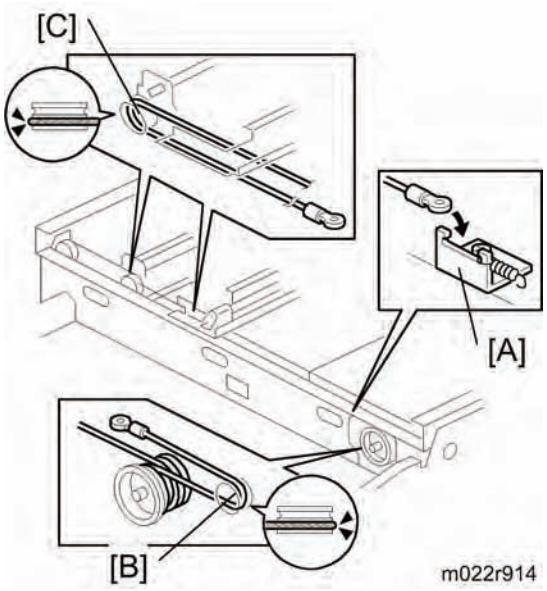


4. Install the drive pulley on the shaft [A].

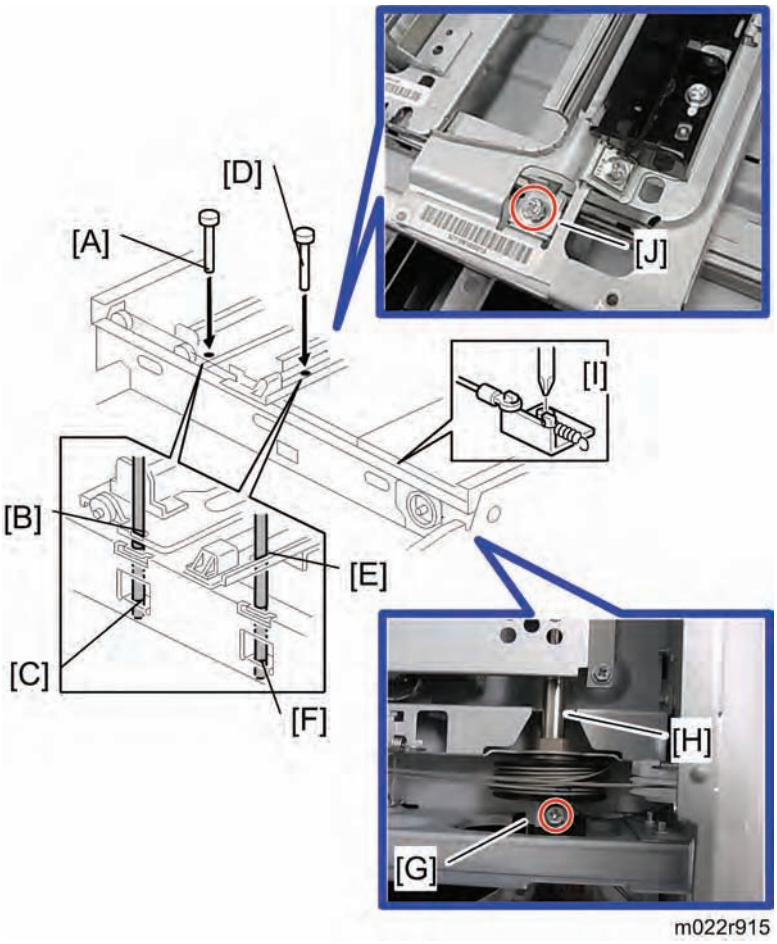
Note

- Do not attach the pulley to the shaft with the screw at this time.

5. Insert the left end into the slit [B]. The end should go via the rear track of the left pulley [C] and the rear track of the movable pulley [D].



6. Hook the right end onto the front scanner wire bracket [A]. The end should go via the front track of the right pulley [B] and the front track of the movable pulley [C].



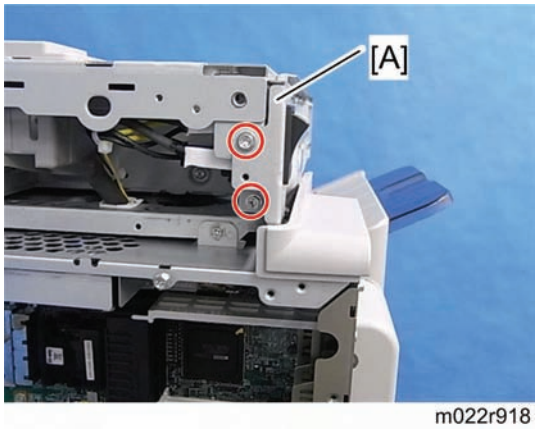
7. Remove the tape from the drive pulley.
8. Insert a scanner-positioning pin [A] through the 2 nd carriage hole [B] and the left holes [C] in the front rail. Insert another scanner positioning pin [D] through the 1 st carriage hole [E] and the right holes in the front rail [F].
9. Insert two more scanner positioning pins through the holes in the rear rail.
10. Install the white clip [G] and drive pulley to the shaft [H] (x 1).
11. Screw the scanner wire bracket to the front rail [I].
12. Screw the scanner wire holder [J].
13. Pull out the positioning pins.

Note

- Make sure the 1st and 2nd carriages move smoothly after you remove the positioning pins. Do steps 8 through 13 again if they do not.

4.5.10 REAR SCANNER WIRE

1. ARDF (☛ p.4-158)
2. Scanner rear cover (☛ p.4-34 "ARDF Exposure Glass")
3. Scanner front cover (☛ p.4-32 "Exposure Glass")
4. Scanner right cover (☛ p.4-32 "Exposure Glass")
5. Scanner left cover (☛ p.4-34 "ARDF Exposure Glass")

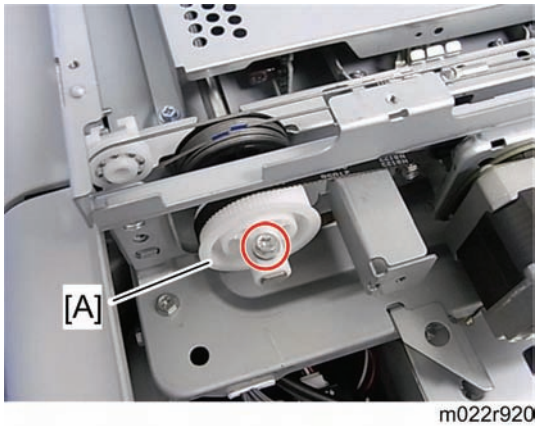


m022r918

6. Main power switch bracket [A] (x 2)

m022r919

7. Scanner rear frame [A] (x 5)

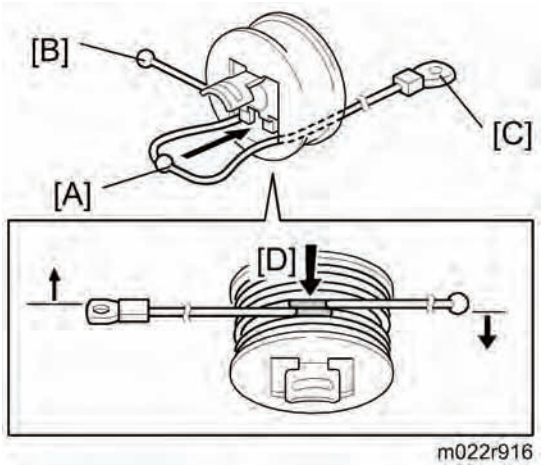


m022r920

8. White pulley [A] (x 1)
9. Follow steps 6 through 8 in the "Front Scanner Wire" Section. You can remove the rear

scanner wire with the same manner for replacing the front scanner wire.

Reinstalling the Rear Scanner Wire



1. Position the center ball [A] in the middle of the forked holder.
2. Pass the left end (with the ball) [B] through the drive pulley notch. Pass the right end (with the ring) [C] through the drive pulley hole.
3. Wind the left end [B] clockwise (shown from the machine's front). Wind the right end [C] counterclockwise.

   Note

   - The two blue marks [D] come together when you do this. Attach the wire to the pulley with tape. This lets you easily handle the assembly at the time of installation.
4. Install the drive pulley on the shaft.

   Note

   - Do not attach the pulley on the shaft with the screw at this time.
5. Install the wire.

   Note

   - The winding of the wire on the three pulleys at the rear of the scanner should be the same as the winding on the three pulleys at the front. This must show as a mirror image.

   Example: At the front of the machine, the side of the drive pulley with the three windings must face the front of the machine. At the rear of the machine, it must face the rear.
6. Do steps 7 through 13 again in the "Front Scanner Wire" Section.

4.6 LASER OPTICS

⚠WARNING

- Turn off the main power switch and unplug the machine before beginning any of the procedures in this section. Laser beams can cause serious eye injury.

4.6.1 CAUTION DECAL LOCATION

Caution decal is attached as shown below.

m022r507

⚠WARNING

- Be sure to turn off the main power switch and disconnect the power plug from the power outlet before beginning any disassembly or adjustment of the laser unit. This machine uses a class IIIb laser beam with a wavelength of 657 - 663 nm and an output of 15 mW. The laser can cause serious eye injury.

4.6.2 LASER UNIT

⚠CAUTION

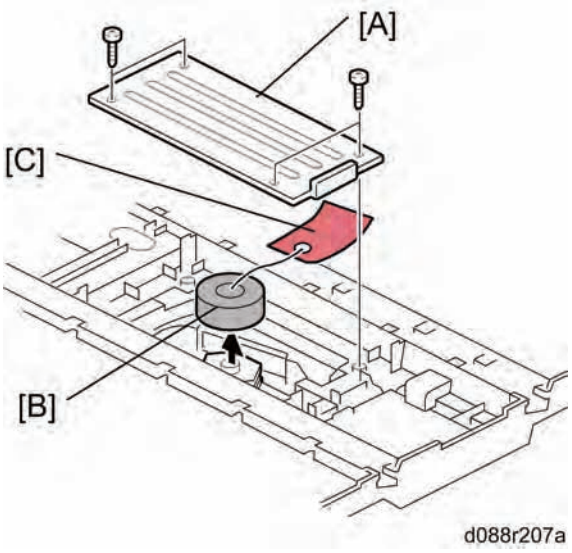
- Before installing a new laser unit, remove the polygon motor holder bracket and the tag from the new unit.

Note

- A new laser optics housing unit has a bracket to protect the LD units. When you install the new unit, do not remove the bracket until near the end of the installation procedure (the correct time is stated in the manual).
- This bracket protects a capacitor on the unit. If the bracket is removed too early, you could break the capacitor on the corner of the main frame when you install the new

unit.

Preparing the new laser unit



1. Polygon motor cover [A] of the laser unit (x 4)
2. Sponge padding [B]
3. Tag [C]
4. Reinstall the polygon motor cover [A].

Before removing the old laser unit

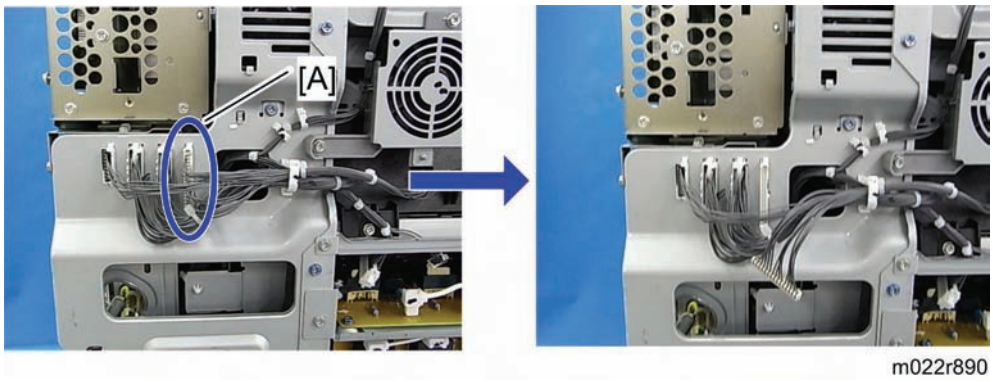
Do the following settings before removing the laser unit. These are adjustments for skew adjustment motors in the laser unit, main scan start position, and laser diode power.

1. Plug in and turn on the main power switch of the machine.
2. Enter the SP mode.
3. Execute SP2-220-001 to clear the mirror positioning motor setting for Cyan.
4. Execute SP2-220-002 to clear the mirror positioning motor setting for Magenta.
5. Execute SP2-220-003 to clear the mirror positioning motor setting for Yellow.
6. Execute SP2-180-004 for clearing main scan start position adjustment setting.
7. Execute SP2-153-001 for clearing LD power.
8. Exit the SP mode.
9. Turn off the main power switch and disconnect the power cord of the copier.

Recovery procedure for no replacement preparation of laser unit

If you did not do the procedure in "Before removing the old laser unit" before removing the laser unit, you must do the following.

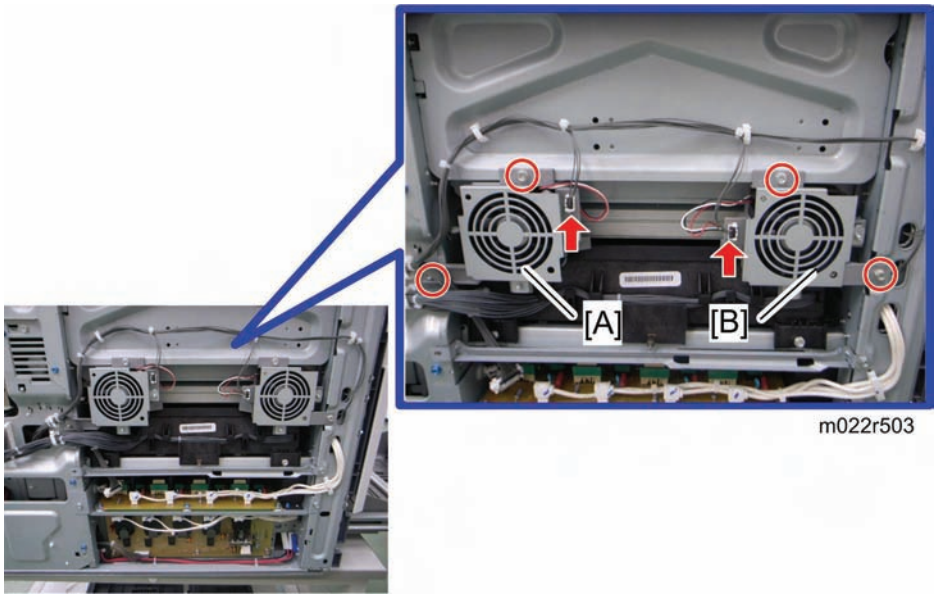
1. Turn off the main power switch and disconnect the power cord of the copier.
2. Left cover (☛ p.4-18)



3. Disconnect the harness [A] of the skew correction motor.
4. Do steps 1 to 9 of "Before removing the old laser unit".
5. Connect the harness [A] and reassemble the machine.
6. Plug in and turn on the main power switch.

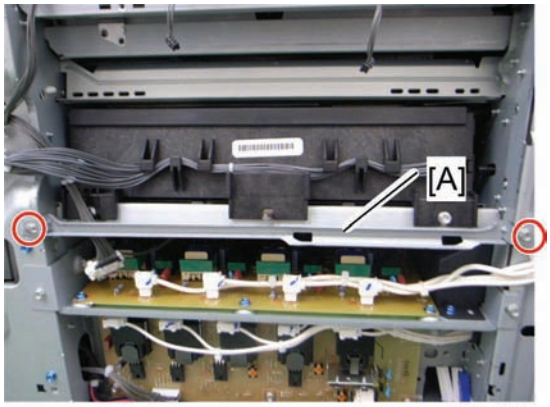
Removing the laser unit

1. Left cover (☛ p.4-18)



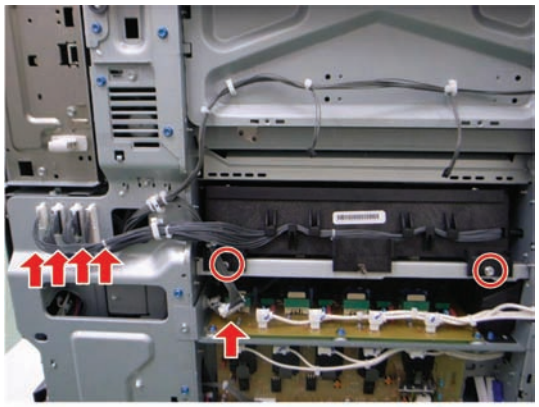
m022r503

2. Ventilation fan base: rear [A] and ventilation fan base: front [B] (x 2, x 1 each)

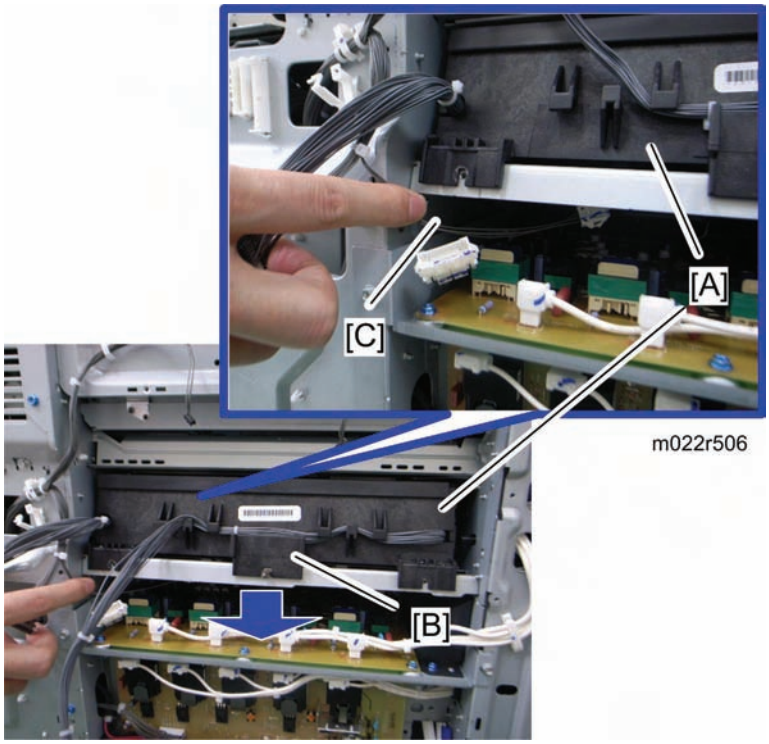


m022r504

3. Left side stay [A] (x 2)


m022r505

4. Disconnect the five harnesses and remove the two screws.



5. Pull out the laser unit [A] while holding the plate [B].

Note

- Hold the harness [C] of the laser unit to one side when pulling out the laser unit.

After installing a new laser unit

Do the following adjustment after installing the new laser unit.

1. Plug in and turn on the main power switch.
2. Check that the settings of SP2-119-001, -002 and -003 are "0". If these settings are not "0", execute "Recovery procedure for no replacement preparation of laser unit" described above.

Important

- If this step is not correctly done, an image problem may occur on printouts.

3. Input the SP settings on the sheet provided with a new laser unit.
   - SP2-101-001: Color Registration Adjustment for Black
   - SP2-102-013, 015, 017, 019: Magnification Adjustment Main Beam Pitch Dot for each color
   - SP2-102-014, 016, 018, 020: Magnification Adjustment Main Beam Pitch Subdot for each color
   - SP2-102-001: Main Magnification for Black and Standard line speed
   - SP2-102-002: Main Magnification for Black and Medium line speed
   - SP2-102-003: Main Magnification for Black and Low line speed
   - SP2-104-001 to -008: :LD Initial Power Adjustment for each color

   Note

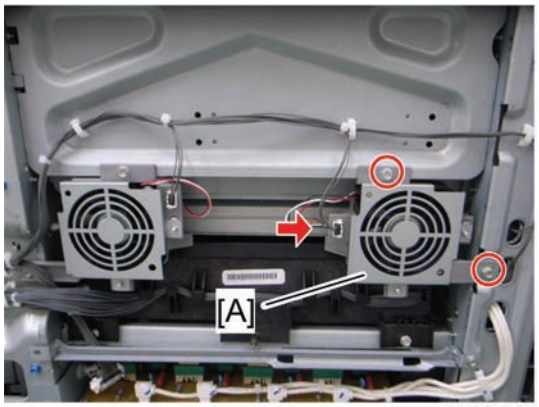
   - The printed values [A] are different for each laser unit.
   - If the SP settings shown above are not input correctly, it may cause color registration errors.
4. Print the test pattern (14: 1-dot trimming pattern in the SP2-109-003).
5. Check that the left and right trim margin is within 4 ± 1 mm. If not, change the standard

value for the main scan magnification adjustment.

6. Select "0" with SP2-109-003 after printing the "1-dot trimming pattern.
7. Do the line position adjustment.
   - First do SP2-111-003.
   - Then do SP2-111-001.
   - To check if SP 2-111-001 was successful, watch the screen during the process. A message is displayed at the end. Also, you can check the result with SP 2-194-010 to -012.
8. Exit the SP mode.

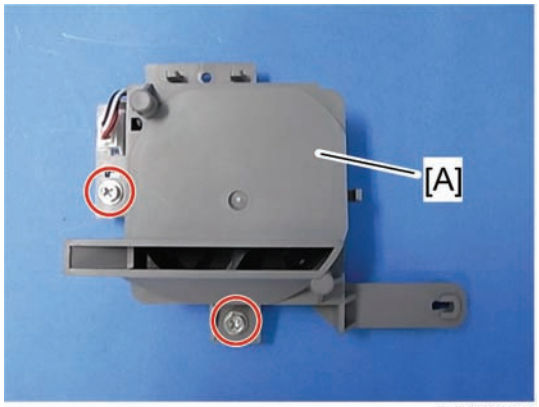
4.6.3 VENTILATION FAN

1. Left cover (☛ p.4-18)



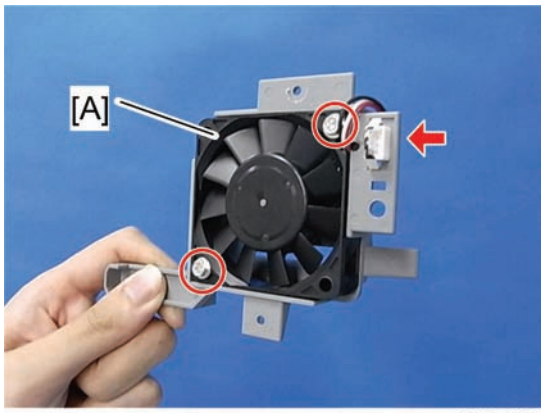
m022r845

2. Ventilation fan base [A] (x 2, x 1)



m022r844

3. Ventilation fan cover [A] (x 2)



m022r846

4. Ventilation fan [A] (x 2)

When installing the ventilation fan

Make sure that the ventilation fan is installed with its decal facing the right side.

4.7 IMAGE CREATION

4.7.1 PCDU (PHOTO CONDUCTOR AND DEVELOPMENT UNIT)

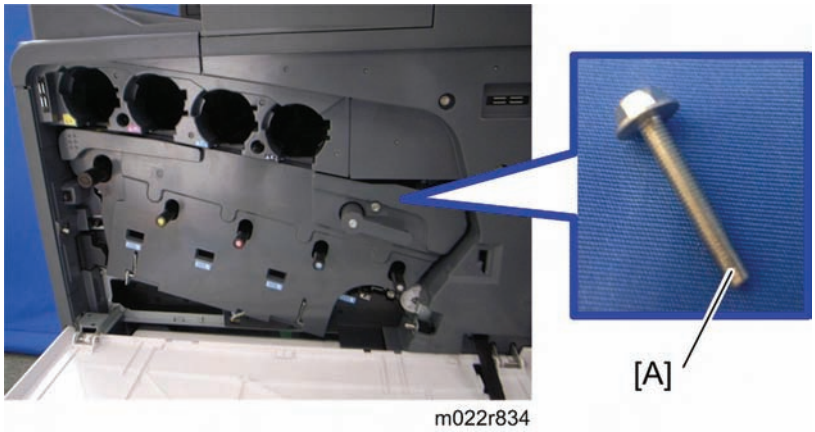
Important

- After developer initialization, the Vtcnt in the M022/M024 PCDU is different from in the M026/M028. So, do not use a PCDU from a M026/M028 in a M022/M024. Also, do not use a PCDU from a M022/M024 in a M026/M028.

Note

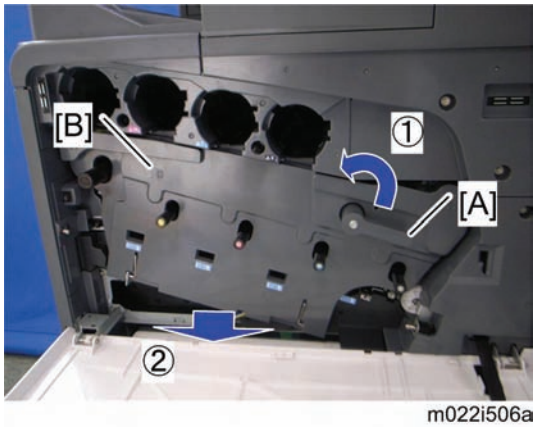
- Do not touch the OPC drum. Do not let metal objects touch the development sleeve.

1. Open the front door.
2. Toner collection bottle (☛ p.4-16)



m022r834

3. Remove the long screw [A].

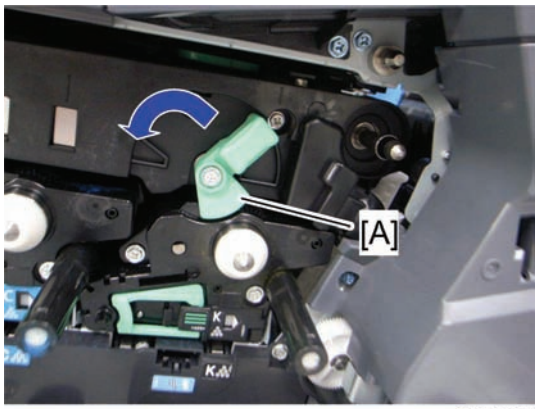


m022i506a

4. Turn the lock lever [A] counterclockwise, and then open the drum securing plate [B].

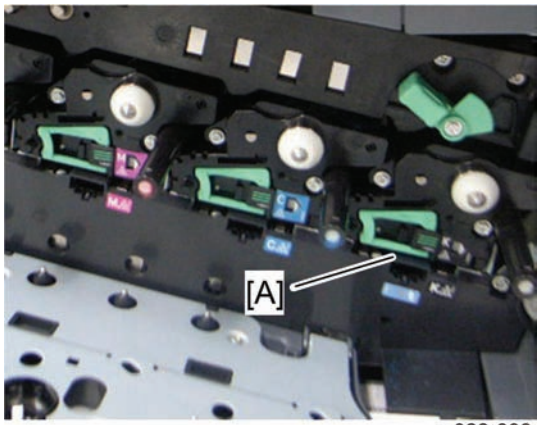
Note

- Make sure that the lock lever [A] is at home position when reassembling.



m022r565

5. Turn the ITB lock lever [A] counterclockwise (this step is only needed if you remove the PCDU: K).



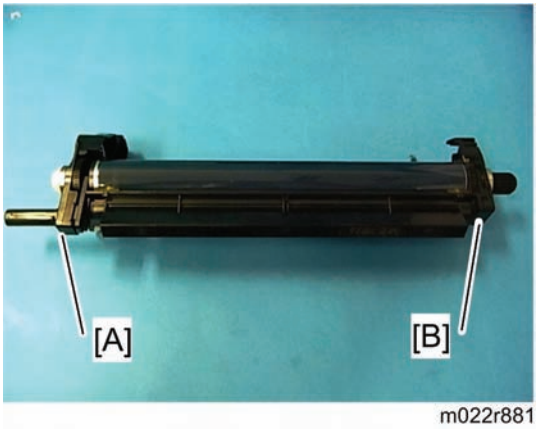
m022r839

6. PCDU [A]

When installing a new PCDU

Remove the cover on the toner inlet and pull out the tape from the new development unit before installing a new PCDU in the machine.

4.7.2 PCU AND DEVELOPMENT UNIT



The new PCU has front cover [A] and rear cover [B]. If you want to attach the old development unit to a new PCU, you must remove the rear cover from the new PCU first.

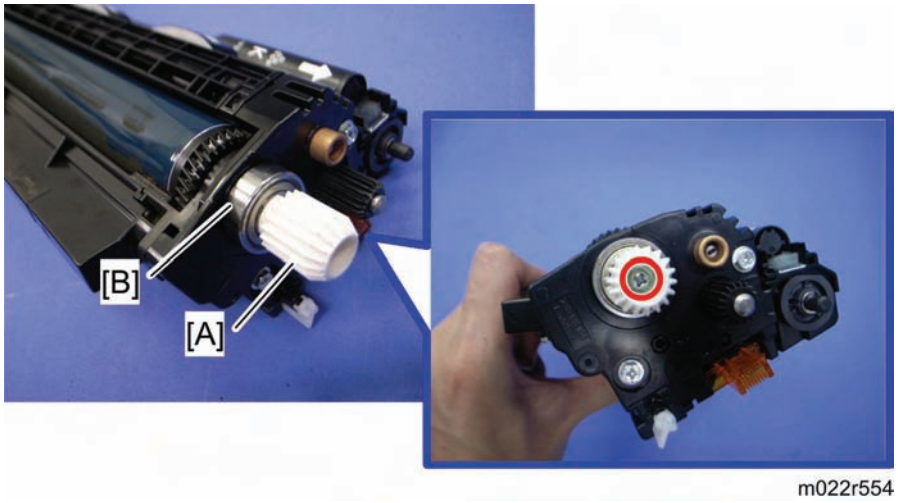
1. If you install a new PCU only, set SP 3902-xxx to "1".
   - Black: 3902-009
   - Cyan: 3902-010
   - Magenta: 3902-011
   - Yellow: 3902-012

   Note

   - If you do this, then the machine will reset the PM counter for the PCU automatically, after you turn the power on again.
2. If you install a new development unit only, set SP 3902-xxx to "1".
   - Black: 3902-001
   - Cyan: 3902-002
   - Magenta: 3902-003
   - Yellow: 3902-004

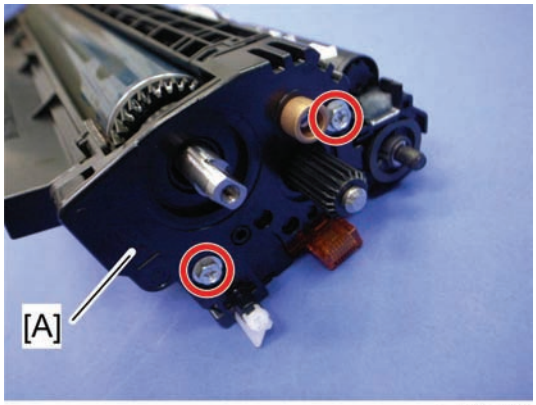
   Note

   - If you do this, then the machine will reset the PM counter for the development
   - unit automatically, after you turn the power on again.
3. Turn the machine power off.
4. PCDU (☛ p.4-57))



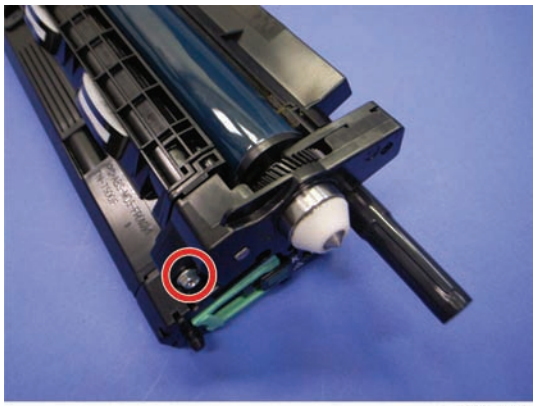
m022r554

5. Remove the gear [A] and the bearing [B].

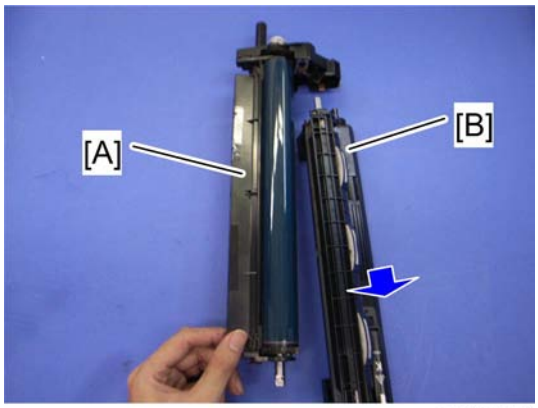


m022r555

6. Rear cover [A] (x 2)


m022r556

7. Remove the screw at the front side.



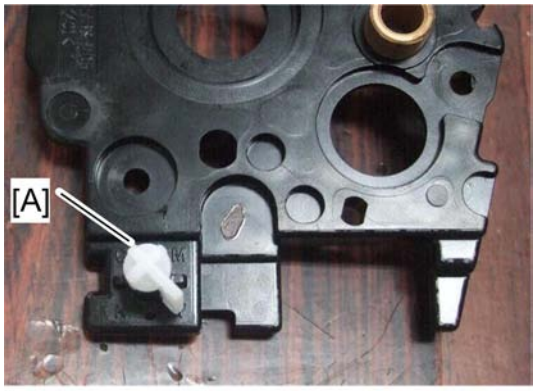
m022r557

8. PCU [A] and development unit [B]

Note

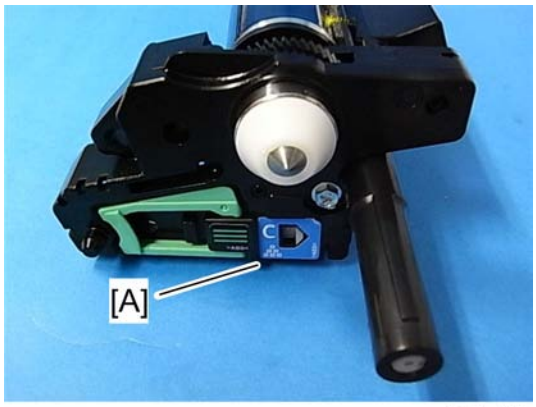
- When the development unit is removed from the PCU, clean the entrance mylar [A] with a vacuum cleaner.

When Reinstalling the PCDU



m022r891

1. When you install a new C, M, or Y PCU, make sure that the white switch [A] is at the correct position for the color. On the K PCU, the switch is already at the K position.



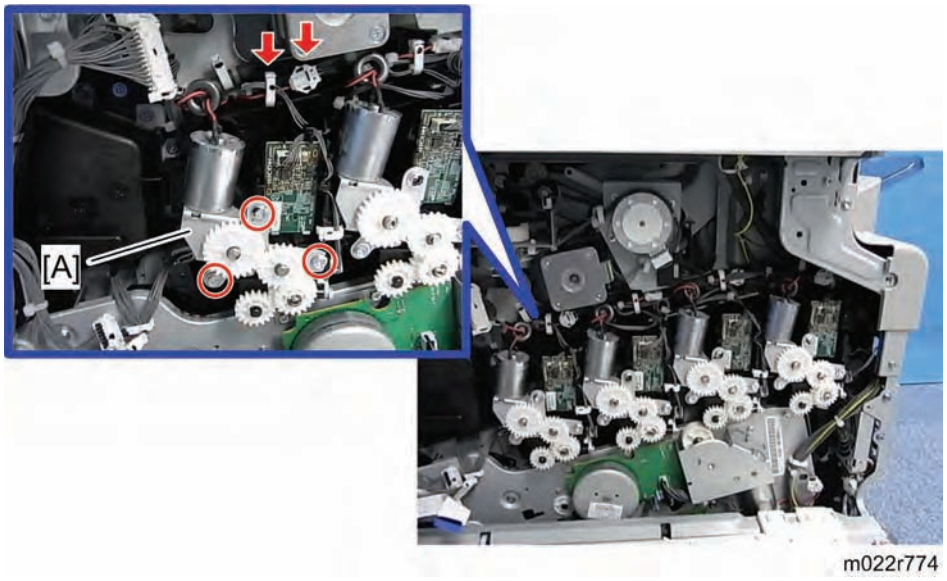
m022r892

2. When you install a new C, M, or Y PCU, attach the decal [A] to the front side of the PCU.
3. Reassemble the machine. See Copier Installation (☛ p.2-12) for important notes.
4. If you change the development unit, do the ACC procedure.

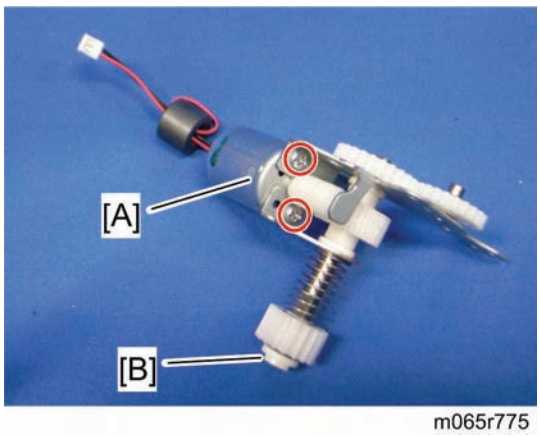
5. Execute the drum phase adjustment with SP1902-001 twice.
6. Do the forced line position adjustment
   First do SP2-111-3 (Mode c).
   Then do SP2-111-1 (Mode a).
   To check if SP 2-111-1 was successful, watch the screen during the process. A message is displayed at the end.
   Also, you can check the result with SP 2-194-10 to -12.

4.7.3 TONER SUPPLY MOTOR

1. Rear cover (☛ p.4-19)
2. Controller box (☛ p.4-195)



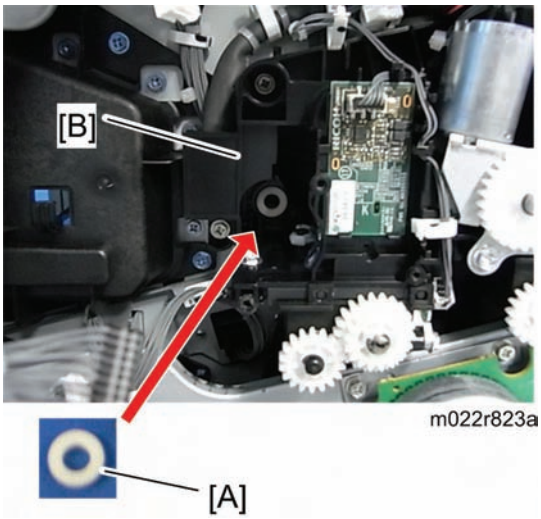
3. Motor bracket [A] (x 3, x1, x1)



4. Toner supply motor [A] (x 2)

Note

- If the bushing (white) [B] is removed with the toner supply motor, install it in the toner hopper frame (as shown below).

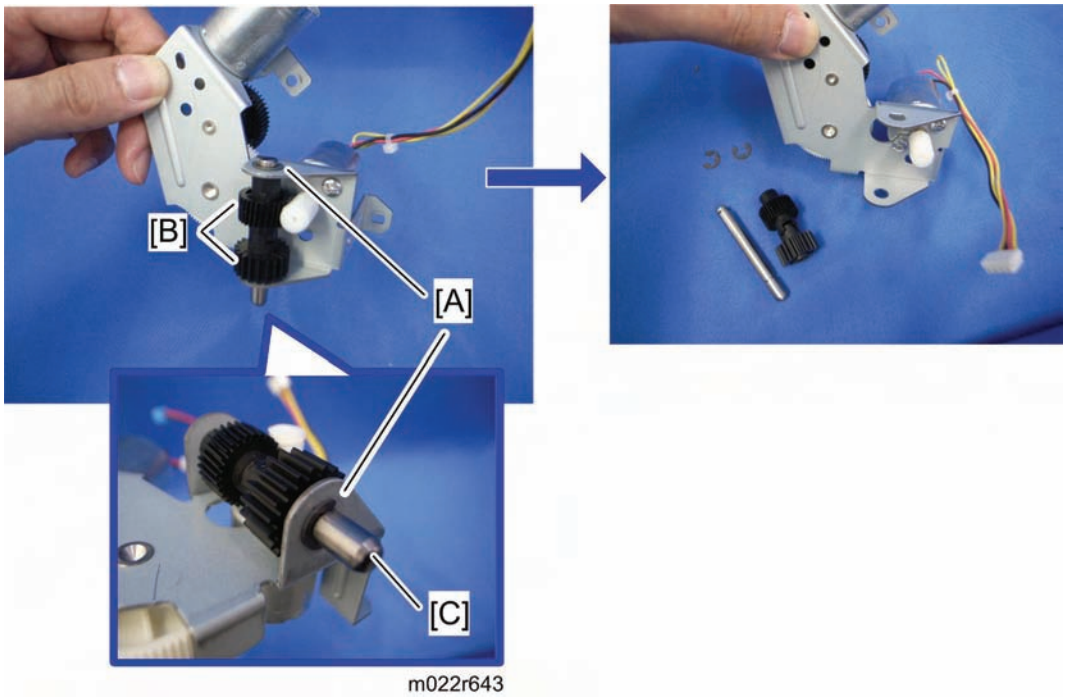


Note

- Make sure that the bushing (white) [A] is installed in the toner hopper frame [B].

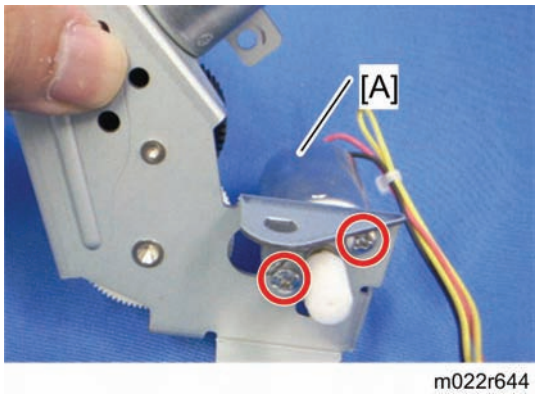
4.7.4 TONER COLLECTION MOTOR

1. Inner right lower cover (☛ p.4-30)
2. Sensor bracket (☛ p.4-85 "PTR Contact Motor")
3. Interlock switch bracket (☛ p.4-85 "PTR Contact Motor")
4. Motor bracket (☛ p.4-85 "PTR Contact Motor")



m022r643

5. Remove the two E-rings [A], the two gears [B], and the shaft [C].



m022r644

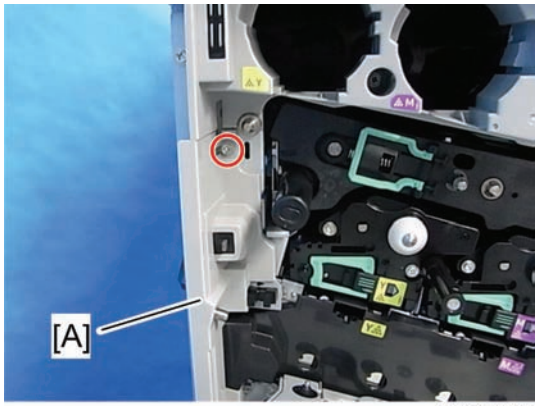
6. Toner collection motor [A] (🔩 x 2)


d037r561

7. Apply a small amount of "Silicone Grease G501" to the gear of the motor as shown above.

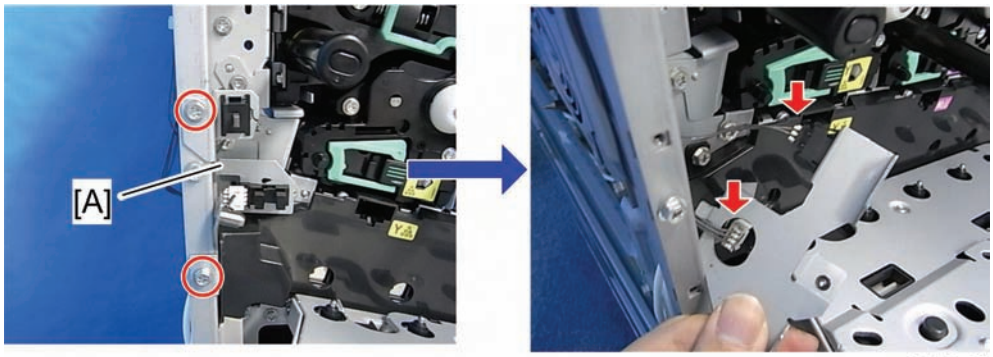
4.7.5 WASTE TONER BOTTLE FULL SENSOR

1. Left cover (☛ p.4-18)
2. Open the drum securing plate (☛ p.4-57 "PCDU (Photo Conductor and Development Unit)").



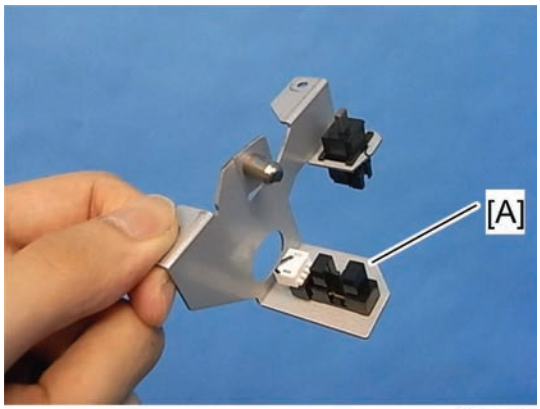
m022r840

3. Inner left front cover [A] (x 1)



m022r841

4. Sensor bracket [A] (x 2, x 2)

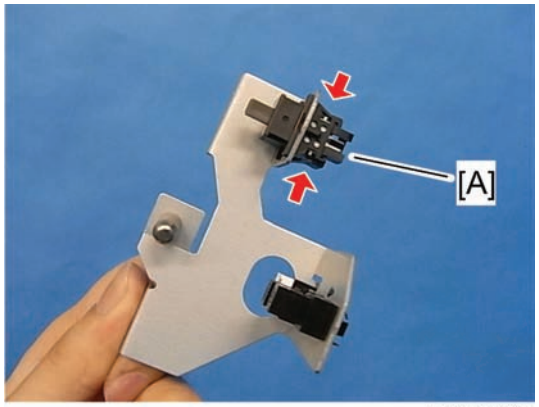


m022r527

5. Waste toner bottle full sensor [A] (hooks)

4.7.6 WASTE TONER BOTTLE SET SENSOR

1. Left cover (☛ p.4-18)
2. Open the drum securing plate (☛ p.4-57 "PCDU (Photo Conductor and Development Unit)").
3. Sensor bracket (☛ p.4-66 "Waste Toner Bottle Full Sensor")

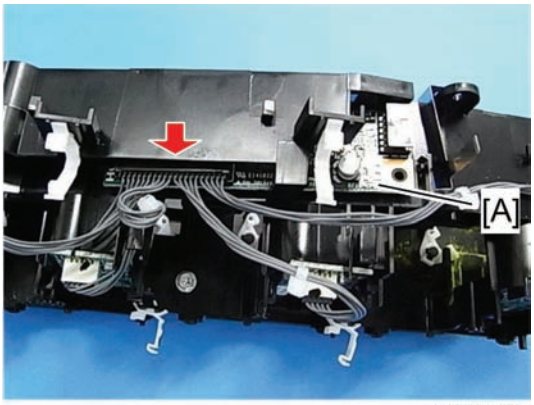


m065r528a

4. Waste toner bottle set sensor [A] (hooks)

4.7.7 RFID CPU BOARD

1. Rear cover (☛ p.4-19)
2. Controller box (☛ p.4-195)
3. Toner hopper unit (☛ p.4-91 "Gear Unit")

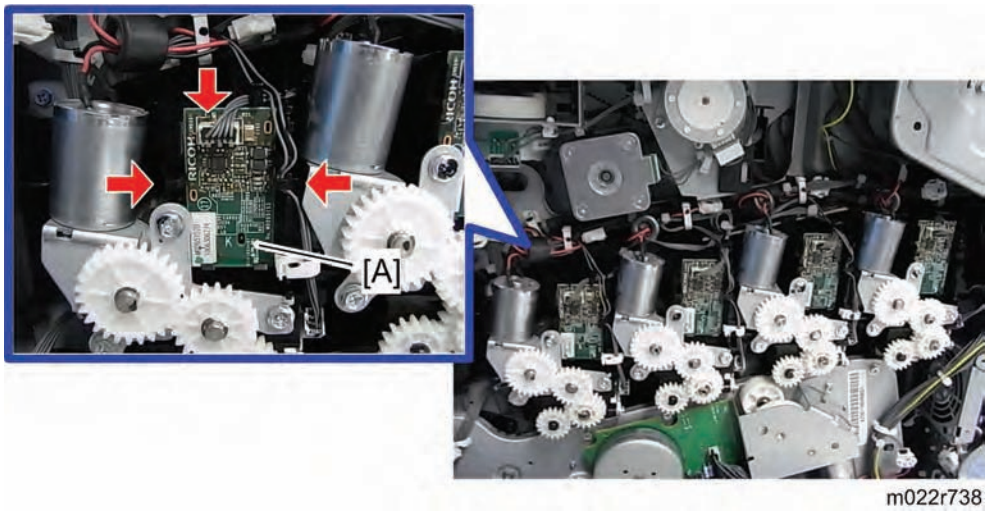


m022r893

4. RFID CPU Board [A] (☛ x 1)

4.7.8 RFID BOARD

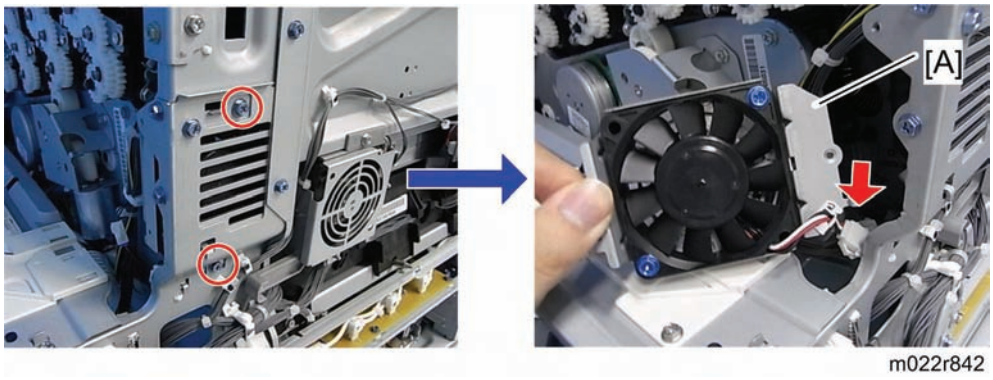
1. Rear cover (☛ p.4-19)
2. Controller box (☛ p.4-195)



3. RFID board [A] (☞ x 1, hooks)

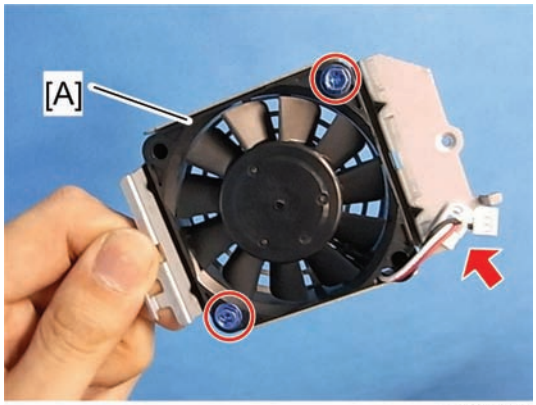
4.7.9 TONER SUPPLY FAN

1. Left cover (☛ p.4-18)
2. Rear cover (☛ p.4-19)
3. Open the controller box (☛ p.4-195 "Controller Box").



m022r842

4. Toner supply fan bracket [A] (x 2, x 1)



m022r843

5. Toner supply fan [A] (x 2, x 1)

When installing the toner supply fan

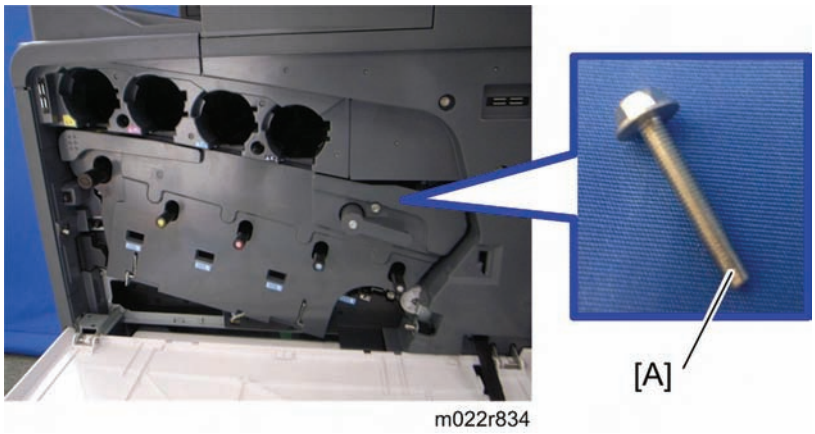
Make sure that the toner supply fan is installed with its decal facing the right side.

4.8 IMAGE TRANSFER

4.8.1 ITB (IMAGE TRANSFER BELT) UNIT

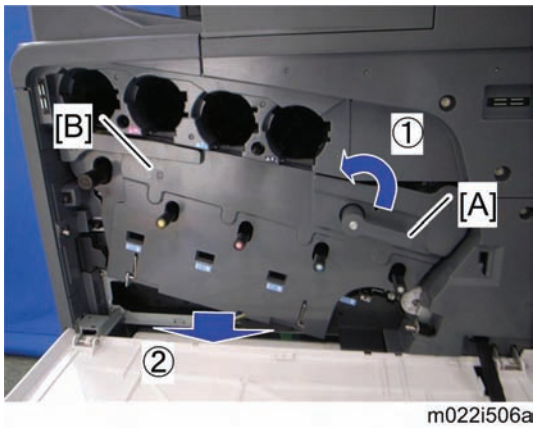
If you replace the ITB unit, then you must reset the PM counter for this unit. To do this, set SP 3902 013 to 1 before you start to work on the machine.

1. Open the front door.
2. Toner collection bottle (p.4-16)



m022r834

3. Remove the long screw [A].

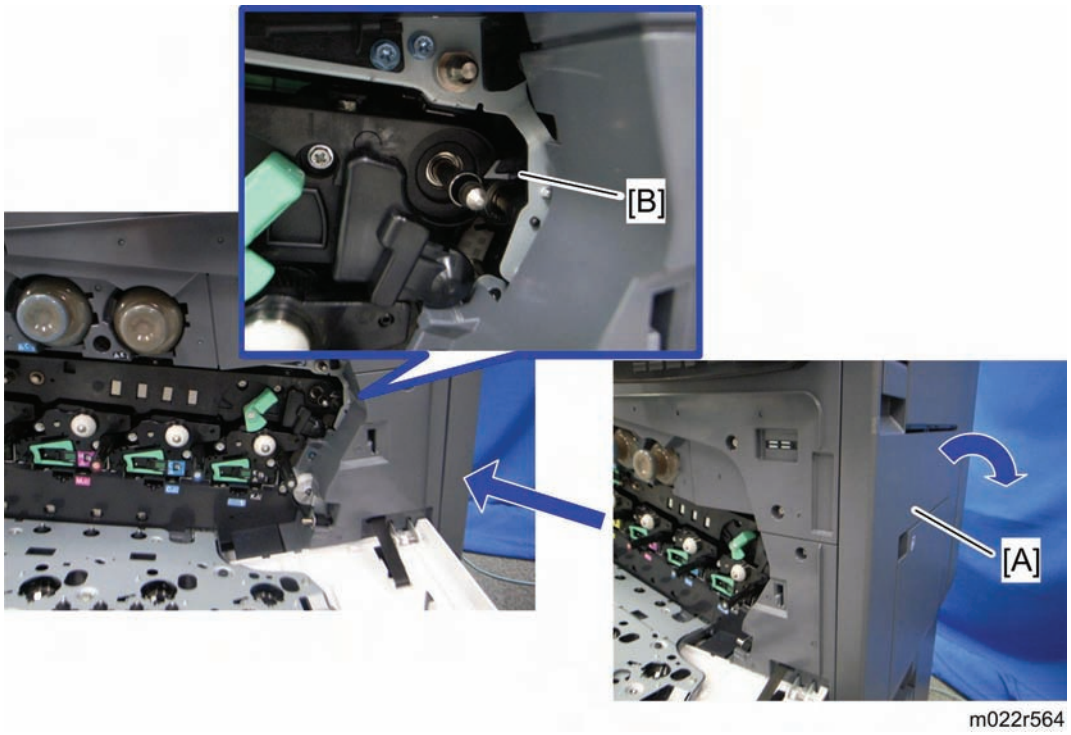


m022i506a

4. Turn the lock lever [A] counterclockwise, and then open the drum securing plate [B].

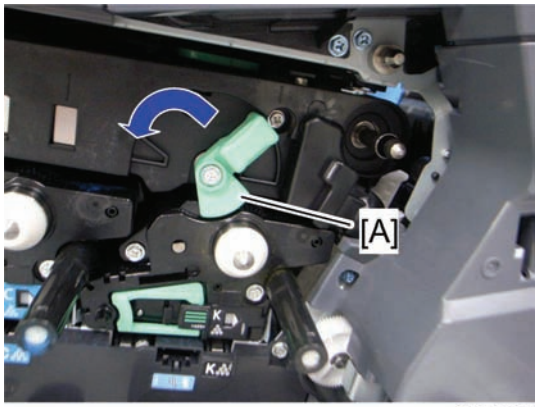
Note

- Make sure that the lock lever [A] is at home position when reassembling.



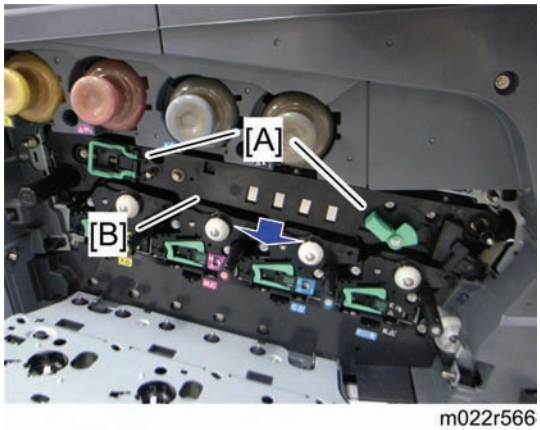
m022r564

5. Open the duplex unit [A].
   - If you open the duplex unit [A], this automatically releases the lock [B] for the ITB unit.



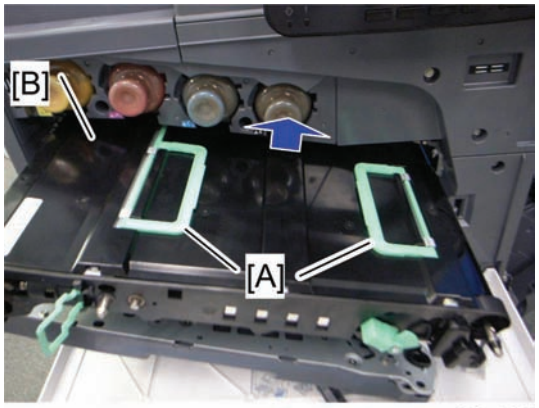
m022r565

6. Unlock the ITB lock lever [A].



m022r566

7. Grasp the handles [A], and then pull out the ITB unit fully [B].



m022r567

8. Grasp the handles [A], and then lift the ITB unit [B].

Important

- If it takes much time to reinstall the ITB unit after removing it from the machine, close the paper transfer unit to prevent the drum units from being exposed to light.

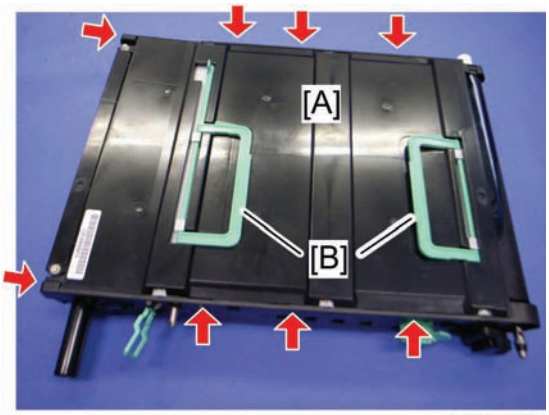
4.8.2 IMAGE TRANSFER BELT, ITB CLEANING UNIT

If you replace the TB cleaning unit, then you must reset the PM counter for this unit. To do this, set SP 3902 017 to 1 before you start to work on the machine.

Note

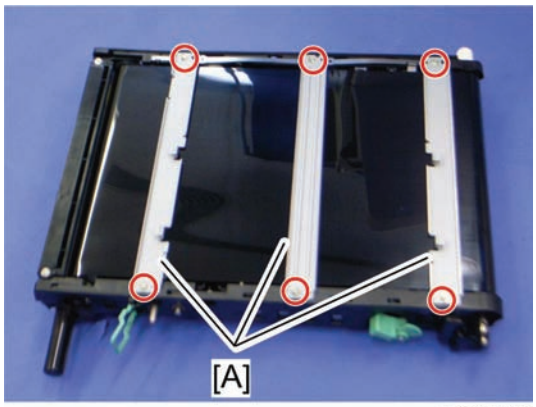
- Do not touch or damage the surface of the image transfer belt during servicing.

1. ITB unit (p.4-70)



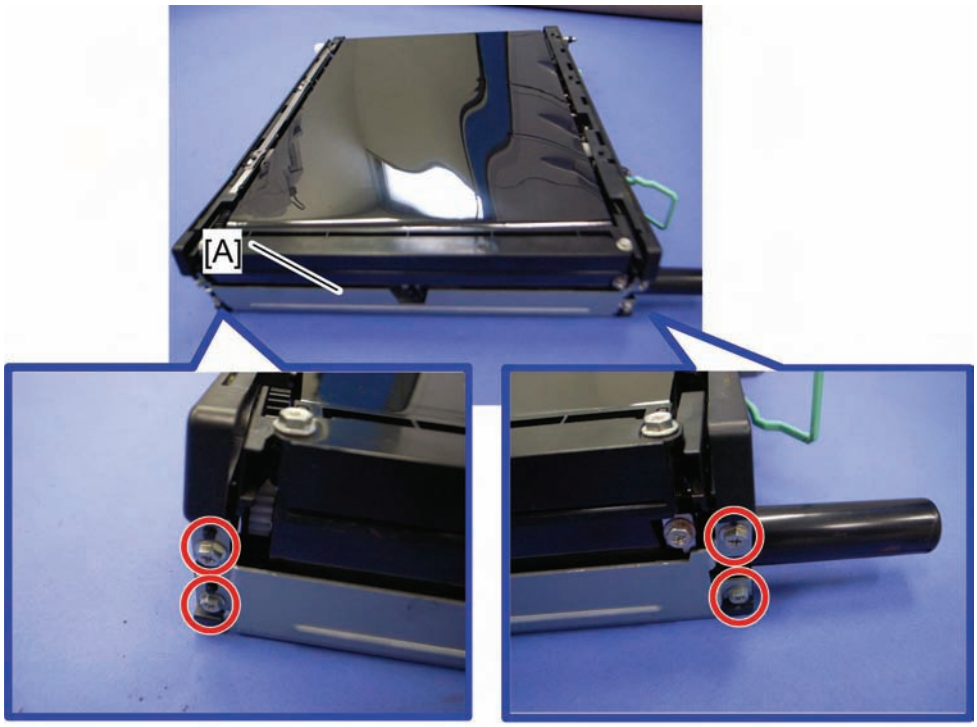
m022r569

2. ITB unit cover [A] and the handles [B] (8 hooks).



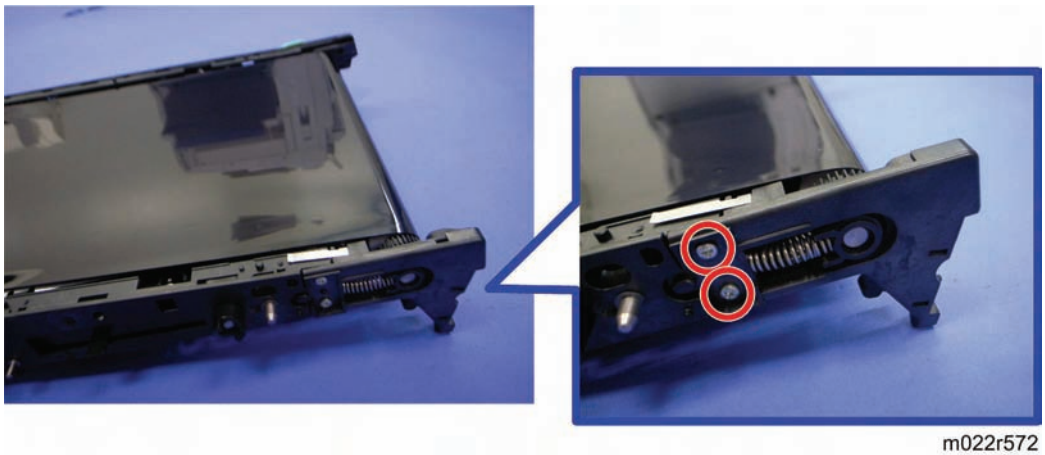
m022r568

3. Three stays [A] (x 2 each)

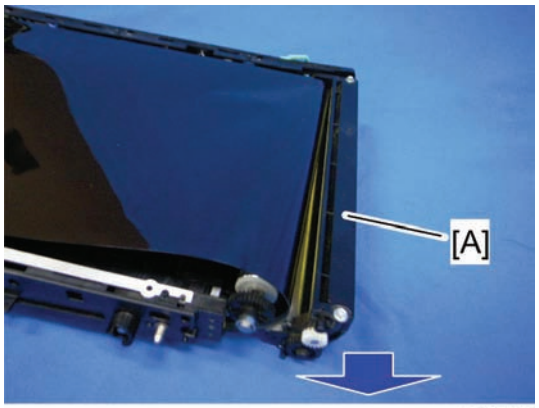


m022r570

4. The left stay [A] (x 4)

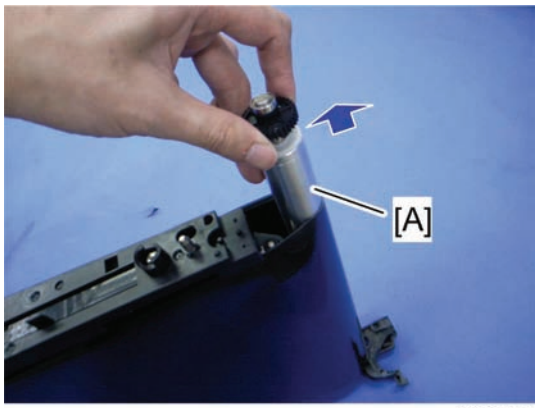

m022r572

5. Rear holder bracket [A] (x 2)



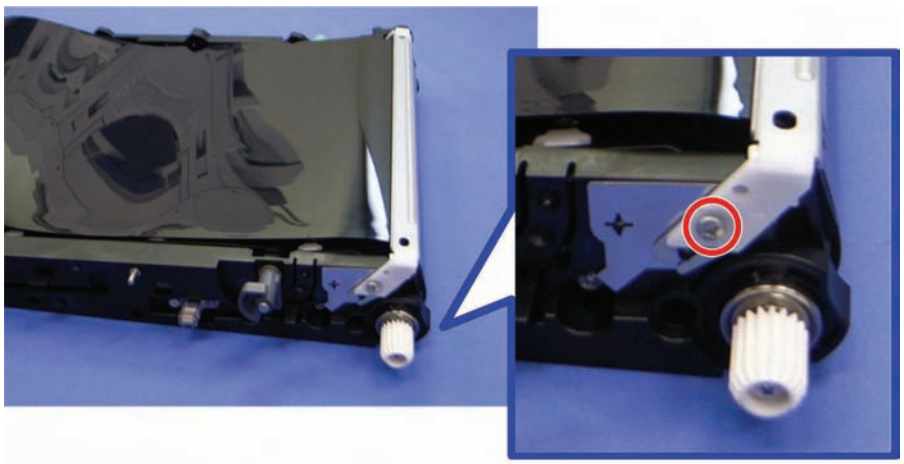
m022r571

6. ITB cleaning unit [A]



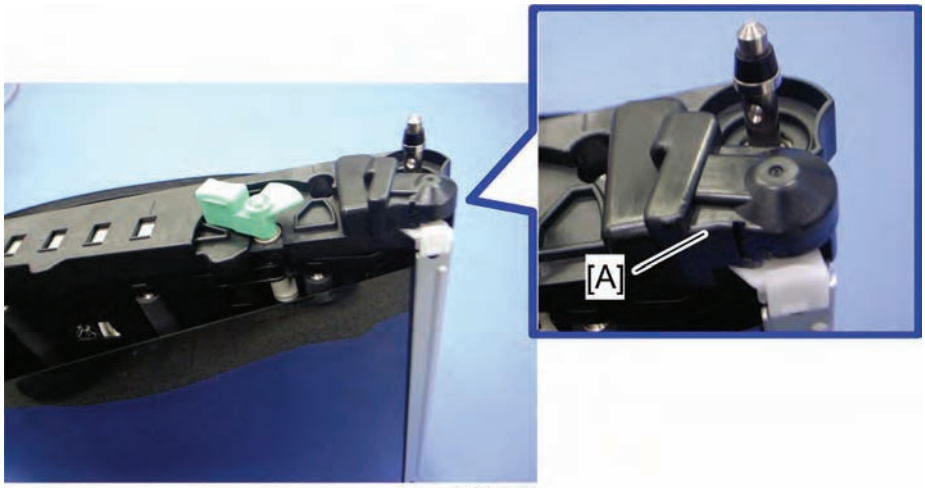
m022r574

7. Pull the tension roller [A] as shown above.



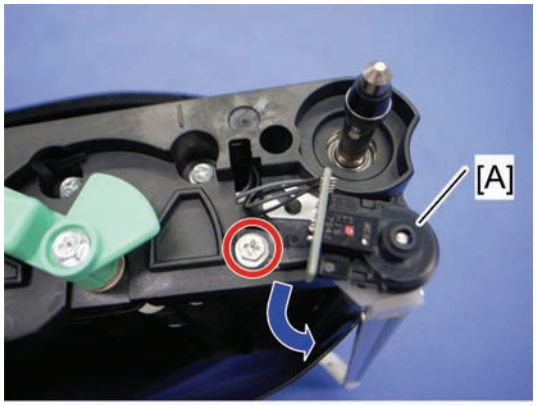
m022r575

8. Remove a screw.



m022r576

9. Front holder bracket [A]

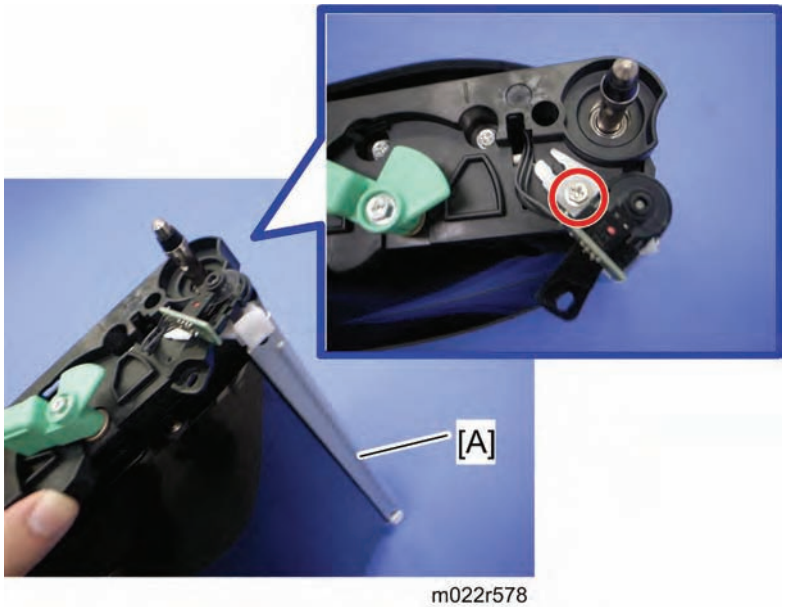


m022r577

10. Remove a screw, and then turn the encoder sensor [A] to the left.

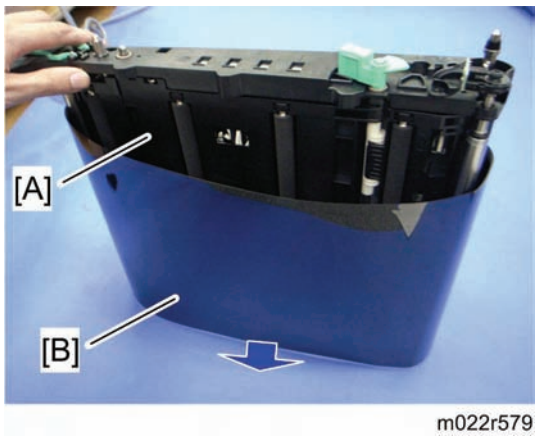
Note

- When replacing the image transfer belt, work carefully to avoid damaging the encoder sensor [A].



m022r578

11. The right stay [A] (x 1)



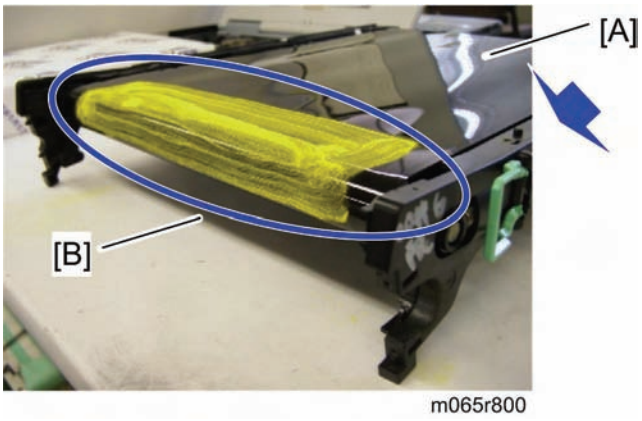
12. Stand the ITB unit [A] as shown above.
13. Image transfer belt [B]

When Installing the Image Transfer Belt

- Reset the PM counter

Note

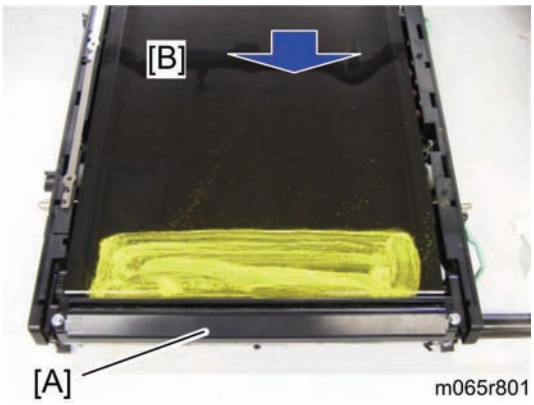
- The image transfer belt does not have any directional characteristics. When installing the image transfer belt, it is not required to install the image transfer belt in a specific orientation.



1. Lubricate a part of the surface of the image transfer belt [A] with yellow toner, and then turn the image transfer belt to the position [B] as shown above.

Note

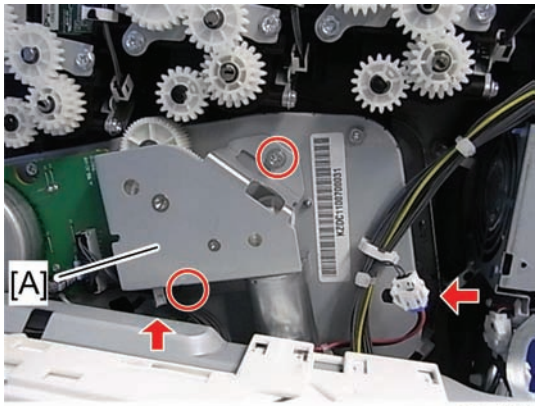
- Be sure to use yellow toner from the machine; do not use lubricant powder, developer, or waste toner.
- You can also use the provided service part: D0159500 (G104 Yellow Toner)



2. Install the ITB cleaning unit [A], and then collect the yellow toner by turning the image transfer belt [B].

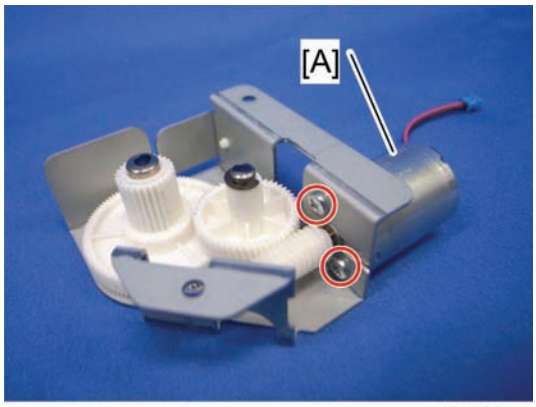
4.8.3 ITB CONTACT MOTOR

1. Rear cover (☛ p.4-19)
2. Open the controller box (☛ Controller Box).



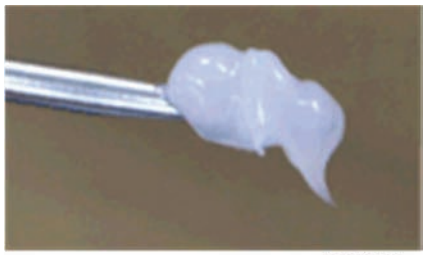
m022r558

3. ITB contact motor unit [A] (x 2, x 1, x 1)



m065r773

4. ITB contact motor [A] (x 2)

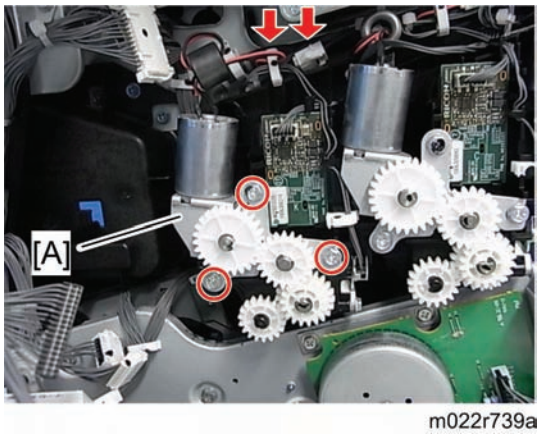


d037r561

5. Apply a small amount of "Silicone Grease G501" to the gear of the motor as shown above.

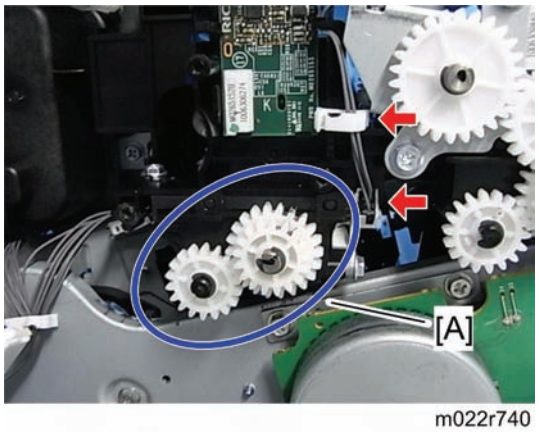
4.8.4 ITB CONTACT SENSOR

1. PCDU: K (☛ p.4-57))
2. Rear cover (☛ p.4-19)
3. Controller box (☛ p.4-195)



m022r739a

4. Toner supply bracket: K [A] (x 3, x 1, x 1)

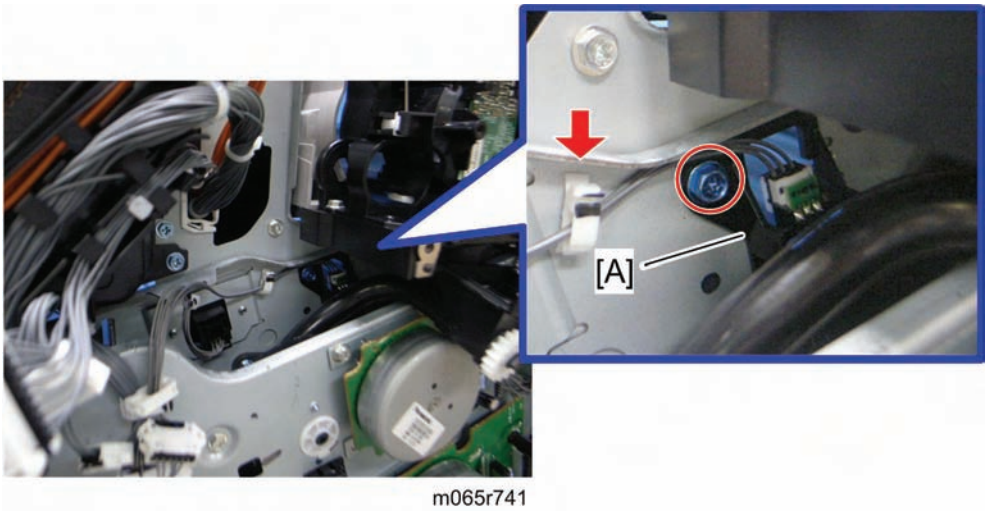


m022r740

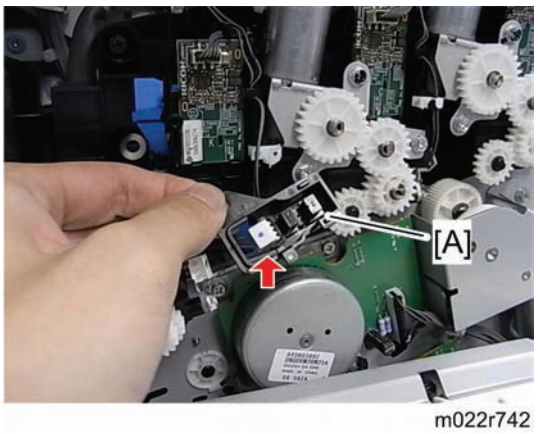
5. Release the toner tube: K [A] by pulling out its gear assembly a short distance (x 1, x 1).

Note

- Work carefully when releasing the toner supply tube [A] to avoid spilling toner on clothing or the hands.



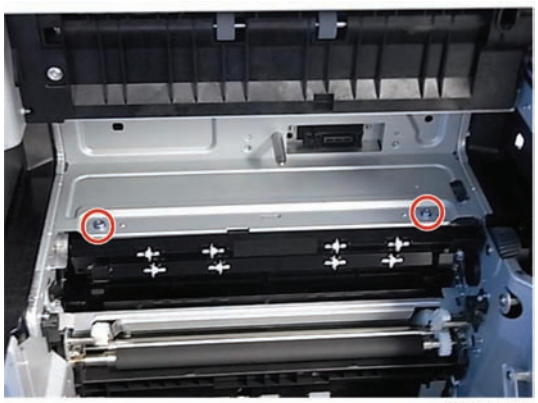
6. Sensor holder [A] (x 1, x 1)



7. ITB contact sensor [A] (x 1, hooks)

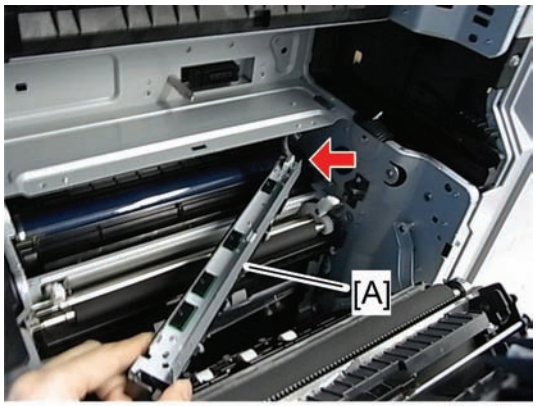
4.8.5 ID SENSOR BOARD

1. Fusing unit (☛ p.4-107)



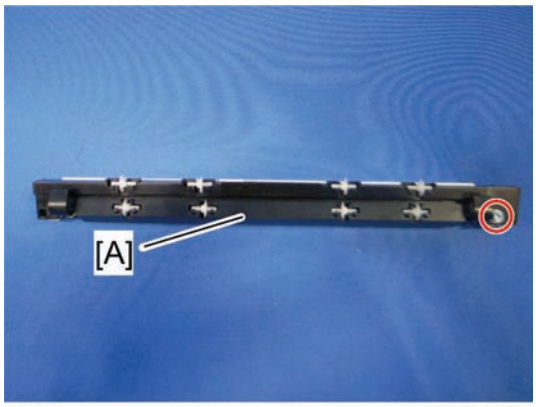
m022r545a

2. Remove the two screws.



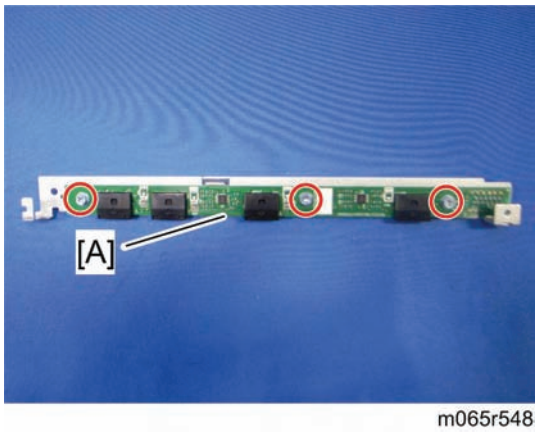
m022r546a

3. ID sensor board bracket [A] (☛ x 1)



m065r547

4. ID sensor board cover [A] (☛ x 1)

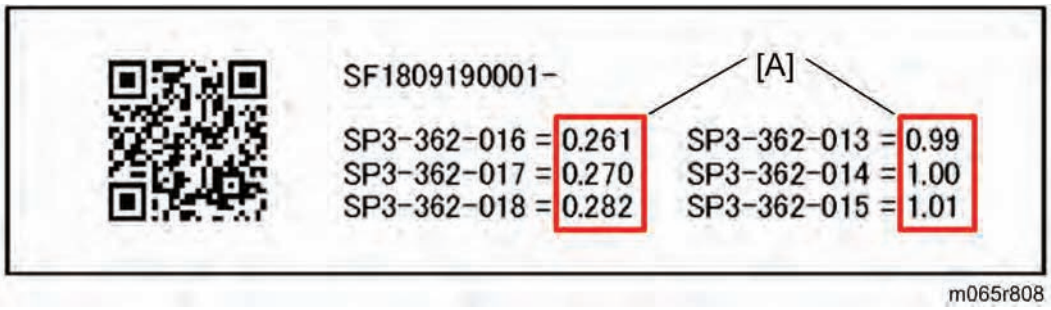


5. ID sensor board [A] (x 3)

After installing a new ID sensor board

Do the following adjustment after installing a new ID sensor board.

1. Plug in and turn on the main power switch of the machine.
2. Enter the SP mode.



3. Input all correction coefficients [A] for the ID sensor with the SP modes referring to the barcode sheet provided with the new ID sensor board.

Note

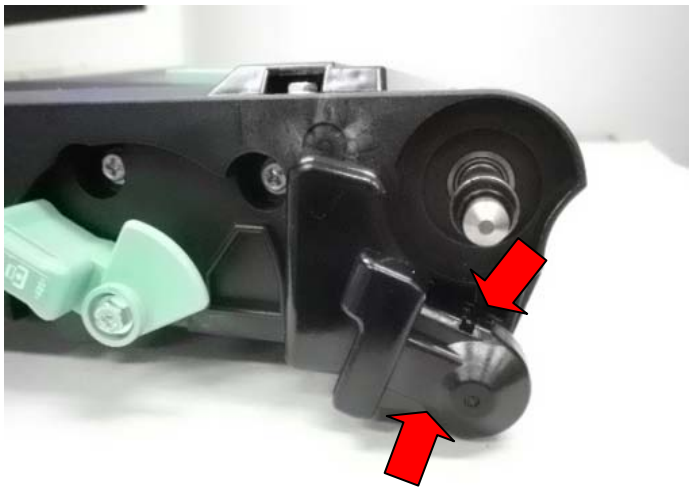
- For example, input "**0.99**" with SP3-362-013.

4. Exit the SP mode.

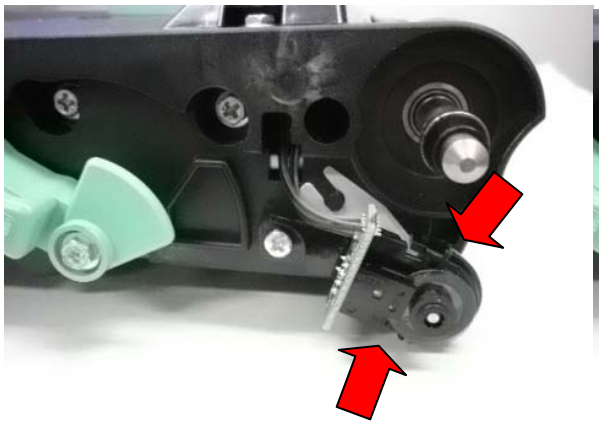
⇒ 4.8.6 REMOVING THE ITB ENCODER UNIT

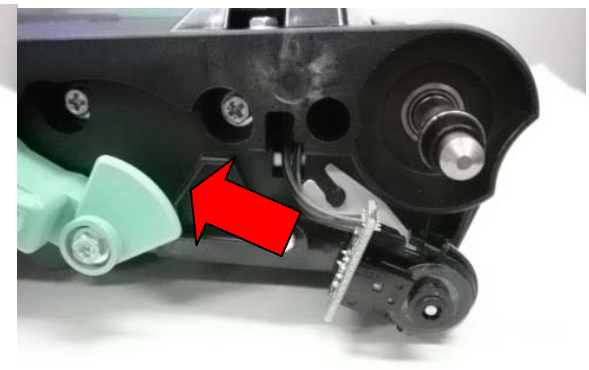
Note: When you replace the ITB unit encoder sensor, the PM counter for the ITB unit will be reset. This is because replacing the sensor triggers the detection of a new ITB unit.

1. Remove the ITB unit.
2. Remove the encoder cover (hooks x 2).

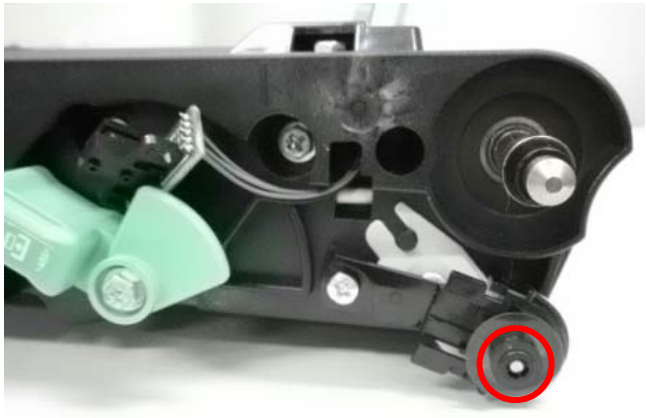


3. Remove the ITB encoder sensor (hooks x 2) and hook it temporarily onto the green lever, as shown in the photos.





4. Remove the encoder collar.

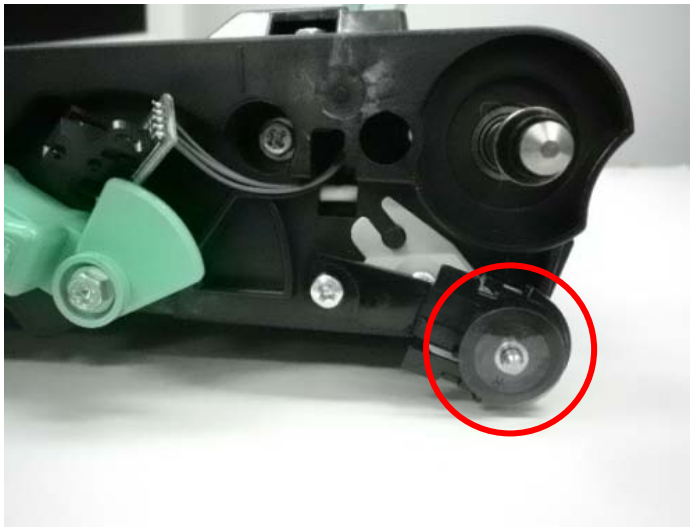


5. Remove the encoder DISC.

IMPORTANT: When you re-attach the disc later,

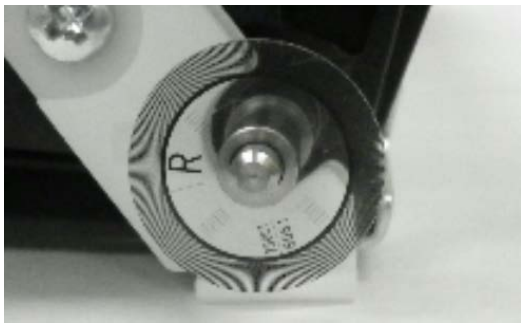
- Never bend the disc.
- Never scratch the disc.
- Make sure the reading surface is not dirtied.
- Make sure that the “R” on the disc is in the correct orientation (and not inversed).

See photos below.

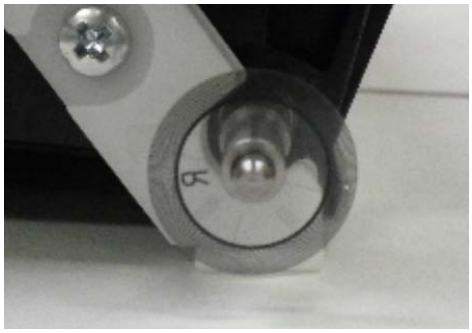


Encoder DISC

CORRECT (“R” can be seen)

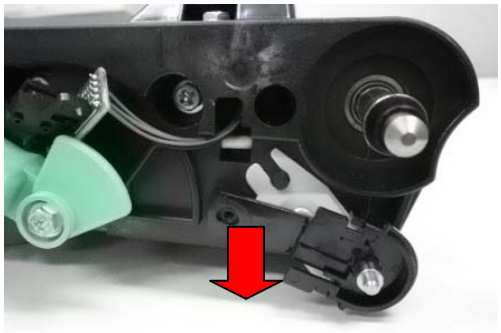


Incorrect (“R” is inversed)

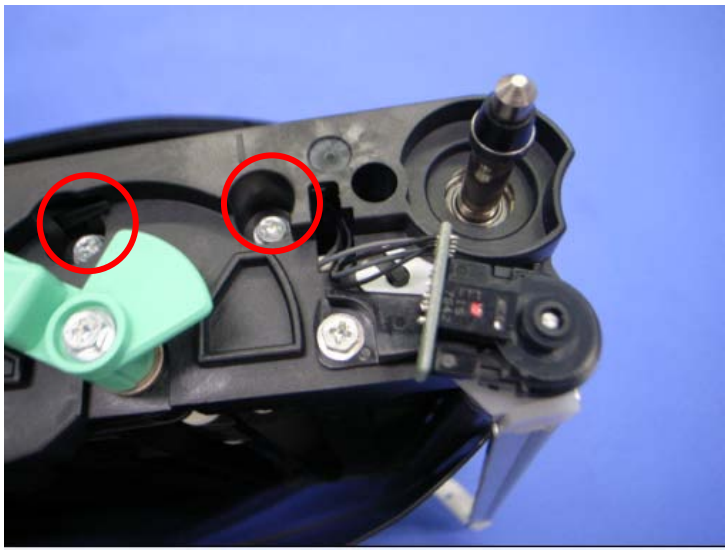


6. Remove the screw.

8. Lower the holder and remove the encoder holder

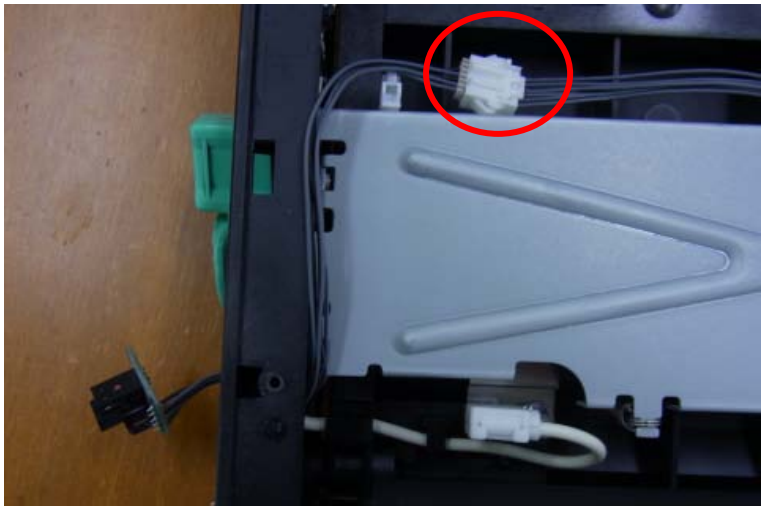


7. Remove the ITB belt. (See the field service manual).
8. Loosen the two screws.



9. Remove the harness cover.

10. Remove the connector for the encoder sensor.



11. Re-attach all the parts you removed in the reverse order.

4.9 PAPER TRANSFER

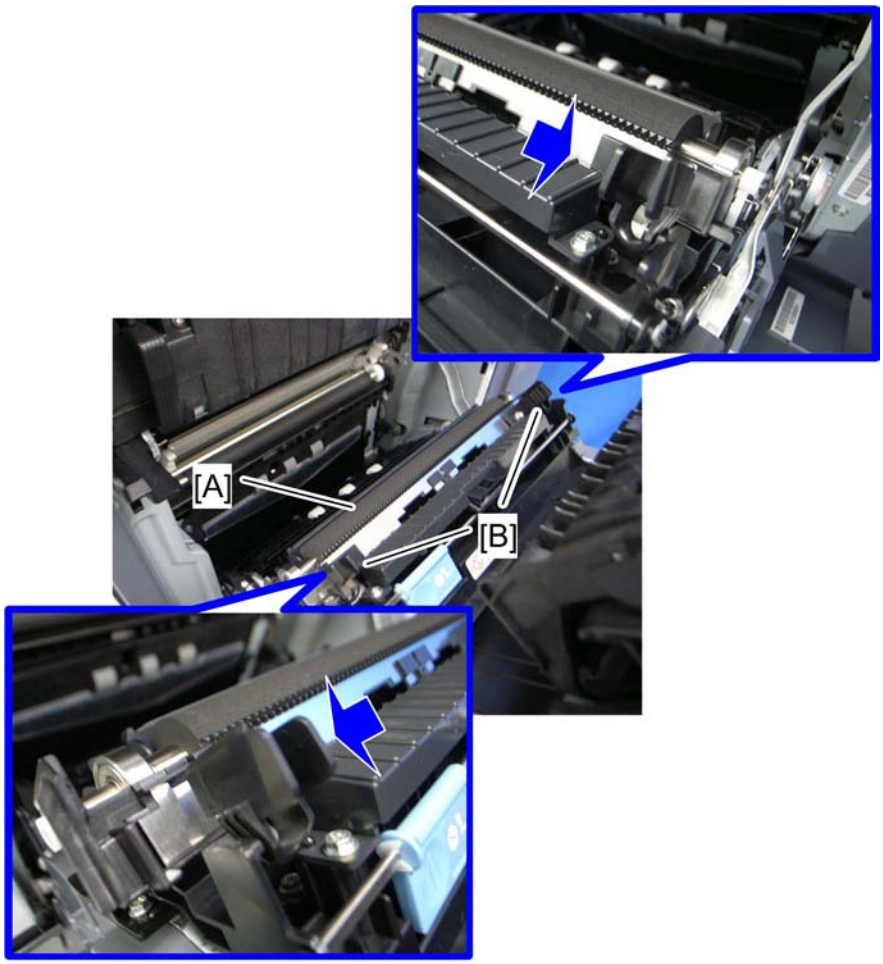
4.9.1 PTR (PAPER TRANSFER ROLLER) UNIT

- If you install a new PTR unit, then set SP 3902-018 to "1" before you start this procedure.

Note

  - If you do this, then the machine will reset the PM counter for the paper transfer unit automatically, after you turn the power on again.

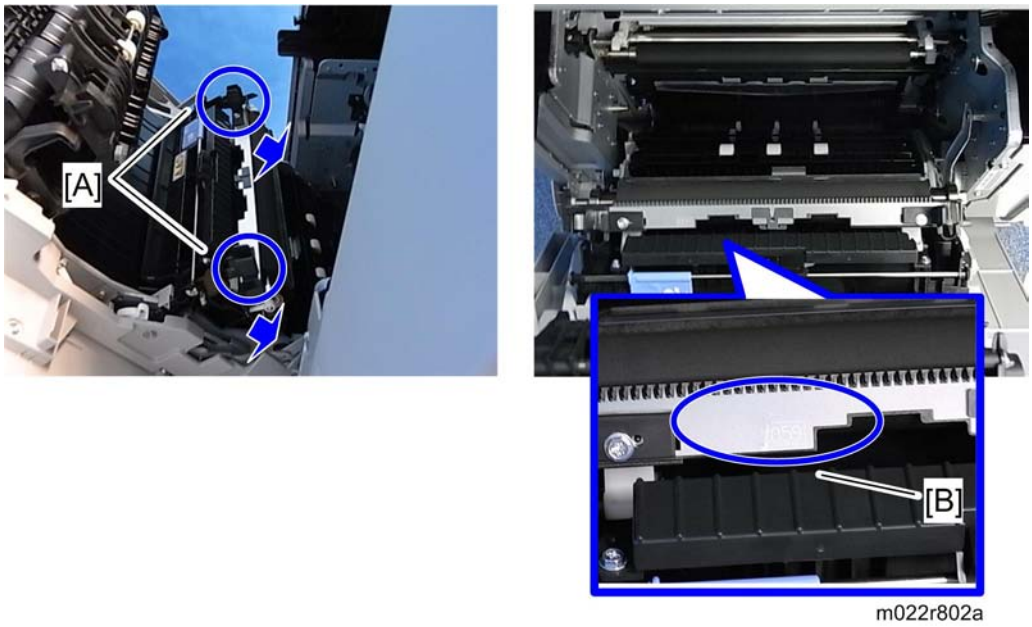
1. Open the duplex unit.



m022r580

2. Remove the PTR unit [A], releasing the two locks [B].

When Installing the PTR Unit



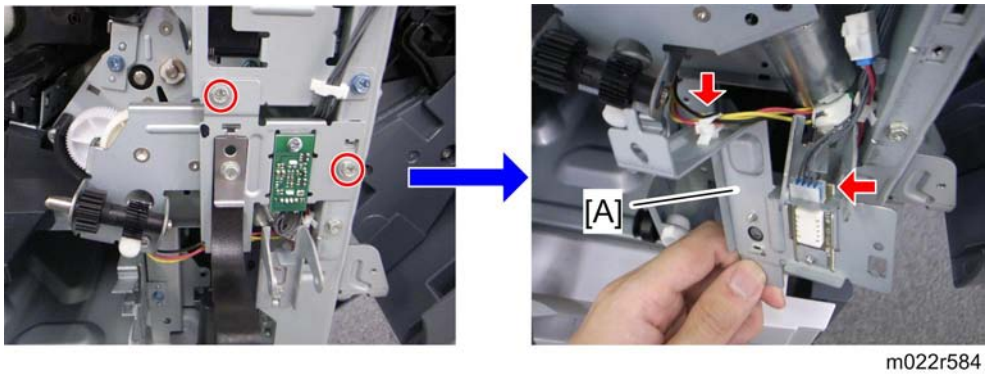
m022r802a

To install the PTR unit, pinch the two green locks [A] while you push the unit back into position.

Do not insert objects between the metal plate [B] and its black plastic base. Otherwise, the plate could be bent, and this can cause poor image quality.

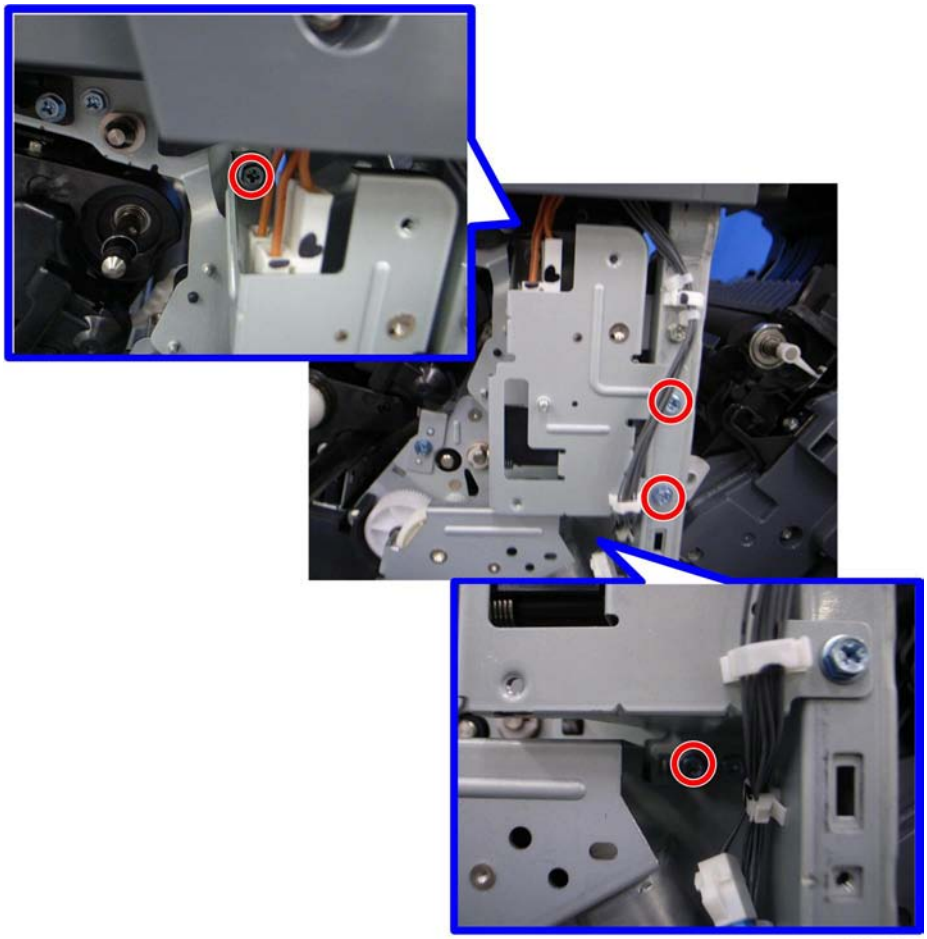
4.9.2 PTR CONTACT MOTOR

1. Inner right lower cover (☛ p.4-30)



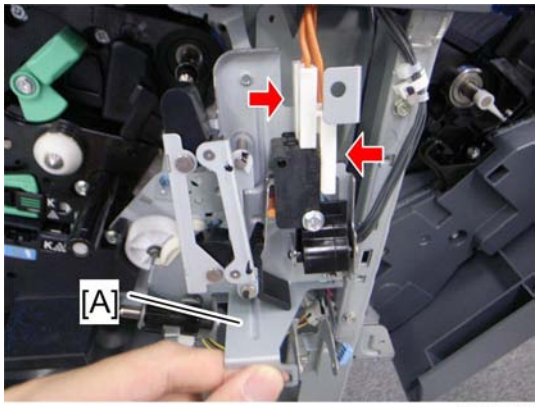
m022r584

2. Sensor bracket [A] (x 2, x 1, x 1)



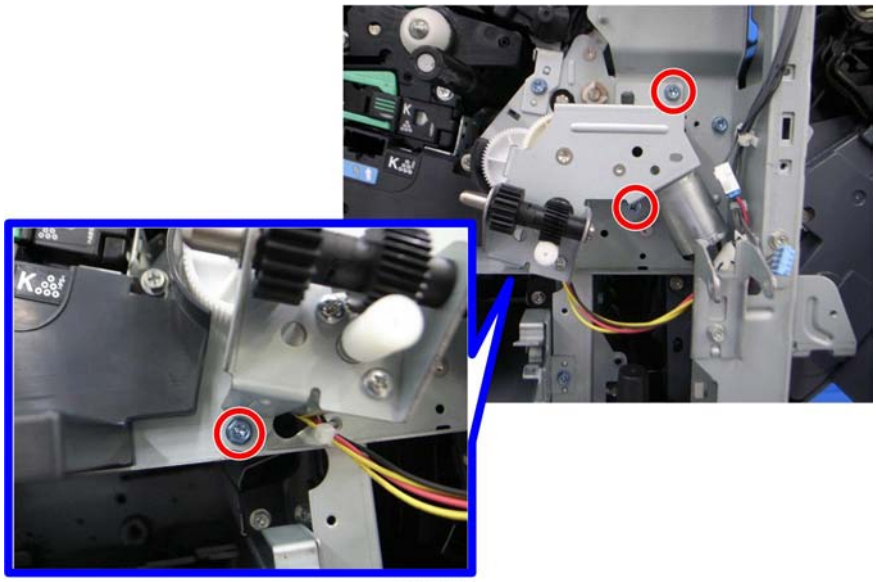
m022r585

3. Remove four screws.



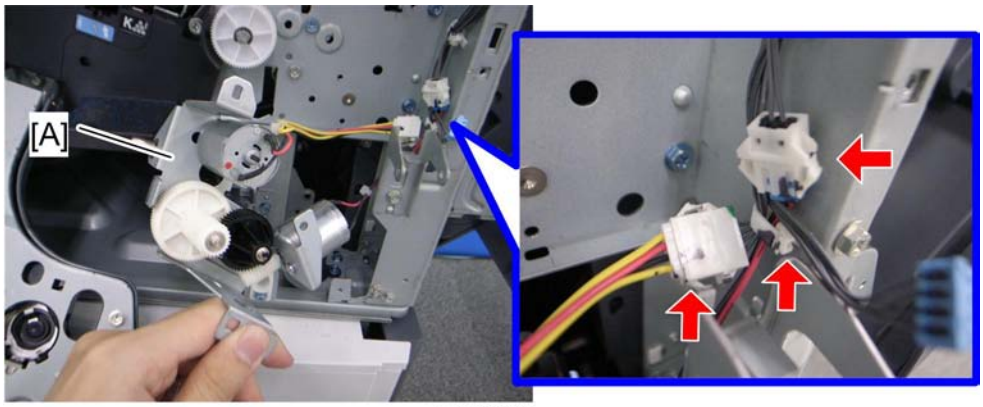
m022r586

4. Interlock switch bracket [A] (x all)



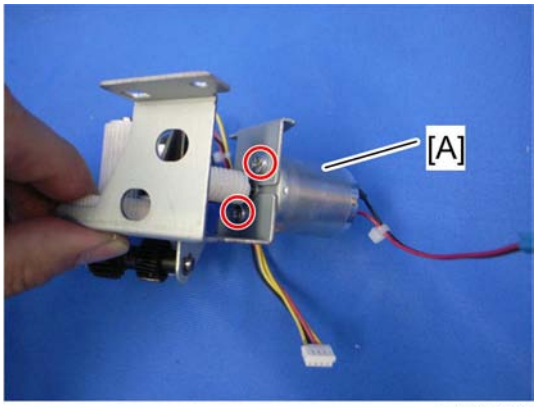
m022r587

5. Remove three screws.



m022r588

6. Motor bracket [A] (x 1, x 2)



m022r589

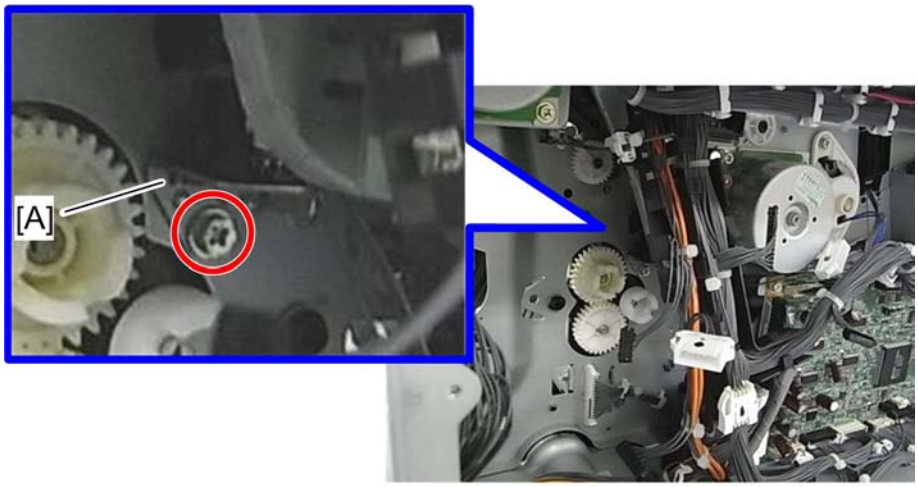
7. PTR contact motor [A] (x 2)

d037r561

8. Apply a small amount of "Silicone Grease G501" to the gear of the motor as shown above.

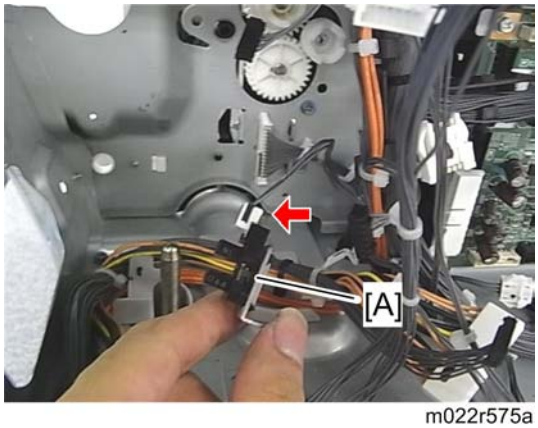
4.9.3 PTR CONTACT SENSOR

1. Rear cover (☛ p.4-19)
2. Motors with bracket (☛ p.4-98)



m022r574a

3. Sensor bracket [A] (🔩 x 1)

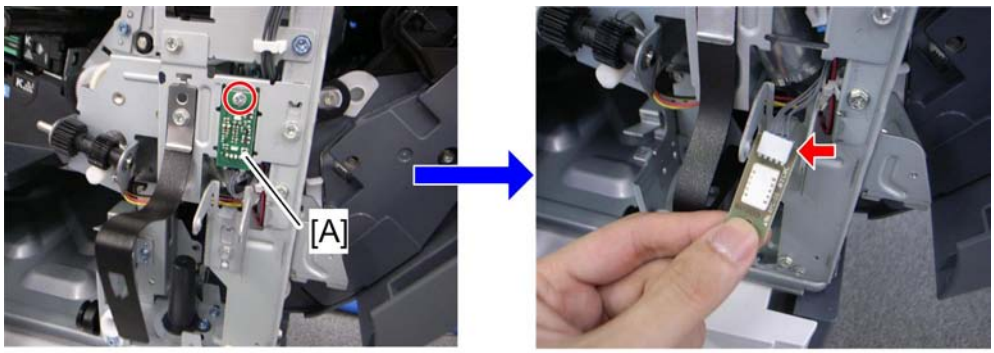


m022r575a

4. PTR contact sensor [A] (🔌 x 1, hooks)

4.9.4 TEMPERATURE AND HUMIDITY SENSOR

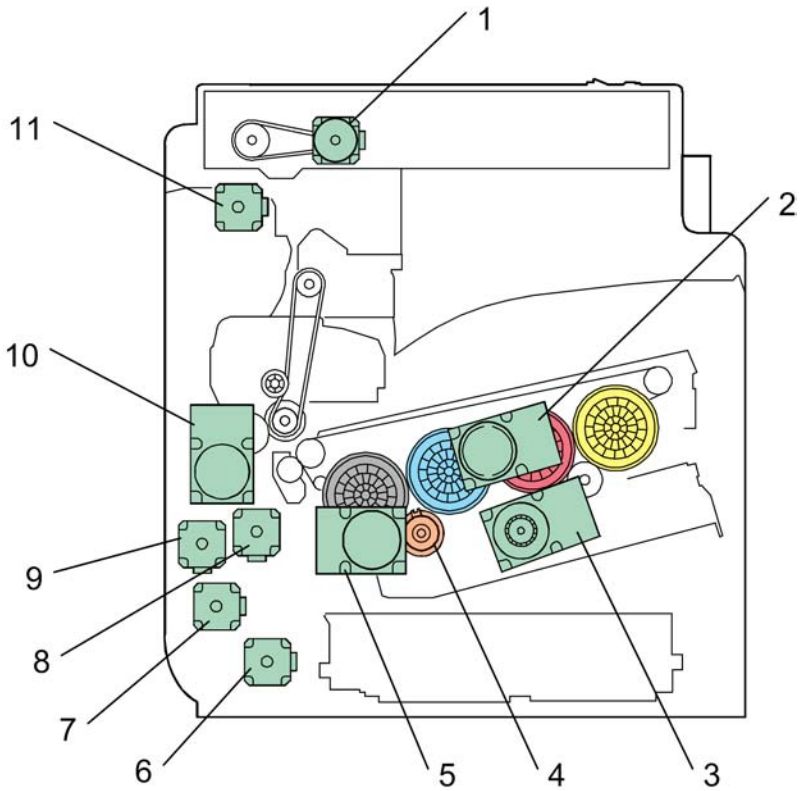
1. Inner right cover (☛ p.4-27)



m022r583

2. Temperature and humidity sensor [A] (x 1, x 1)

4.10 DRIVE UNIT



m022v103

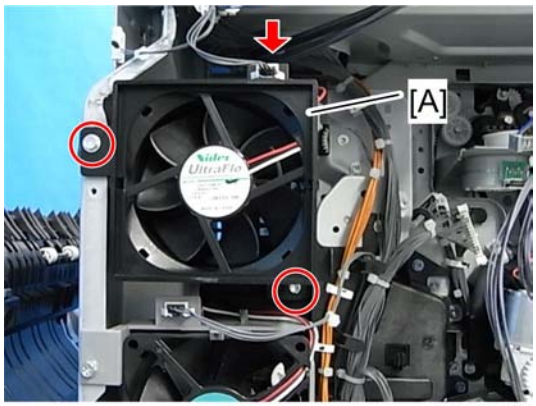
The drawing above shows the drive unit layout.

1. Scanner motor	6. Paper feed motor
2. Drum motor: CMY	7. Vertical transport motor
3. Development motor: CMY	8. Registration motor

4. Development clutch: K 5. ITB Unit/ Drum: K/ Development : K motor	9. Duplex/ By-pass motor 10. Fusing/paper exit motor 11. Inverter motor

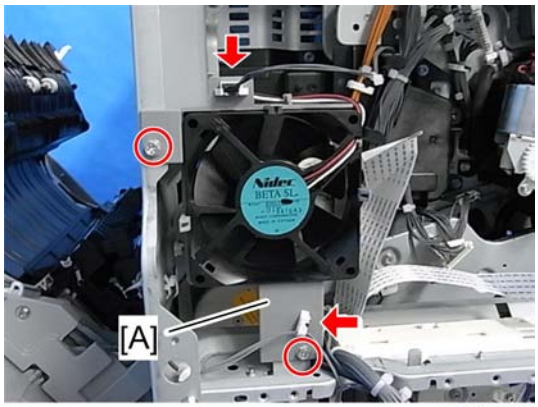
4.10.1 GEAR UNIT

1. Pull out the toner bottles.
2. ITB unit (☛ p.4-70)
3. PCDU (☛ p.4-57))
4. Rear lower cover (☛ p.4-18)
5. Rear cover (☛ p.4-19)
6. Right rear cover (☛ p.4-20)
7. Controller box (☛ p.4-195)



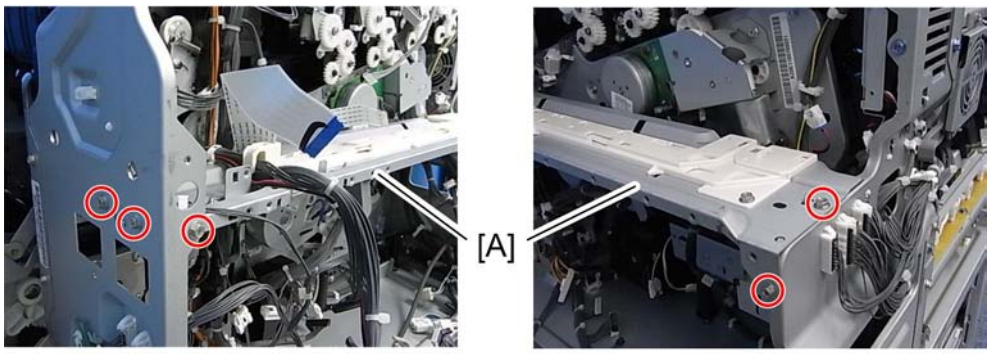
m022r847

8. Fusing rear fan base [A] (x 2, x 1)



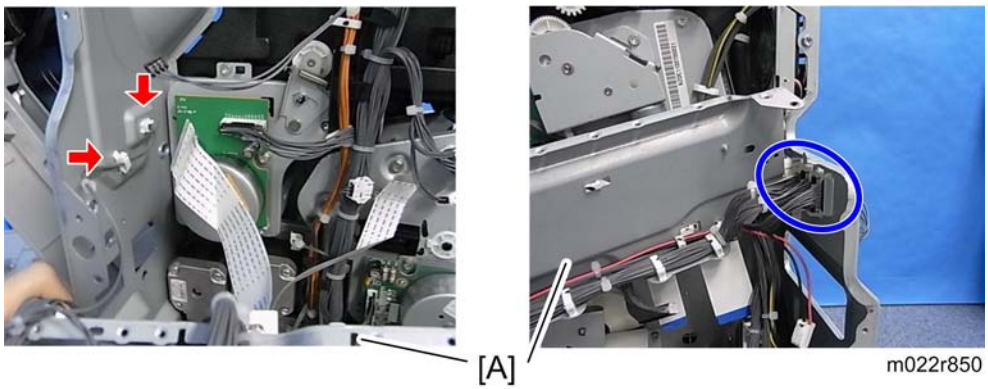
m022r848

9. Drive unit fan base [A] (x 2, x 1, x 1)
10. PSU box (☛ p.4-208)



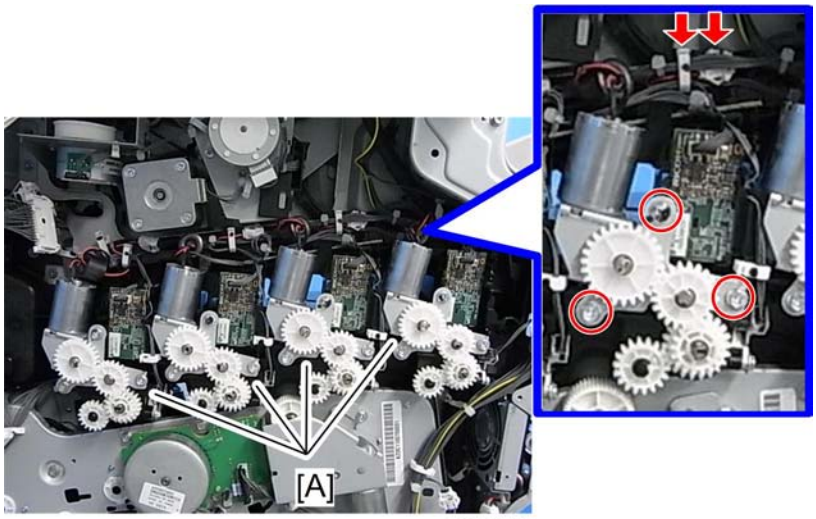
m022r849

11. Remove the five screws for stay [A].



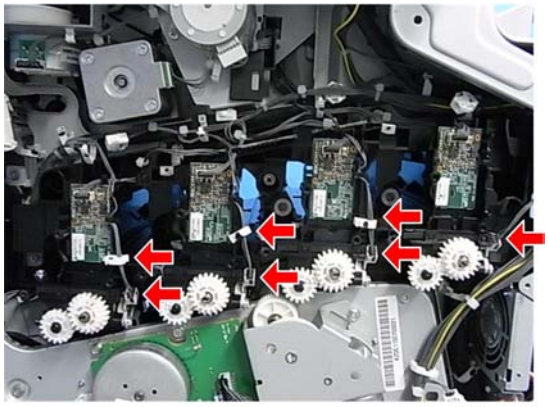
m022r850

12. Stay [A] (x 4, x 1)



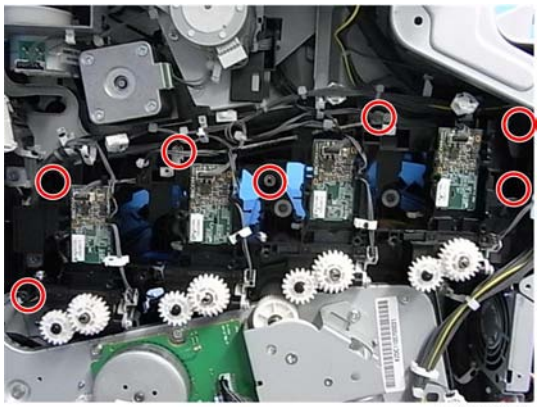
m022r851

13. Toner supply motor brackets [A] (x 3, x 1, x 1 each)



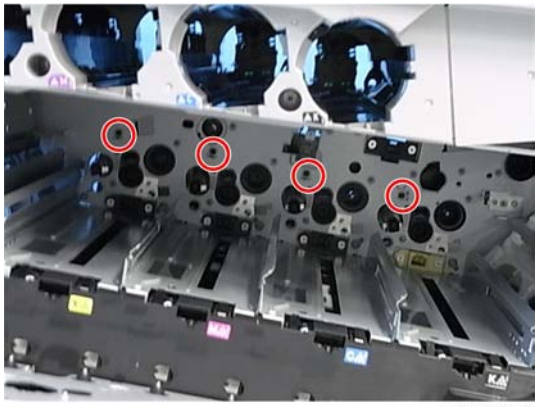
m022r852

14. Release the three clamps and disconnect the four connectors.



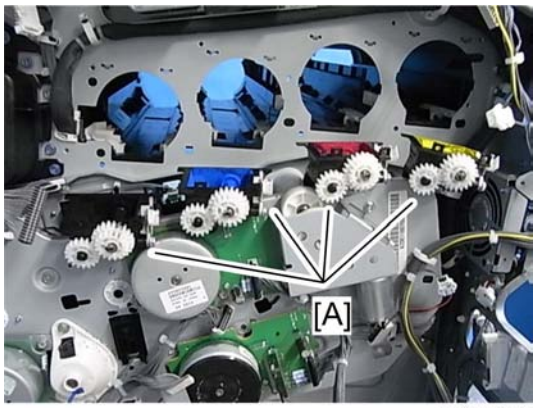
m022r854

15. Toner hopper unit (x 7, s, s)



m022r853

16. Remove the four clips for the toner supply tubes.

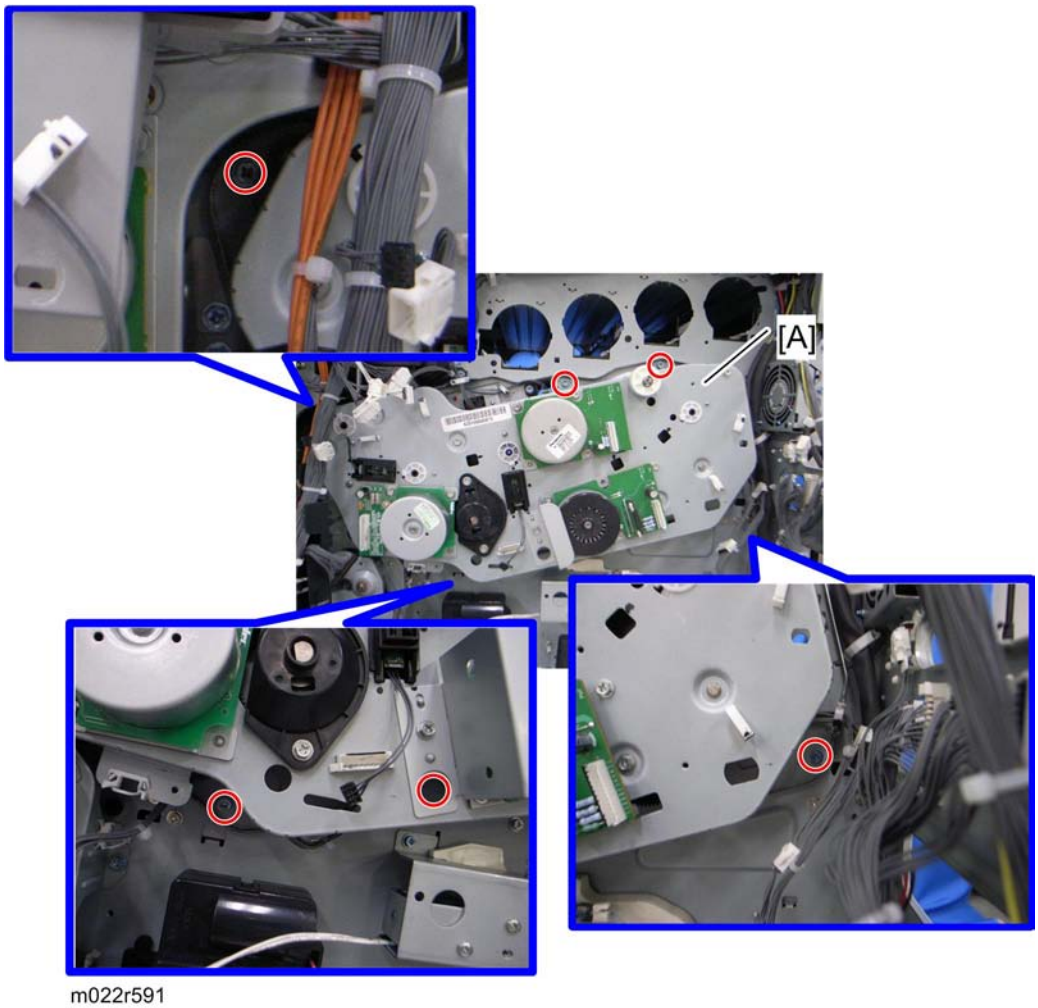


m022r855

17. Toner supply tubes [A]

Note

- Work carefully when removing the toner supply tube [A] to avoid spilling toner on clothing or the hands.

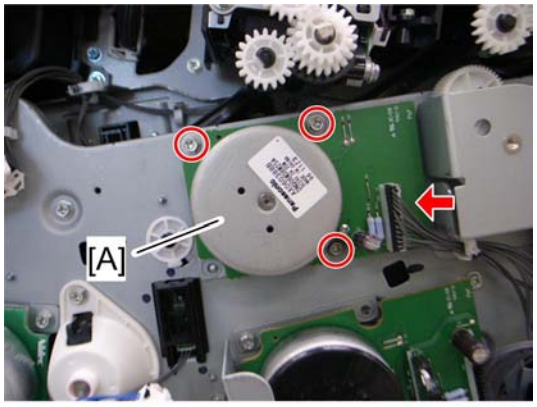


m022r591

18. Gear unit [A] (x all, x all, x 6)

4.10.2 DRUM MOTOR: CMY

1. Rear cover (☛ p.4-19)
2. Rear lower cover (☛ p.4-18)
3. Right rear cover (☛ p.4-20)
4. Controller box (☛ p.4-195)
5. Fusing rear fan base (☛ p.4-91 "Gear Unit")
6. Drive unit fan base (☛ p.4-91 "Gear Unit")
7. PSU box (☛ p.4-208)
8. Stay (☛ p.4-91 "Gear Unit")

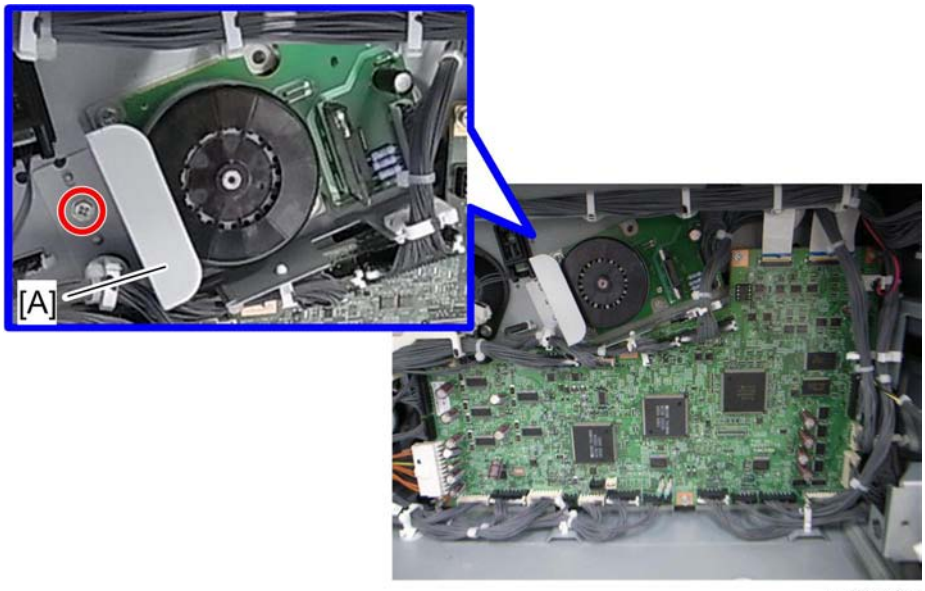


m065r512

9. Drum motor: CMY [A] (x 3, x 1)

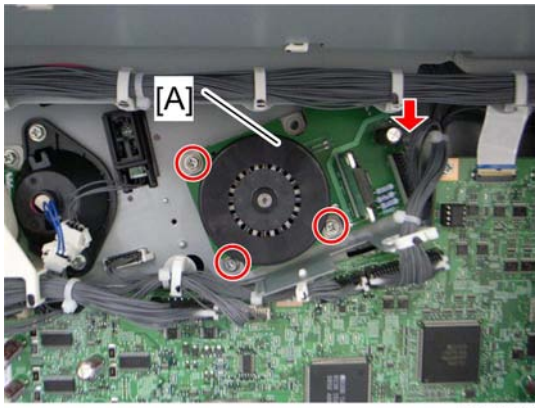
4.10.3 DEVELOPMENT MOTOR: CMY

1. Rear lower cover (☛ p.4-18)
2. Right rear cover (☛ p.4-20)
3. PSU box (☛ p.4-208)



m022r592

4. Remove the bracket [A] (x 1).

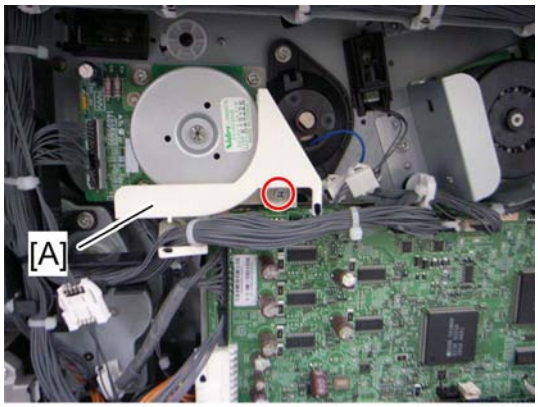


m022r593

5. Development motor: CMY [A] (x 3, x 1)

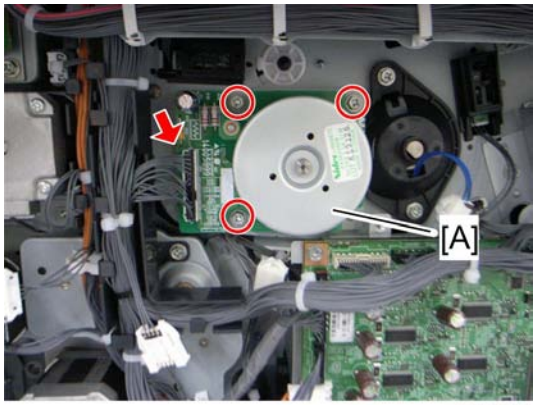
4.10.4 ITB UNIT/ DRUM: K/ DEVELOPMENT: K MOTOR

1. Rear lower cover (p.4-18)
2. Right rear cover (p.4-20)
3. PSU box (p.4-208)



m022r594

4. Harness guide [A] (x 1)

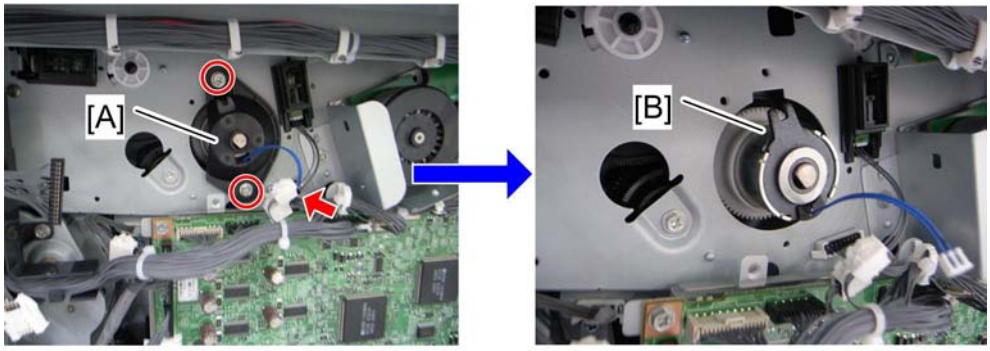


m022r595

5. ITB unit/ Drum: K/ Development :K motor [A] (x 3, x 1)

4.10.5 DEVELOPMENT CLUTCH: K

1. Rear lower cover (☛ p.4-18)
2. Right rear cover (☛ p.4-20)
3. PSU box (☛ p.4-208)
4. ITB unit/ Drum: K/ Development :K motor (☛ p.4-96)

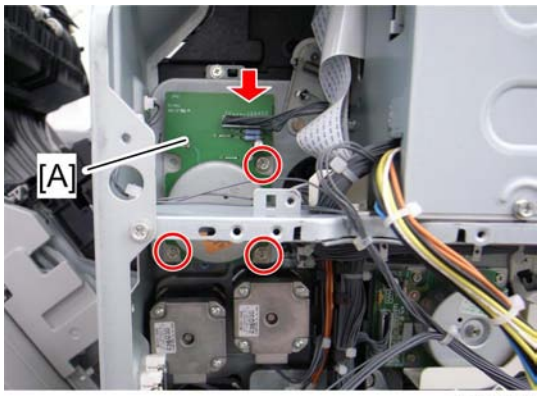


m022r596

5. Development clutch: K cover [A] (x 2, x 1)
6. Development clutch: K [B]

4.10.6 FUSING/PAPER EXIT MOTOR

1. Rear cover (☛ p.4-19)
2. Rear lower cover (☛ p.4-18)
3. Right rear cover (☛ p.4-20)
4. PSU box (☛ p.4-208)
5. Drive unit fan base (☛ p.4-91 "Gear Unit")

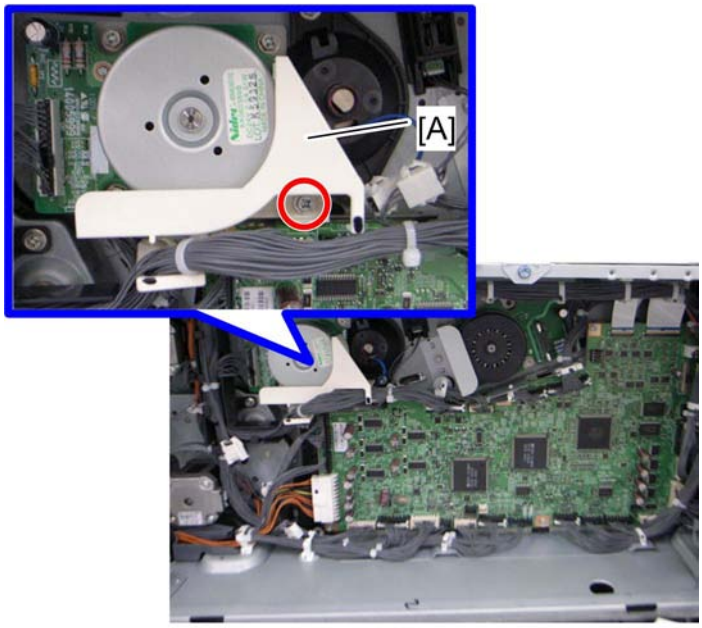


m022r784

6. Fusing/paper exit motor [A] (x 3, x 1)

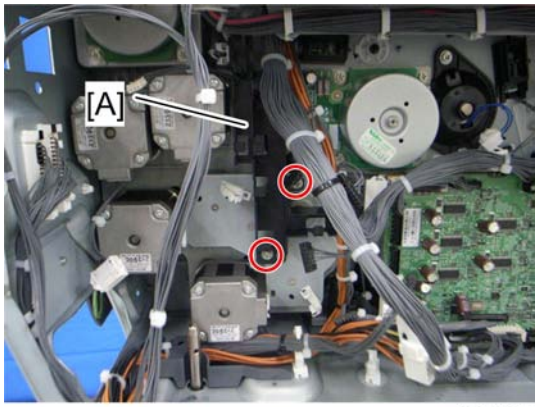
4.10.7 MOTORS WITH BRACKET

1. Rear lower cover (☛ p.4-18)
2. Right rear cover (☛ p.4-20)
3. PSU box (☛ p.4-208)



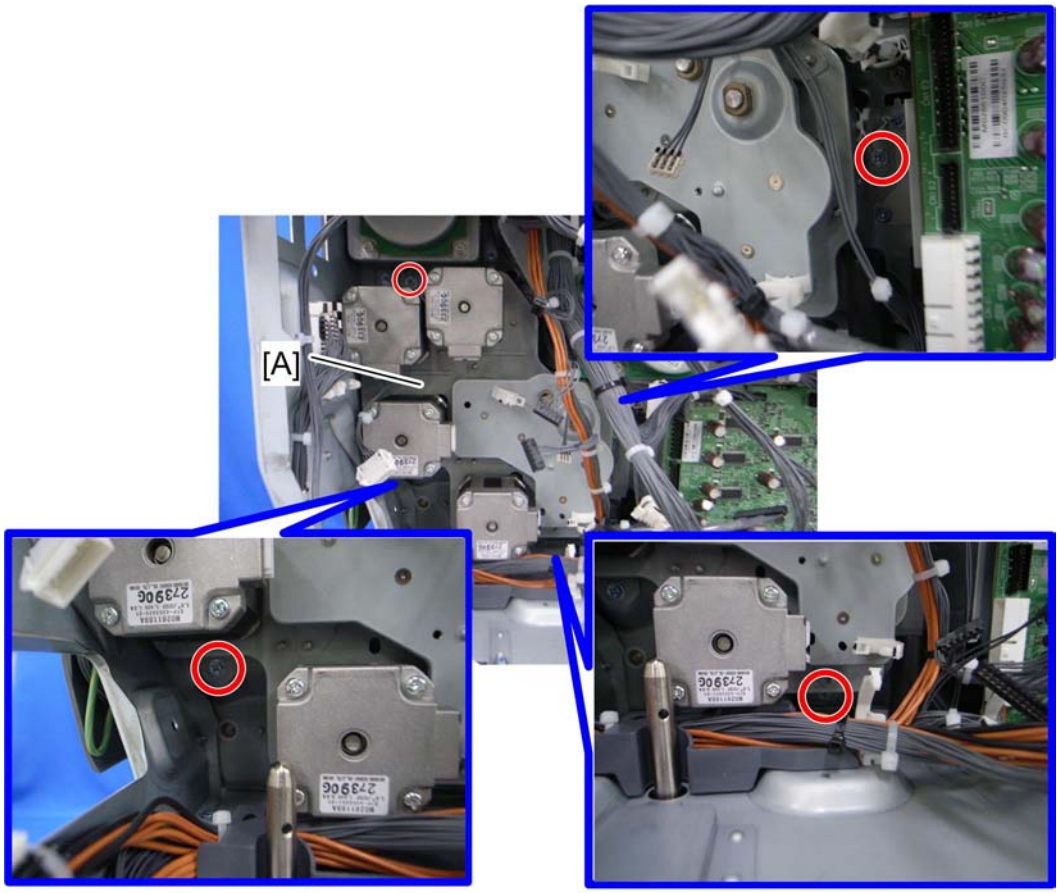
m022r597

4. Harness guide: white [A] (🔩 x 1)
5. Remove all the connectors and clamps.



m022r598

6. Harness guide: black [A] (🔩 x 2)

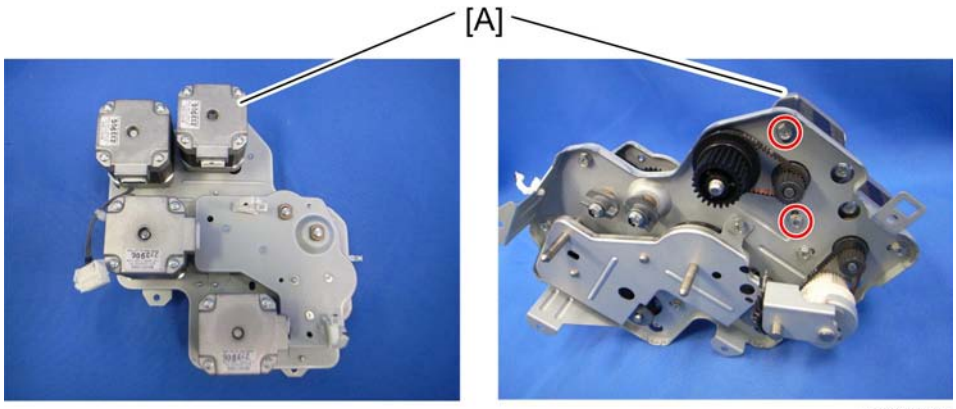


m022r599

7. Motors with bracket [A] (x 4)

4.10.8 REGISTRATION MOTOR

1. Rear lower cover (☛ p.4-18)
2. PSU box (☛ p.4-208)
3. Motors with bracket (☛ p.4-98)

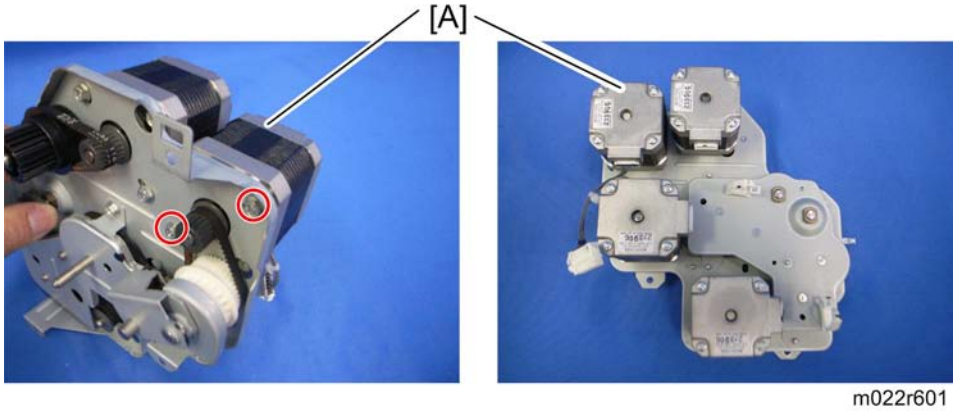


m022r600

4. Registration motor [A] (x 2, timing belt x 1)

4.10.9 DUPLEX/ BY-PASS MOTOR

1. Rear lower cover (☛ p.4-18)
2. PSU box (☛ p.4-208)
3. Motors with bracket (☛ p.4-98)

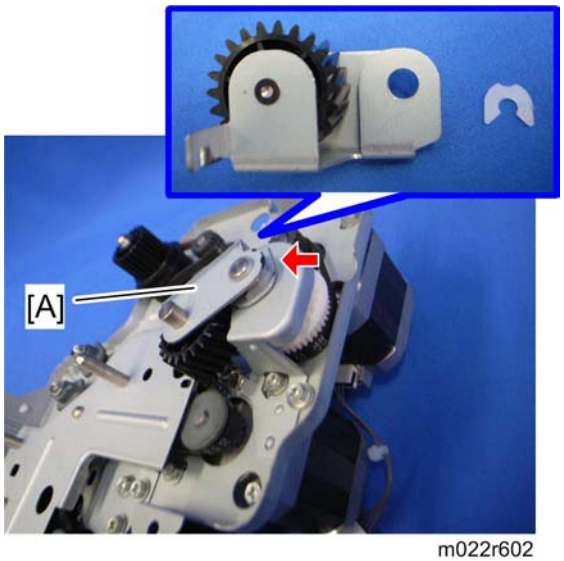


m022r601

4. Duplex/ By-pass motor [A] (🔩 x 2, timing belt x 1)

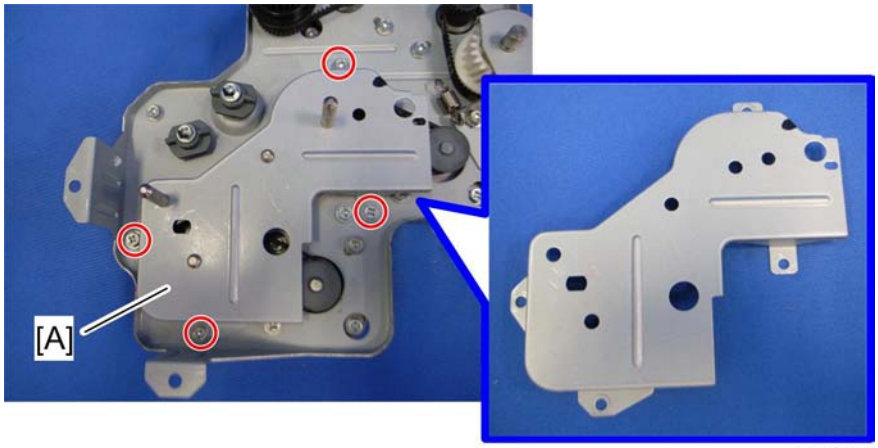
4.10.10 PAPER FEED MOTOR

1. Rear lower cover (☛ p.4-18)
2. PSU box (☛ p.4-208)
3. Motors with bracket (☛ p.4-98)



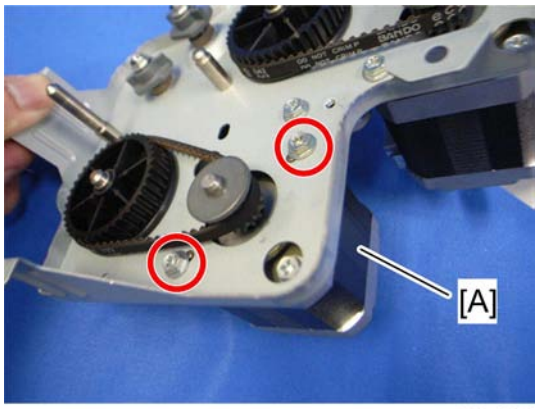
m022r602

4. Gear with bracket [A] (⚙ x 1)



m022r603

5. Bracket [A] (x 4)

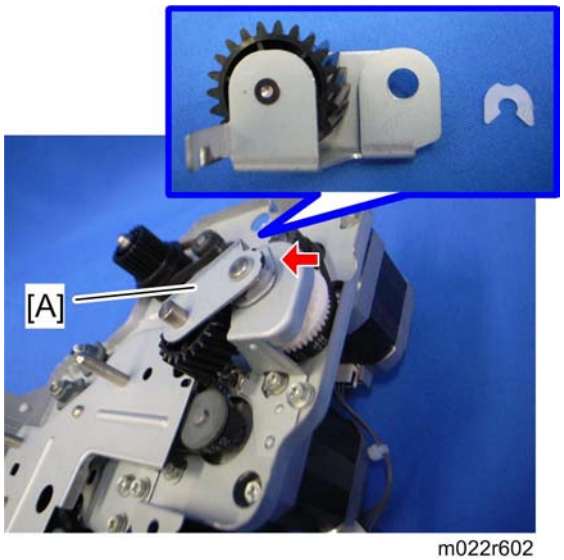


m022r604

6. Paper feed motor [A] (x 2, timing belt x 1)

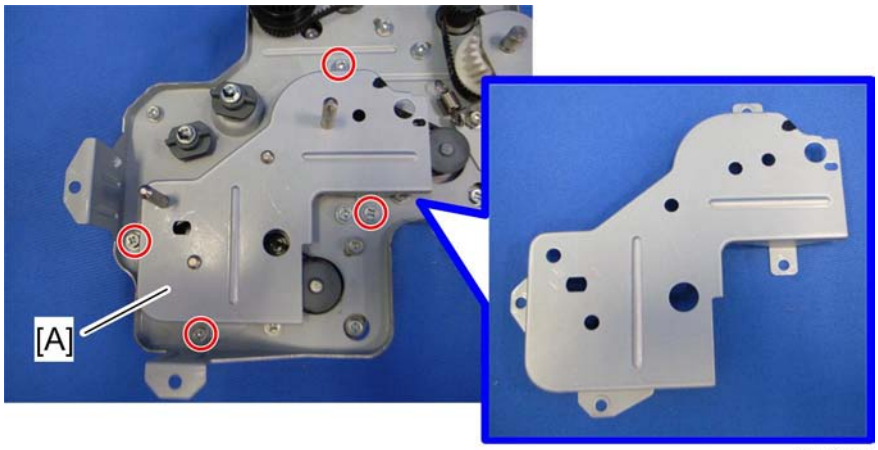
4.10.11 VERTICAL TRANSPORT MOTOR

1. Rear lower cover (☛ p.4-18)
2. PSU box (☛ p.4-208)
3. Motors with bracket (☛ p.4-98)



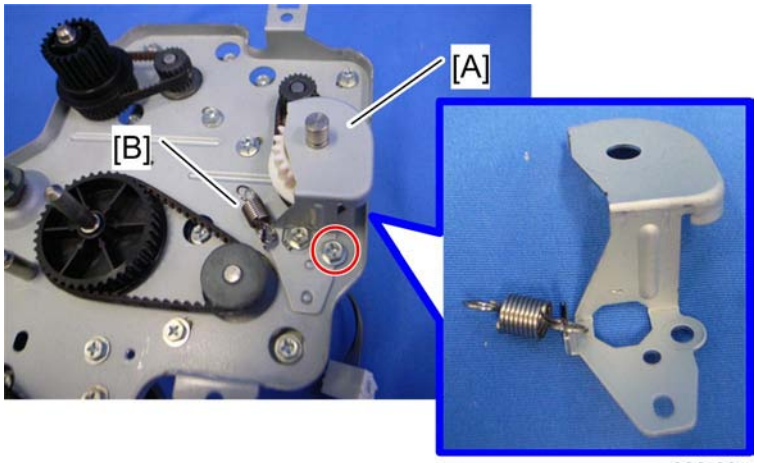
m022r602

4. Gear with bracket [A] (x 1)



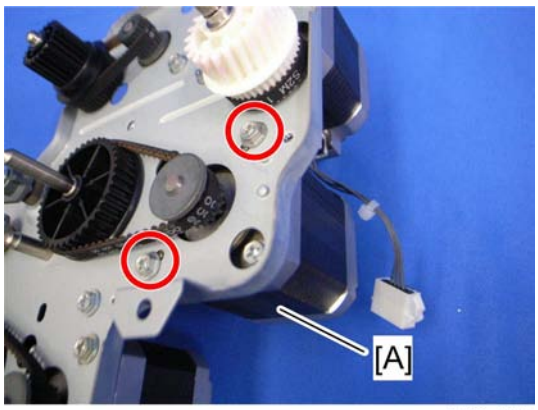
m022r603

5. Bracket [A] (x 4)



m022r605

6. Remove the bracket [A] and the spring [B].

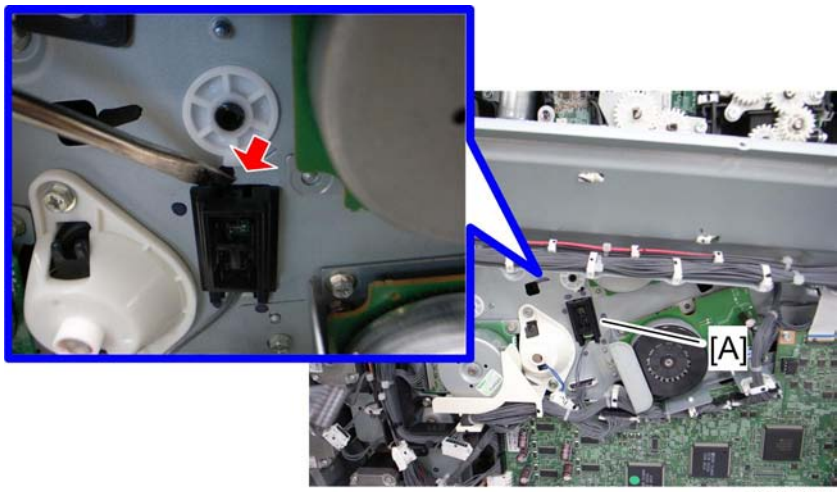


m022r606

7. Vertical transport motor [A] (x 2)

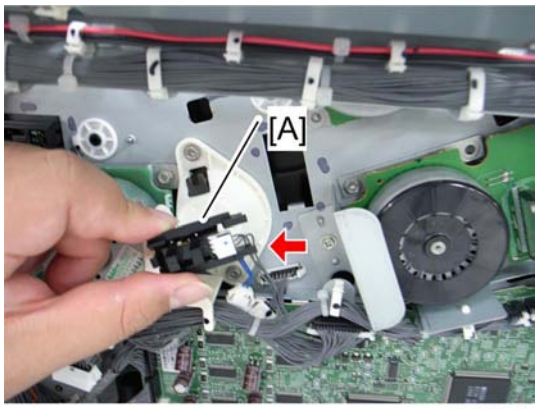
4.10.12 DRUM PHASE SENSOR: CMY

1. Rear cover (☛ p.4-19)
2. Rear lower cover (☛ p.4-18)
3. Right rear cover (☛ p.4-20)
4. Controller box (☛ p.4-195)
5. Fusing rear fan base (☛ p.4-91 "Gear Unit")
6. Drive unit fan base (☛ p.4-91 "Gear Unit")
7. PSU box (☛ p.4-208)
8. Stay (☛ p.4-91 "Gear Unit")



m022r785

9. Push the hook, and then release the sensor holder [A].



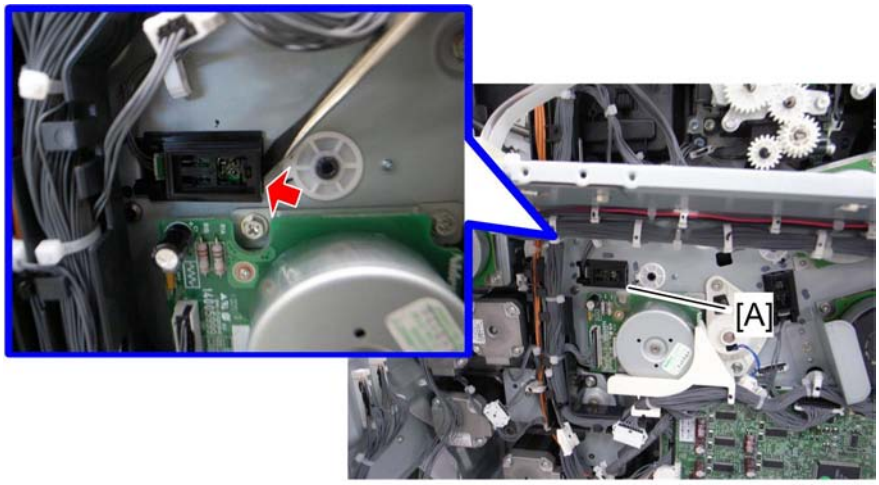
m022r786

10. Drum phase sensor: CMY [A] (x 1, hooks)

4.10.13 DRUM PHASE SENSOR: K

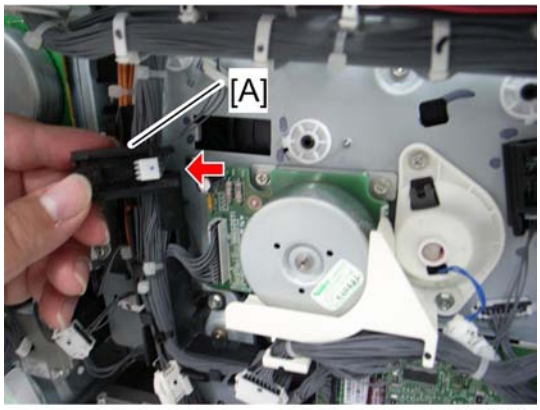
1. Rear cover (☛ p.4-19)
2. Rear lower cover (☛ p.4-18)
3. Right rear cover (☛ p.4-20)
4. Controller box (☛ p.4-195)

5. Fusing rear fan base (☛ p.4-91 "Gear Unit")
6. Drive unit fan base (☛ p.4-91 "Gear Unit")
7. PSU box (☛ p.4-208)
8. Stay (☛ p.4-91 "Gear Unit")



m022r787

9. Push the hook, and then release the sensor holder [A].

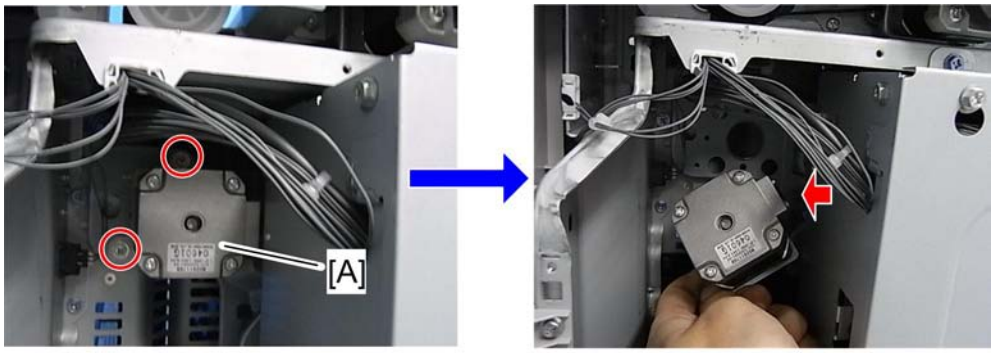


m022r788

10. Drum phase sensor: K [A] (x 1, hooks)

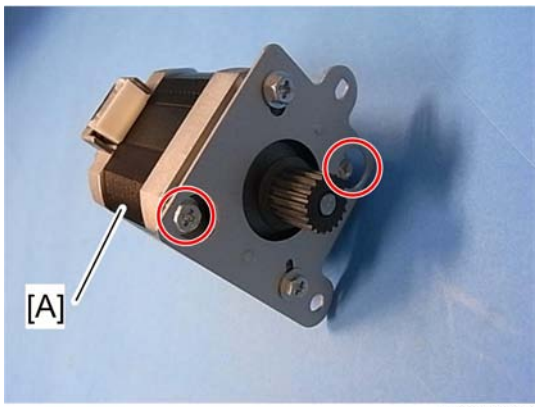
4.10.14 INVERTER MOTOR

1. Rear cover (☛ p.4-19)



m022r861

2. Inverter motor base [A] (x 2, x 1)

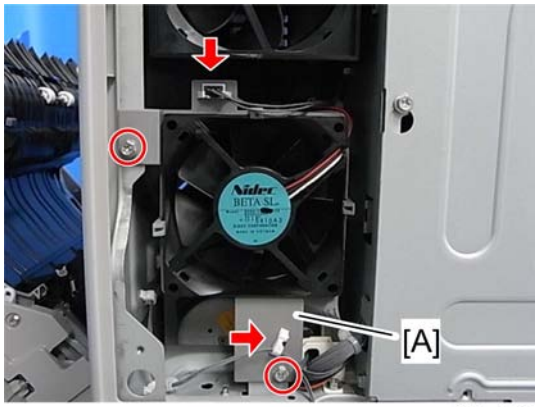


m022r862

3. Inverter motor [A] (x 2)

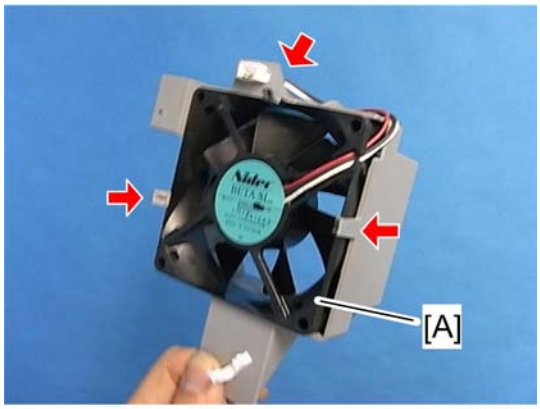
4.10.15 DRIVE UNIT FAN

1. Rear cover (p.4-19)



m022r859

2. Drive unit fan base [A] (x 2, x 1, x 1)



m022r860

3. Drive unit fan [A] (x 1, hooks)

When installing the drive unit fan

Make sure that the drive unit fan is installed with its decal facing the rear of the machine.

4.11 FUSING

4.11.1 FUSING UNIT MAINTENANCE PARTS

In the fusing unit, there are some maintenance parts. However, these parts are defined as yield parts. Refer to the following list to check the maintenance parts.

Maintenance Parts	Replacement Procedure
Pressure Roller -Bearing	☛ p.4-114 "Pressure Roller"
Fusing Roller -Bearing	☛ p.4-120 "Fusing Belt"

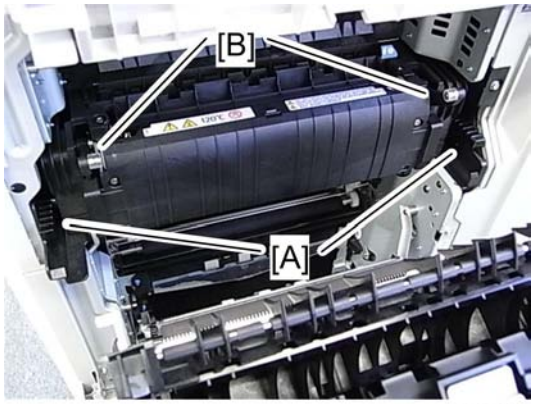
4.11.2 FUSING UNIT

If you replace a fusing unit, then you must reset the PM counter for this unit. To do this, set SP 3902 014 to 1 before you start to work on the machine.

⚠CAUTION

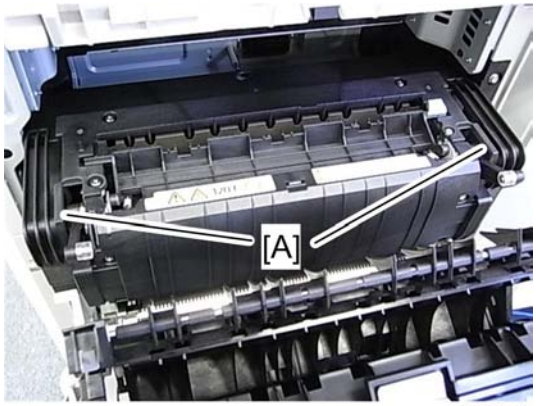
- Turn off the main switch and wait until the fusing unit cools down before beginning any of the procedures in this section. The fusing unit can cause serious burns.

1. Open the duplex unit.



m022r878

2. Release the lock levers [A].
3. Pull out the pressure levers [B] a short distance.



m022r879

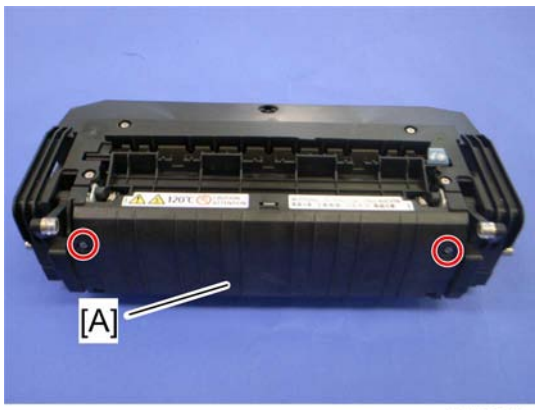
4. Hold the fusing unit handles [A], and then pull out the fusing unit.

When installing the fusing unit

Make sure that the both lock levers are locked before closing the duplex unit. Otherwise, these lock levers can be broken.

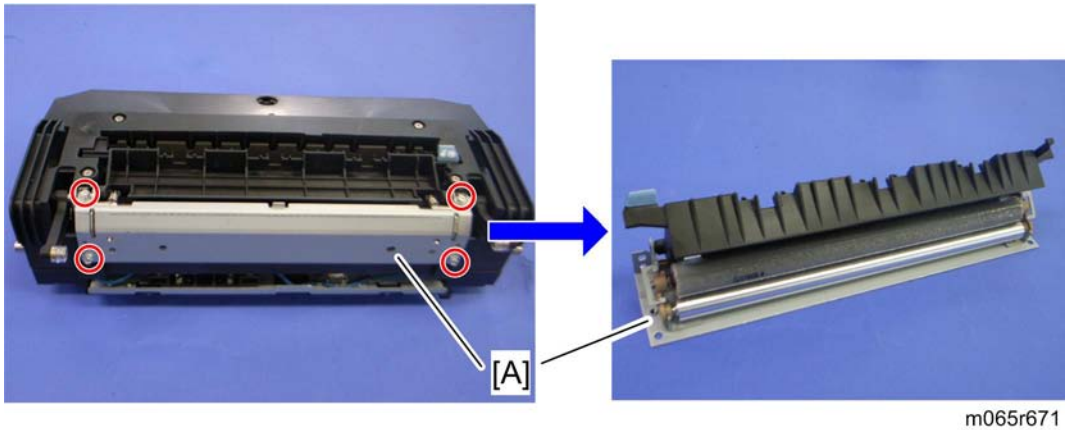
4.11.3 CLEANING UNIT

1. Fusing unit (☛ p.4-107)



m065r667

2. Fusing front cover [A] (x 2)

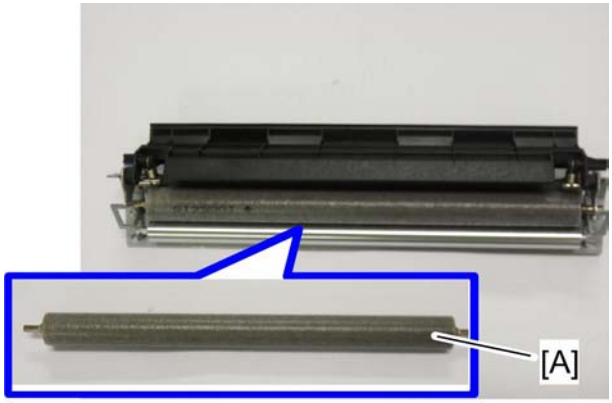


m065r671

3. Cleaning unit [A] (x 4)

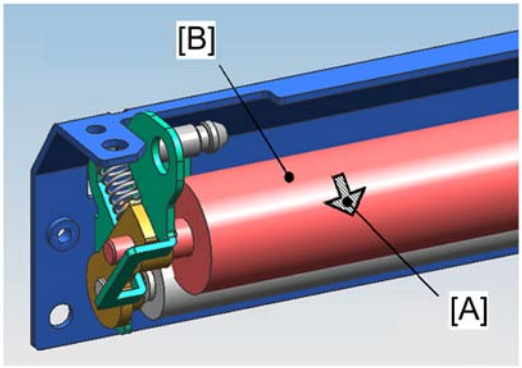
4.11.4 OIL SUPPLY ROLLER

1. Cleaning unit (☛ p.4-109)



m022r779

2. Oil supply roller [A]



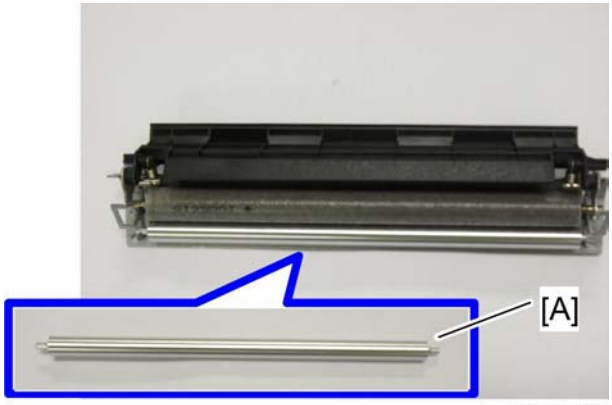
m022r886

Note

- Check the arrow [A] and install the oil supply roller [B] the correct way around. If not correct, the film on the oil supply roller will come off.

4.11.5 CLEANING ROLLER

1. Cleaning unit (☛ p.4-109)

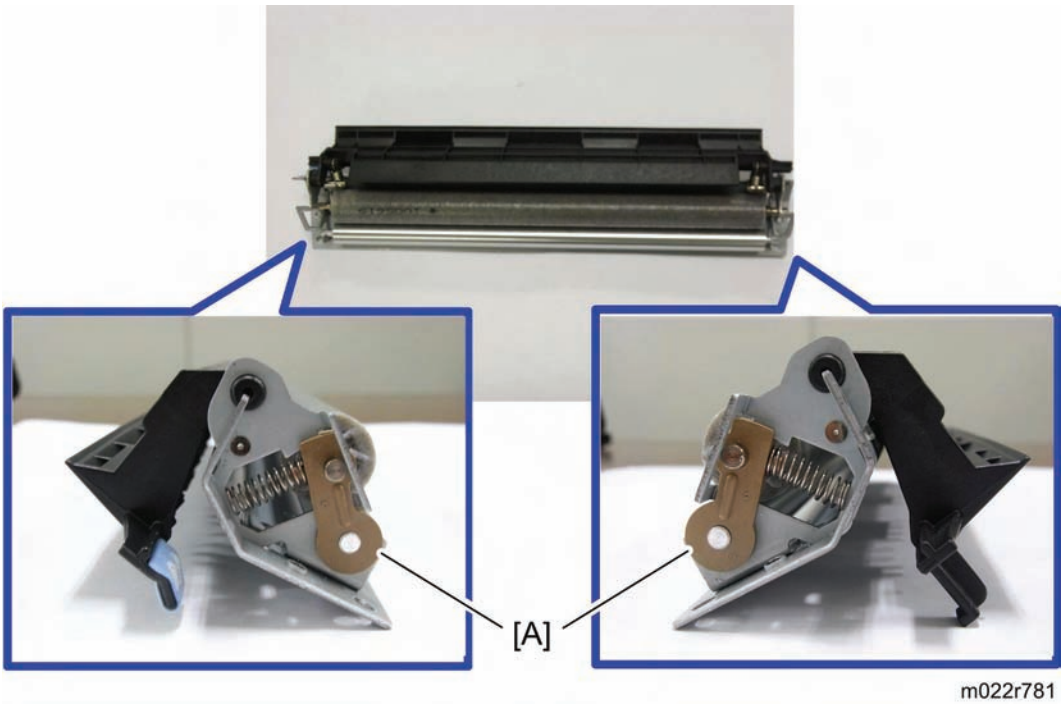


m022r780

2. Cleaning roller [A]

4.11.6 PLAIN SHAFT BEARING

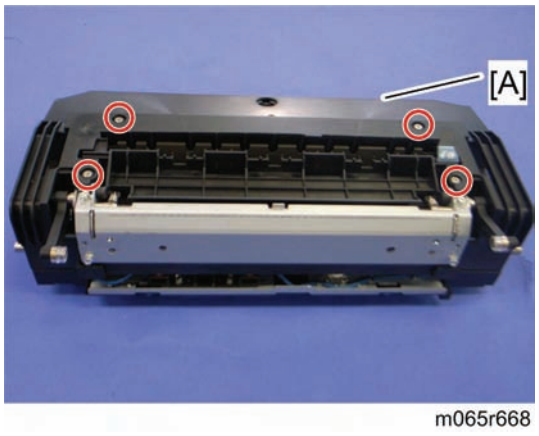
1. Cleaning unit (☛ p.4-109)



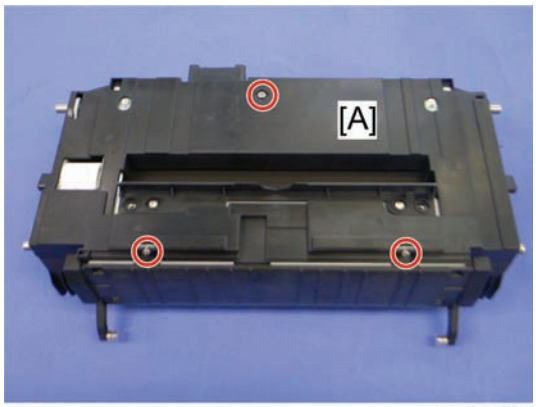
2. Plain shaft bearing [A]

4.11.7 PRESSURE ROLLER FUSING LAMP

1. Fusing front cover (☛ p.4-109)

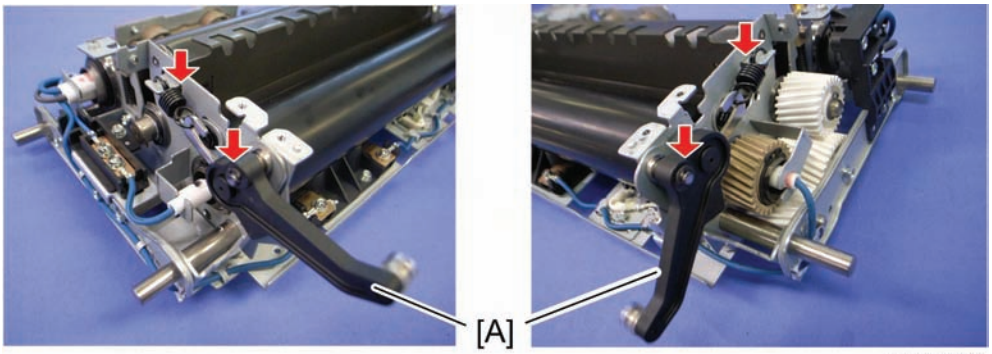


2. Fusing upper cover [A] (x 4)



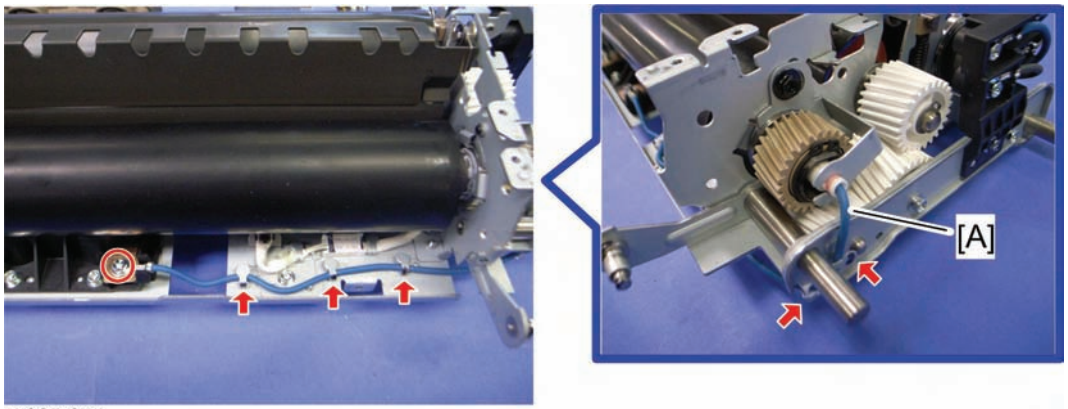
m065r665

3. Fusing lower cover [A] (x 3)
4. Cleaning unit (p.4-109)



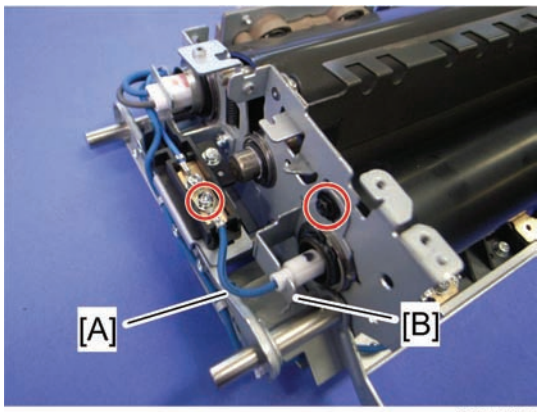
m065r674

5. Pressure levers [A] (x 1 each, spring x 1 each)



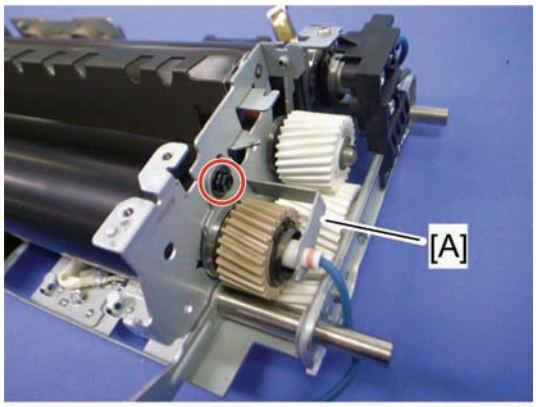
m065r675

6. Release the fusing lamp harness [A] at the right side (x 1, x 5).



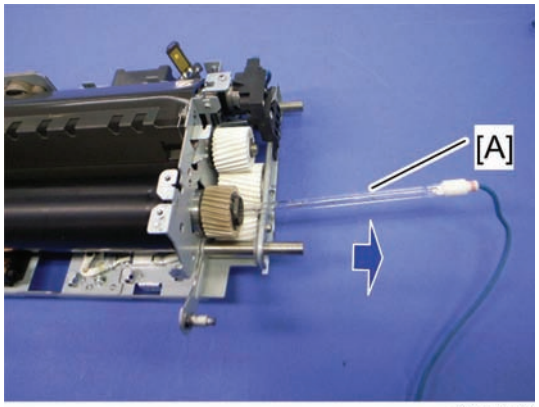
m065r677

7. Release the fusing lamp harness [A] at the left side (x 1).
8. Lamp holder [B] (x 1)



m065r676

9. Remove the fusing lamp holder [A] at the right side (x 1).

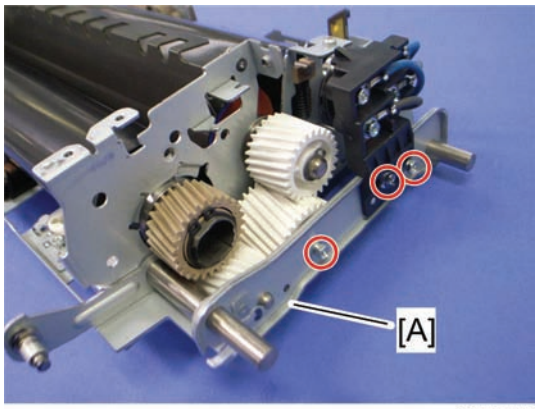


m065r678

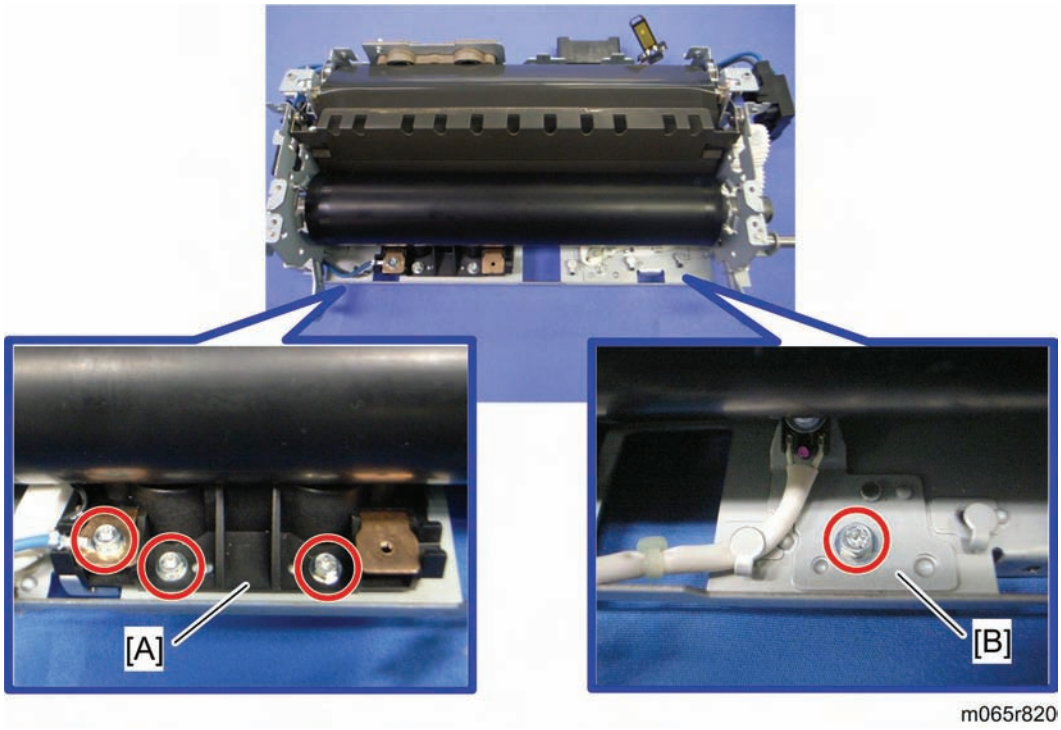
10. Pressure roller fusing lamp [A]

4.11.8 PRESSURE ROLLER

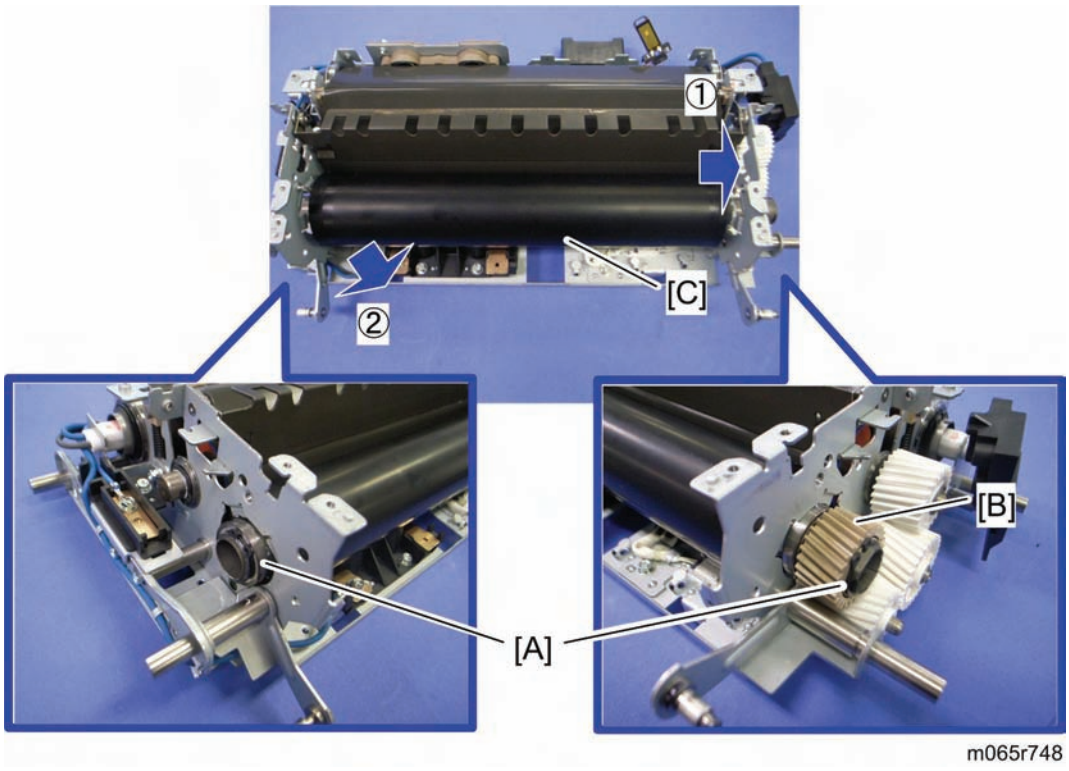
1. Pressure roller fusing lamp (☛ p.4-111)



2. Right stay [A] (🔩 x 3)



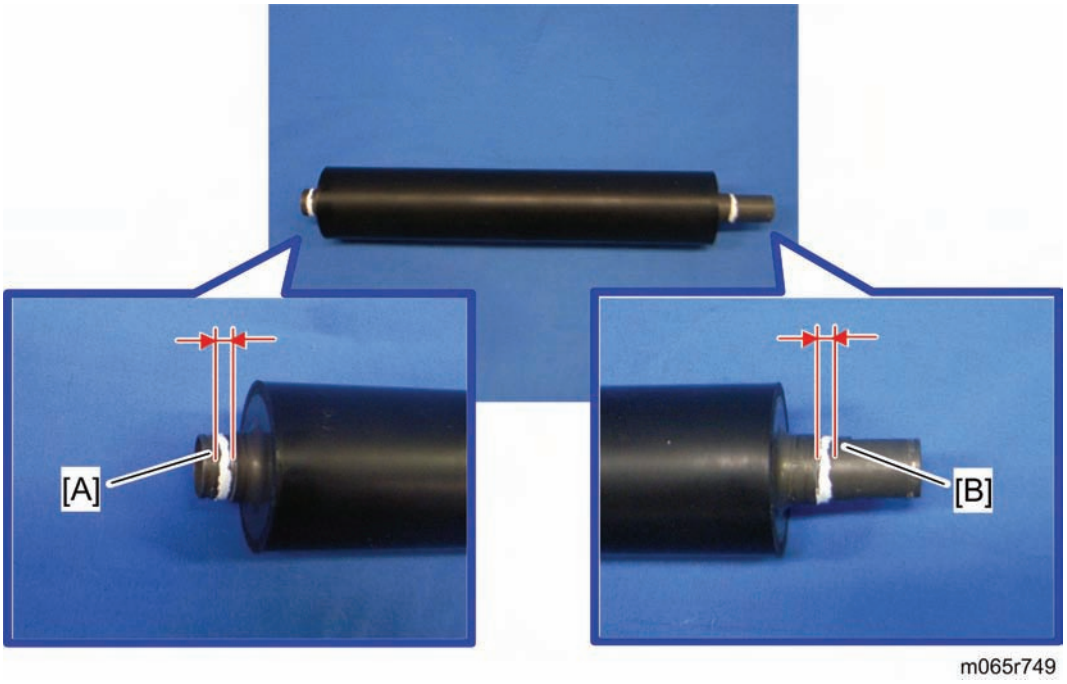
3. Thermostat holder [A] and thermistor bracket [B] (🔩 x 4)



4. Remove the C-rings, bearings [A], and gear [B].
5. Pressure roller [C]

When Reinstalling the Pressure Roller

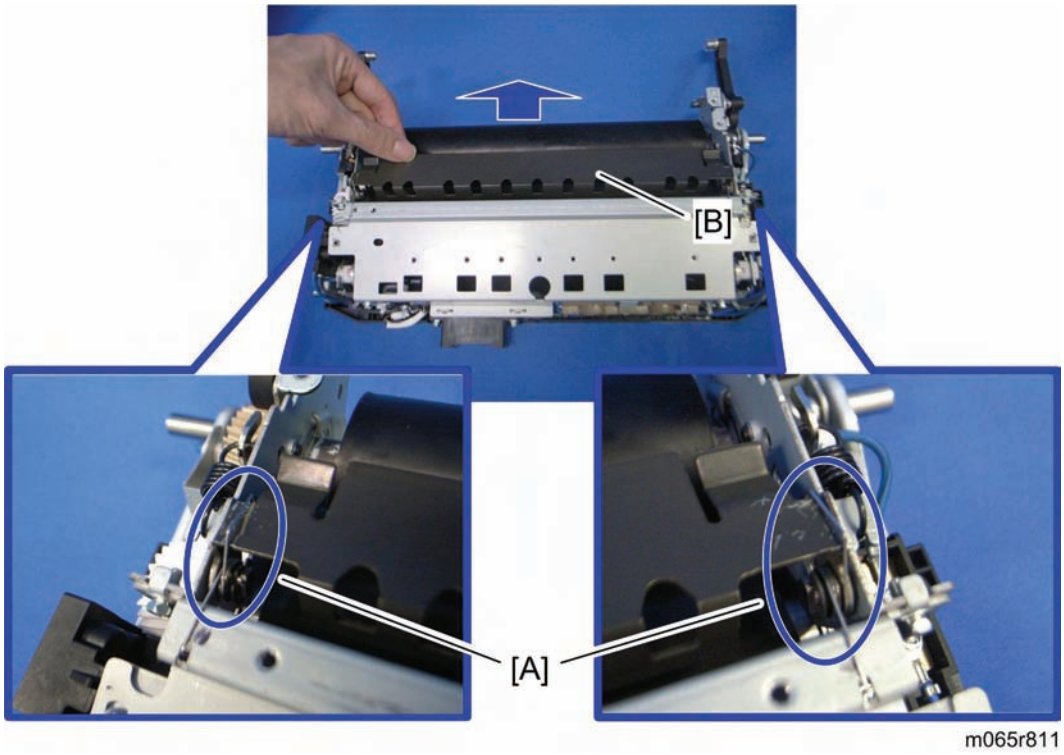
When replacing the pressure roller, you have to apply lubricant to the following places.



- Apply "Barrierta S552R" (0.15g to 0.25g) to the left end [A] and right end [B] of the pressure roller as shown above.

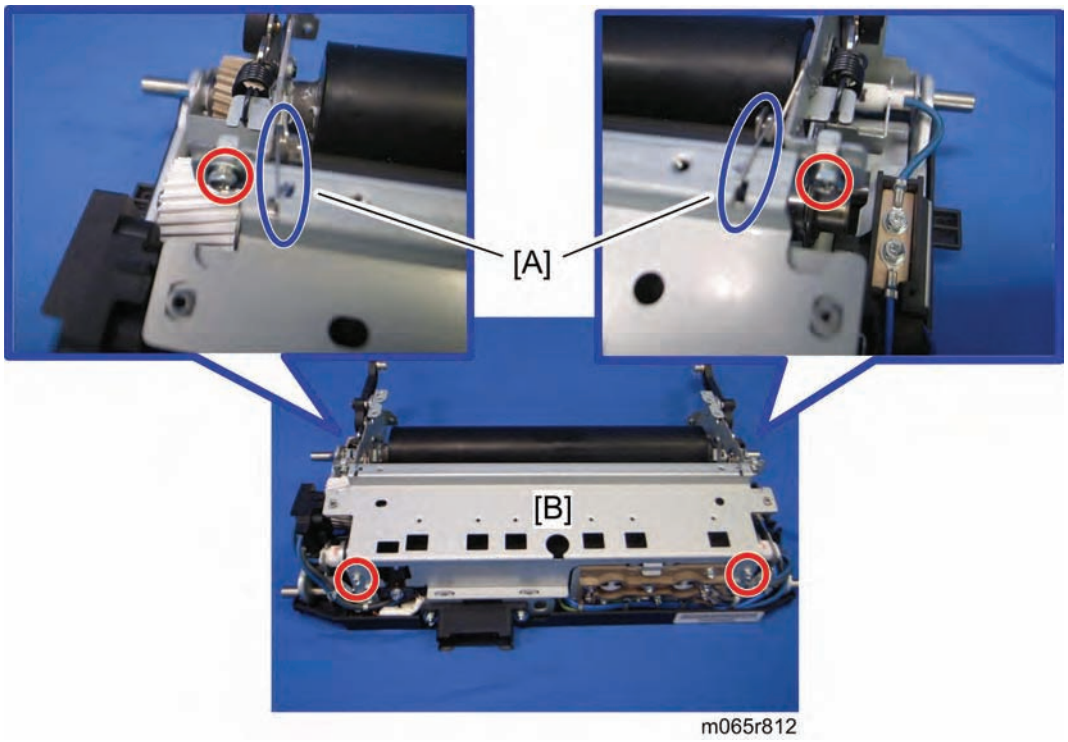
4.11.9 HEATING ROLLER FUSING LAMP

1. Fusing unit (☛ p.4-107)
2. Fusing lower cover (☛ p.4-111 "Pressure Roller Fusing Lamp")
3. Cleaning unit (☛ p.4-109)
4. Fusing upper cover (☛ p.4-111 "Pressure Roller Fusing Lamp")



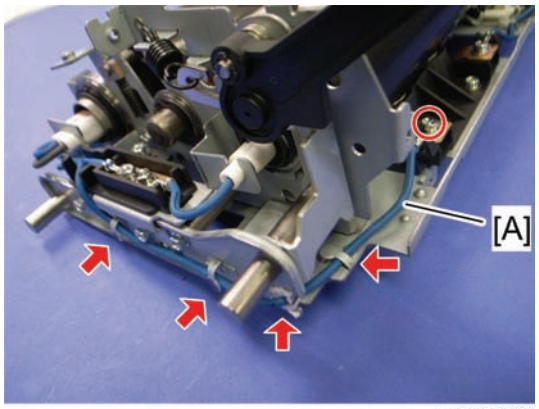
m065r811

5. Release the pins [A], and then remove the stripper plate [B].



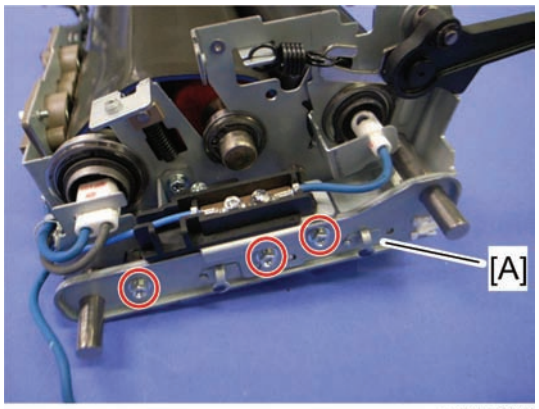
m065r812

6. Release the pins [A], and then remove the bracket [B] (x 4).



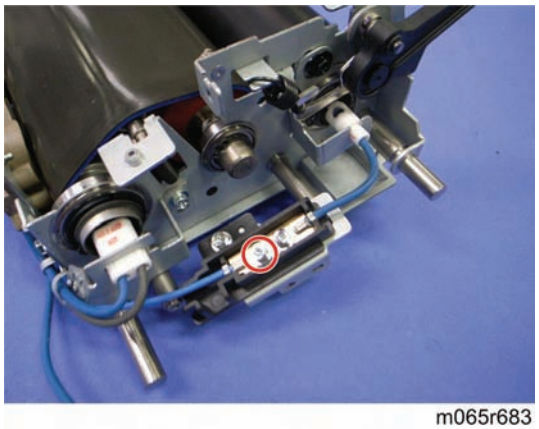
m065r681

7. Release the fusing lamp harness [A] at the left side (x 1, x 4).



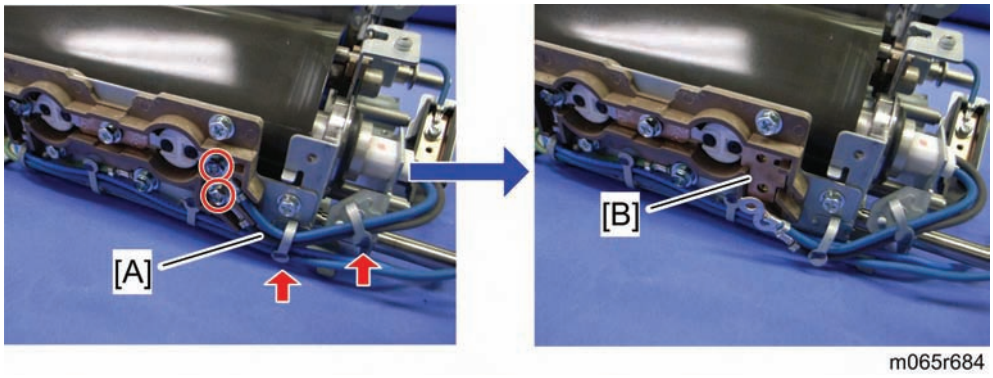
m065r682

8. Left stay [A] (x 3)



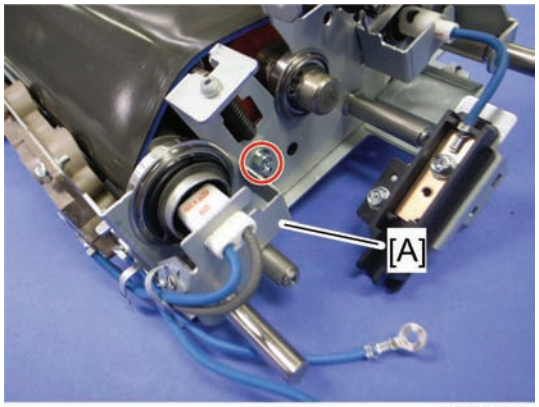
m065r683

9. Remove the screw.



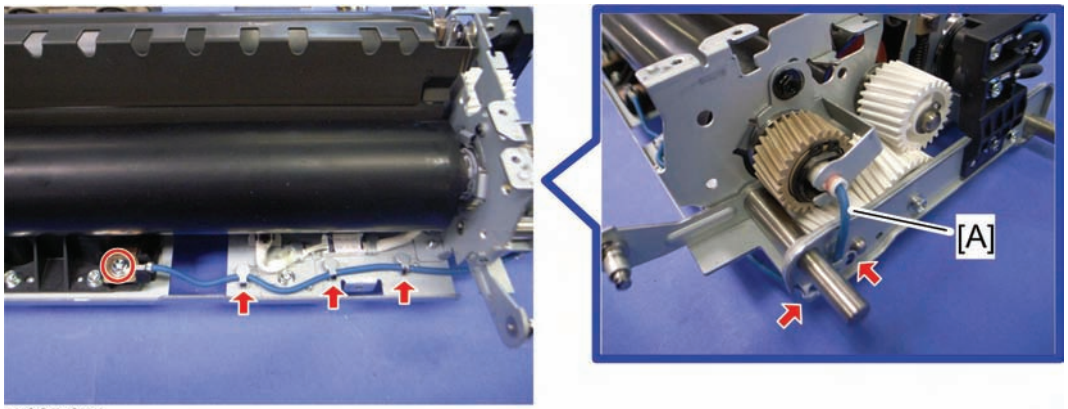
m065r684

10. Release the fusing lamp harnesses [A], and then remove the plate [B] (x 2, x 2).



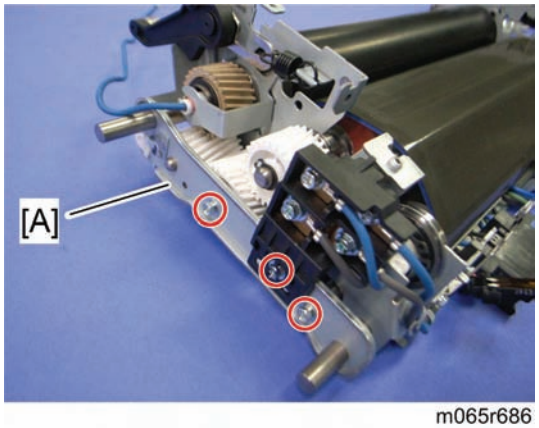
m065r685

11. Remove the fusing lamp holder [A] (x 1).



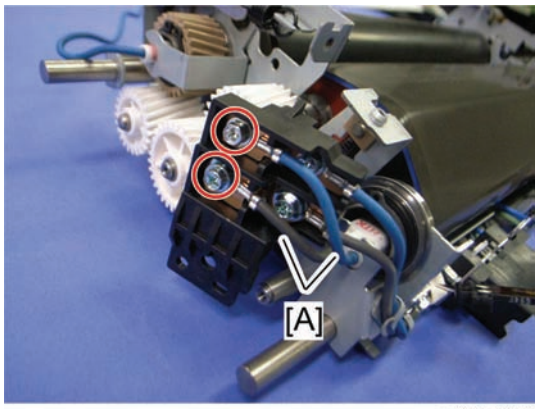
m065r675

12. Release the fusing lamp harness [A] at the right side (x 1, x 5).



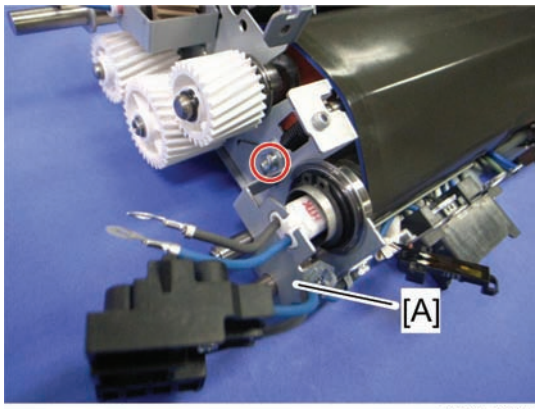
m065r686

13. Right stay [A] (x 3)



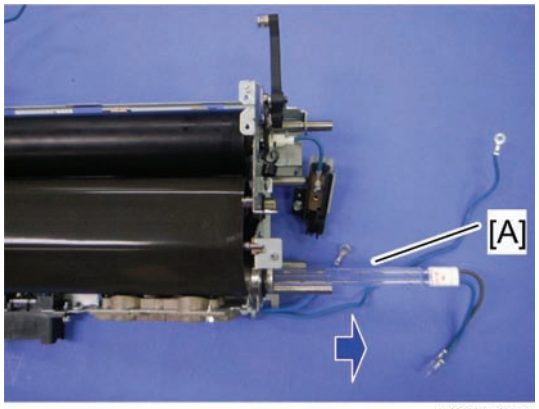
m065r687

14. Release the fusing lamp harnesses [A] (x 2).



m065r688

15. Lamp holder [A] (x 1)



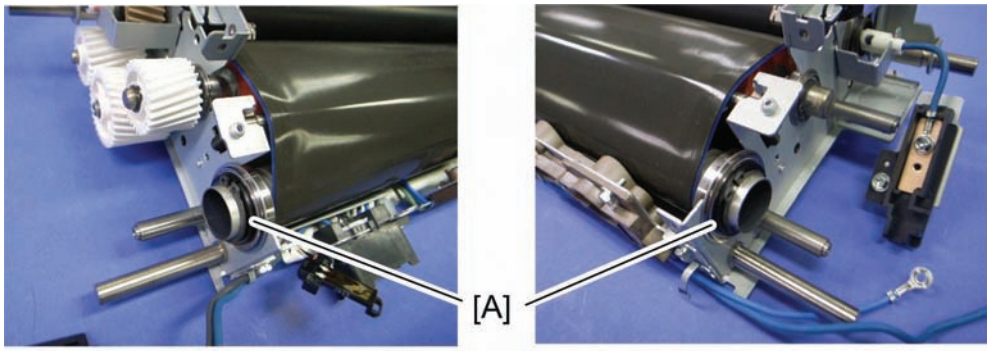
m065r689

16. Heating roller fusing lamp [A]

4.11.10 FUSING BELT

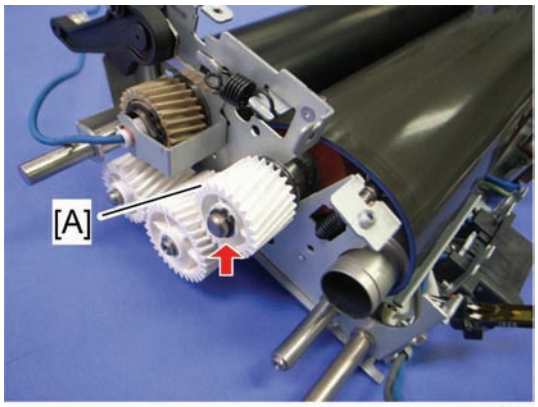
If you replace a fusing belt, then you must reset the PM counter for this unit. To do this, set SP 3902 016 to 1 before you start to work on the machine.

1. Heating roller fusing lamp (☛ p.4-116)



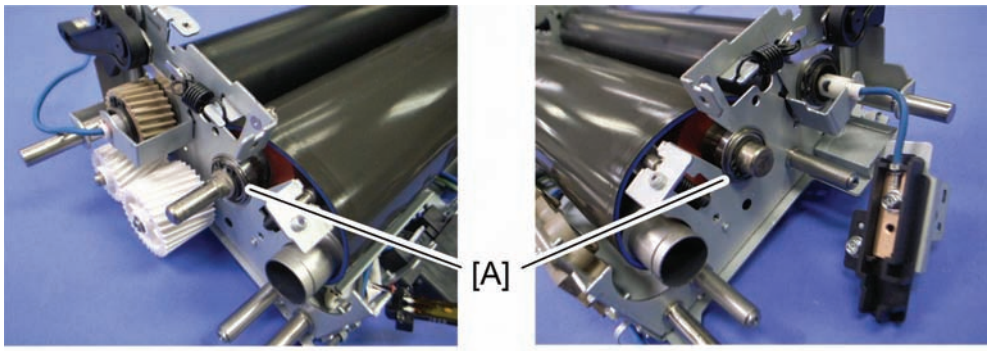
m065r750

2. C-rings and bearings [A]



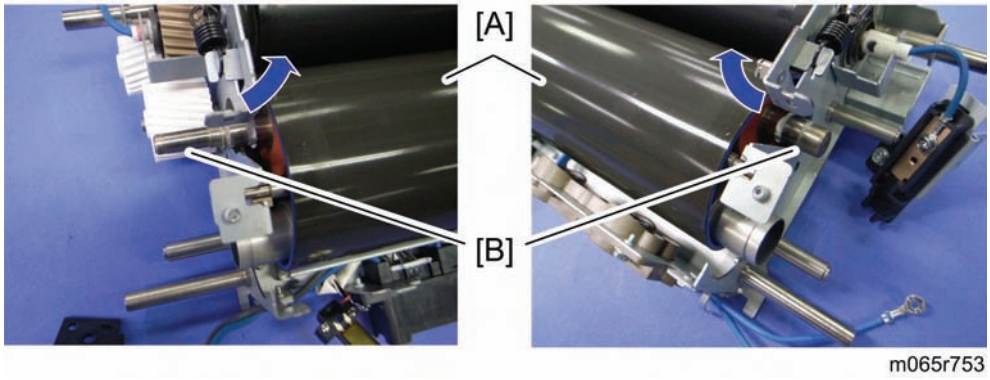
m065r751

3. Gear [A] at the left side (C-ring x 1)



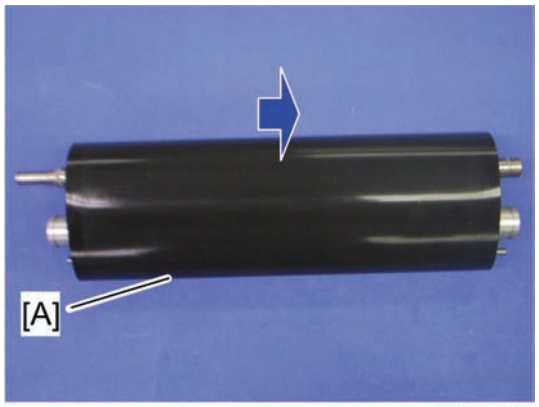
m065r752

4. C-rings and bearings [A]



m065r753

5. Remove the fusing belt [A] with rollers, lifting the shafts [B] up.



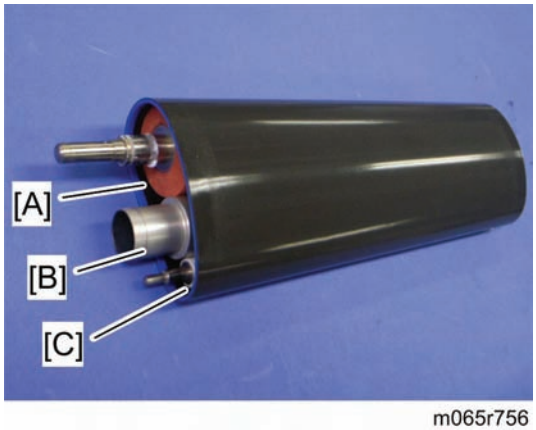
m065r754

6. Fusing belt [A]

4.11.11 FUSING, HEATING AND TENSION ROLLER

If you replace a fusing roller, then you must reset the PM counter for this unit. To do this, set SP 3902 015 to 1 before you start to work on the machine.

1. Fusing belt with rollers (☛ p.4-120 "Fusing Belt")

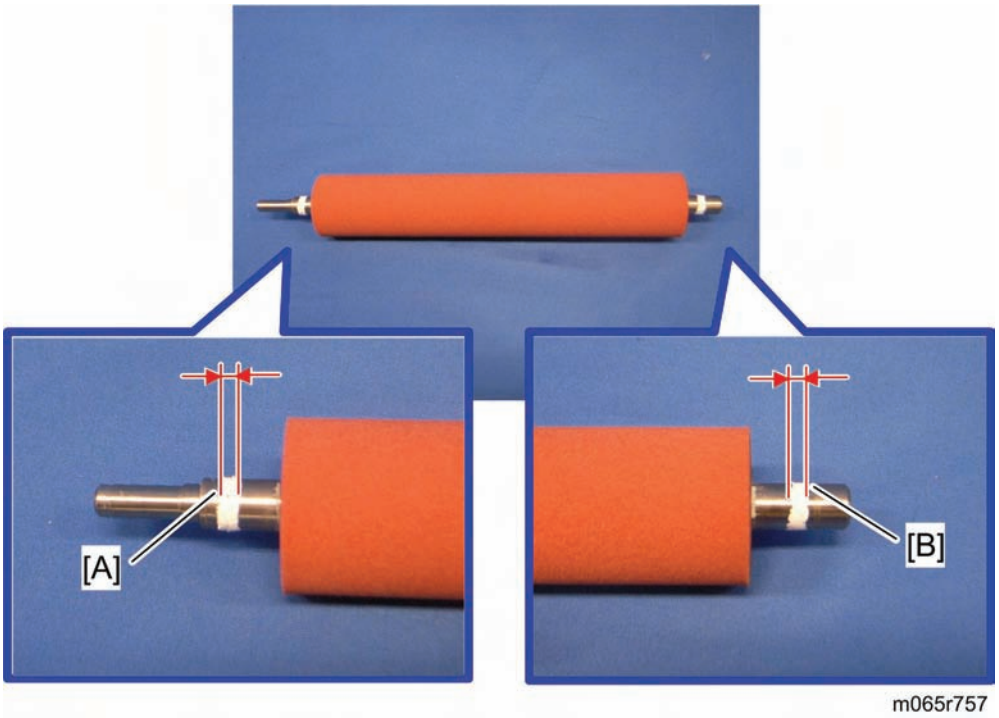


m065r756

2. Fusing roller [A], heating roller [B] and tension roller [C]

When Reinstalling the Fusing Roller

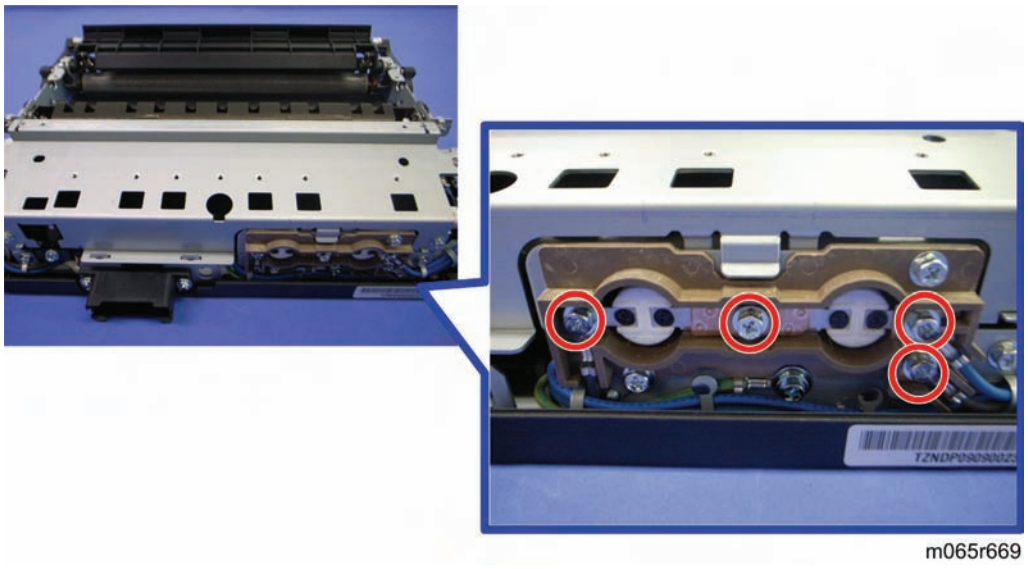
When replacing the fusing roller, you have to apply lubricant to the following places.



- Apply "Barrierta S552R" (0.1g to 0.2g) to the left end [A] and right end [B] of the fusing roller as shown above.

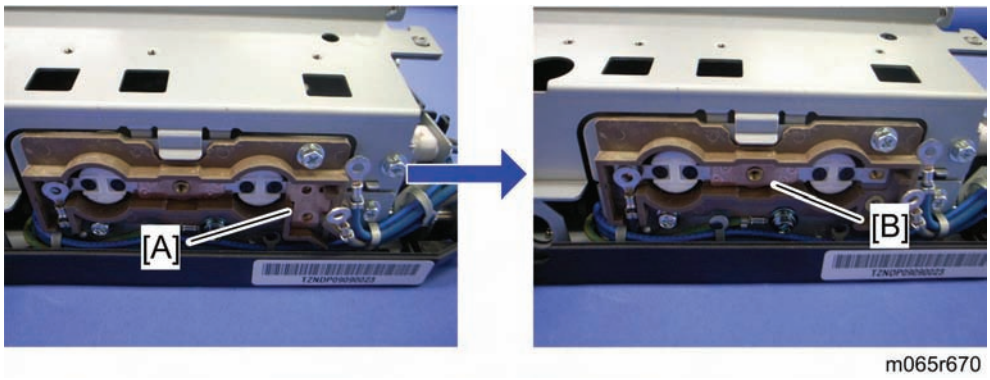
4.11.12 HEATING ROLLER THERMOSTAT

1. Fusing front cover (☛ p.4-109 "Cleaning Unit")
2. Fusing upper cover (☛ p.4-111)



m065r669

3. Remove the four screws.



m065r670

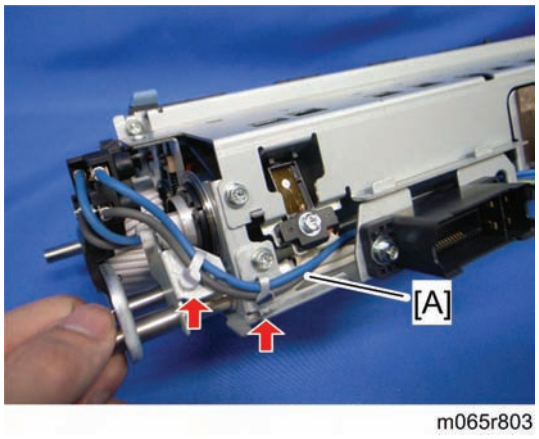
4. Remove the plate [A], and then remove the heating roller thermostats [B].

⚠CAUTION

- Do not re-use a thermostat that is already opened. Safety is not guaranteed if you do this.

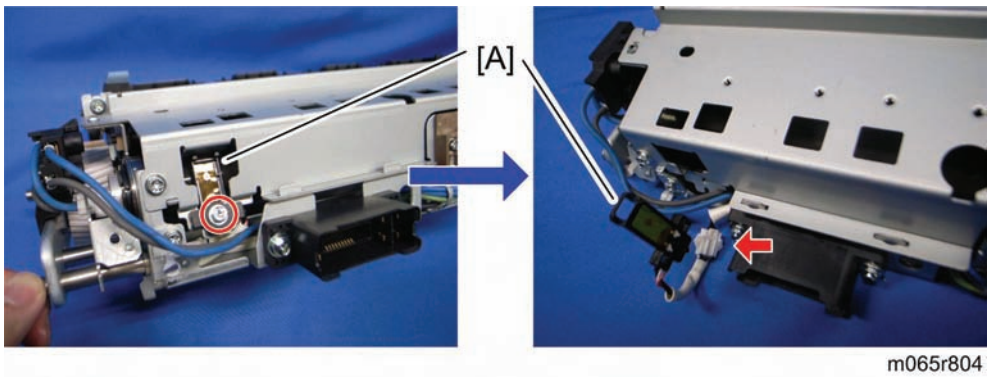
4.11.13 HEATING ROLLER THERMISTOR

1. Fusing front cover (☛ p.4-109 "Cleaning Unit")
2. Fusing upper cover (☛ p.4-111)
3. Fusing lower cover (☛ p.4-111)



m065r803

4. Release the harness [A] (x 2).

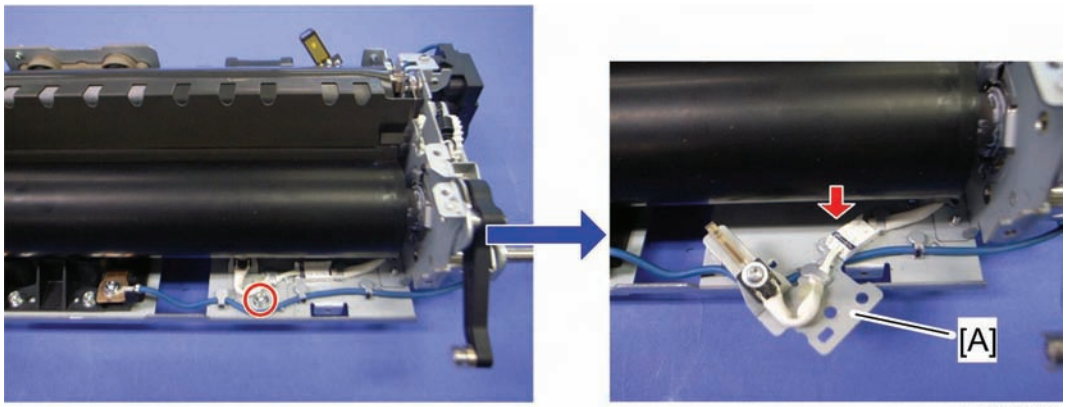


m065r804

5. Heating roller thermistor [A] (x 1, x 1)

4.11.14 PRESSURE ROLLER THERMISTOR

1. Cleaning unit (p.4-109)



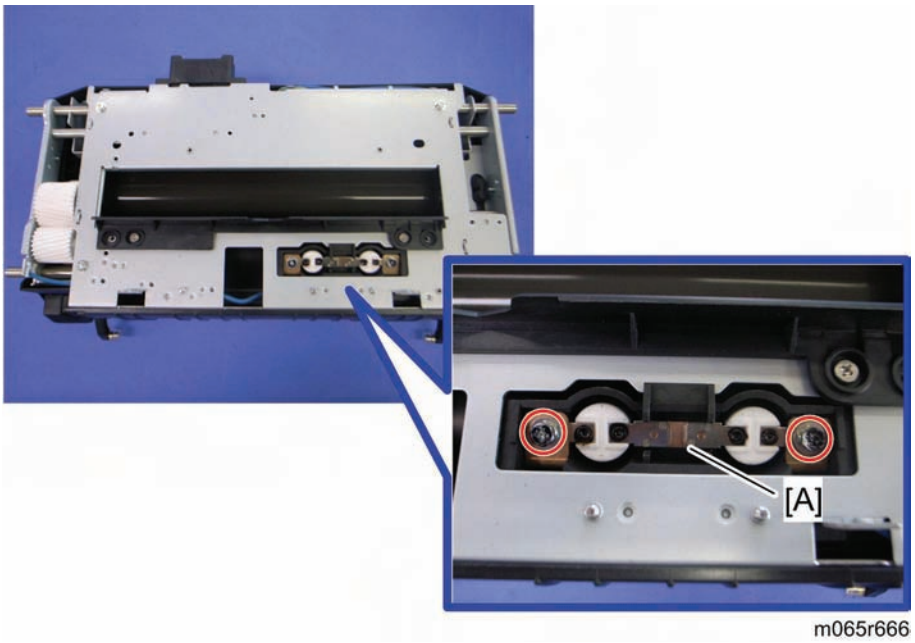
m065r672

2. Thermistor assembly [A] (x 1, x 1)

3. Pressure roller thermistor [A] (x 1, x 1)

4.11.15 PRESSURE ROLLER THERMOSTAT

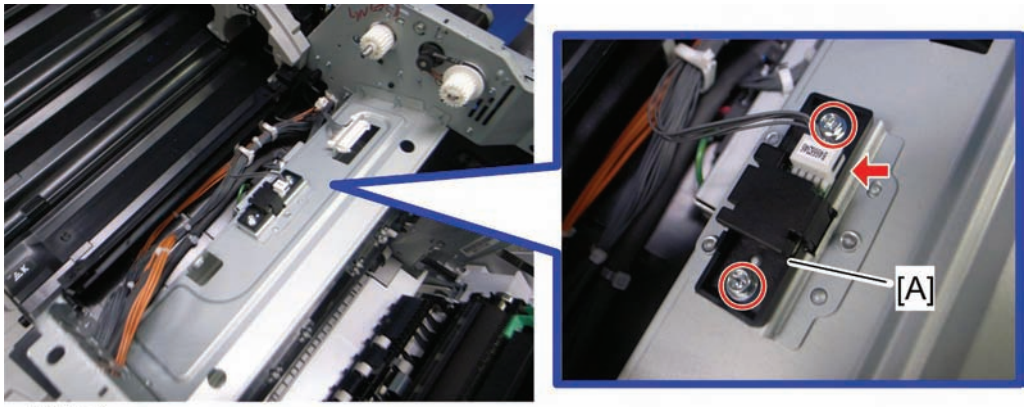
1. Fusing lower cover (☛ p.4-111)



2. Pressure roller thermostats [A] (x 2)

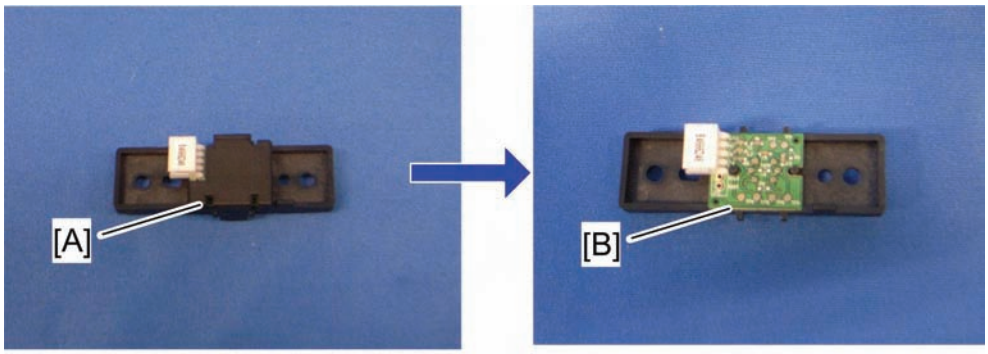
4.11.16 THERMOPILE

1. Paper exit unit (☛ p.4-138)



m065r549

2. Thermopile base [A] (x 2, x 1)

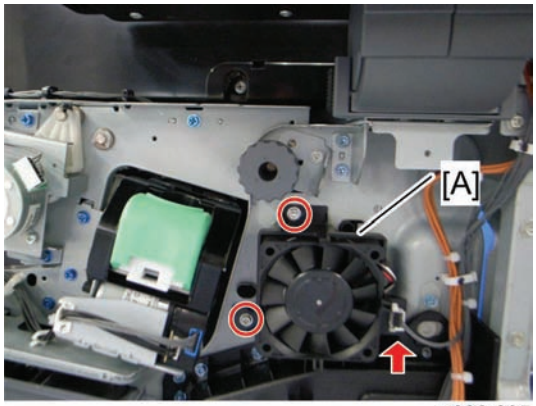


m065r550

3. Thermopile cover [A] (hooks)
4. Thermopile [B]

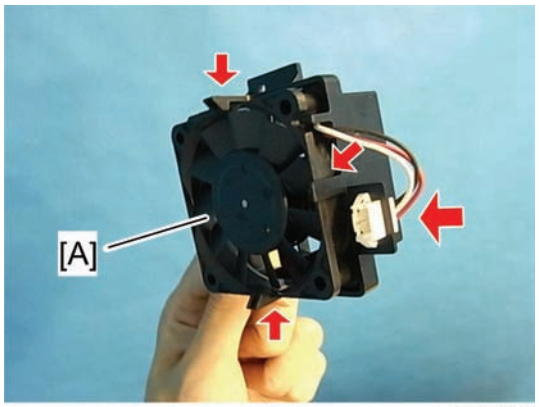
4.11.17 FUSING FRONT FAN

1. Inner right cover (☛ p.4-27)



m022r835

2. Fusing front fan base [A] (x 2, x 1)



m022r836

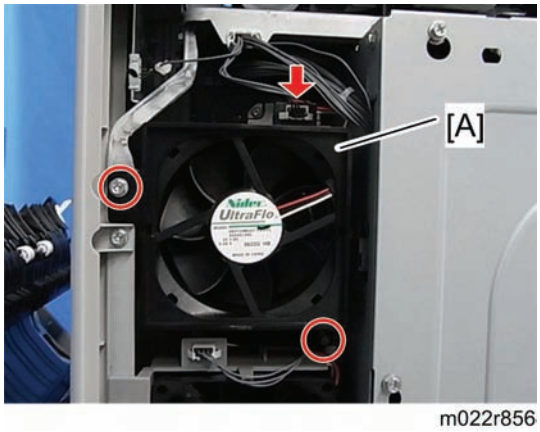
3. Fusing front fan [A] (x 1, hooks)

When installing the fusing front fan

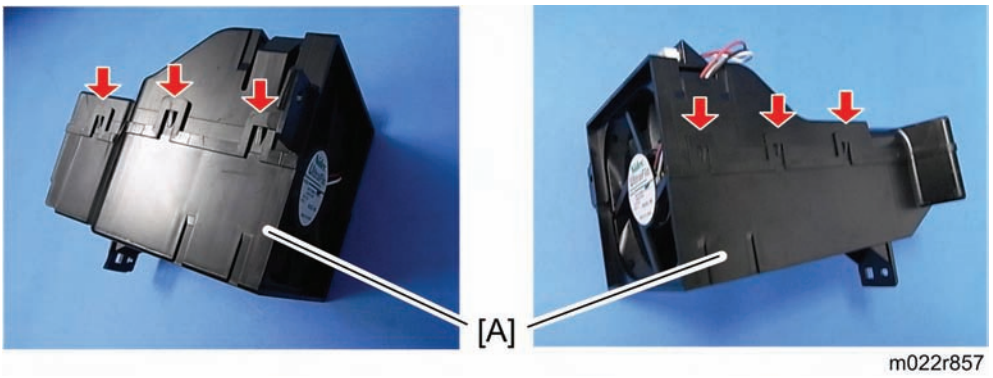
Make sure that the fusing front fan is installed with its decal facing the rear of the machine.

4.11.18 FUSING REAR FAN

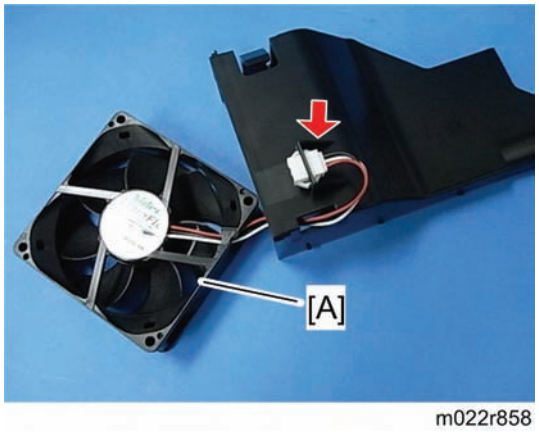
1. Rear cover (☛ p.4-19)



2. Fusing rear fan base [A] (x 2, x 1)



3. Fusing rear fan cover [A] (hooks)



4. Fusing rear cover [A] (x 1)

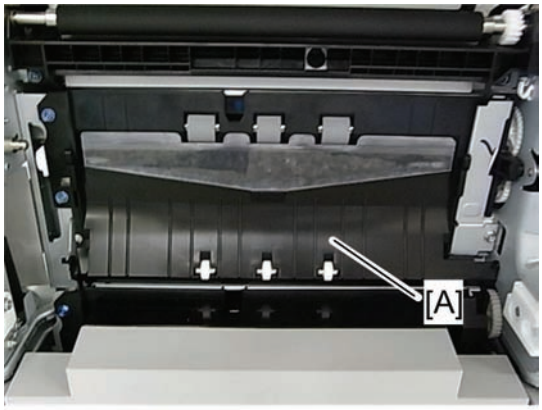
When installing the fusing rear fan

Make sure that the fusing rear fan is installed with its decal facing the rear of the machine.

4.12 PAPER FEED

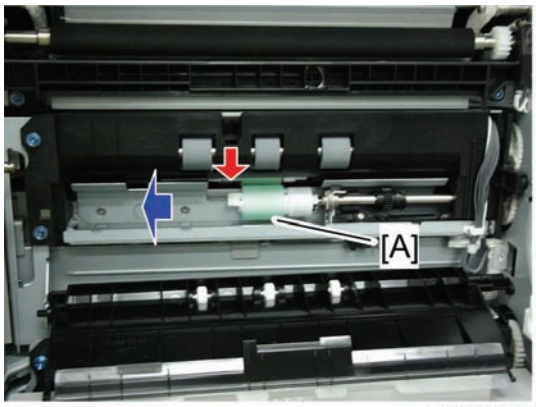
4.12.1 SEPARATION ROLLER

1. Pull out the paper tray.
2. Duplex unit (☛ p.4-146)



m022r654

3. Open the guide plate [A].

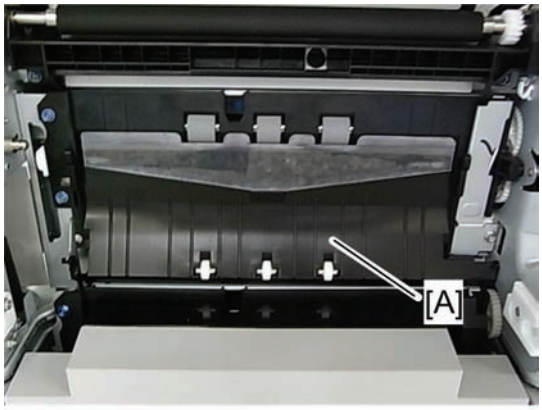


m022r655a

4. Separation roller [A] (⟲ x 1).

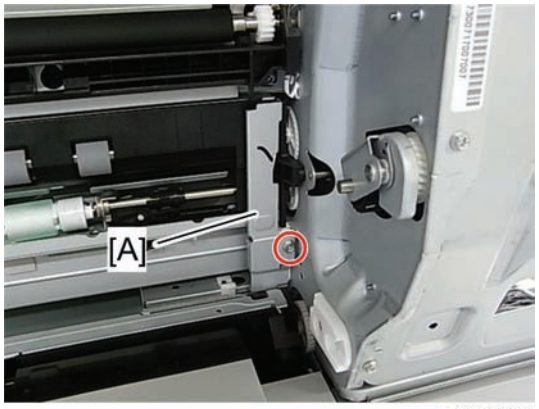
4.12.2 PAPER FEED UNIT

1. Pull out the paper tray.
2. Duplex unit (☛ p.4-146)



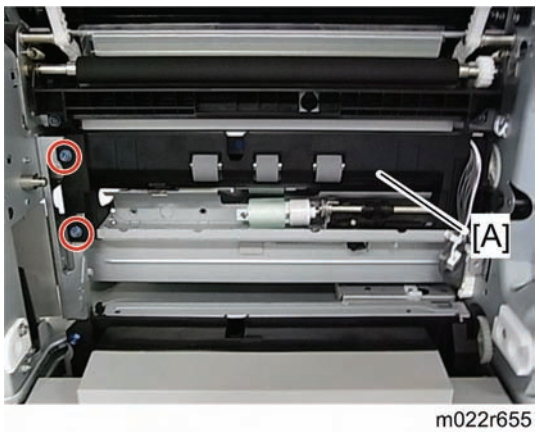
m022r654

3. Guide plate [A]



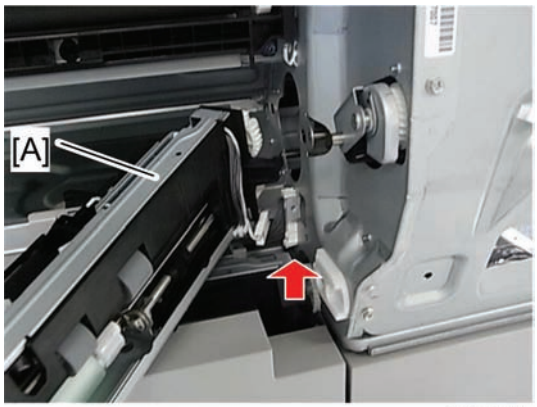
m022r894

4. Bracket [A] (🔩 x 1)



m022r655

5. Release the paper feed unit [A] (🔩 x 2).

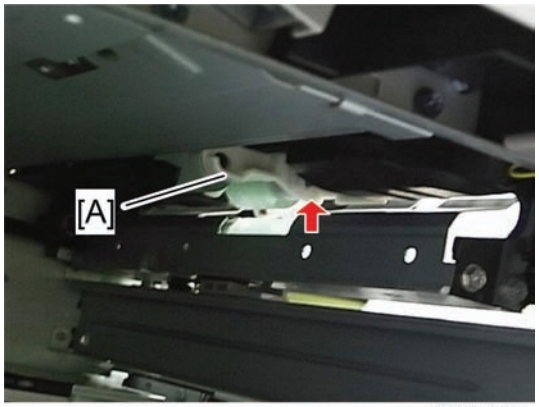


m022r651a

6. Paper feed unit [A] (x 1)

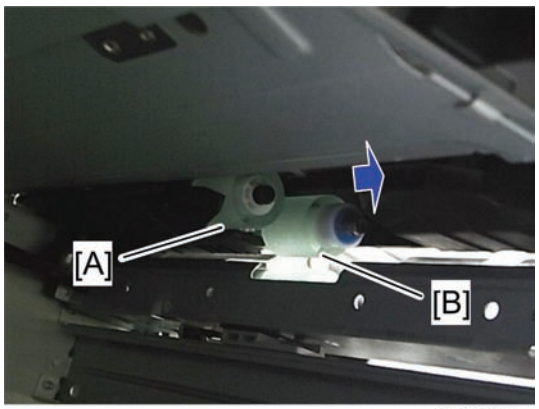
4.12.3 PICK-UP AND PAPER FEED ROLLERS

1. Pull out the paper tray.



m022r614a

2. Roller holder [A] (x 1)

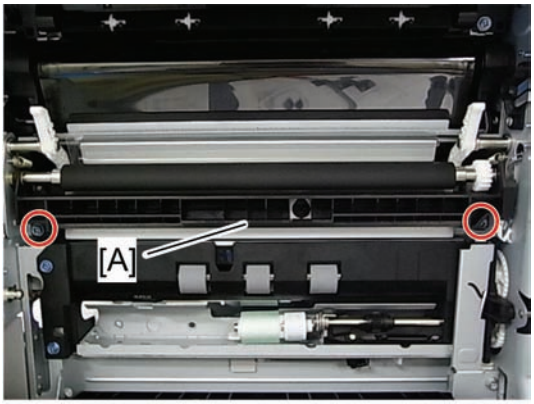


m022r615a

3. Pick-up roller [A]
4. Paper feed roller [B]

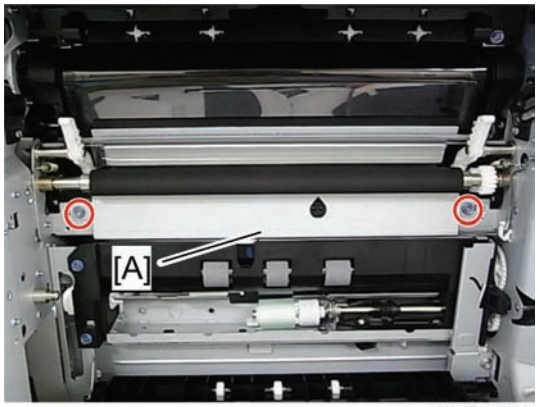
4.12.4 REGISTRATION SENSOR

1. Duplex unit (☛ p.4-146)



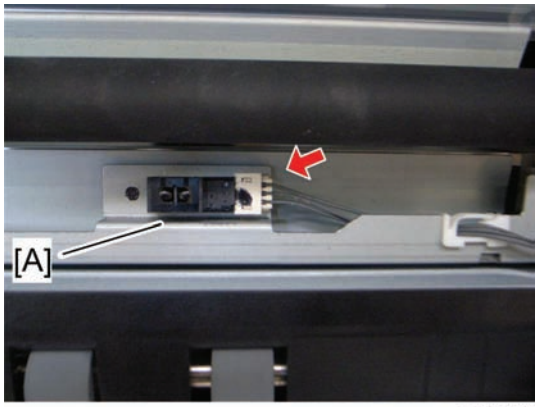
m022r646a

2. Registration roller guide [A] (x 2)



m022r647a

3. Bracket [A] (x 2)

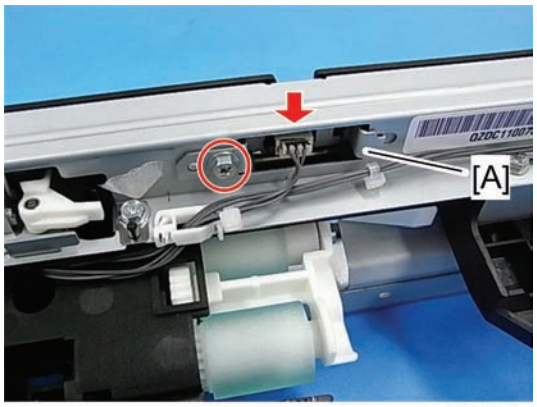


m065r648

4. Registration sensor [A] (x 1, hooks)

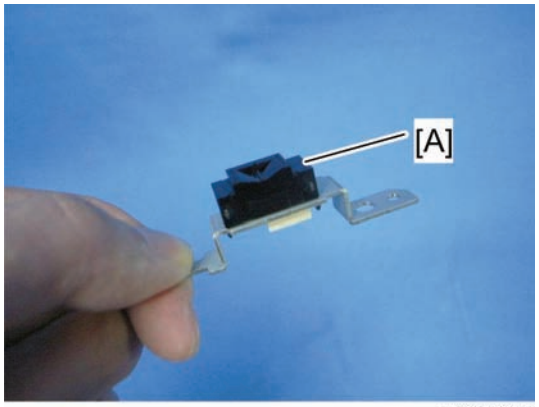
4.12.5 VERTICAL TRANSPORT SENSOR

1. Paper feed unit (☛ p.4-130)



m022r652a

2. Vertical transport sensor bracket [A] (x1, x1)

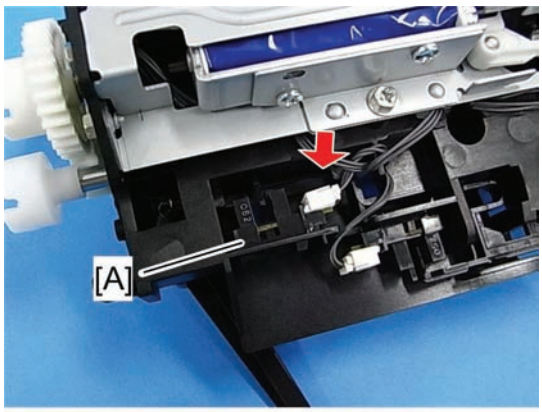


m065r653

3. Vertical transport sensor [A] (hooks)

4.12.6 PAPER LIFT SENSOR

1. Paper feed unit (☛ p.4-130)

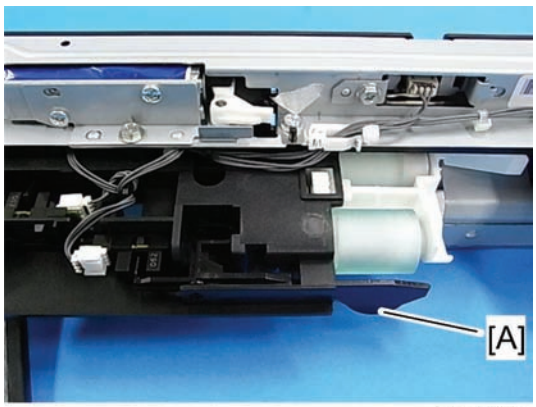


m022r659a

2. Paper lift sensor [A] (x1, hooks)

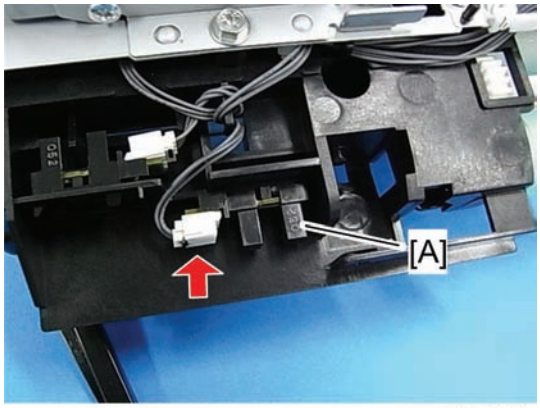
4.12.7 PAPER END SENSOR

1. Paper feed unit (☛ p.4-130)



m022r660a

2. Actuator [A] (tab x 2)

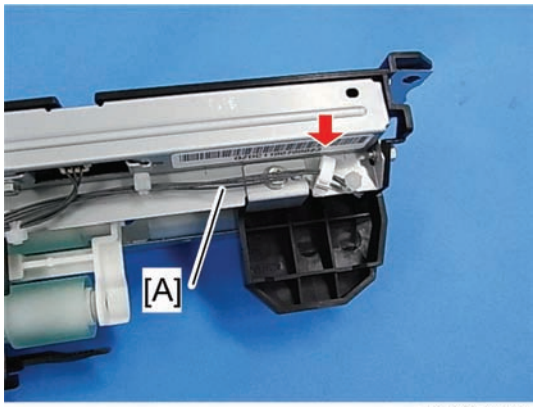


m022r661a

3. Paper end sensor [A] (☞ x1, hooks)

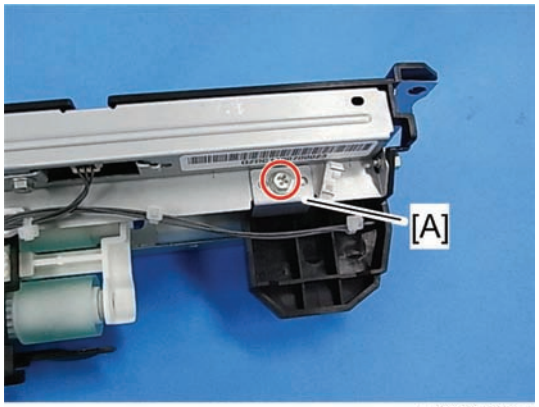
4.12.8 PAPER FEED SENSOR

1. Paper feed unit (☛ p.4-130)



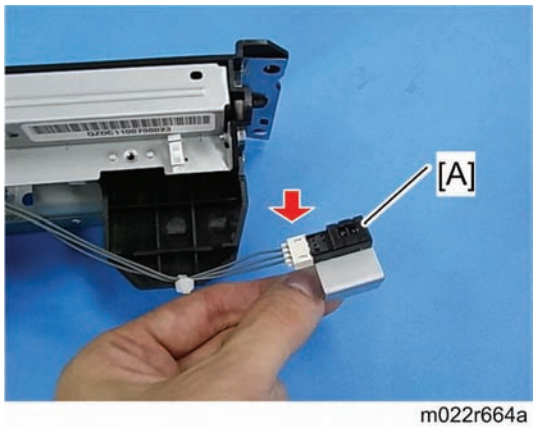
m022r662a

2. Release the harness [A] (🔩 x 1).



m022r663a

3. Paper feed sensor bracket [A] (🔩 x 1)

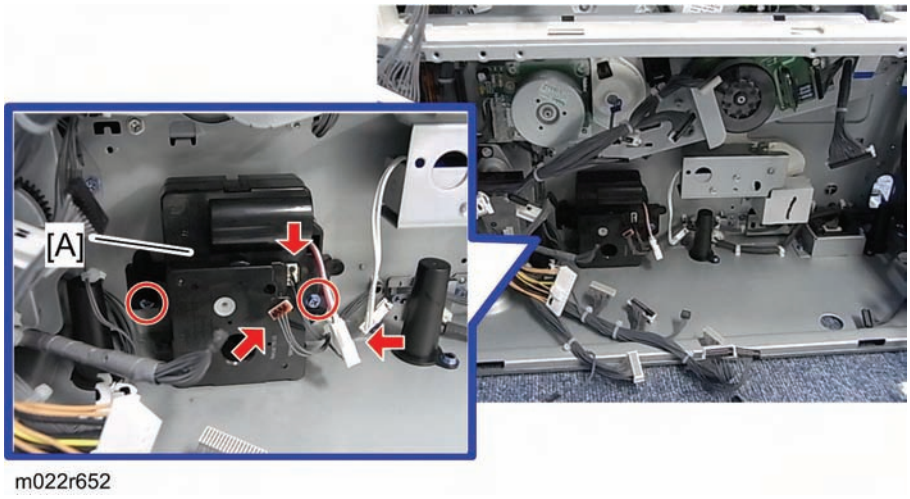


m022r664a

4. Paper feed sensor [A] (🔩 x1, hooks)

4.12.9 TRAY LIFT MOTOR

1. Rear cover (☛ p.4-19)
2. PSU box (☛ p.4-208)
3. BCU bracket (☛ p.4-203 "BCU")

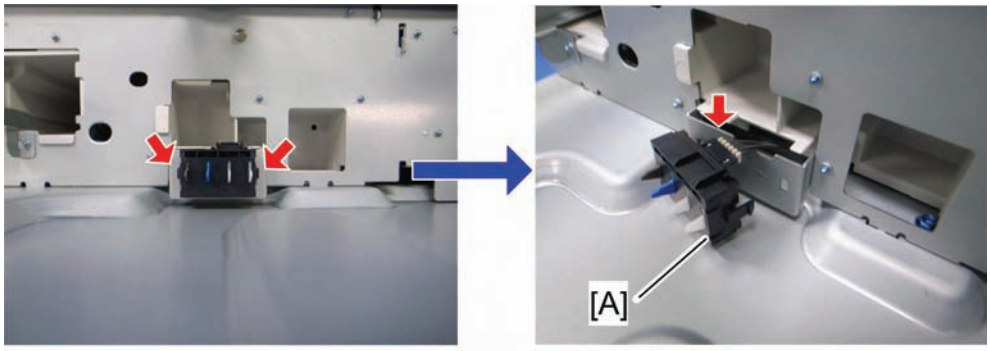


m022r652

4. Tray lift motor [A] (x 2, x 3)

4.12.10 PAPER SIZE SWITCH

1. Pull out the paper tray.

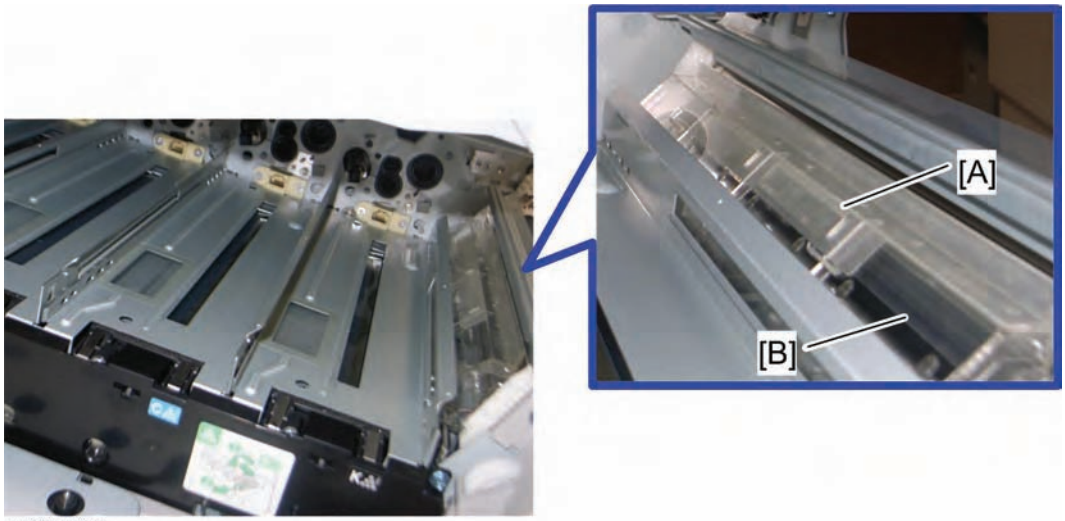


m367r509

2. Paper size switch [A] (x 1, hooks)

4.12.11 CLEANING THE PAPER DUST CONTAINER

1. ITB unit (☛ p.4-70)
2. PCDU (☛ p.4-57))



m065r785

3. Peel off the tape [A] and clean the paper dust container [B] with a vacuum cleaner.

4.13 PAPER EXIT

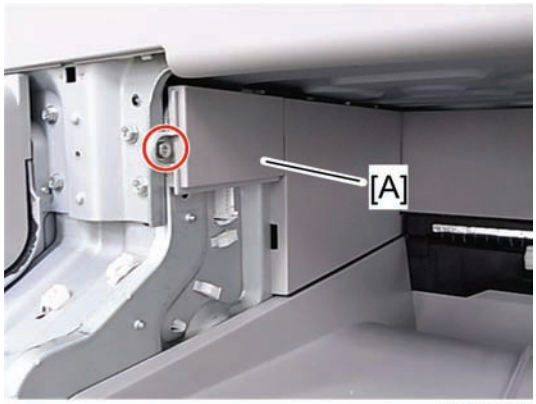
4.13.1 PAPER EXIT UNIT

Basic model

1. Fusing unit (☛ p.4-107)
2. Left cover (☛ p.4-18)

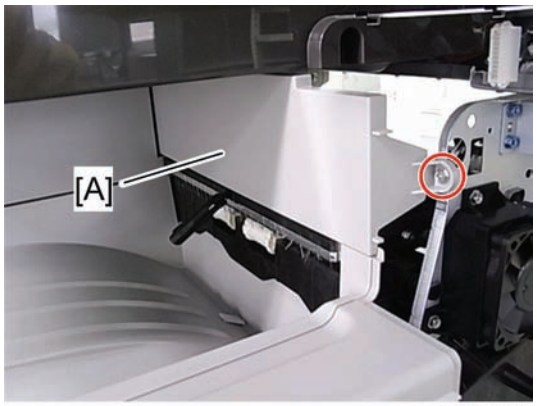
m022r867

3. Left upper cover [A] (🔩 x 1)



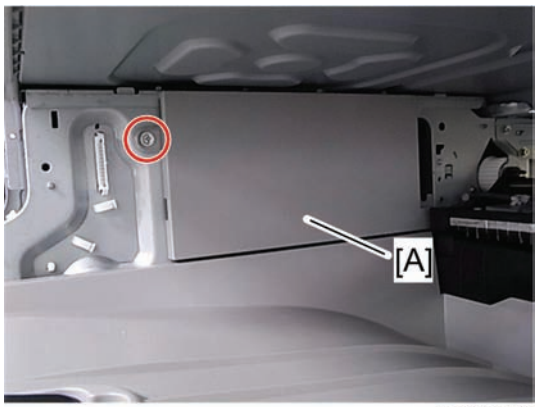
m022r868

4. Inner rear left cover [A] (🔩 x 1)



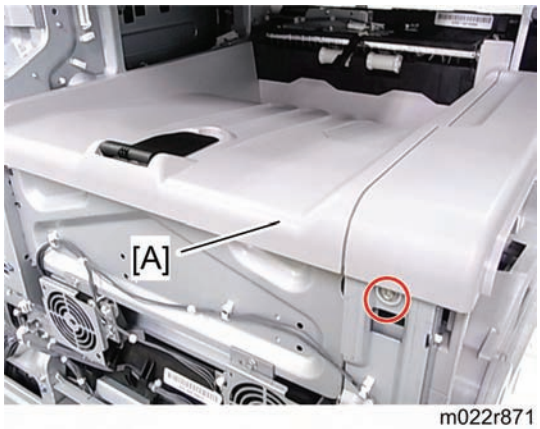
m022r869

5. Paper exit cover [A] (🔩 x 1)



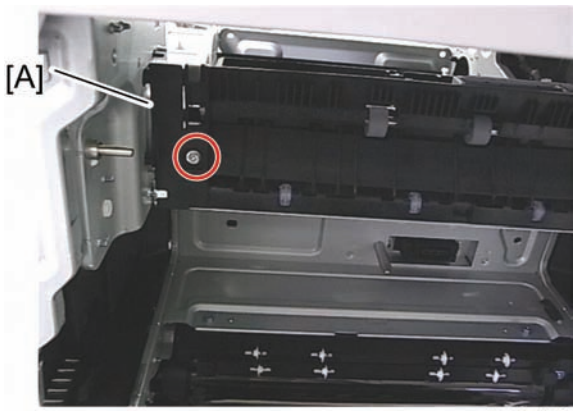
m022r870

6. Inner rear right cover [A] (x 1)



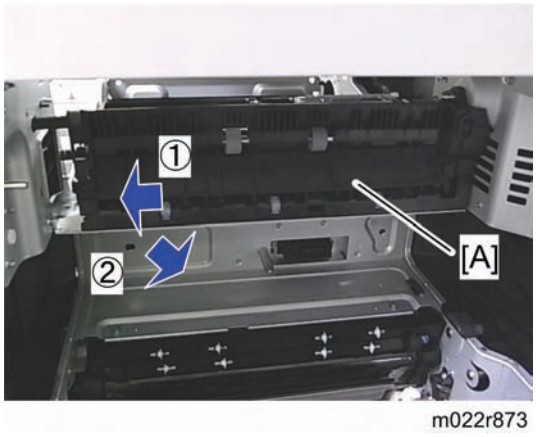
m022r871

7. Paper exit tray [A] (x 1)



m022r872

8. Paper exit unit holder [A] (x 1)



m022r873

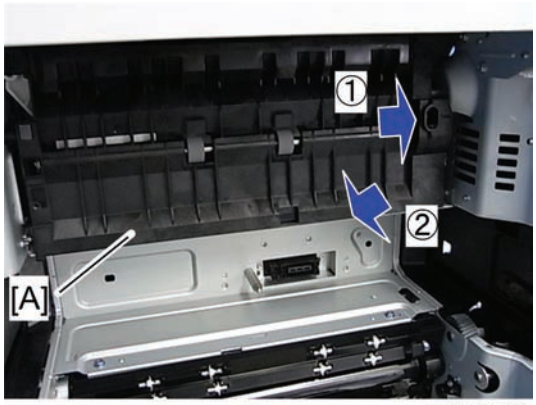
9. Paper exit unit [A] (x 1)

Finisher model

1. Fusing unit (☛ p.4-107)

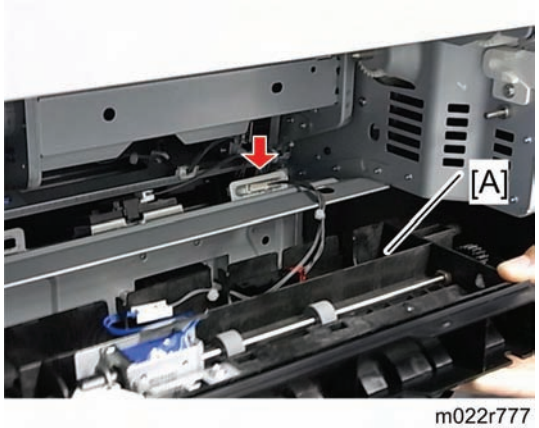
m022r775

2. Paper exit unit holder [A] (🔩 x 1)



m022r776

3. Release the paper exit unit [A]



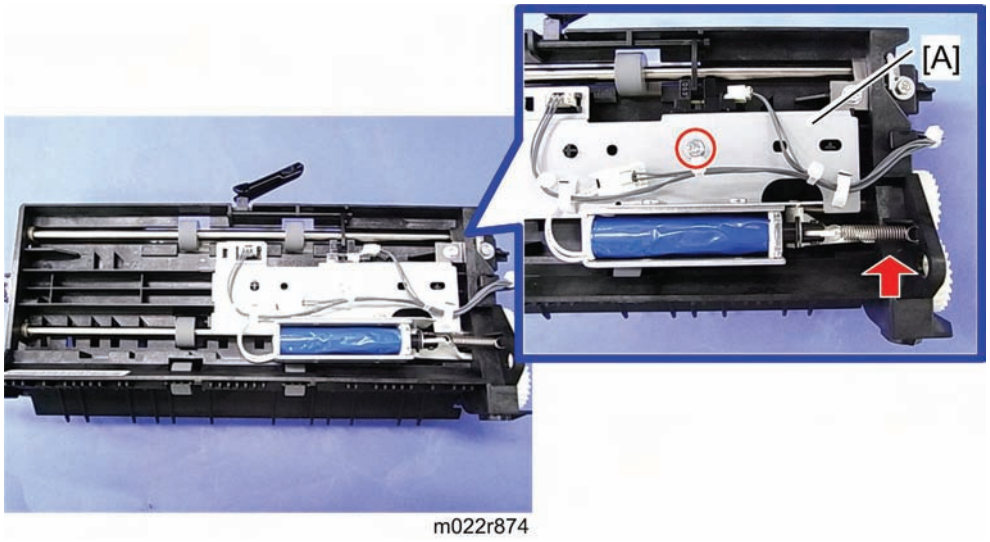
m022r777

4. Paper exit unit [A] (🔩 x 1)

4.13.2 PAPER EXIT SENSOR

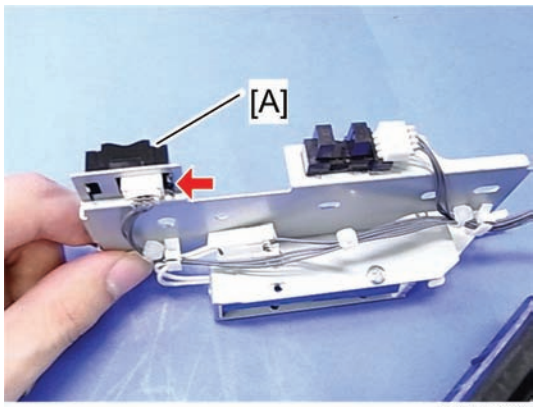
Basic model only

1. Paper exit unit (☛ p.4-138)



m022r874

2. Sensor bracket [A] (x 1, spring x 1)



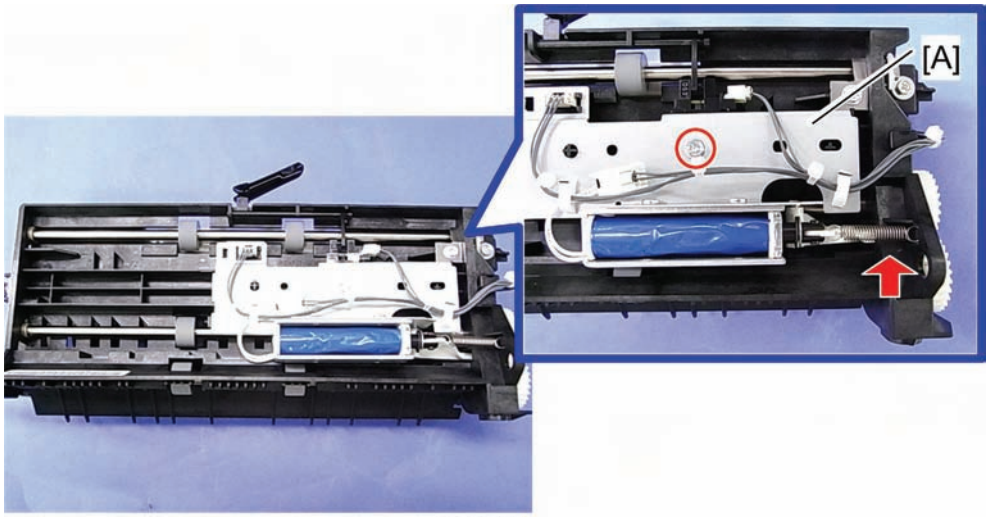
m022r875

3. Paper exit sensor [A] (x 1, hooks)

4.13.3 PAPER OVERFLOW SENSOR

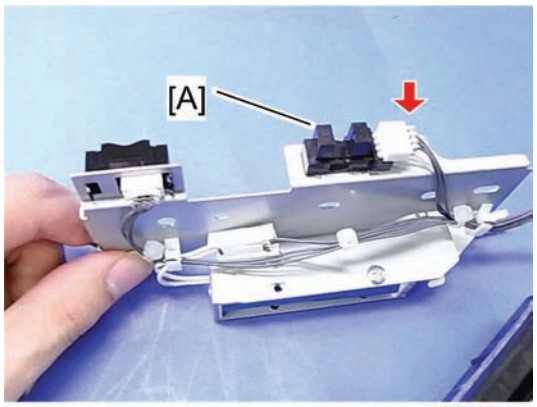
Basic model only

1. Paper exit unit (☛ p.4-138)



m022r874

2. Sensor bracket [A] (x 1, spring x 1)



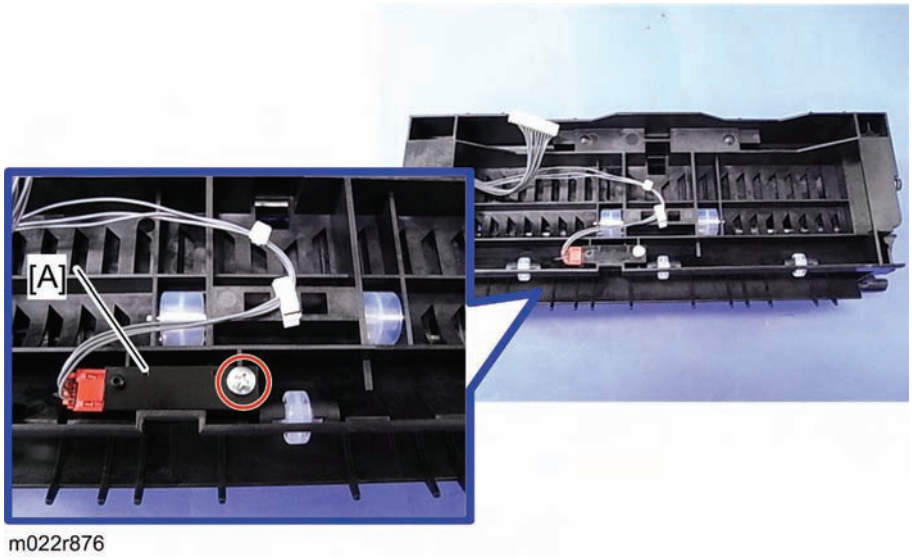
m022r875a

3. Paper overflow sensor [A] (x 1, hooks)

4.13.4 FUSING EXIT SENSOR

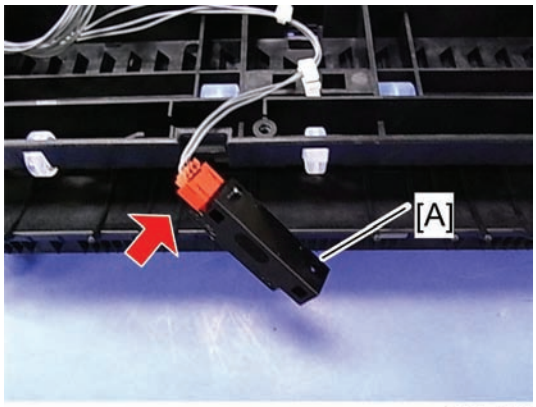
Basic model

1. Paper exit unit (☛ p.4-138)



m022r876

2. Remove the screw for the fusing exit sensor [A].

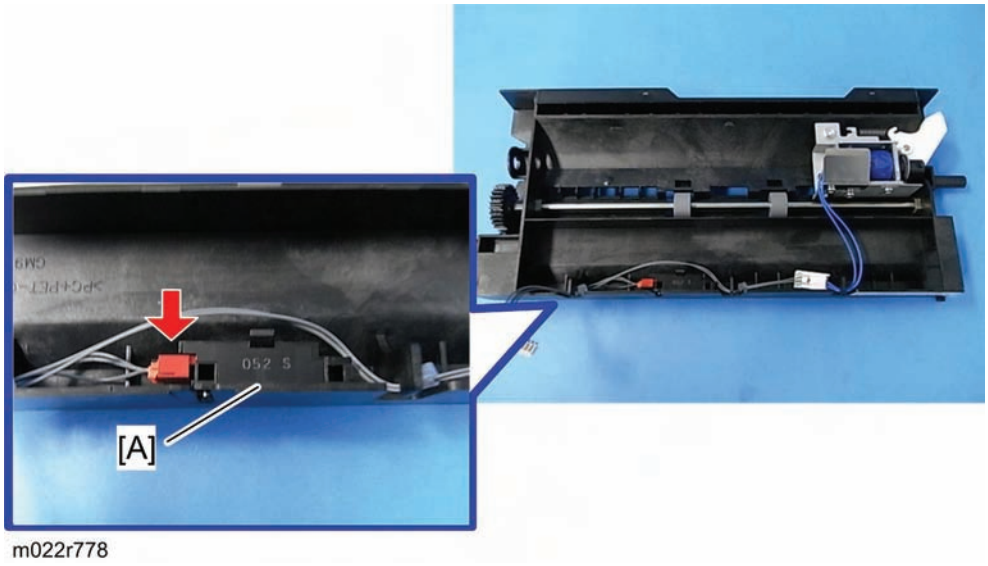


m022r877

3. Fusing exit sensor [A] (x 1)

Finisher model

1. Paper exit unit (☛ p.4-138)



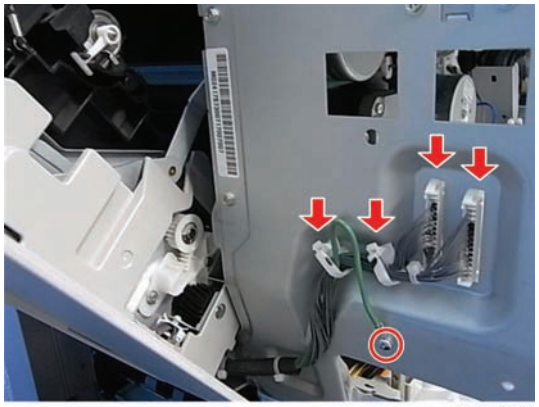
m022r778

2. Fusing exit sensor [A] (☞ x 1, hook x 1)

4.14 DUPLEX UNIT

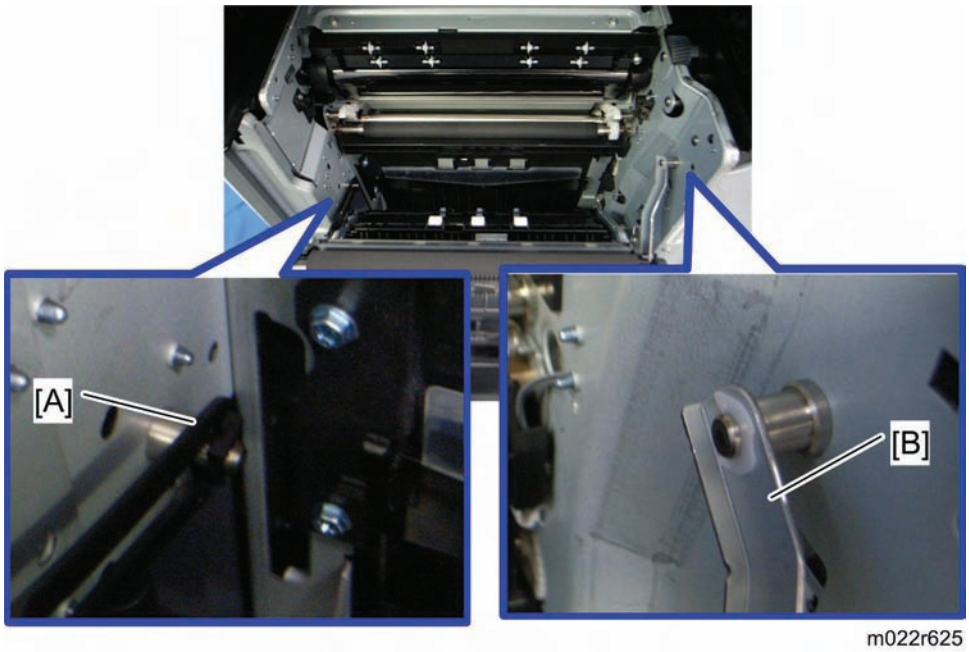
4.14.1 DUPLEX UNIT

1. Right rear cover (☛ p.4-20)
2. Right lower cover (☛ p.4-27)



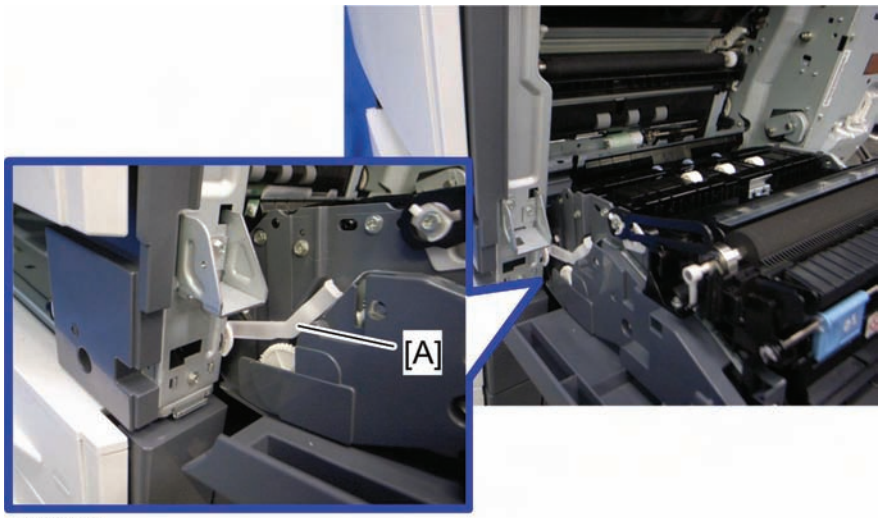
m022r895

3. Remove the screw and disconnect the two harnesses (x 2).



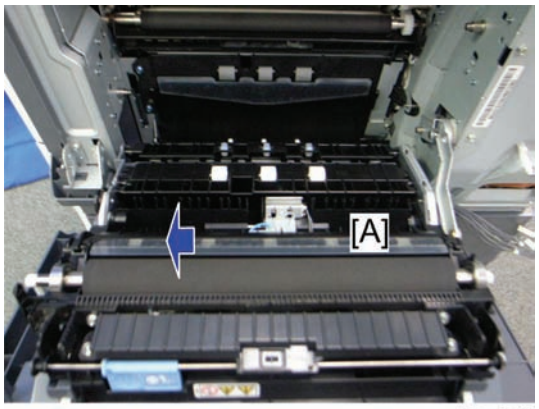
m022r625

4. Release the front and rear arms [A], [B] (x 1 each).



m022r626

5. Remove the long clip [A].

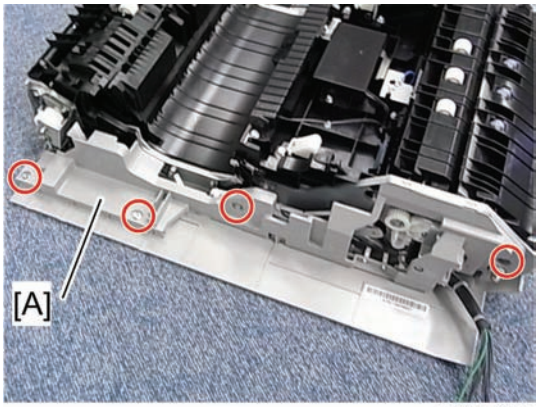


m022r627

6. Slide the duplex unit [A] to the front, and then remove it.

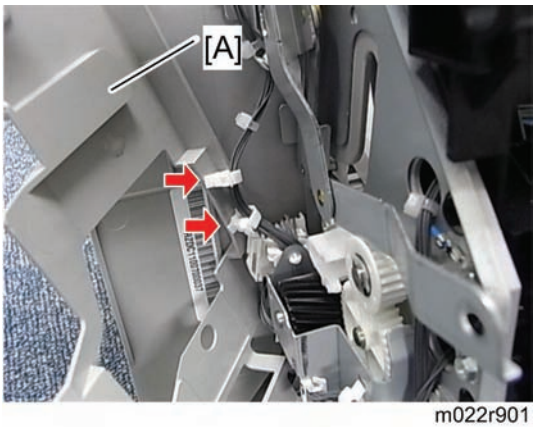
4.14.2 BY-PASS TRAY UNIT

1. Duplex unit (☛ p.4-146)



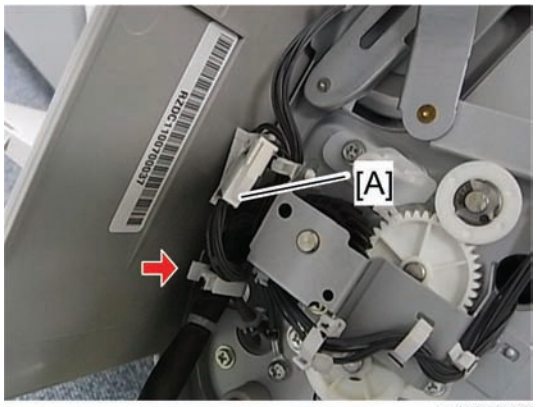
m022r903

2. Release the duplex rear cover [A] (🔩 x 4)



m022r901

3. Duplex rear cover [A] (🔌 x 2)

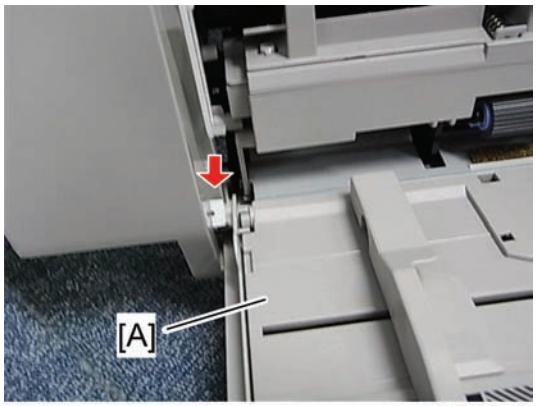


m022r902

4. Disconnect the connector [A] (🔌 x 1)

m022r904

5. Remove the two clips.

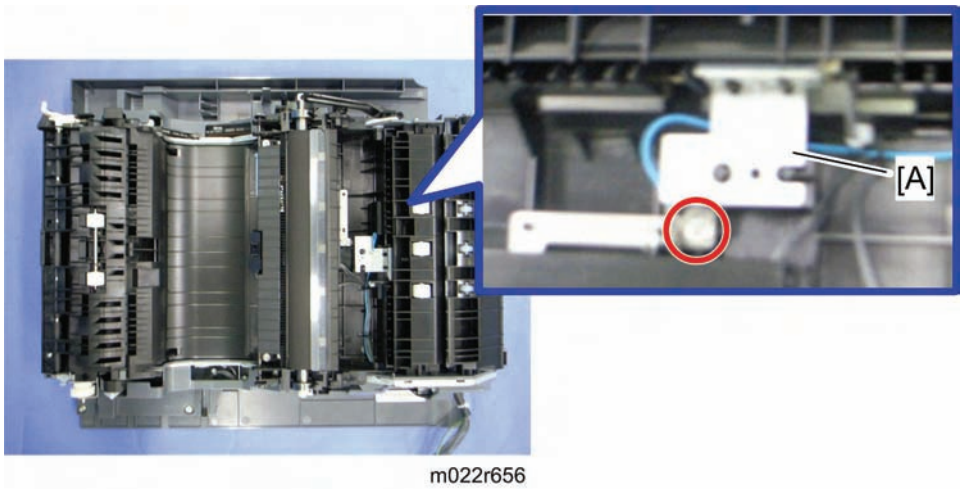


m022r905

6. By-pass tray unit [A] (x 1)

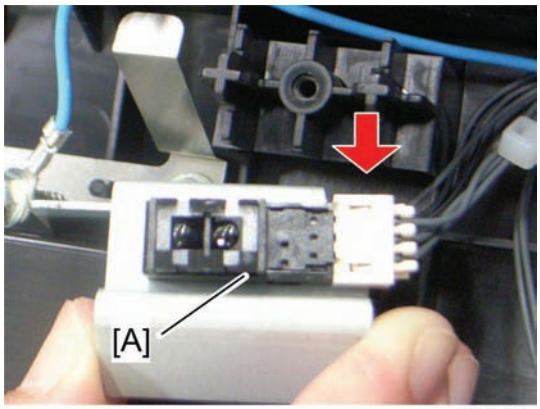
4.14.3 DUPLEX ENTRANCE SENSOR

1. Duplex unit (☛ p.4-146)



m022r656

2. Sensor bracket [A] (🔩 x 1)

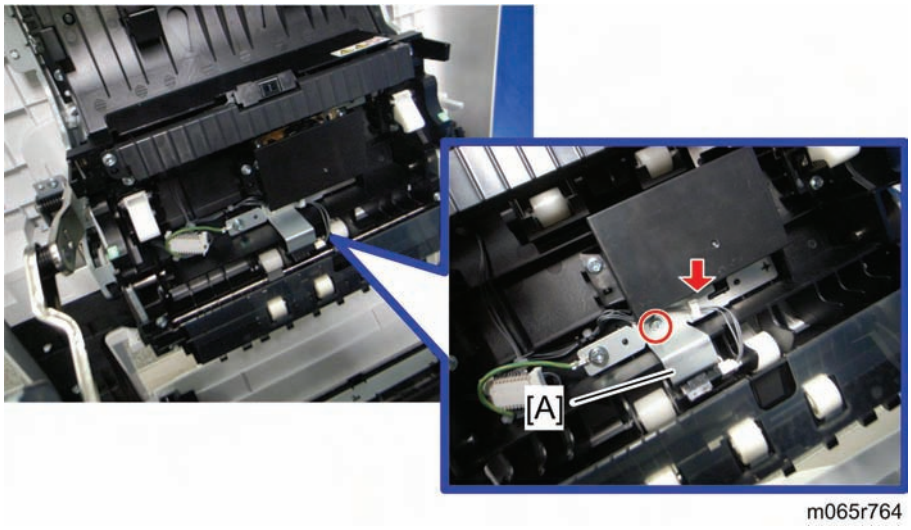


m022r657

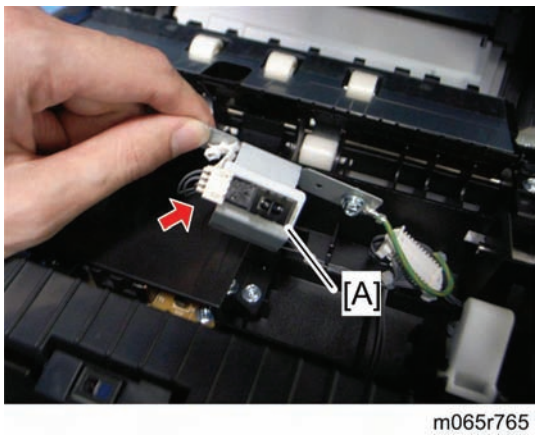
3. Duplex entrance sensor [A] (🔌 x 1, hooks)

4.14.4 DUPLEX EXIT SENSOR

1. Open the duplex unit.
2. Fusing unit (☛ p.4-107)
3. PTR unit (☛ p.4-83)



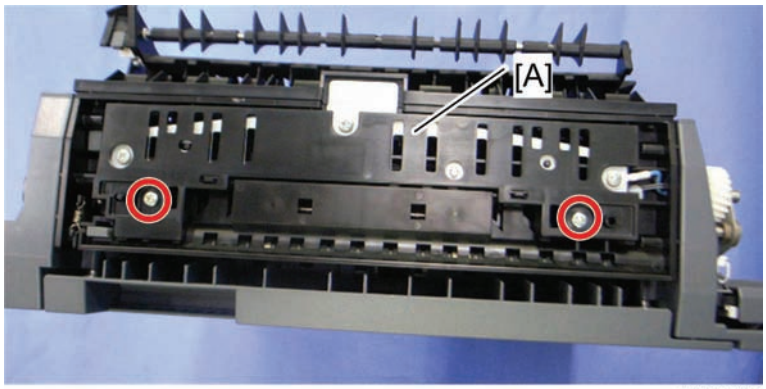
4. Release the sensor bracket [A] (x 1, x 1).



5. Duplex exit sensor [A] (x 1, hooks)

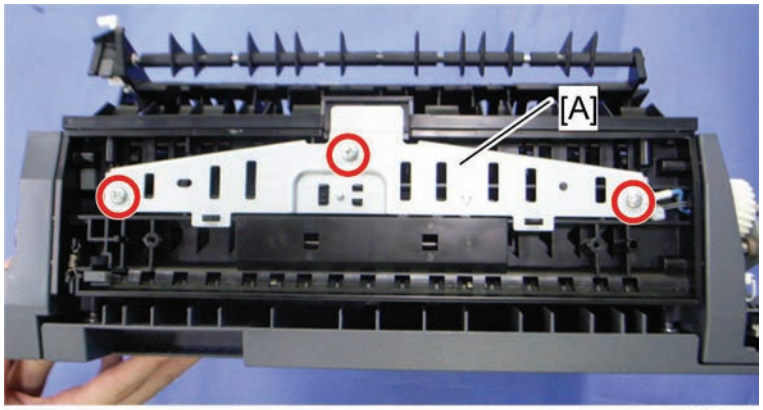
4.14.5 INVERTER SENSOR

1. Duplex unit (☛ p.4-146)



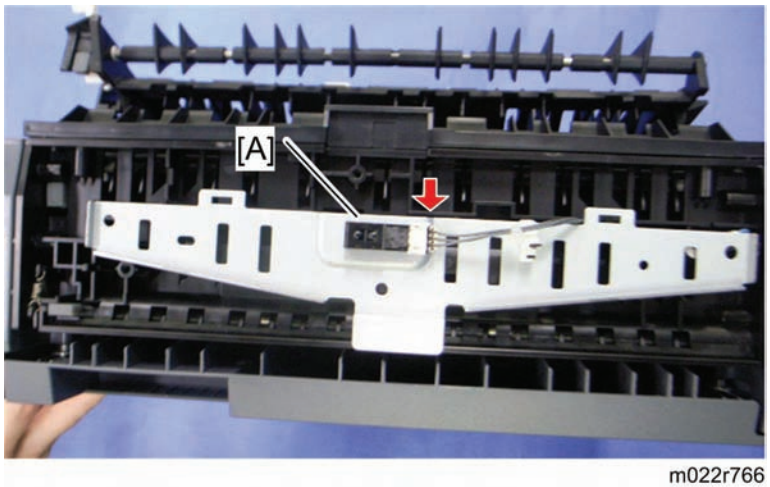
m022r764

2. Guide plate [A] (x 2)



m022r765

3. Bracket [A] (x 3)

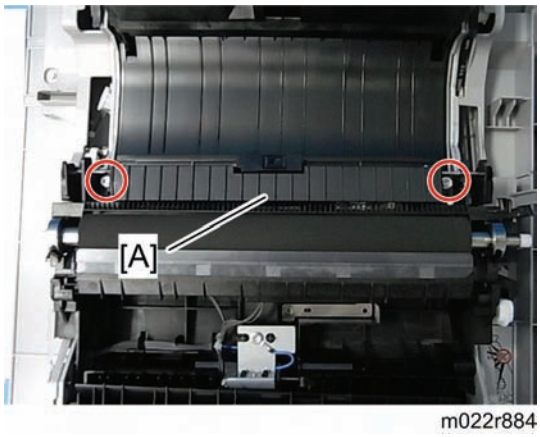


m022r766

4. Inverter sensor [A] (x 1, hooks)

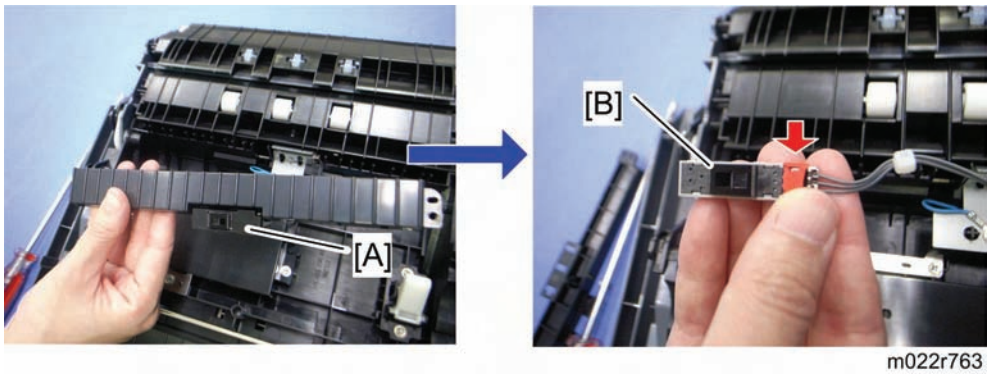
4.14.6 FUSING ENTRANCE SENSOR

1. Open the duplex unit.
2. Fusing unit (☛ p.4-107)
3. PTR unit (☛ p.4-83)



m022r884

4. Sensor base [A] (🔩 x 2)

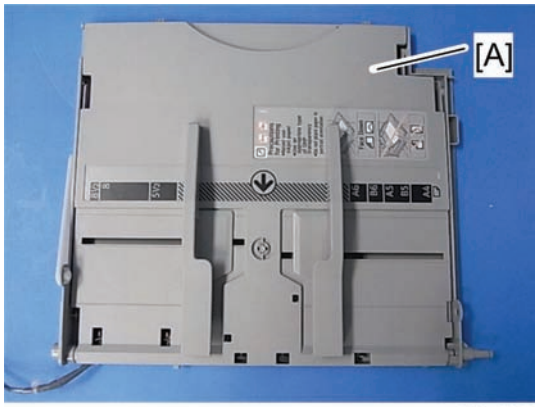


m022r763

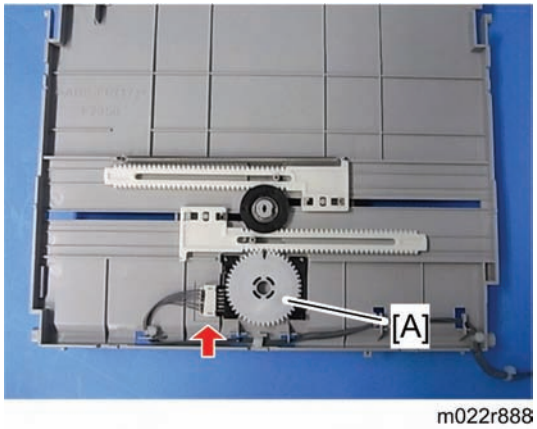
5. Sensor cover [A] (hooks)
6. Fusing entrance sensor [B] (🔌 x 1, hooks)

4.14.7 BY-PASS PAPER SIZE SENSOR

1. By-pass tray unit (☛ p.4-148)

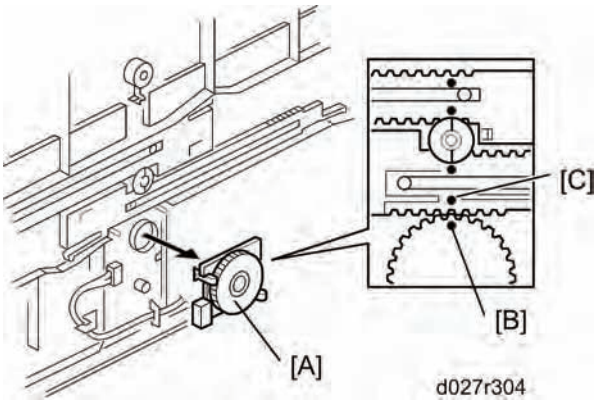


2. By-pass tray cover [A] (hooks)



3. By-pass paper size sensor [A] (☛ x 1)

When reinstalling the by-pass paper size sensor



1. Adjust the projection [A] of the left side fence bar (it must be centered).
2. Install the by-pass paper size detection switch so that the hole [B] in this switch faces the projection [C] of the left side fence bar.
3. Reassemble the copier.

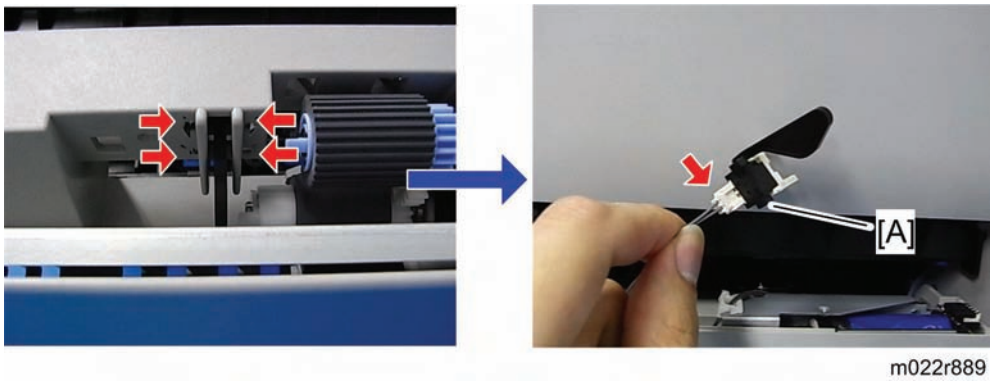
4. Plug in and turn on the main power switch.
5. Check this switch operation with SP5803-017 (By-Pass Size Detection SW < Input Check).

- Display on the LCD -

Paper Size	Display	Paper Size	Display
A4 SEF	00001101	B6 SEF	00001011
B5 SEF	00001001	A6 SEF	00000011
A5 SEF	00001011	Smaller A6 SEF	00001110

4.14.8 BY-PASS PAPER END SENSOR

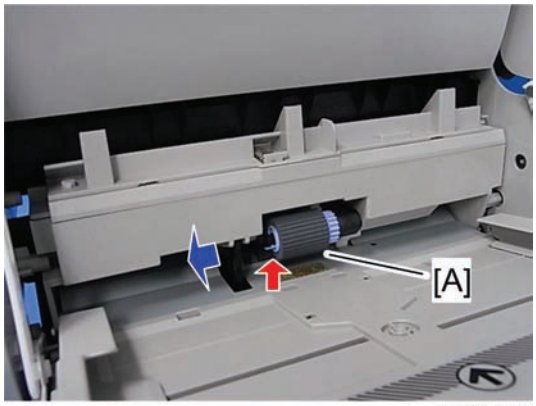
1. By-pass tray unit (☛ p.4-148)



2. By-pass paper end sensor [A] (☛ x 1, hooks)

4.14.9 BY-PASS PICK-UP ROLLER

1. Open the by-pass tray.

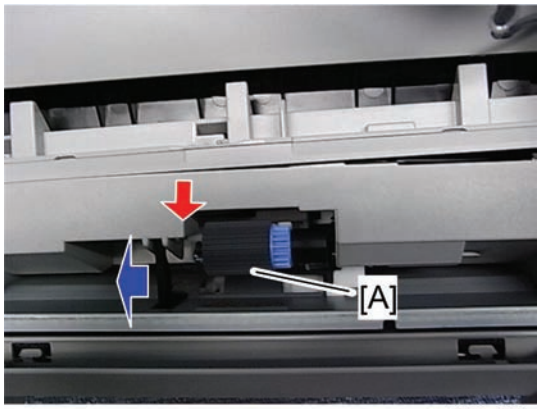


m022r885

2. By-pass pick-up roller [A] (hook x 1).

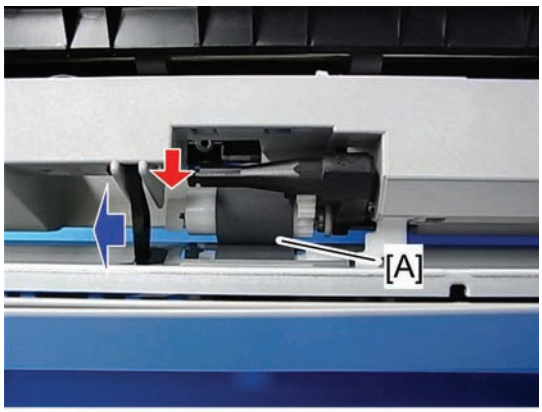
4.14.10 BY-PASS FEED AND SEPARATION ROLLERS

1. By-pass tray unit (p.4-148)



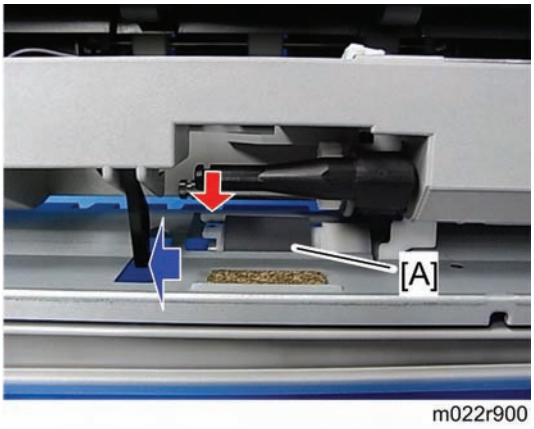
m022r899

2. By-pass pick-up roller [A] (hook x 1).



m022r898

3. By-pass feed roller [A] (hook x 1)



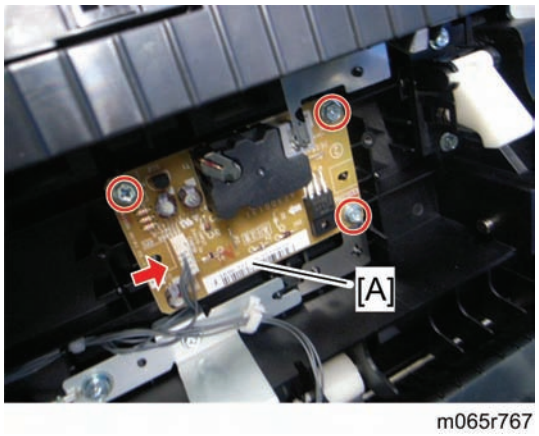
4. By-pass separation roller [A] (hook x 1)

4.14.11 HVPS: D

⚠CAUTION

- Turn off the main power switch and unplug the machine before removing the HVPS: D.

1. Open the duplex unit.
2. Fusing unit (☛ p.4-107)
3. Paper transfer roller unit (☛ p.4-83)
4. HVPS: D cover [A] (🔩 x 2)

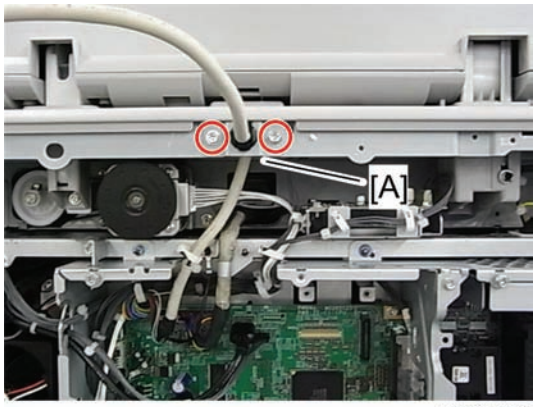


5. HVPS: D [A] (🔩 x 3, 🔌 x 1)

4.15 ARDF

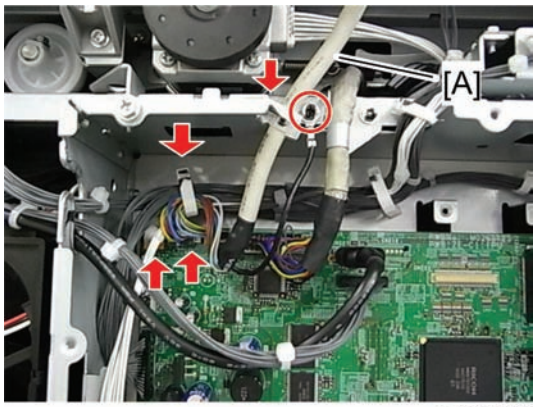
4.15.1 ARDF

1. Rear lower cover (☛ p.4-18)
2. Rear cover (☛ p.4-19)
3. Controller box cover (☛ p.4-194)



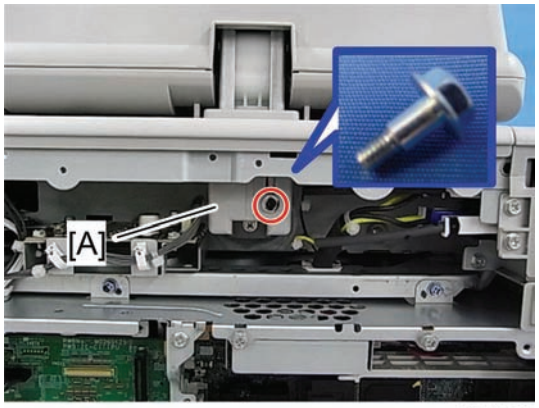
m022r519

4. Remove the bracket [A] (x 2).



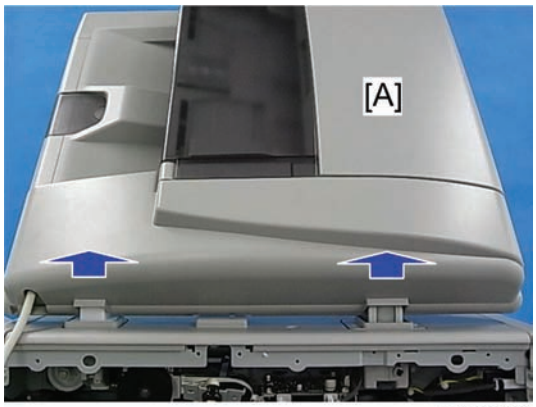
m022r520

5. Disconnect the ARDF cable [A] (x 2, x 2, x 1).



m022r521

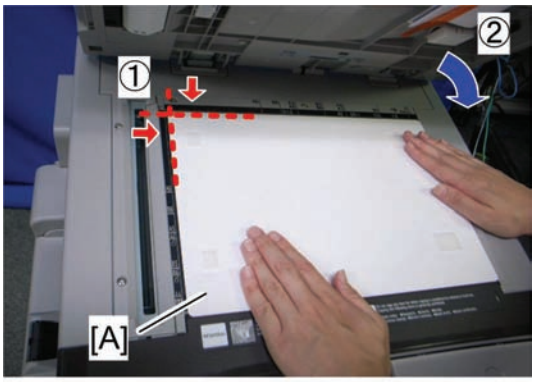
6. Remove the left hinge [A] (x 1).



m022r522

7. Open the ARDF [A], and then remove it.

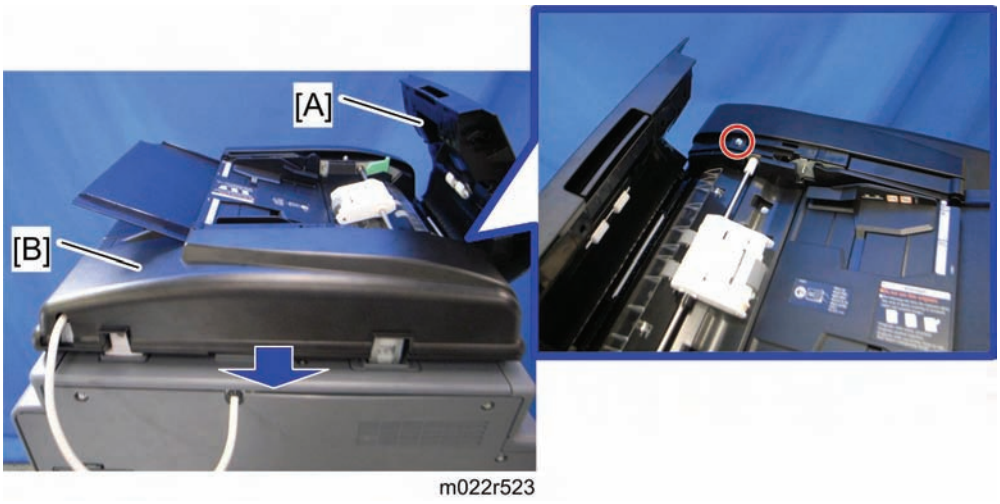
When installing the Platen Sheet



m022i537

When setting the platen cover [A], it is necessary to have a 1 to 2 mm gap on the upper side and on the left side.

4.15.2 ARDF REAR COVER

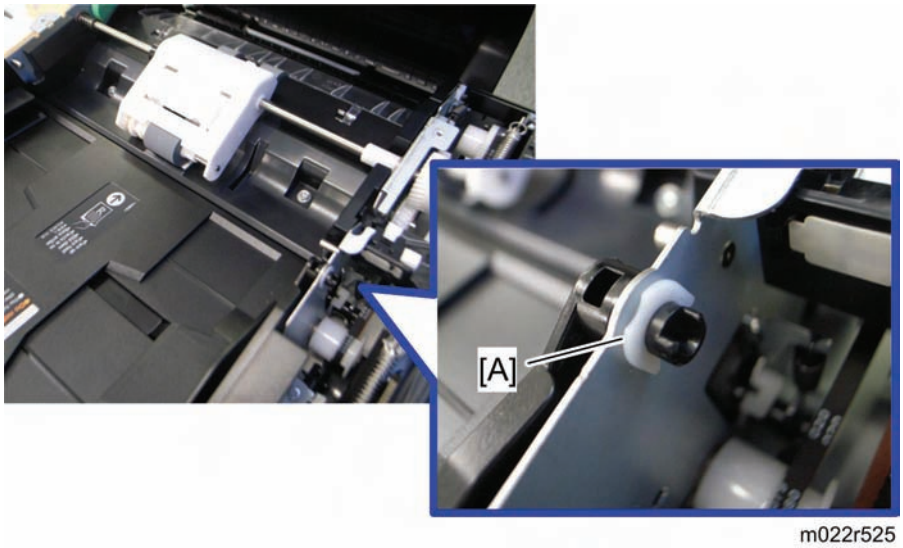


1. Open the ARDF left cover [A].
2. ARDF rear cover [B] (x 1)

4.15.3 ARDF FRONT COVER AND ORIGINAL TRAY

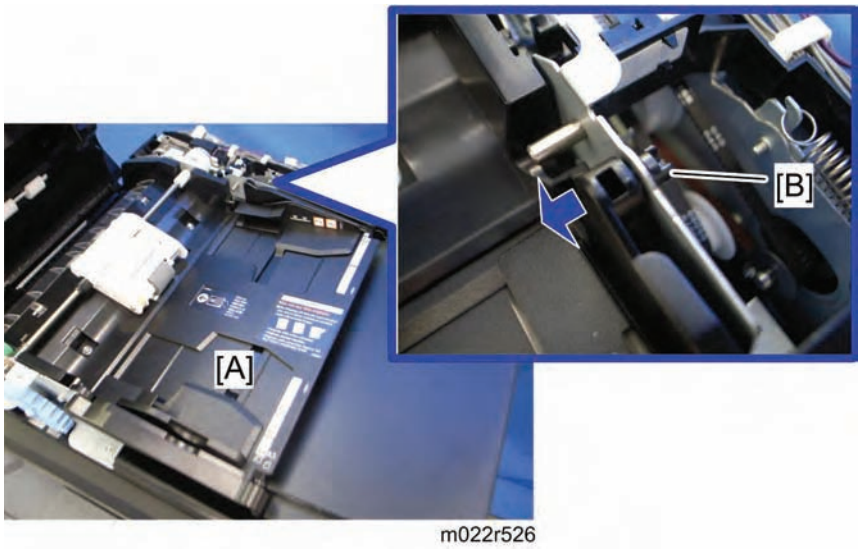
1. ARDF rear cover (p.4-160)

2. ARDF front cover [A] (x 1)



m022r525

3. Remove the snap ring [A].

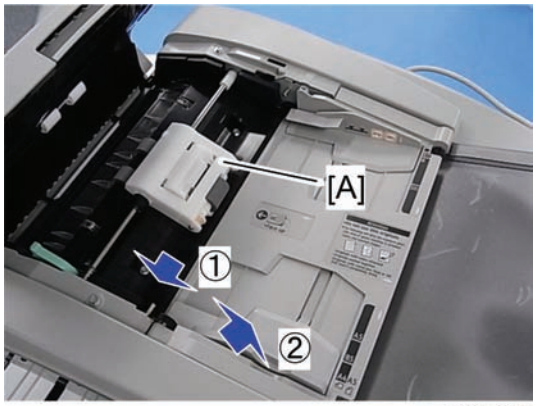


m022r526

4. Remove the original tray [A], and release the rear shaft [B].

4.15.4 ORIGINAL FEED UNIT

1. Open the ARDF left cover (☛ p.4-160 "ARDF Rear Cover").

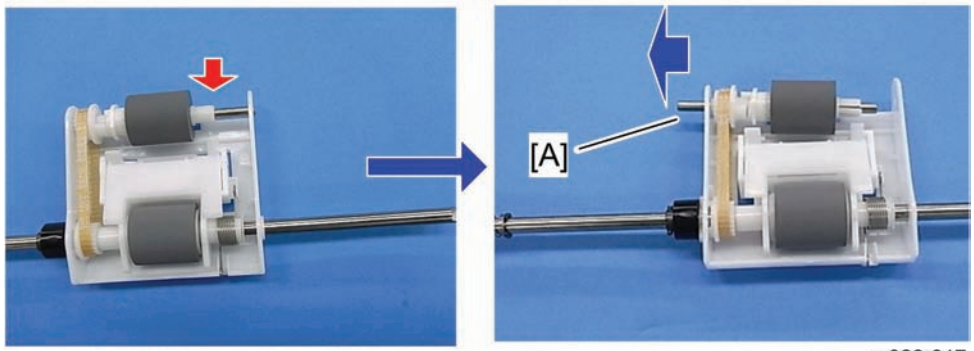


m022r816

2. Original feed unit [A].

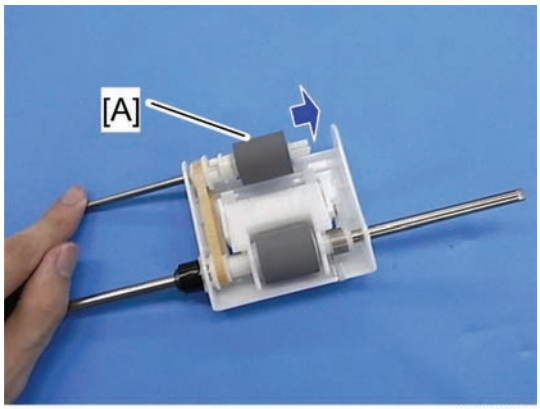
4.15.5 PICK-UP ROLLER

1. Original feed unit (☛ p.4-162)



m022r817

2. Slide the shaft [A] (hook x 1).

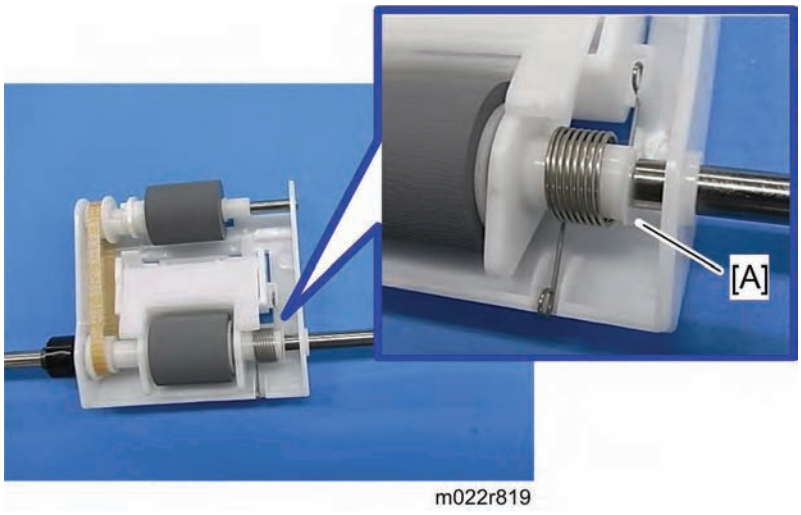


m022r818

3. Pick-up roller [A]

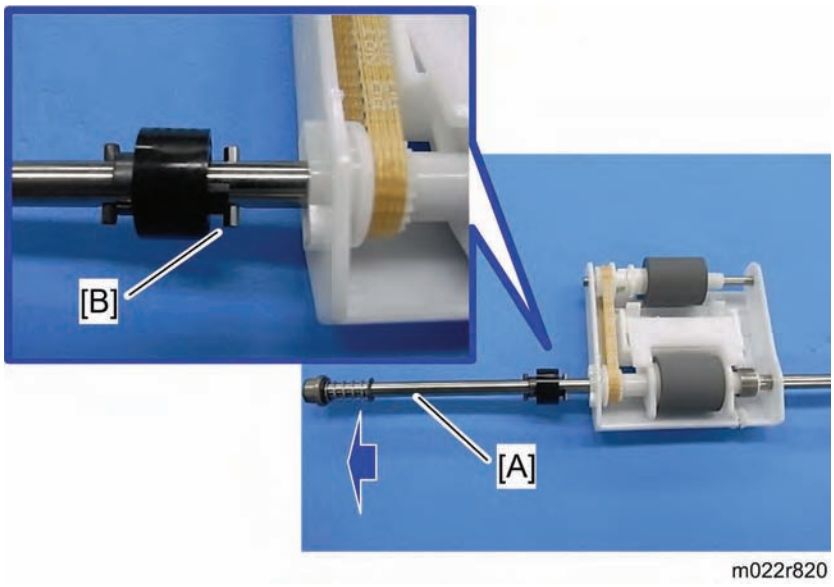
4.15.6 FEED ROLLER

1. Original feed unit (☛ p.4-162)



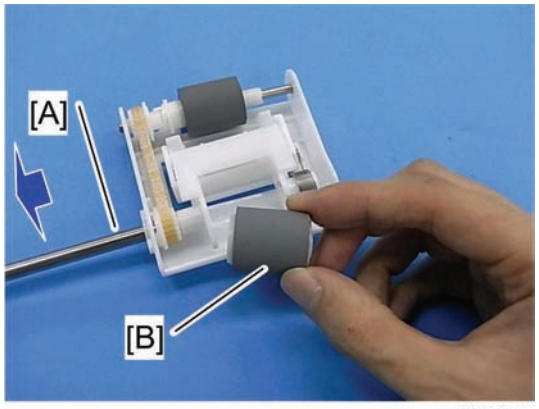
m022r819

2. Remove the clip [A].



m022r820

3. Slide the shaft [A], and then remove the pin [B].

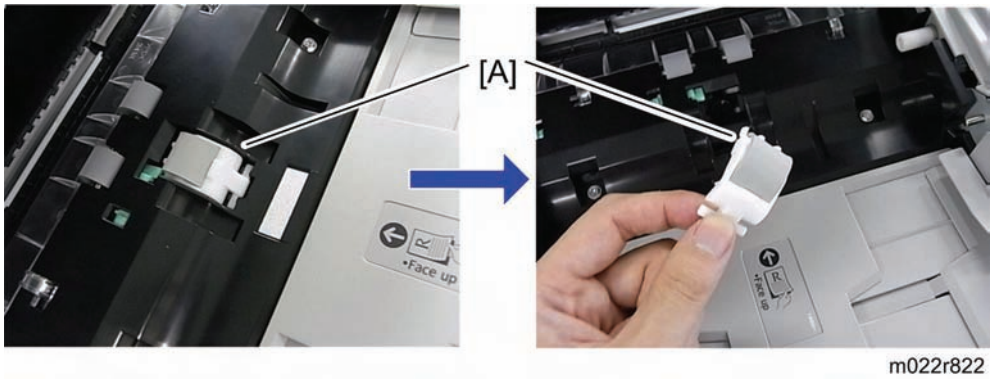


m022r821

4. Slide the shaft [A], and then remove the feed roller [B].

4.15.7 FRICTION PAD

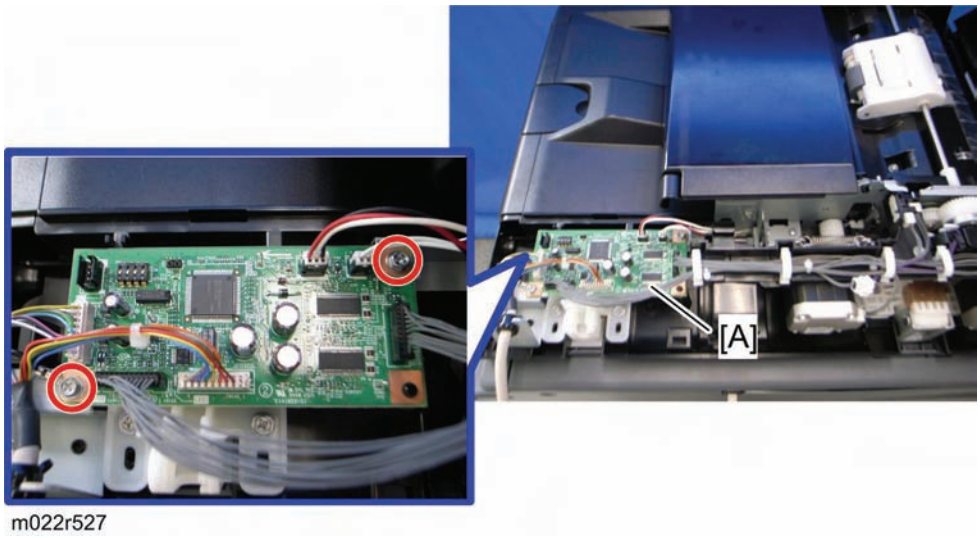
1. Original feed unit (☛ p.4-162)



2. Friction pad [A] (hooks)

4.15.8 ARDF DRIVE BOARD

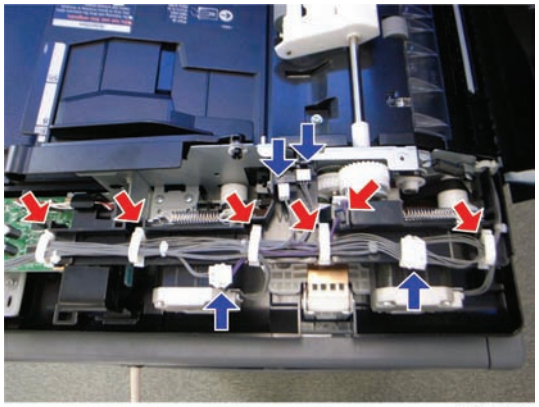
1. ARDF rear cover (☛ p.4-160)



2. ARDF drive board [A] (x 2, all s)

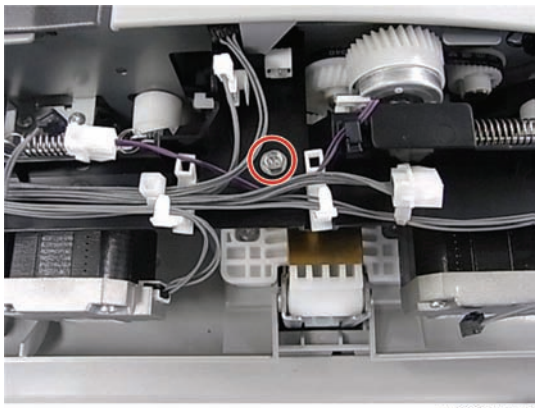
4.15.9 ORIGINAL SET SENSOR AND ARDF TOP COVER SENSOR

1. ARDF rear cover (☛ p.4-160)



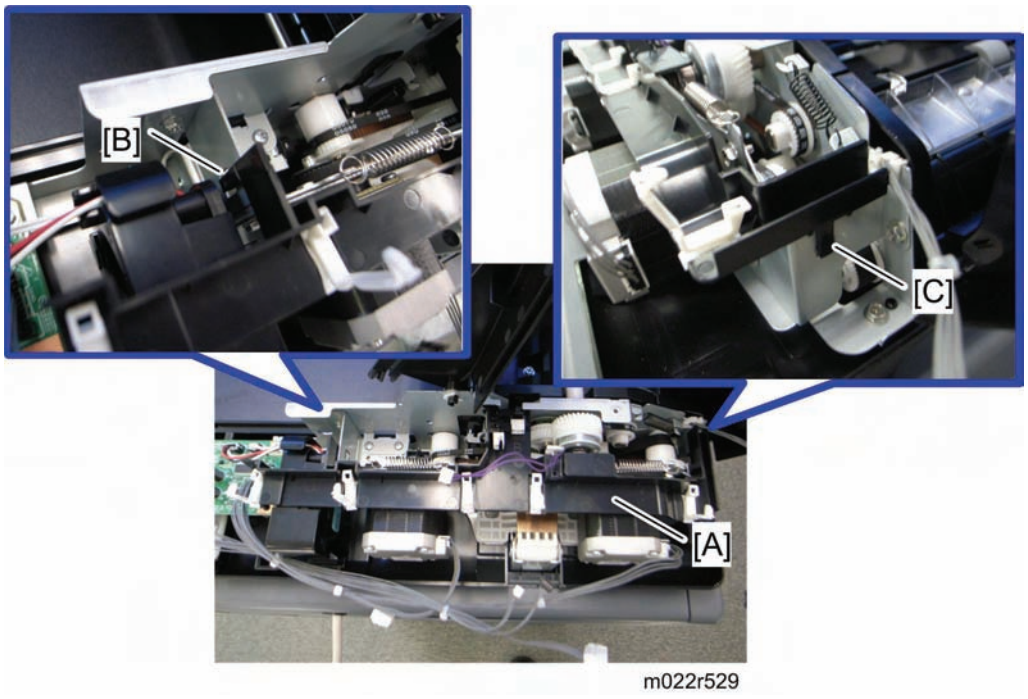
m022r528

2. Release the six clamps and disconnect the four connectors.



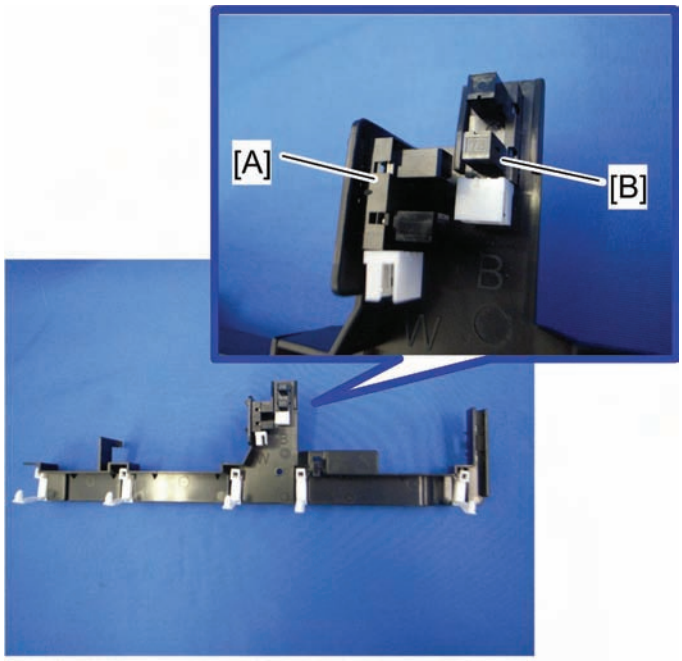
m022r826

3. Remove the screw.



m022r529

4. Remove the harness guide [A], and release the hooks [B] [C].

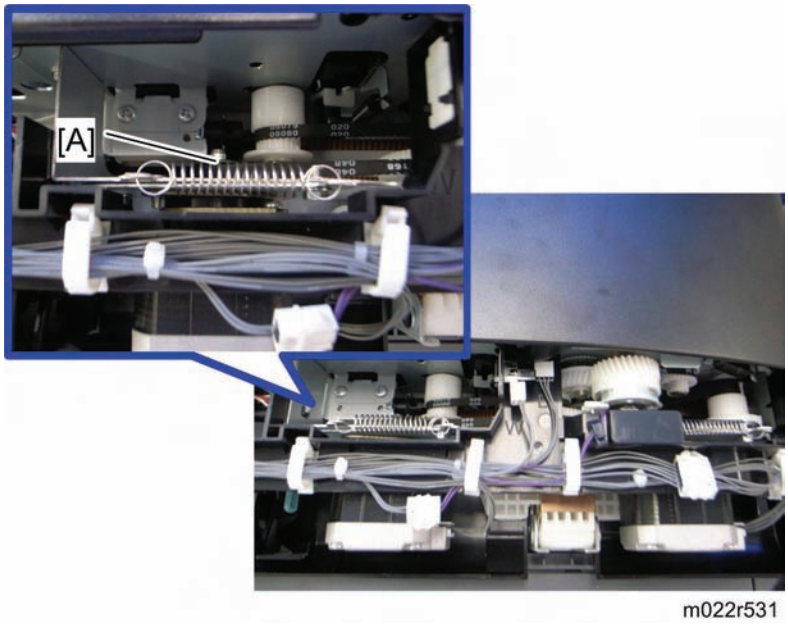


m022r530

5. ARDF top cover sensor [A] (hooks)
6. Original set sensor [B] (hooks)

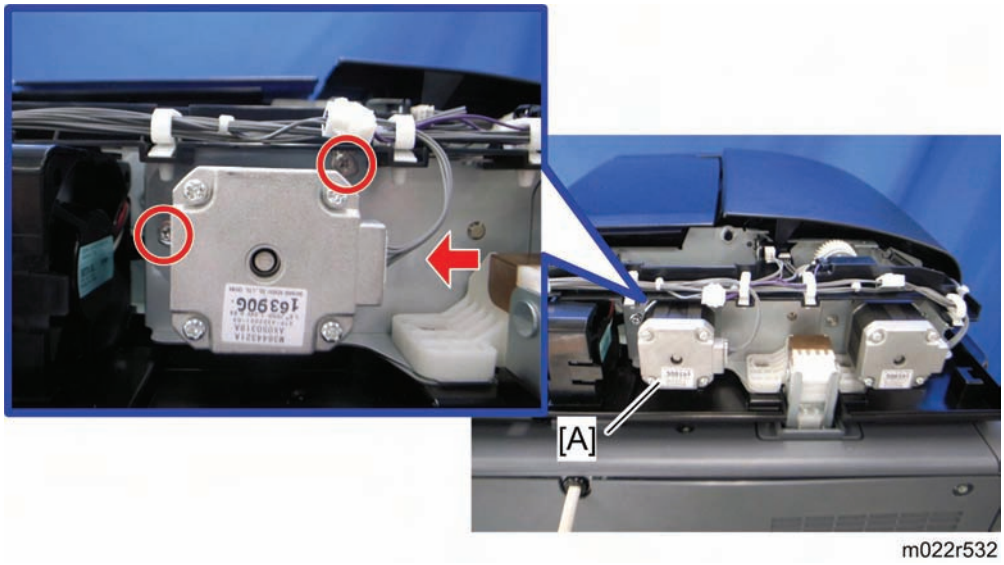
4.15.10 FEED MOTOR

1. ARDF rear cover (☛ p.4-160)



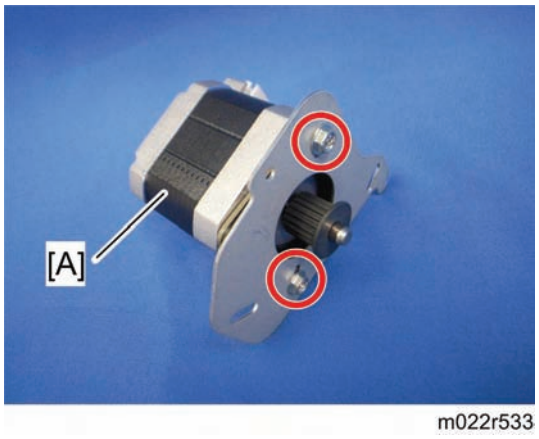
m022r531

2. Remove the spring [A].



m022r532

3. Feed motor with bracket [A] (x 2, x 1)

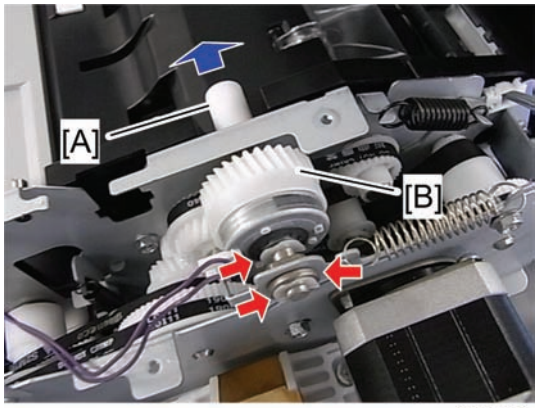


4. Feed motor [A] (x 2)

4.15.11 FEED CLUTCH

1. ARDF rear cover (☛ p.4-160)
2. Harness guide (☛ p.4-165 "

Original Set Sensor and ARDF Top Cover Sensor")



m022r827

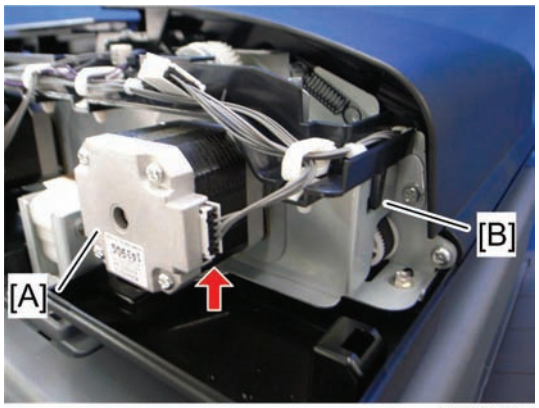
3. Slide the shaft [A], and then feed clutch [B] (x 2, bushing x 1)

4.15.12 TRANSPORT MOTOR

1. ARDF rear cover (☛ p.4-160)

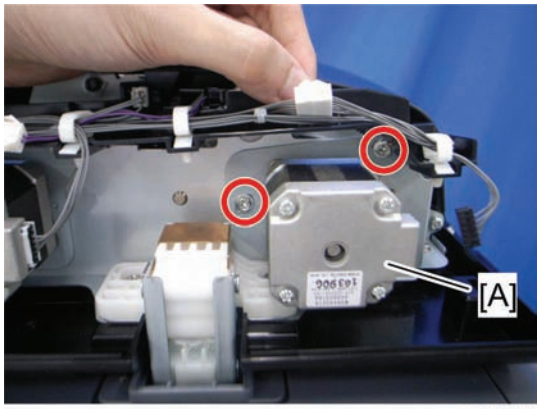
m022r534

2. Remove the spring [A].



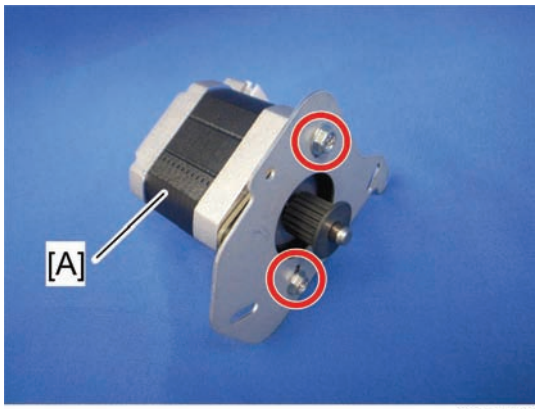
m022r535

3. Disconnect the harness of the transport motor [A].
4. Release the hook [B] of the harness guide.



m022r536

5. Transport motor with bracket [A] (🔩 x 2)

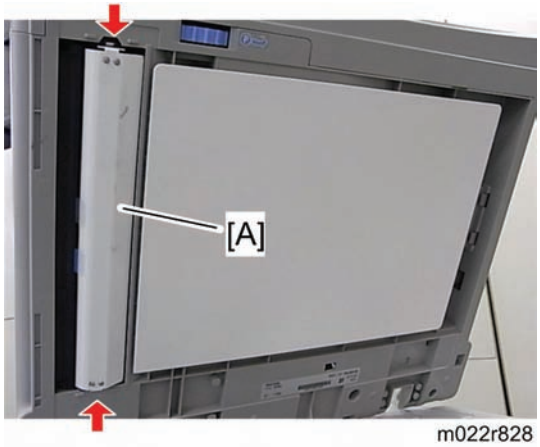


m022r533

6. Transport motor [A] (x 2)

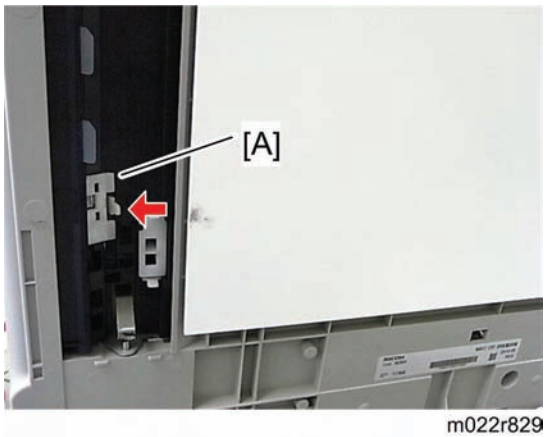
4.15.13 REGISTRATION SENSOR

1. Open the ARDF.



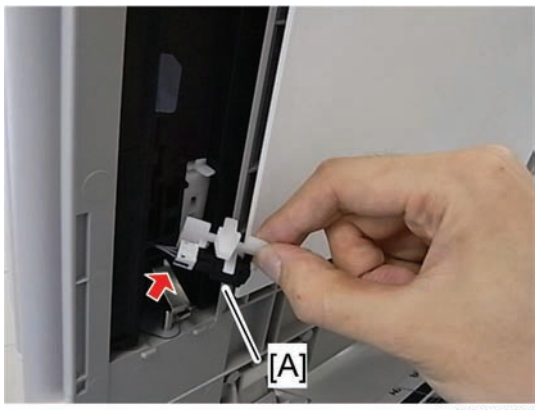
m022r828

2. Bracket [A] (hook x 2)



m022r829

3. Registration sensor holder [A] (hook x 1)

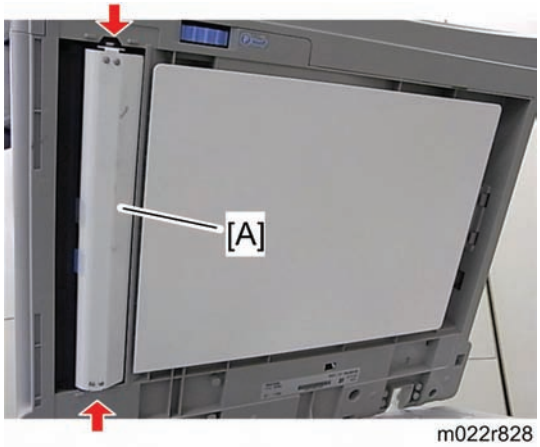


m022r830

4. Registration sensor (x 1, hooks)

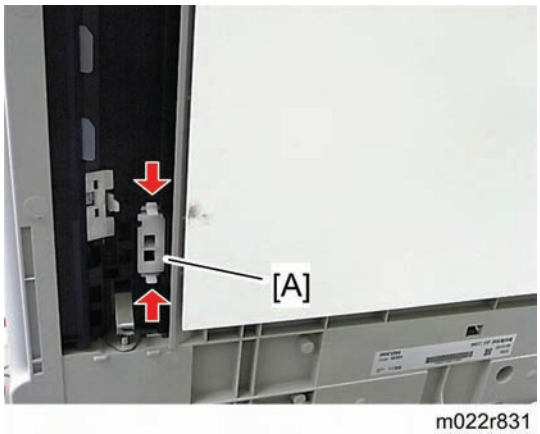
4.15.14 INVERTER SENSOR

1. Open the ARDF.



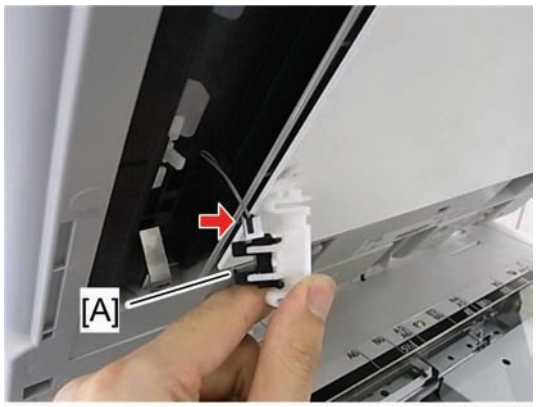
m022r828

2. Bracket [A] (hook x 2)



m022r831

3. Inverter sensor holder [A] (hook x 2)

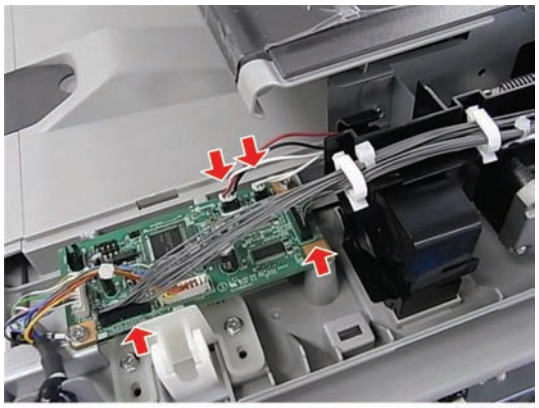


m022r832

4. Inverter sensor (x 1, hooks)

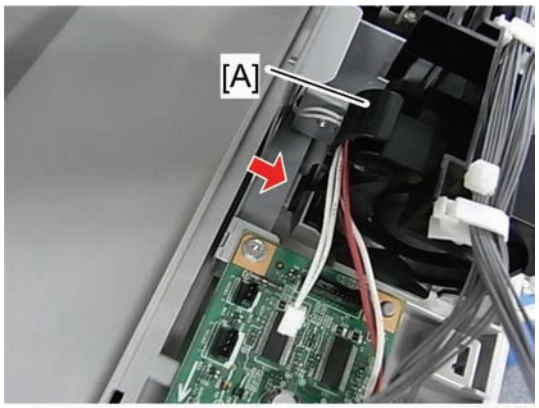
4.15.15 COOLING FAN

1. ARDF rear cover (p.4-160)



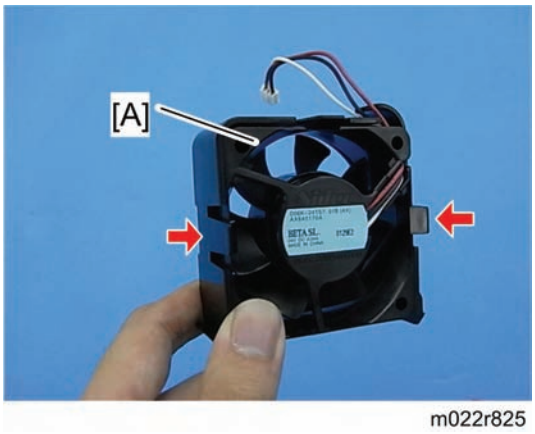
m022r823

2. Disconnect the four connectors.



m022r824

3. Fan cover [A] (hook x 1)



4. Cooling fan [A] (hook x 2)

When installing the cooling fan

Make sure that the cooling fan is installed with its decal facing the left of the machine.

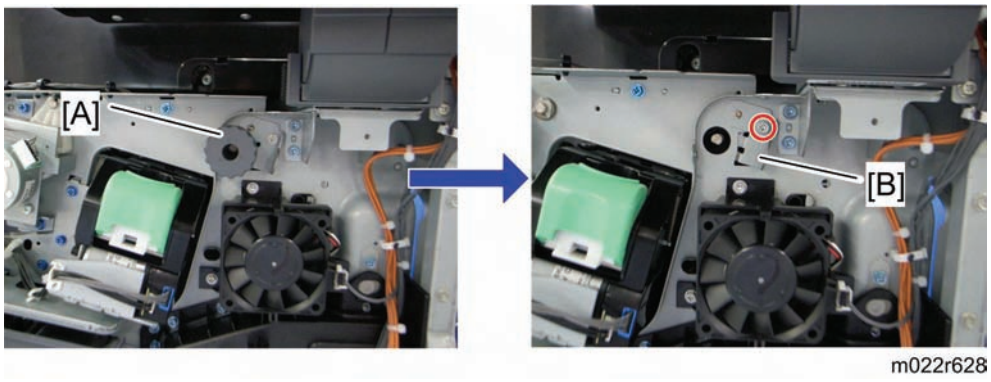
4.16 INTERNAL FINISHER

Note

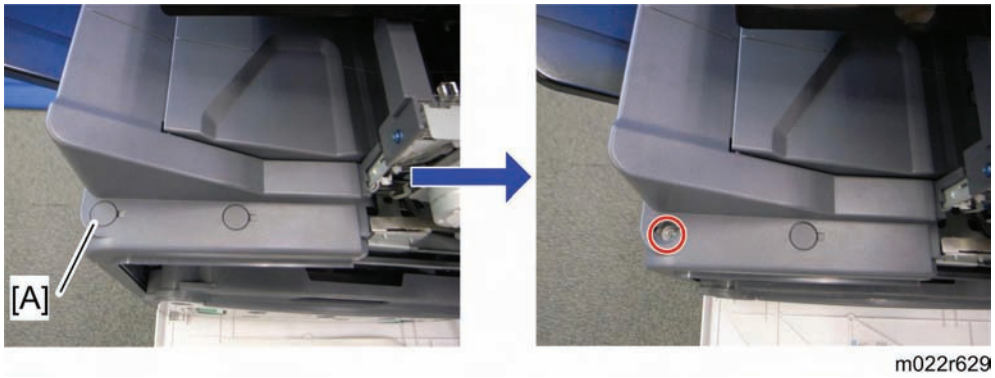
- This section is for the finisher models (M024 and M028).

4.16.1 INTERNAL FINISHER

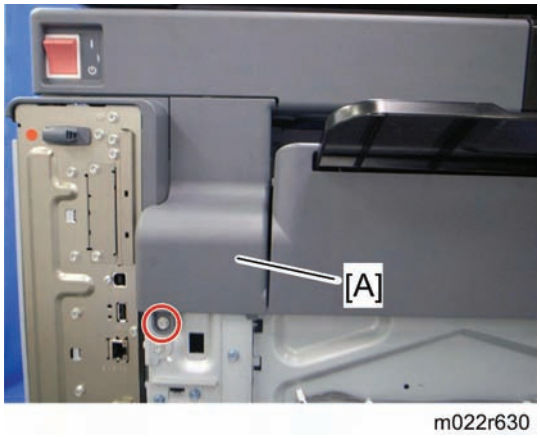
1. Inner right cover (☛ p.4-27)



2. Remove the knob [A], and then remove the bracket [B] (🔩 x 1).



3. Remove the cap [A], and then remove the screw.



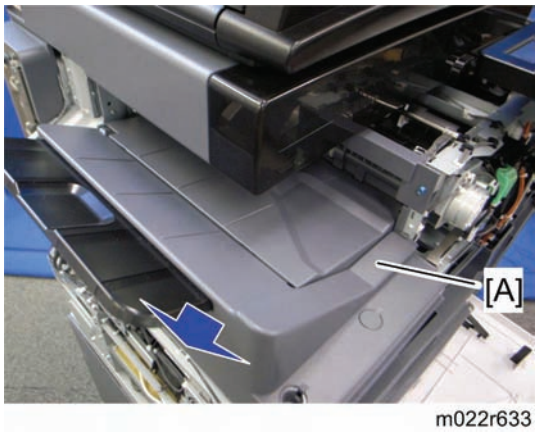
4. Left upper cover [A] (🔩 x 1)

m022r631

5. Inner rear left cover [A] (x 1)

m022r632

6. Disconnect the harness [A] and remove the screw.

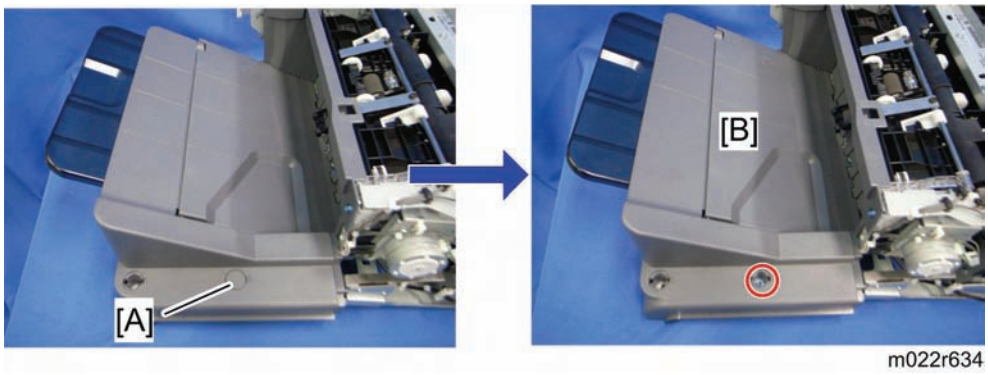


m022r633

7. Internal finisher [A]

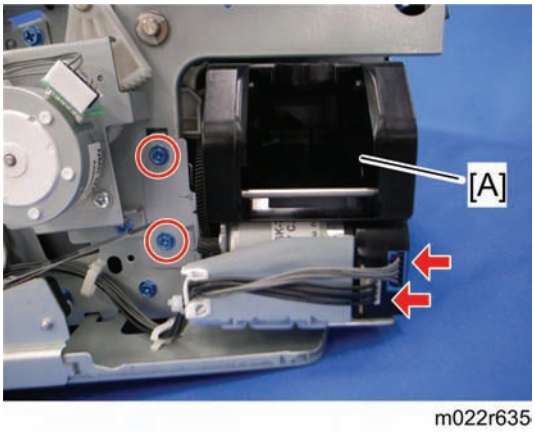
4.16.2 OUTPUT TRAY UNIT

1. Internal finisher (☛ p.4-175)

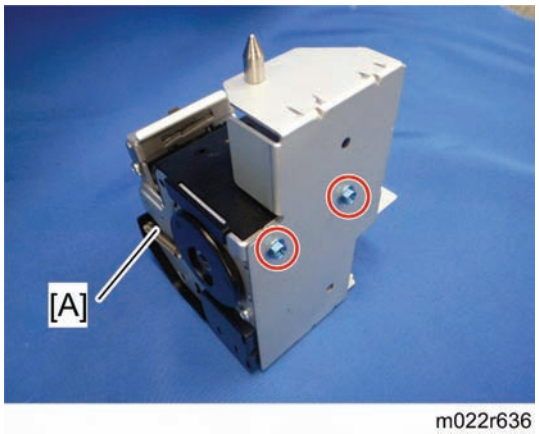


2. Remove the cap [A].
3. Output tray unit [B] (🔩 x 1)

4.16.3 STAPLER UNIT



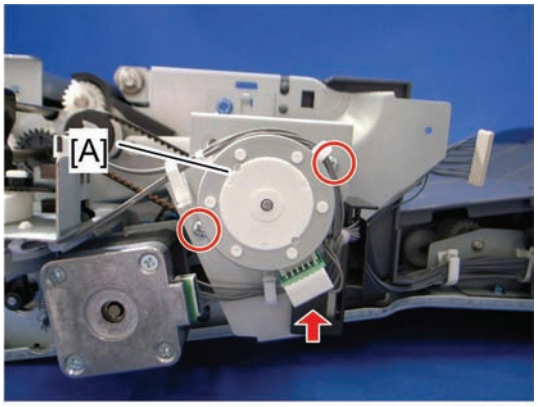
1. Stapler unit with bracket [A] (🔩 x 2, 🔌 x 2)



2. Stapler unit [A] (🔩 x 2)

4.16.4 GATHERING ROLLER MOTOR

1. Internal finisher (☛ p.4-175)

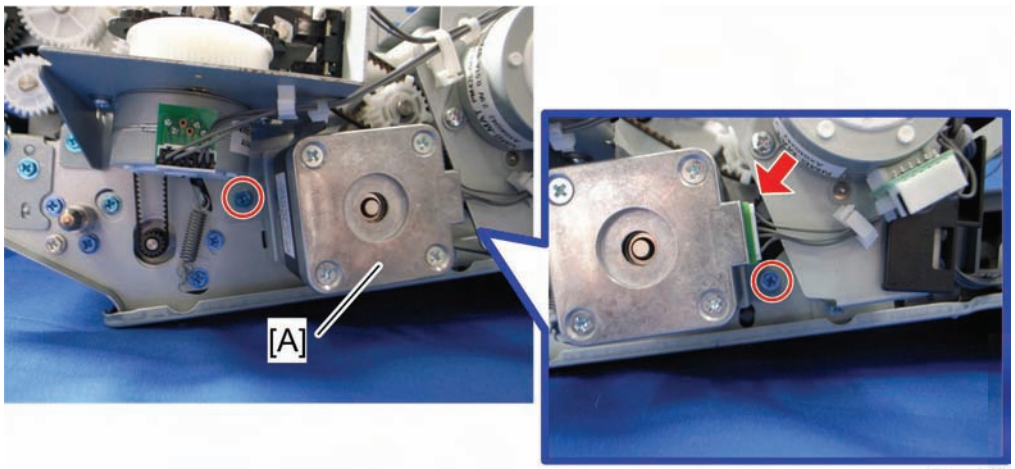


m022r637

2. Gathering roller motor [A] (x 2, x 1)

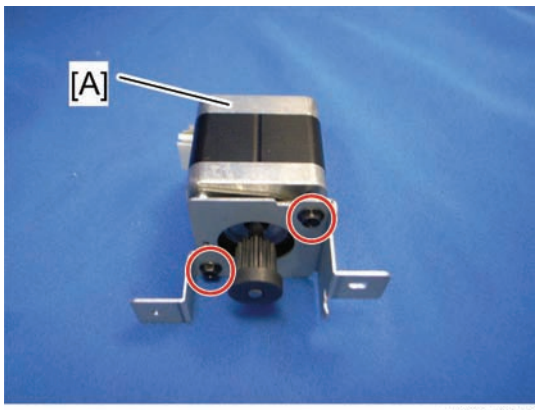
4.16.5 PAPER EXIT MOTOR

1. Internal finisher (☛ p.4-175)



m022r638

2. Paper exit motor bracket [A] (x 2, x 1)

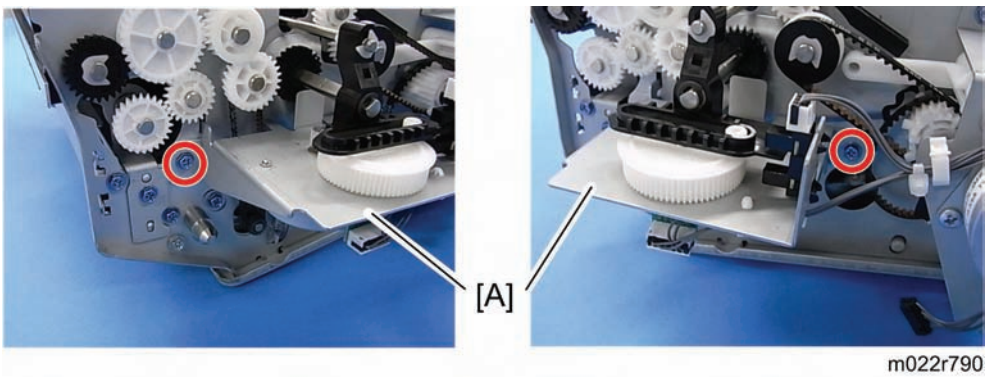


m022r639

3. Paper exit motor [A] (x 2)

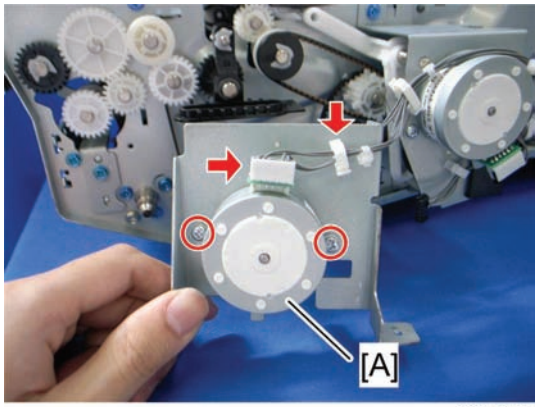
4.16.6 SHIFT ROLLER MOTOR

1. Internal finisher (☛ p.4-175)
2. Paper exit motor (☛ p.4-178)



m022r790

3. Shift roller motor bracket [A] (x 2)

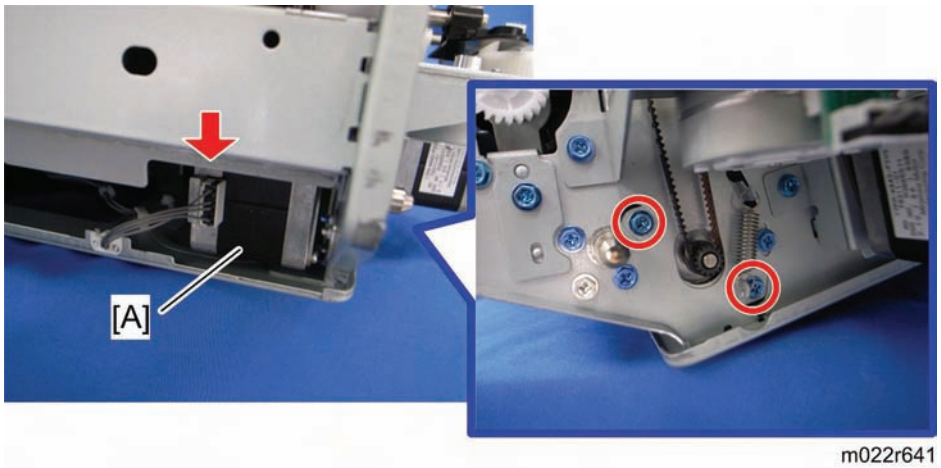


m022r640

4. Shift roller motor [A] (x 2, x 1, x 1)

4.16.7 TRANSPORT MOTOR

1. Internal finisher (☛ p.4-175)

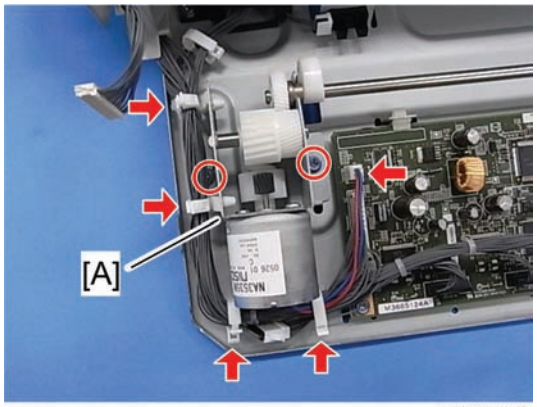


m022r641

2. Transport motor (x 2, x 1)

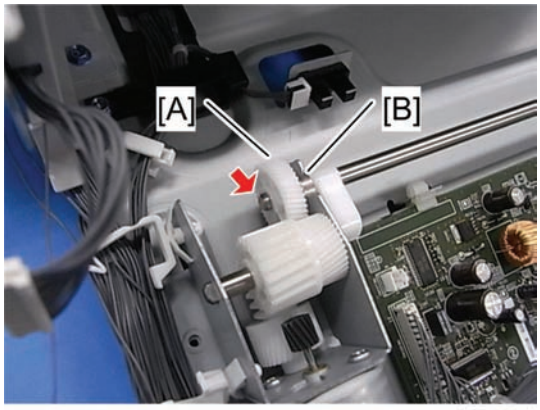
4.16.8 TRAY LIFT MOTOR

1. Internal finisher (☛ p.4-175)
2. Output tray unit (☛ p.4-177)



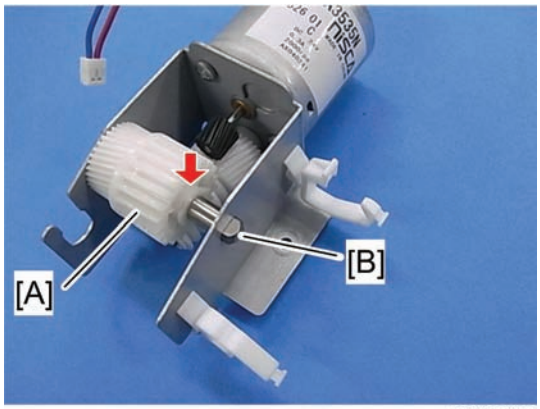
m022r793

3. Release the tray lift motor bracket [A] (x 2, x 1, x 4)



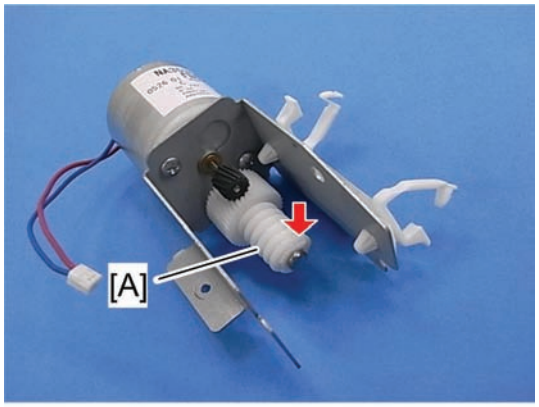
m022r794

4. Remove the gear [A] and bushing [B] (x 1).



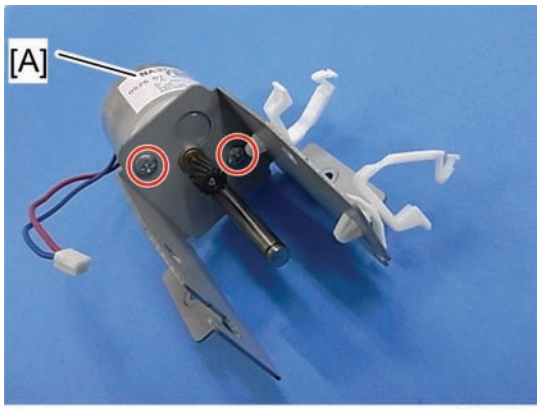
m022r795

5. Remove the gear [A] and shaft [B] (x 1).



m022r796

6. Gear [A] (x 1)

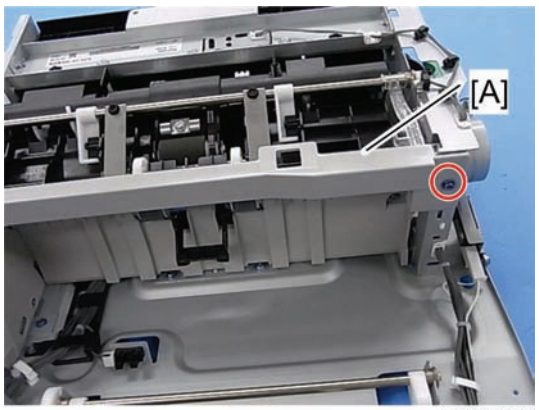


m022r797

7. Tray lift motor [A] (x 2)

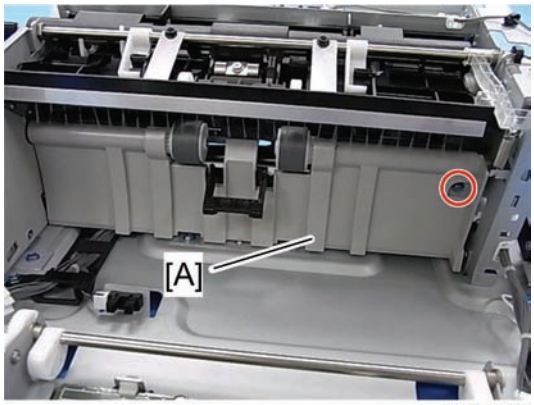
4.16.9 JOGGER MOTOR

1. Internal finisher (☛ p.4-175)
2. Output tray unit (☛ p.4-177)
3. Transport motor (☛ p.4-179)



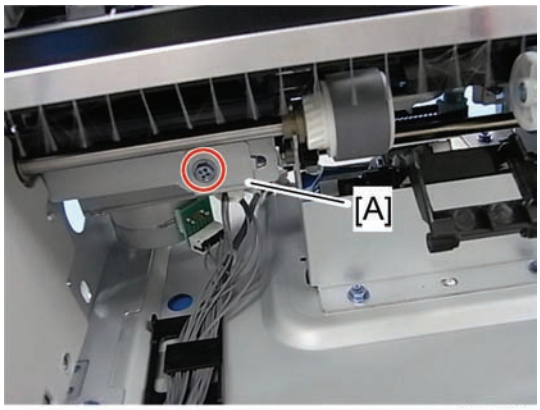
m022r806

4. Remove the cover [A] (🔩 x 1).



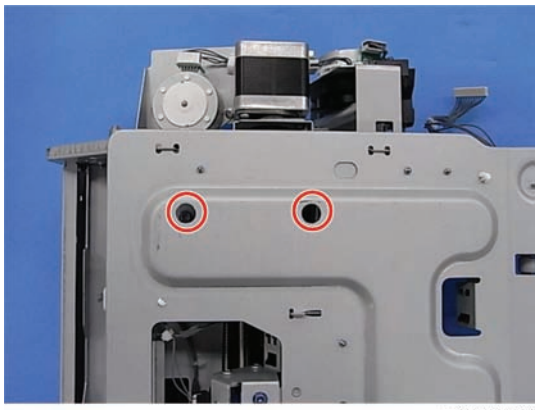
m022r807

5. Guide plate [A] (🔩 x 1).



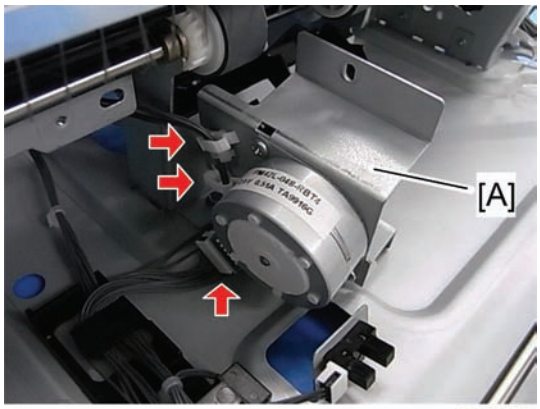
m022r808

6. Jogger fence HP sensor bracket [A] (🔩 x 1).



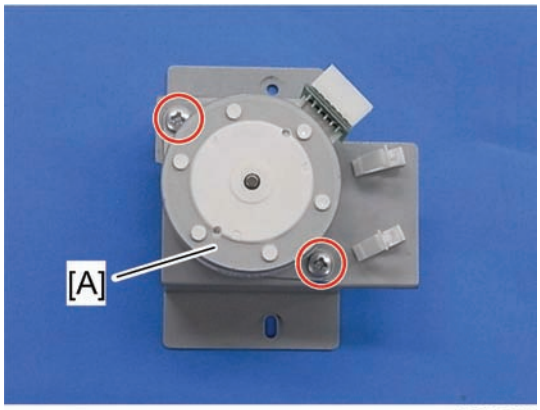
m022r810

7. Remove the two screws.



m022r812

8. Jogger motor bracket [A] (x 1, x 2)

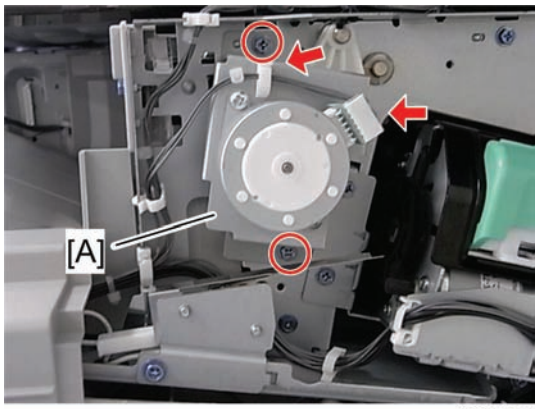


m022r813

9. Jogger motor [A](x 2)

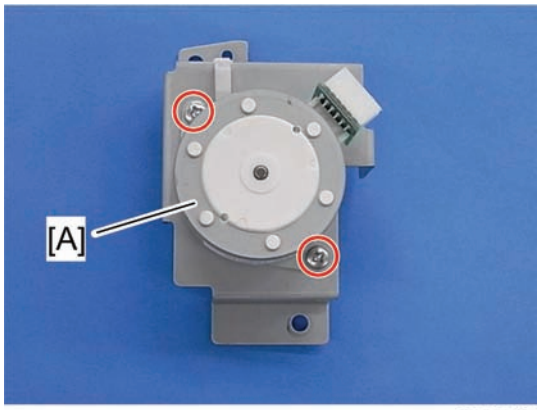
4.16.10 EXIT GUIDE PLATE MOTOR

1. Inner right cover (☛ p.4-27)



m022r814

2. Exit guide plate motor bracket [A] (x 2, x 1, x 1)

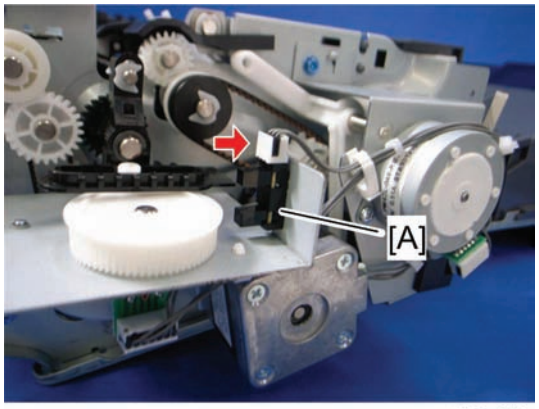


m022r815

3. Exit guide plate motor [A] (x 2)

4.16.11 SHIFT ROLLER HP SENSOR

1. Internal finisher (☛ p.4-175)

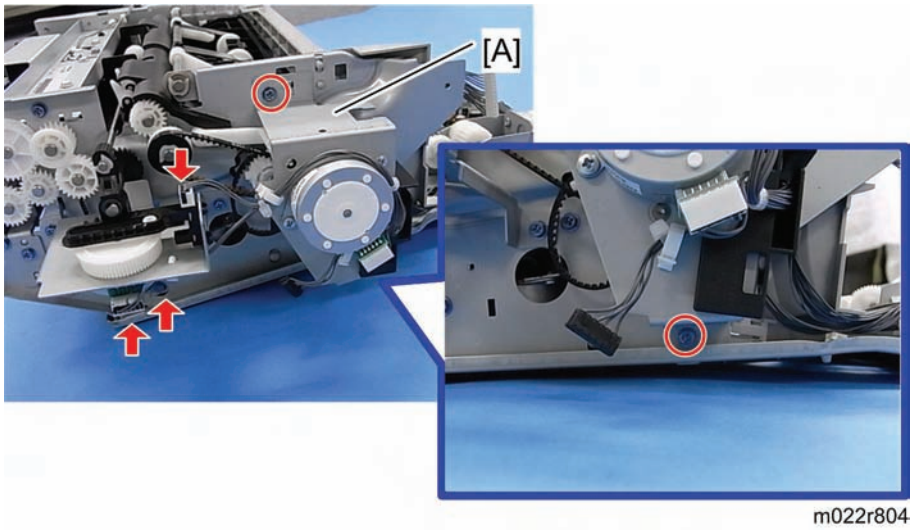


m022r642

2. Shift roller HP sensor [A] (x 1, hooks)

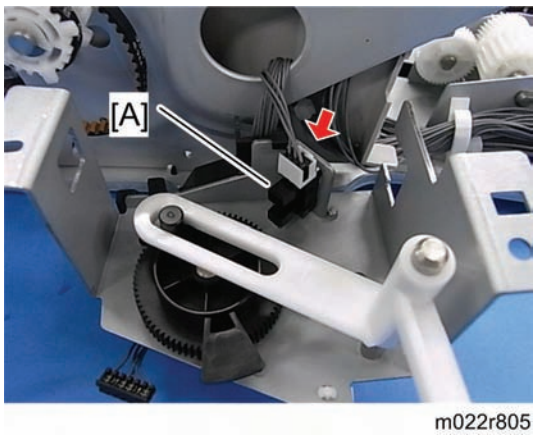
4.16.12 GATHERING ROLLER HP SENSOR

1. Internal finisher (☛ p.4-175)



m022r804

2. Gathering roller motor bracket [A] (x 2, x 2, x 1)

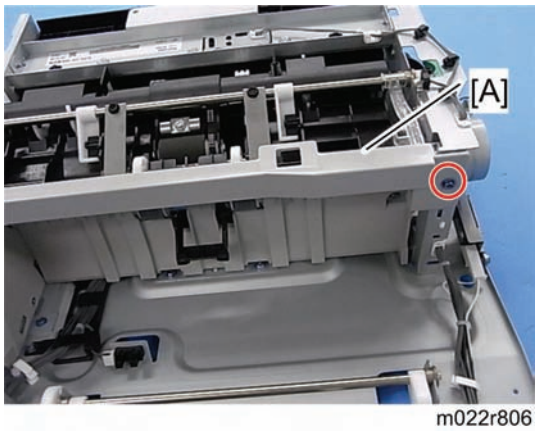


m022r805

3. Gathering roller HP sensor [A] (x 1, hooks)

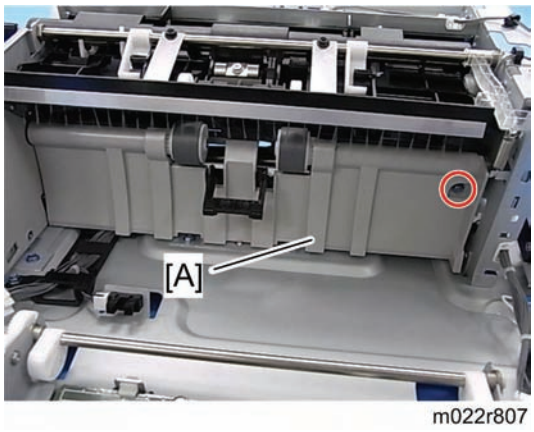
4.16.13 JOGGER FENCE HP SENSOR

1. Internal finisher (☛ p.4-175)
2. Output tray unit (☛ p.4-177)



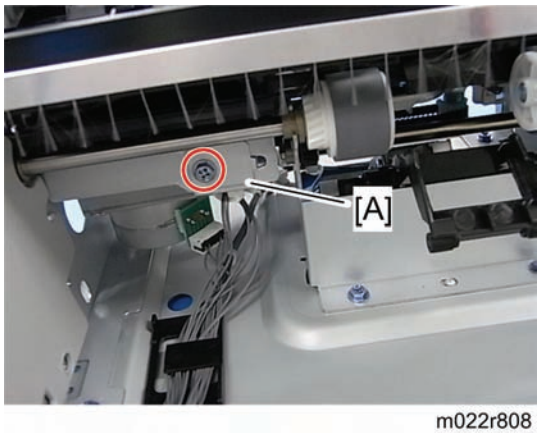
m022r806

3. Remove the cover [A] (🔩 x 1).



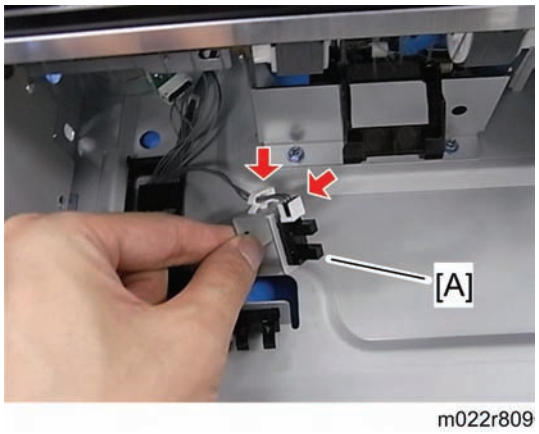
m022r807

4. Guide plate [A] (🔩 x 1).



m022r808

5. Jogger fence HP sensor bracket [A] (🔩 x 1).

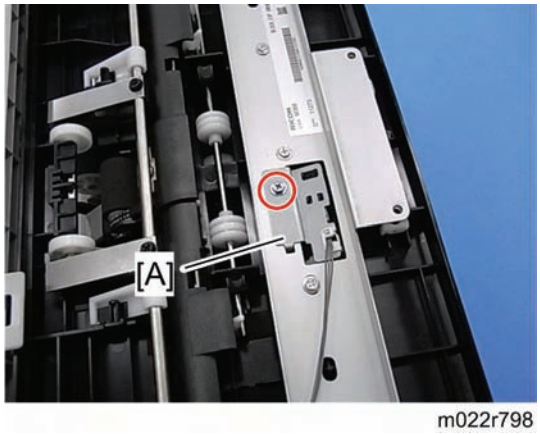


m022r809

6. Jogger fence HP sensor [A] (x 1, x 1, hooks)

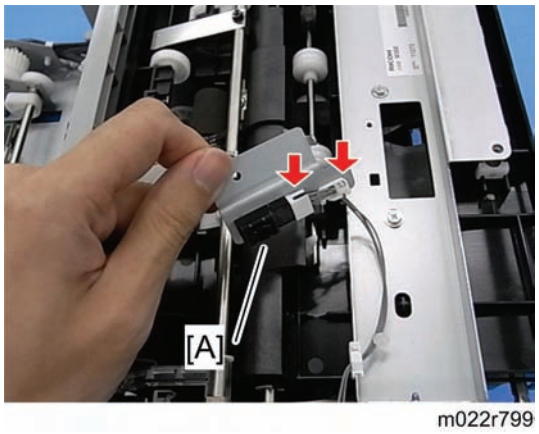
4.16.14 ENTRANCE SENSOR

1. Internal finisher (p.4-175)



m022r798

2. Entrance sensor bracket [A] (x 1)

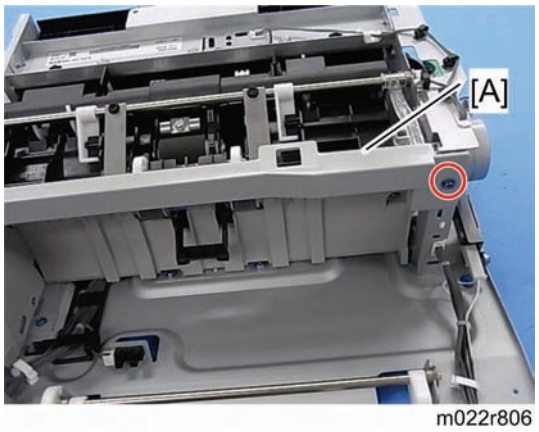


m022r799

3. Entrance sensor [A] (x 1, x 1)

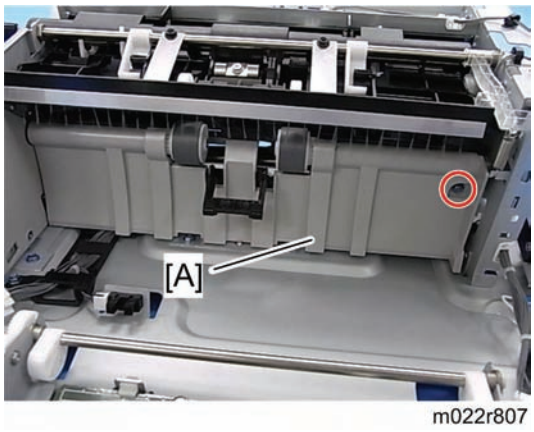
4.16.15 PAPER EXIT SENSOR

1. Internal finisher (☛ Internal finisher)
2. Output tray unit (☛ Output tray unit)



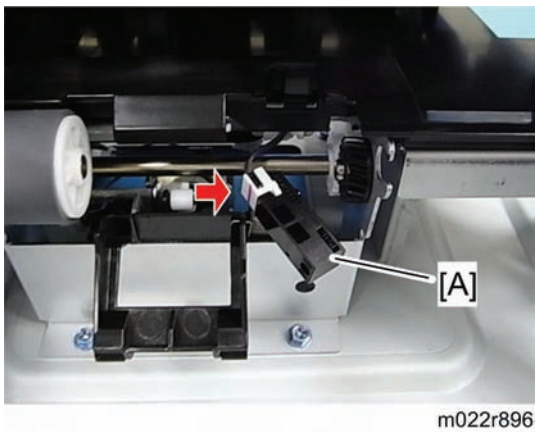
m022r806

3. Remove the cover [A] (x 1).



m022r807

4. Guide plate [A] (x 1)

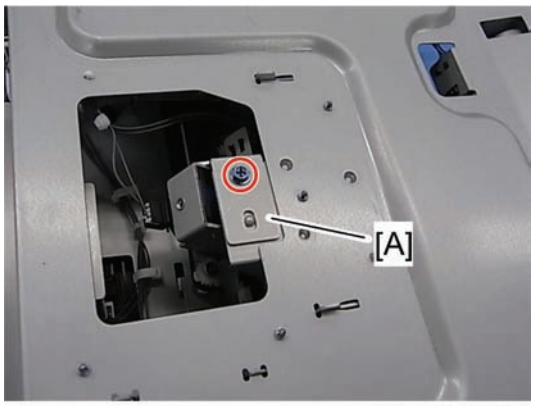


m022r896

5. Paper exit sensor [A] (x1)

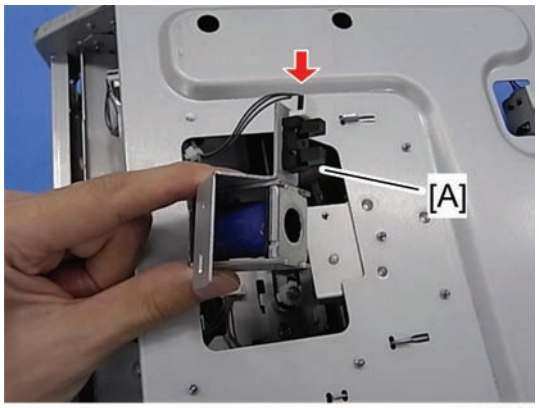
4.16.16 PAPER SENSOR

1. Internal finisher (☛ Internal finisher)



m022r800

2. Paper sensor bracket [A] (x 1)

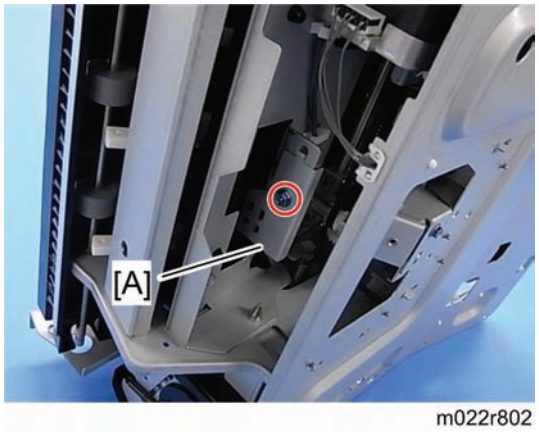


m022r801

3. Paper sensor [A] (x 1, hooks)

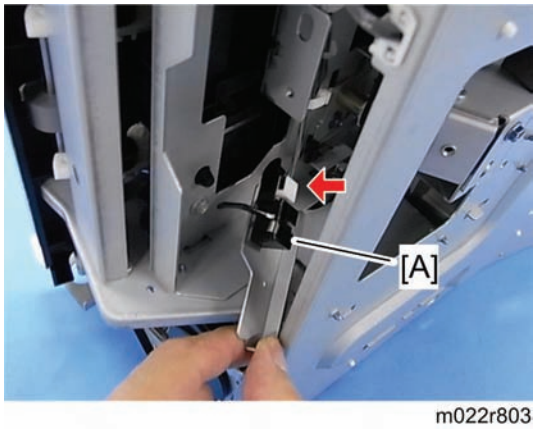
4.16.17 STAPLE TRAY PAPER SENSOR

1. Internal finisher (☛ p.4-175)



m022r802

2. Staple tray paper sensor bracket [A] (☛ x 1)

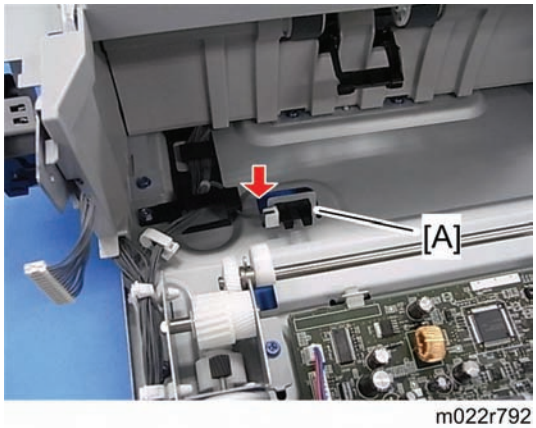


m022r803

3. Staple tray paper sensor [A] (☛ x 1, hooks)

4.16.18 TRAY LOWER LIMIT SENSOR

1. Internal finisher (☛ p.4-175)
2. Output tray unit (☛ p.4-177)

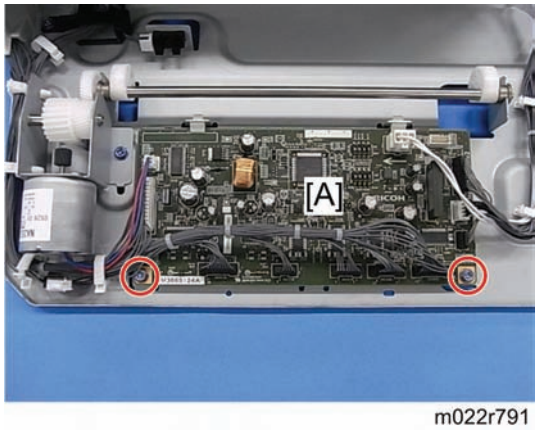


m022r792

3. Tray lower limit sensor [A] (☛ x 1, hooks).

4.16.19 MAIN BOARD

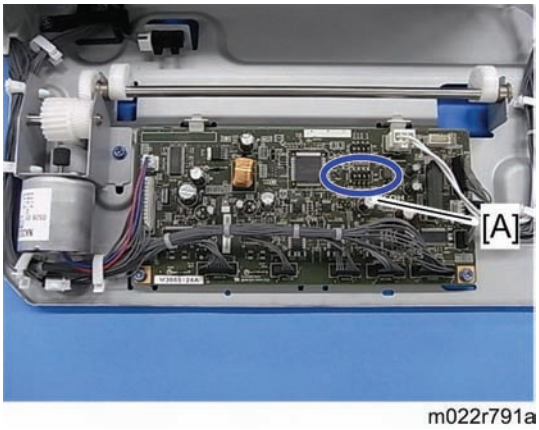
1. Internal finisher (☛ p.4-175)
2. Output tray unit (☛ p.4-177)



m022r791

3. Main board [A] (x 2, x all)

When reinstalling the main board



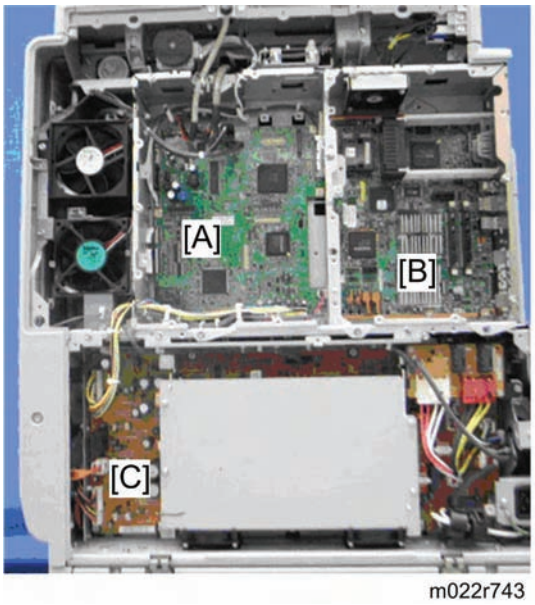
m022r791a

Check the DIP switch (SW100) [A] on the old main board. If the settings on the new main board are different from the old main board, change the settings on the new board (they must be the same as the settings on the old board).

4.17 ELECTRICAL COMPONENTS

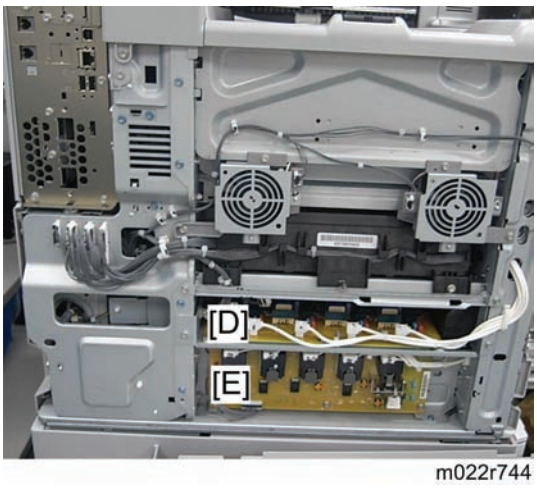
4.17.1 BOARDS

Rear Cover and Controller Cover Removal



[A]	IPU
[B]	Controller Board
[C]	PSU

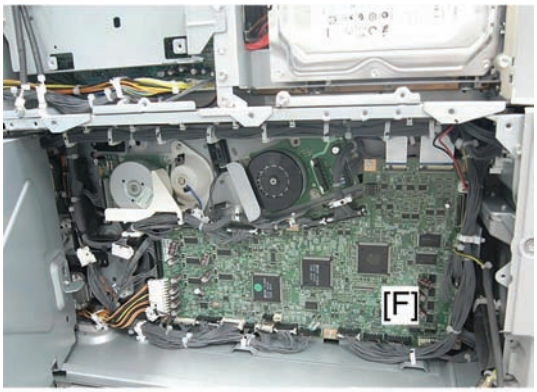
Left Cover Removal



m022r744

[D]	HVPS: CB Board
[E]	HVPS: T1T2 Board

PSU Box Open

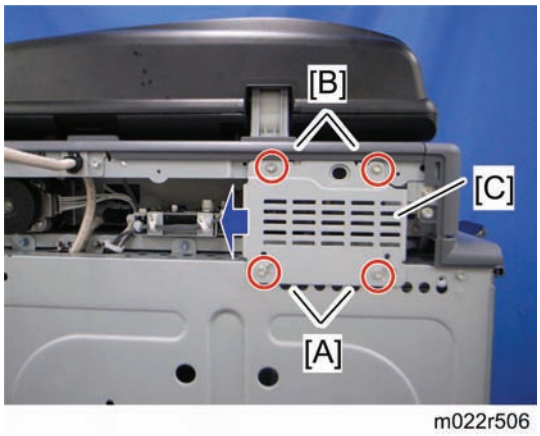


m022r745

[F]	BCU

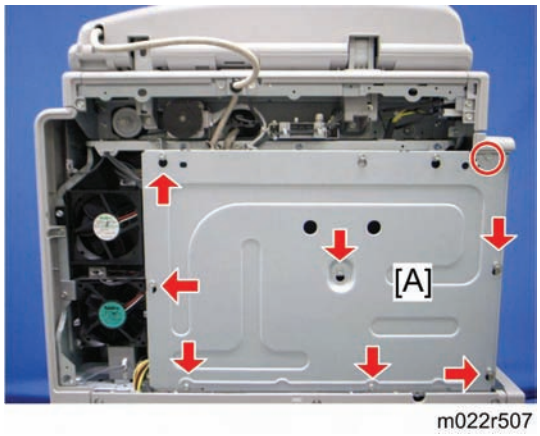
4.17.2 CONTROLLER BOX COVER

1. Rear cover (☛ p.4-19)



m022r506

2. Loosen two screws [A], and remove two screws [B].
3. Slide the scanner cable bracket [C] in the direction of the blue arrow, and then remove it.



m022r507

4. Loosen seven screws, and remove one screw.
5. Slide up the controller box cover [A], and then remove it.

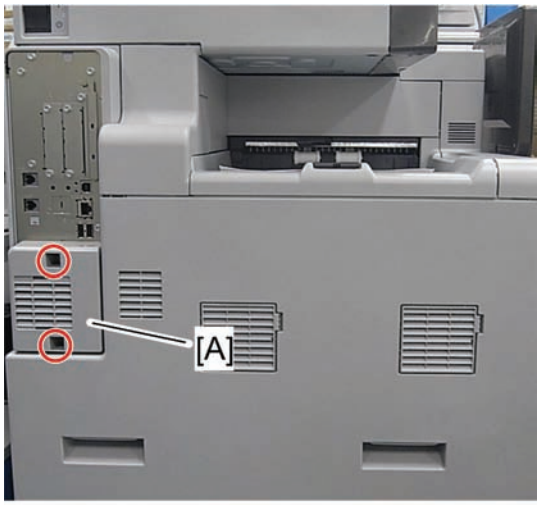
4.17.3 CONTROLLER BOX

Note

- Remove the optional counter interface unit when opening or removing the controller box.

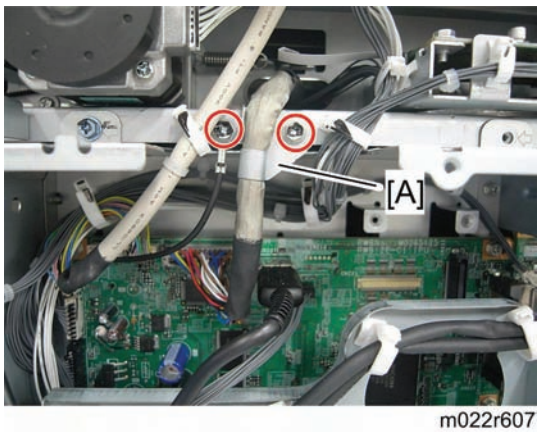
Opening the controller box

1. Rear cover (☛ p.4-19)
2. Rear lower cover (☛ p.4-18)



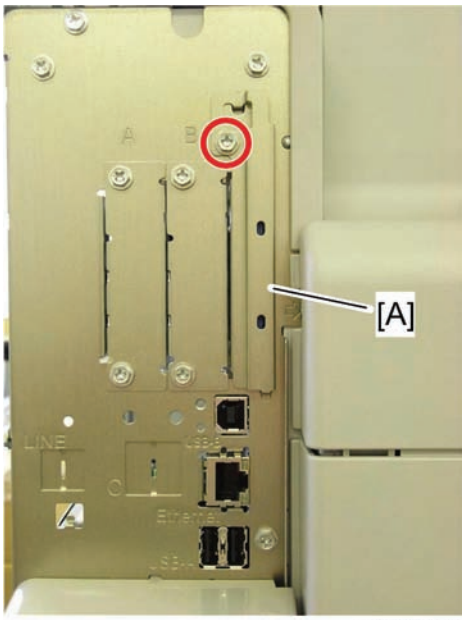
m022r782

3. Fan cover [A] (🔩 x 2)
4. Controller box cover (☛ p.4-194)



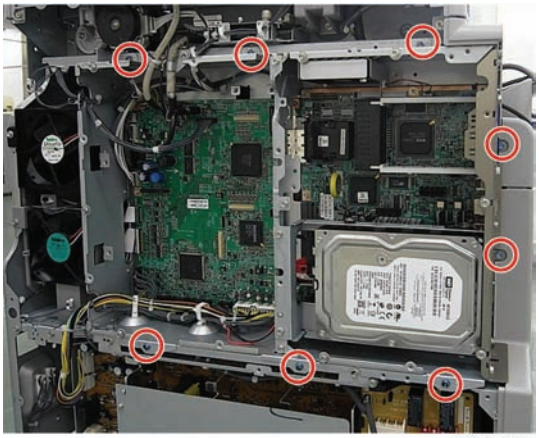
m022r607

5. Release the ground cable and the bracket [A] (🔩 x 2).

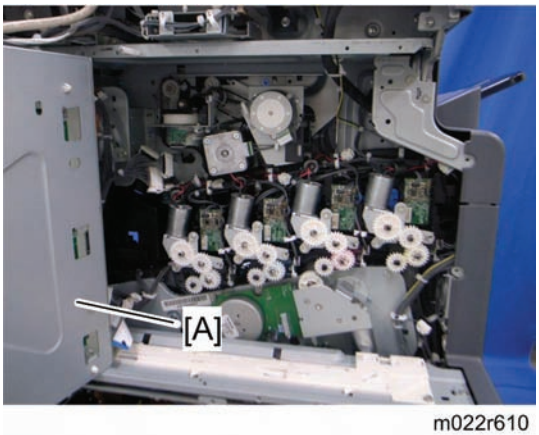


m022i151b

6. SD card cover [A] (x 1)
7. Disconnect all the harnesses (x All).


m022r608

8. Remove eight screws.

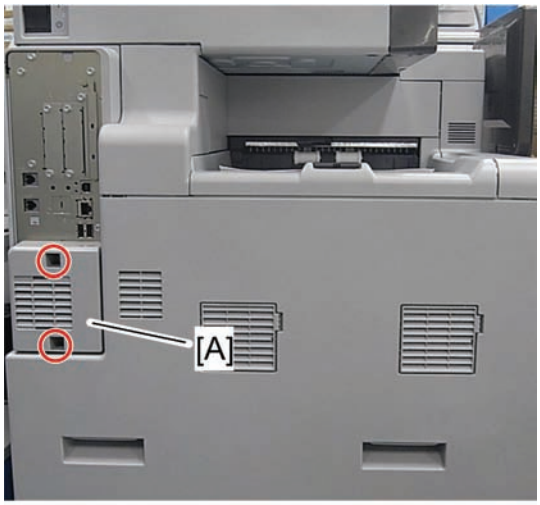


m022r610

9. Open the controller box [A].

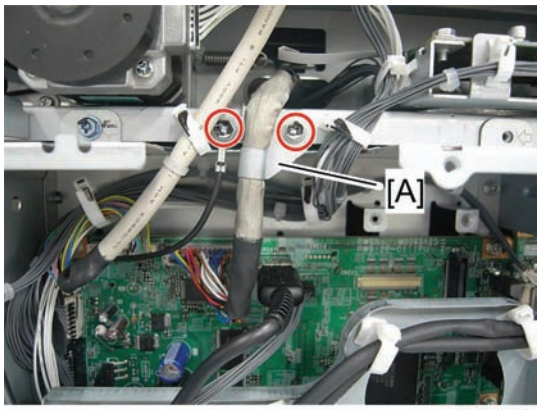
Removing the controller box

1. Rear cover (☛ p.4-19)
2. Rear lower cover (☛ p.4-18)



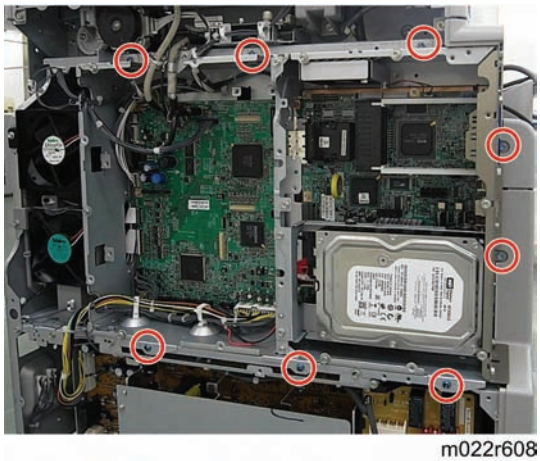
m022r782

3. Fan cover [A] (🔩 x 2)
4. Controller box cover (☛ p.4-194)



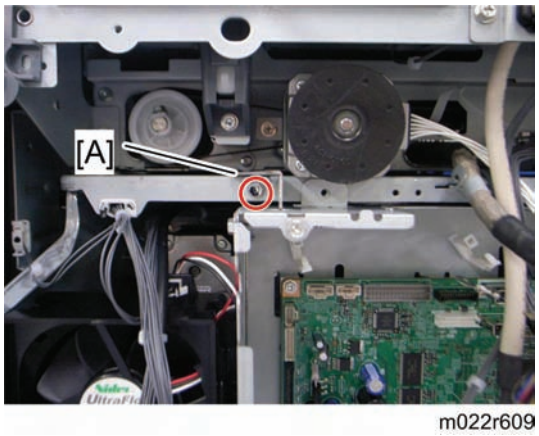
m022r607

5. Release the ground cable and the bracket [A] (🔩 x 2).
6. Disconnect all the harnesses (🔌 x All).



m022r608

7. Remove eight screws.

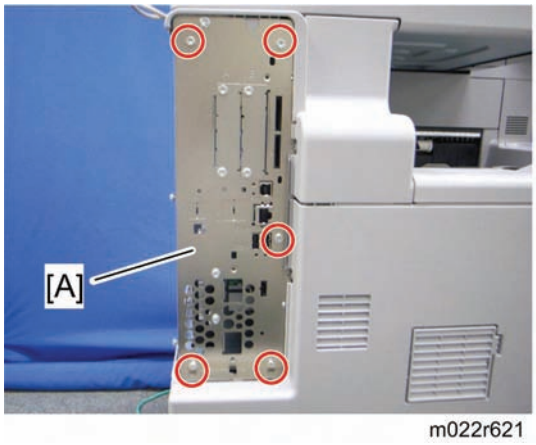


m022r609

8. Bracket [A] (x 1)
9. Remove the controller box.

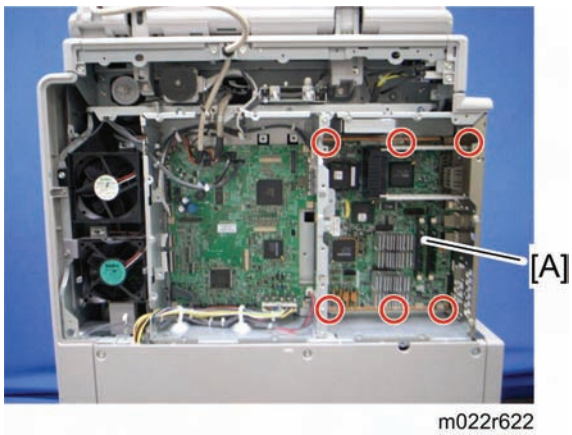
4.17.4 CONTROLLER BOARD

1. Rear cover (p.4-19)
2. Controller box cover (p.4-194)
3. Fan cover (p.4-195 "Controller Box")
4. HDD assembly (p.4-200 "HDD")



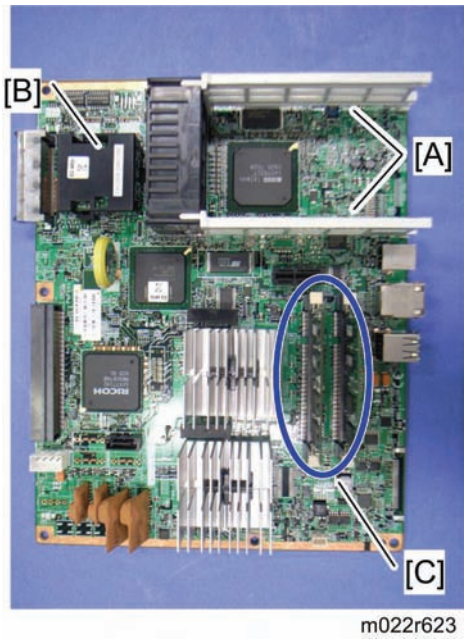
m022r621

5. Controller box bracket [A] (x 5)



m022r622

6. Controller board [A] (x 6)



7. Remove the Interface rails [A], NVRAM [B] and RAM-DIMMs [C].

When installing the new controller board

1. Remove the NVRAM and RAM DIMMs from the old controller board.
2. Install the NVRAM and RAM DIMMs on the new controller board after you replace the controller board.
3. Reassemble the machine.
4. Turn on the main power of the machine.

Note

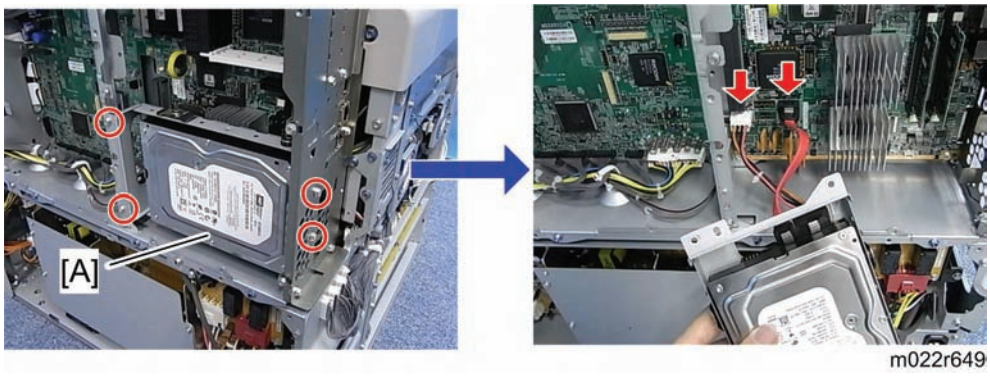
- Make sure you print out the SMC reports ("SP Mode Data" and "Logging Data") before you replace the NVRAM.

CAUTION

- Keep NVRAMs away from any objects that can cause static electricity. Static electricity can damage NVRAM data.
- Make sure the NVRAM is correctly installed on the controller board.

4.17.5 HDD

1. Rear cover (☛ p.4-19)
2. Fan cover (☛ p.4-195 "Controller Box")
3. Controller box cover (☛ p.4-194)



m022r649

4. HDD assembly [A] (x 4, x 2)

m022r650

5. HDD [A] (x 4)

m022r651

6. Disconnect the HDD harnesses [A].

When installing a new HDD unit

1. Turn the main power switch on. The disk is automatically formatted.
2. Install the stamp data using "SP5853".
3. Switch the machine off and on to enable the fixed stamps for use.

Disposal of HDD Units

- Never remove an HDD unit from the work site without the consent of the client.
- If the customer has any concerns about the security of any information on the HDD, the HDD must remain with the customer for disposal or safe keeping.
- The HDD may contain proprietary or classified (Confidential, Secret) information. Specifically, the HDD contains document server documents and data stored in temporary files created automatically during copy job sorting and jam recovery. Such data is stored on the HDD in a special format so it cannot normally be read but can be recovered with illegal methods.

Reinstallation

Explain to the customer that the following information stored on the HDD is lost when the HDD is replaced:

- Address book

The address book and document server documents (if needed) must be input again.

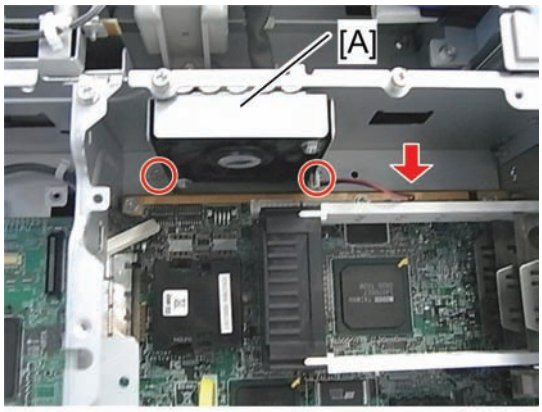
If you previously backed up the address book to an SD card with SP5846 051, you can use SP 5846 052 to copy the data from the SD card to the hard disk.

If the customer is using the following options, each option function must be set up again. For more, see each reference guide.

- Data Overwrite Security Unit: See "Security Guide".
- HDD Encryption Unit: See "Security Guide".
- ELP NX: see "Enhanced Locked Print NX Administrator's Guide".

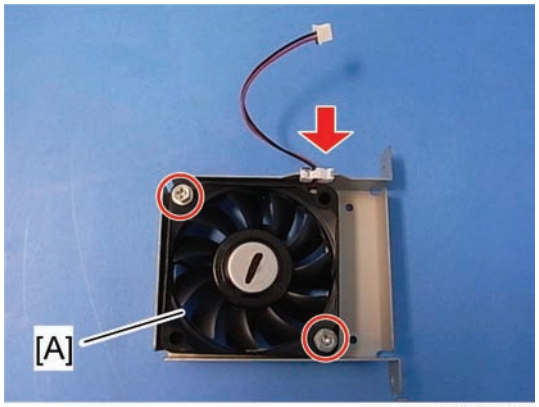
4.17.6 CONTROLLER FAN

1. Rear cover (☛ p.4-19)
2. Controller box cover (☛ p.4-194)



m022r647

3. Controller fan base (x 2, x 1)



m022r648

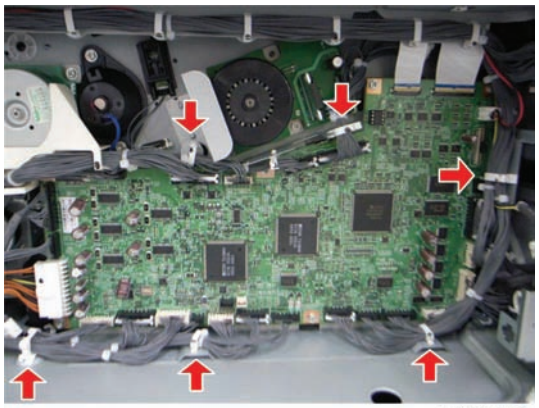
4. Controller fan [A] (x 2, x 1)

When installing the controller fan

Make sure that the controller fan is installed with its decal facing the upper side.

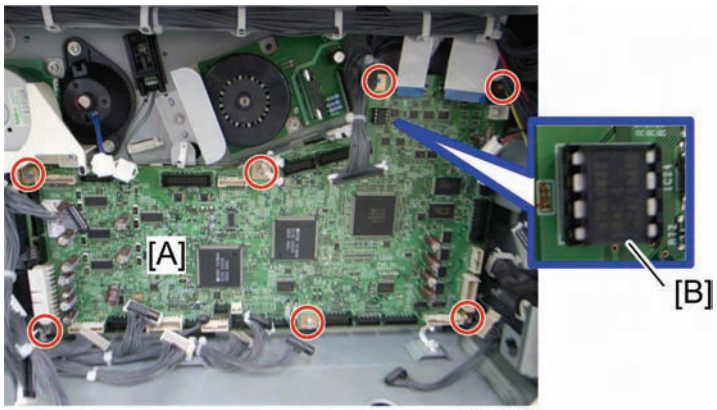
4.17.7 BCU

1. Rear lower cover (☛ p.4-18)
2. PSU box (☛ p.4-208)



m022r611

3. Release the six connectors and disconnect all the harnesses.



m022r612

4. BCU [A] (🔧 x 7)

Note

- Make sure the EEPROM is correctly installed on the BCU. Insert the EEPROM in the EEPROM slot with the "half-moon" pointing [B] to the downward side.

When installing the new BCU

1. Remove the EEPROM from the old BCU.
2. Install the EEPROM on the new BCU after you replace the BCU.
3. Reassemble the machine.
4. Turn on the main power of the machine.
5. "SC995-01" occurs.
6. Enter the serial number with SP5811-004.
7. Turn the main power of the machine off and on.

Note

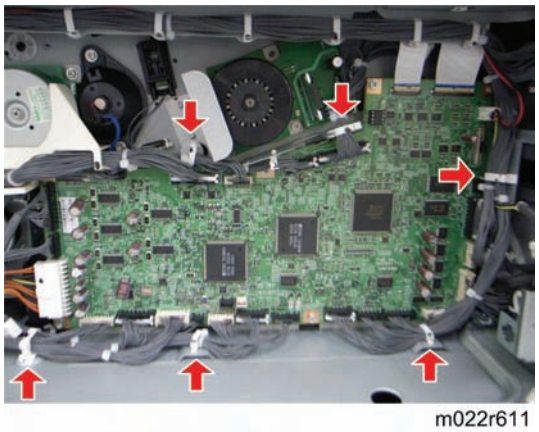
- Make sure you print out the SMC reports ("SP Mode Data" and "Logging Data") before you replace the EEPROM.

CAUTION

- Keep EEPROM away from any objects that can cause static electricity. Static electricity can damage EEPROM data.

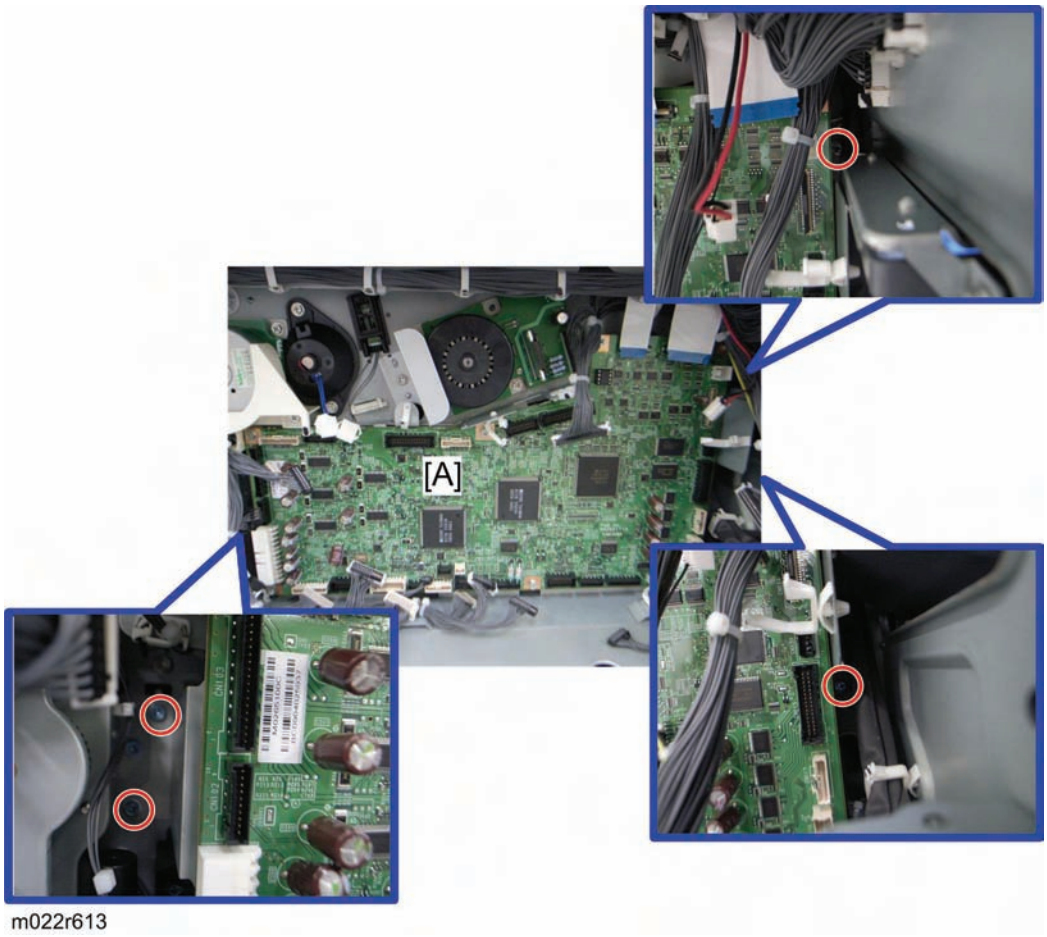
Removing the BCU with bracket

1. Rear lower cover (☛ p.4-18)
2. PSU box (☛ p.4-208)



m022r611

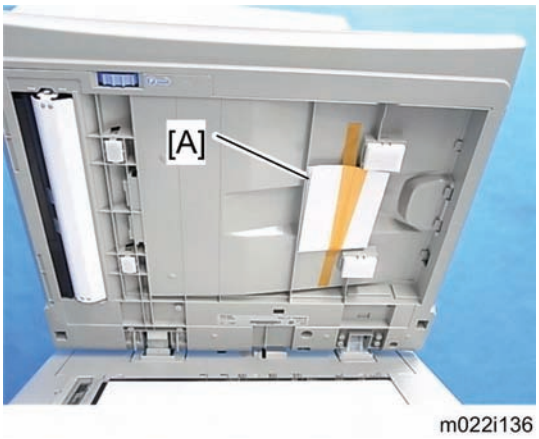
3. Release the six clamps and disconnect all the harnesses.



4. BCU with bracket [A] (x 4)

4.17.8 NVRAM/EEPROM REPLACEMENT PROCEDURE

SMC Report



Make sure the SMC report [A] is stored as shown above.

EEPROM on the BCU

1. Make sure that you have the SMC report (factory settings). This report comes with the machine.
2. Output the SMC data (SP5-990-001) if possible.
3. Turn the main switch off.
4. Install an SD card into SD card slot 2. Then turn the main power on.
5. Copy the EEPROM data to an SD card (SP5-824-001) if possible.
6. Turn off the main switch. Then unplug the power cord.
7. Replace the EEPROM on the BCU and reassemble the machine.
8. Plug in the power cord. Then turn the main switch on.
9. SC195 occurs.
10. Copy the data from the SD card to the EEPROM (SP5-825-001) if you have successfully copied them to the SD card.
11. Turn the main switch off. Then remove the SD card from SD card slot 2.
12. Turn the main switch on.
13. Specify the SP and UP mode settings.
14. Do the process control self-check.
15. Do ACC for the copier application program.
16. Do ACC for the printer application program.

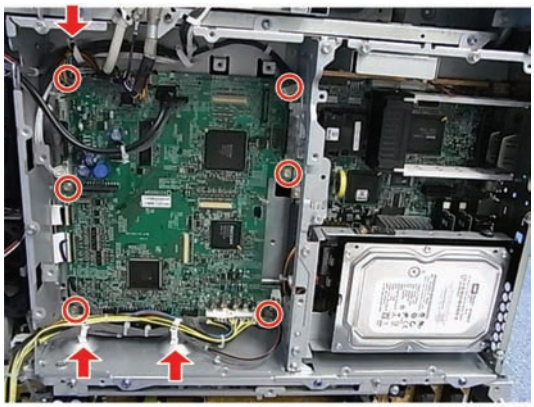
NVRAM on the Controller

1. Make sure that you have the SMC report (factory settings). This report comes with the machine.
2. Output the SMC data (SP5-990-001) if possible.

3. Turn the main switch off. Then unplug the power cord.
4. Install a New NVRAM on the controller. Then reassemble the machine.
5. Turn the main switch on.
6. SC995-02 occurs.
7. Turn the machine off and on.
8. Do the process control self-check.
9. Do ACC for the copier application program.
10. Do ACC for the printer application program.

4.17.9 IPU

1. Rear cover (☛ p.4-19)
2. Controller box cover (☛ p.4-194)



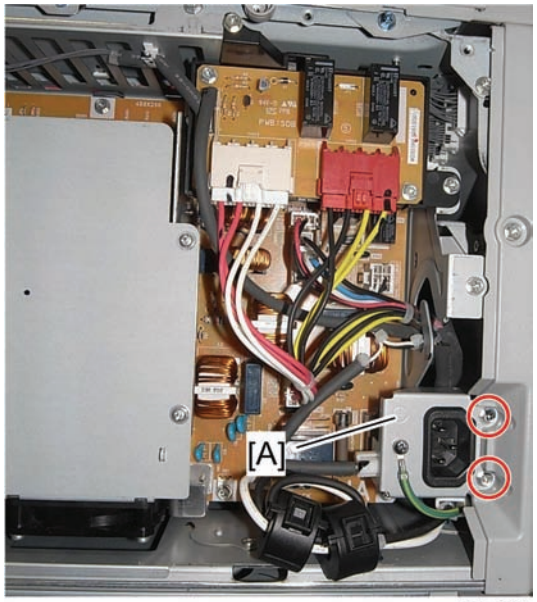
m022r646

3. IPU [A] (x 6, x 3, x all)

4.17.10 PSU BOX

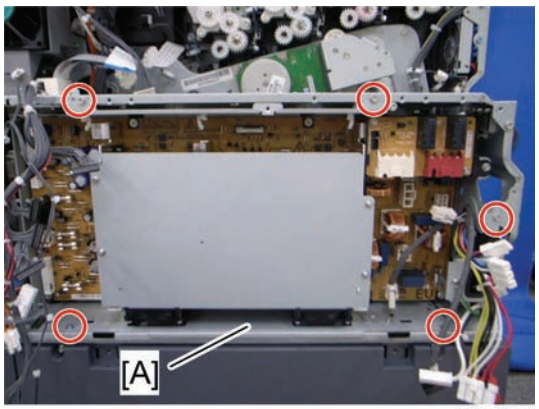
Opening the PSU box

1. Rear lower cover (☛ p.4-18)



m022r783

2. Connector bracket [A] (🔩 x 2)

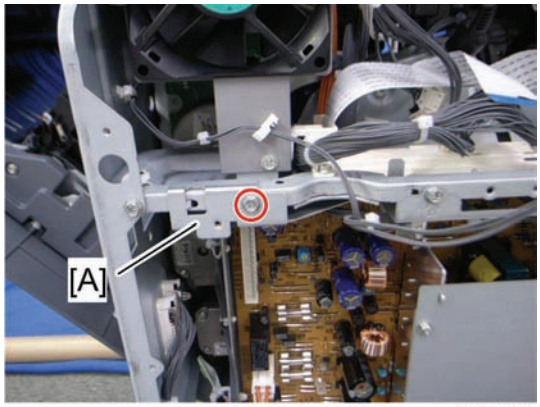


m022r615

3. Open the PSU box [A] (🔩 x 5, x All, x All).

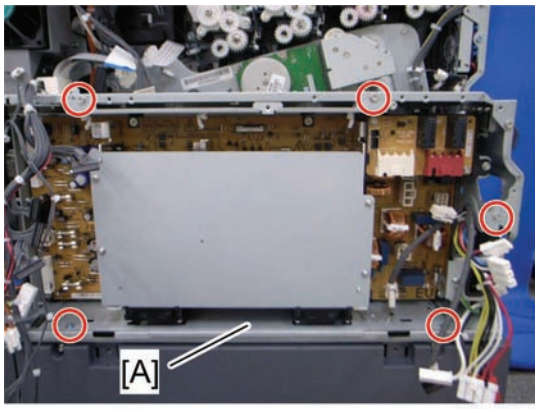
Removing the PSU box

1. Rear lower cover (☛ p.4-18)



m022r614

2. Bracket [A] (🔩 x 1)

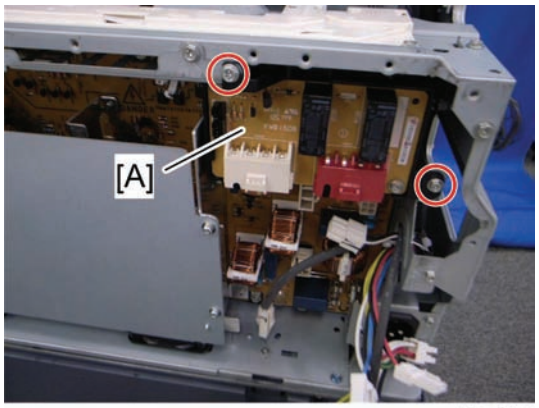


m022r615

3. PSU box [A] (🔩 x 5, x All, x All)

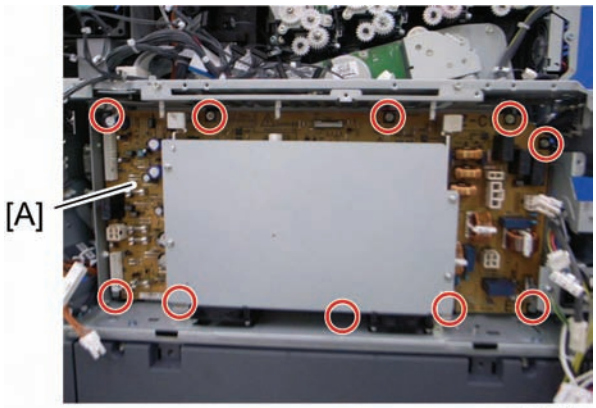
4.17.11 PSU

1. Rear lower cover (☛ p.4-18)
2. Connector bracket (☛ p.4-208)
3. Disconnect all the harnesses (x All).



m022r616

4. SDB holder [A] (x 2)

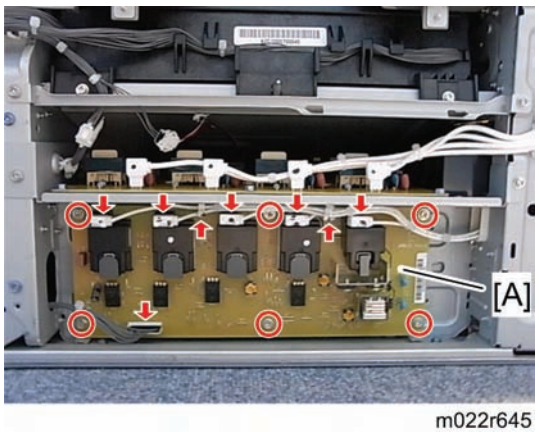


m022r617

5. PSU board [A] (x 10, x all)

4.17.12 HVPS: T1T2 BOARD

1. Left cover (☛ p.4-18)

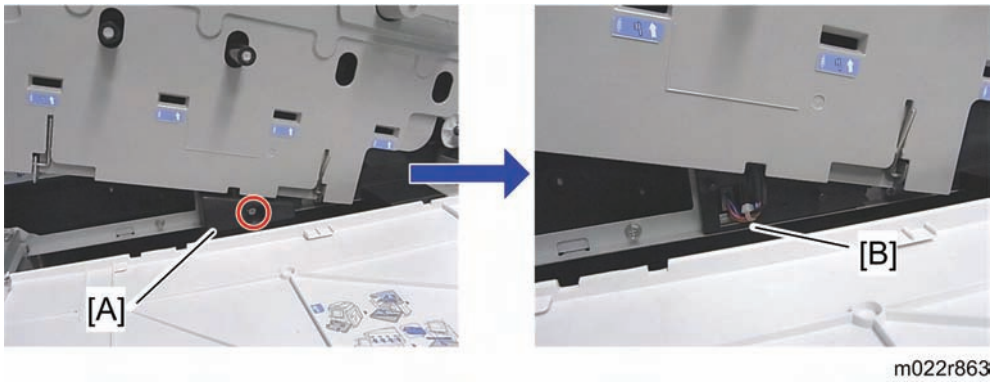


m022r645

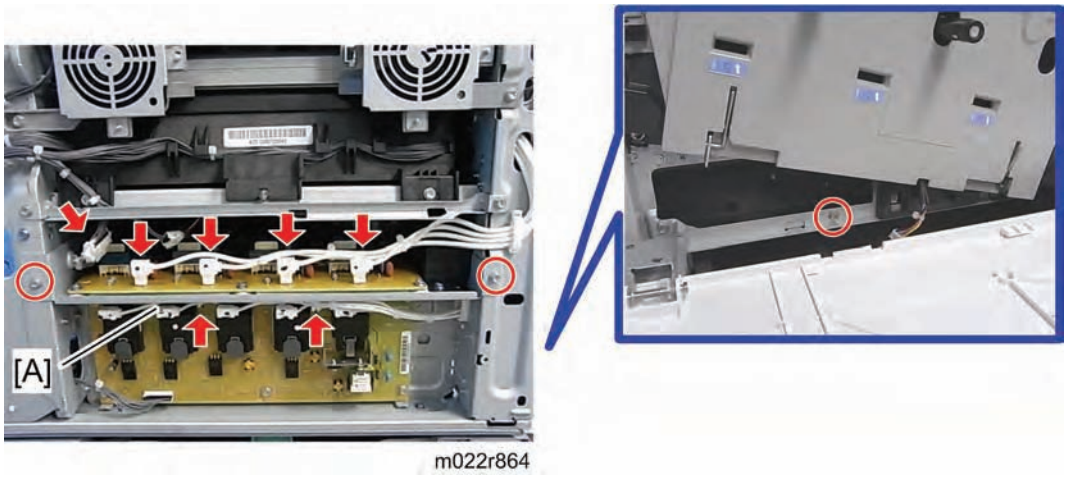
2. HVPS: T1T2 board [A] (x 6, x 6, x 2)

4.17.13 HVPS: CB BOARD

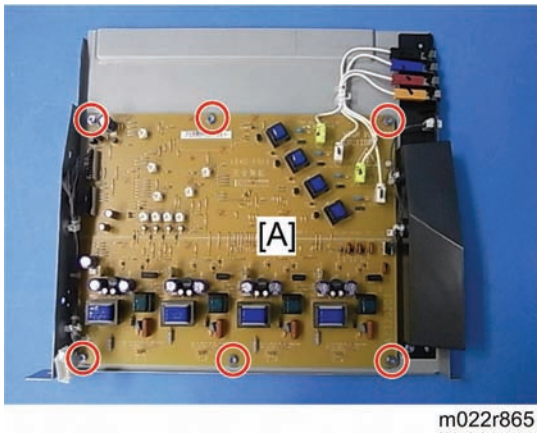
1. Left cover (☛ p.4-18)
2. Toner collection bottle (☛ p.4-16)



3. Remove the connector cover [A], and then disconnect the connector [B].



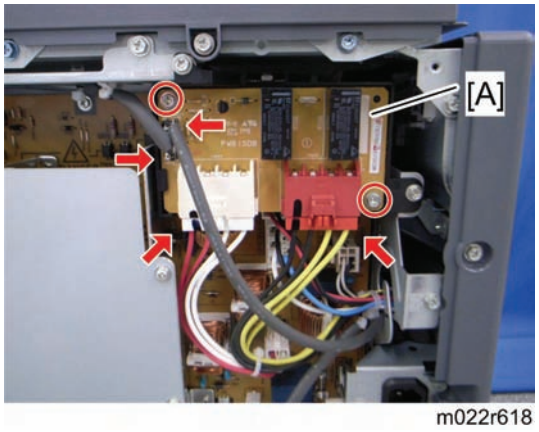
4. Board bracket [A] (x 3, x 5, x 2)



5. HVPS: CB board [A] (x 6, All s)

4.17.14 SDB

1. Rear lower cover (☛ p.4-18)



2. SDB [A] (x 4, x 2)

SYSTEM MAINTENANCE

REVISION HISTORY		
Page	**Date**	**Added/Updated/New**
		None

5. SYSTEM MAINTENANCE

5.1 SERVICE PROGRAM MODE

⚠CAUTION

- Make sure that the data-in LED (📨) is not on before you go into the SP mode. This LED indicates that some data is coming to the machine. When the LED is on, wait for the copier to process the data.

5.1.1 SP TABLES

See "Appendices" for the following information:

- System Service Mode
- Printer Service Mode
- Scanner Service Mode

5.1.2 ENABLING AND DISABLING SERVICE PROGRAM MODE

Note

- The Service Program Mode is for use by service representatives only. If this mode is used by anyone other than service representatives for any reason, data might be deleted or settings might be changed. In such case, product quality cannot be guaranteed any more.

Entering SP Mode

For details, ask your supervisor.

Exiting SP Mode

- Press "Exit" on the LCD twice to return to the copy window.

5.1.3 TYPES OF SP MODES

- System SP: SP modes related to the engine functions
- Printer SP: SP modes related to the controller functions
- Scanner SP: SP modes related to the scanner functions
- Fax SP: SP modes related to the fax functions

Select one of the Service Program modes (System, Printer, Scanner, or Fax) from the touch panel as shown in the diagram below after you access the SP mode. This section explains the functions of the System/Printer/Scanner SP modes. Refer to the Fax service manual for the Fax SP modes.

SP Mode Button Summary

Here is a short summary of the touch-panel buttons.

1	Opens all SP groups and sublevels.
2	Closes all open groups and sublevels and restores the initial SP mode display.
3	Opens the copy window (copy mode) so you can make test copies. Press SP Mode (highlighted) in the copy window to return to the SP mode screen,
4	Enter the SP code directly with the number keys if you know the SP number. Then press #. (The required SP Mode number will be highlighted when pressing #. If not, just press the required SP Mode number.)
5	Press two times to leave the SP mode and return to the copy window to resume normal operation.
6	Press any Class 1 number to open a list of Class 2 SP modes.
7	Press to scroll the show to the previous or next group.
8	Press to scroll to the previous or next display in segments the size of the screen display (page).
9	Press to scroll the show the previous or next line (line by line).
10	Press to move the highlight on the left to the previous or next selection in the list.

Switching Between SP Mode and Copy Mode for Test Printing

1. In the SP mode, select the test print. Then press "Copy Window".
2. Use the copy window (copier mode), to select the appropriate settings (paper size, etc.) for the test print.
3. Press Start ◇ to start the test print.
4. Press SP Mode (highlighted) to return to the SP mode screen and repeat from step 1.

Selecting the Program Number

Program numbers have two or three levels.

1. Refer to the Service Tables to find the SP that you want to adjust before you begin.
2. Press the Group number on the left side SP Mode window that contains the SP that you want to adjust.
3. Use the scrolling buttons in the center of the SP mode window to show the SP number that you want to open. Then press that number to expand the list.
4. Use the center touch-panel buttons to scroll to the number and title of the item that you want to set and press it. The small entry box on the right activates and shows the below default or the current settings.

   Note

   - Refer to the Service Tables for the range of allowed settings.
5. Do this procedure to enter a setting:
   - Press ⁻/₊ to toggle between plus and minus and use the keypad to enter the appropriate number. The number you enter writes over the previous setting.
   - Press # to enter the setting. (The value is not registered if you enter a number that is out of range.)
   - Press "Yes" when you are prompted to complete the selection.
6. If you need to perform a test print, press Copy Window to open the copy window and select the settings for the test print. Press Start ◇ and then press SP Mode (highlighted) in the copy window to return to the SP mode display.
7. Press Exit two times to return to the copy window when you are finished.

Exiting Service Mode

- Press the Exit key on the touch-panel.

Service Mode Lock/Unlock

At locations where the machine contains sensitive data, the customer engineer cannot operate the machine until the Administrator turns the service mode lock off. This function makes sure that work on the machine is always done with the permission of the Administrator.

1. If you cannot go into the SP mode, ask the Administrator to log in with the User Tool and then set "Service Mode Lock" to OFF after he or she logs in:
   User Tools > System Settings > Administrator Tools > Service Mode Lock > OFF
   - This unlocks the machine and lets you get access to all the SP codes.
   - The CE can service the machine and turn the machine off and on. It is not necessary to ask the Administrator to log in again each time the machine is turned on.
2. Go into the SP mode and set SP5169 to "1" if you must use the printer bit switches.
3. After machine servicing is completed:
   - Change SP5169 from "1" to "0".
   - Turn the machine off and on. Tell the administrator that you have completed servicing the machine.
   - The Administrator will then set the "Service Mode Lock" to ON.

5.1.4 REMARKS

Display on the Control Panel Screen

The maximum number of characters which can show on the control panel screen is limited to 30 characters. For this reason, some of the SP modes shown on the screen need to be abbreviated. The following are abbreviations used for the SP modes for which the full description is over 20 characters.

<table>
<tr><td colspan="2">Paper Weight
Thin paper: 52-59 g/m^2
Plain Paper: 60-90 g/m^2, 16-24lb.
Middle Thick: 91-105 g/m^2, 24-28lb.
Thick Paper 1: 106-169 g/m^2, 28.5-44.9lb.
Thick Paper 2: 170-220 g/m^2, 45-58lb.
Thick Paper 3: 221-256 g/m^{2,} 59lb-68lb
Thick Paper 4: 257 -300 g/m^2, 68.4-79.8lb</td></tr>
<tr><td>Paper Type
N: Normal paper
MTH: Middle thick paper
TH: Thick paper</td><td>Paper Feed Station
P: Paper tray
B: By-pass table</td></tr>
<tr><td colspan="2">Color Mode [Color]
[K]: Black in B&W mode
[Y], [M], or [C]: Yellow, Magenta, or Cyan in Full Color mode
[YMC]: Only for Yellow, Magenta, and Cyan
[FC]: Full Color mode
[FC, K], [FC, Y], [FC, M], or [FC, C]: Black, Yellow, Magenta, or Cyan in full color mode</td></tr>
<tr><td>Print Mode
S: Simplex
D: Duplex</td><td>Process Speed
L: Low speed (85 mm/s)
M: Middle speed (182 mm/s)
H: Middle speed (260 mm/s)</td></tr>
</table>

Others

The following symbols are used in the SP mode tables.

FA: Factory setting

(Data may be adjusted from the default setting at the factory. Refer to the factory setting sheets enclosed. You can find it under the jammed paper removal decal.)

DFU: Design/Factory Use only

Do not touch these SP modes in the field.

A sharp (#) to the right hand side of the mode number column means that the main switch must be turned off and on to effect the setting change.

An asterisk (*) to the right hand side of the mode number column means that this mode is stored in the NVRAM and EEPROM. If you do a RAM clear, this SP mode will be reset to the default value. "ENG" and "CTL" show which NVRAM contains the data.

- ENG: EEPROM on the BCU board
- CTL: NVRAM on the controller board

The settings of each SP mode are explained in the right-hand column of the SP table in the following way.

[Adjustable range / **Default setting** / Step] Alphanumeric

Note

- If "Alphanumeric" is written to the right of the bracket as shown above, the setting of the SP mode shows on the screen using alphanumeric characters instead of only numbers. However, the settings in the bracket in the SP mode table are explained by using only the numbers.

SSP: This denotes a "Special Service Program" mode setting.

5.2 MAIN SP TABLES-1

5.2.1 SP1-XXX (FEED)

1001	**[Leading Edge Registration]** Leading Edge Registration Adjustment (Tray Location, Paper Type, Color Mode), Paper Type -> Plain, Thick 1, Thick 2 or Thick3		
	Adjusts the leading edge registration by changing the registration motor operation timing for each mode. Increasing a value: an image is moved to the trailing edge of paper. Decreasing a value: an image is moved to the leading edge of paper.		
001	Tray:Plain	*ENG	[–9 to 9 / **3.9** / 0.1 mm/step]
002	Tray:Middle Thick	*ENG	[–9 to 9 / -**0.4** / 0.1 mm/step]
003	Tray:Thick1	*ENG	[–9 to 9 / -**2.5** / 0.1 mm/step]
004	Tray:Thick2	*ENG	[–9 to 9 / -**3.7** / 0.1 mm/step]
005	Tray:Thick3	*ENG	[–9 to 9 / -**3.5** / 0.1 mm/step]
006	Tray:Plain:1200	*ENG	[–9 to 9 / **0.8** / 0.1 mm/step]
007	Tray: Middle Thick:1200	*ENG	[–9 to 9 / -**0.5** / 0.1 mm/step]
008	Tray:Thick1:1200	*ENG	[–9 to 9 / -**0.5** / 0.1 mm/step]
009	By-pass:Plain	*ENG	[–9 to 9 / **3.9** / 0.1 mm/step]
010	By-pass: Middle Thick	*ENG	[–9 to 9 / **0.1** / 0.1 mm/step]
011	By-pass: Thick1	*ENG	[–9 to 9 / -**1.8** / 0.1 mm/step]
012	By-pass: Thick2	*ENG	[–9 to 9 / -**2.7** / 0.1 mm/step]
013	By-pass: Thick3	*ENG	[–9 to 9 / -**2.4** / 0.1 mm/step]
014	By-pass:Plain:1200	*ENG	[–9 to 9 / **0.8** / 0.1 mm/step]
015	By-pass: Middle Thick:1200	*ENG	[–9 to 9 / **0.1** / 0.1 mm/step]
016	By-pass:Thick1:1200	*ENG	[–9 to 9 / **0.1** / 0.1 mm/step]

017	Duplex:Plain	*ENG	[–9 to 9 / **3.9** / 0.1 mm/step]
018	Duplex: Middle Thick	*ENG	[–9 to 9 / -**0.1** / 0.1 mm/step]
019	Duplex:Thick1	*ENG	[–9 to 9 / -**2.1** / 0.1 mm/step]
020	Duplex: Thick2	*ENG	[–9 to 9 / -**3** / 0.1 mm/step]
021	Duplex:Plain:1200	*ENG	[–9 to 9 / **0.7** / 0.1 mm/step]
022	Duplex: Middle Thck:1200	*ENG	[–9 to 9 / **0.1** / 0.1 mm/step]
023	Duplex:Thck1:1200	*ENG	[–9 to 9 / **0** / 0.1 mm/step]
024	Tray:Thin	*ENG	[–9 to 9 / **1** / 0.1 mm/step]
026	By-pass:Thin	*ENG	[–9 to 9 / **1** / 0.1 mm/step]

1002	**[Side-to-Side Registration]**		
	Adjusts the side-to-side registration by changing the laser main scan start position for each mode and tray. Increasing a value: an image is moved to the rear edge of paper. Decreasing a value: an image is moved to the front edge of paper.		
001	By-pass	*ENG	[–4 to 4 / **0.0** / 0.1 mm/step]
002	Paper Tray 1	*ENG	
003	Paper Tray 2	*ENG	
004	Paper Tray 3	*ENG	
005	Paper Tray 4	*ENG	
006	Duplex	*ENG	

1003	**[Paper Buckle]** Paper Buckle Adjustment (Tray Location, Paper Type), Paper Type: N: Normal, TH: Thick		
	Adjusts the amount of paper buckle at the registration roller by changing the paper feed timing.		
001	Paper Tray1:Plain	*ENG	[-11 to 9 / **-1** / 1 mm/step]

002	Paper Tray1:Middle Thick	*ENG	[-11 to 9 / **-1** / 1 mm/step]
003	Paper Tray1:Thick1	*ENG	[-11 to 9 / **-3** / 1 mm/step]
004	Paper Tray2/3/4:Plain	*ENG	[-11 to 9 / **-1** / 1 mm/step]
005	Paper Tray2/3/4:Middle Thick	*ENG	[-11 to 9 / **-1** / 1 mm/step]
006	Paper Tray2/3/4:Thick1	*ENG	[-11 to 9 / **-3** / 1 mm/step]
007	By-pass:Plain	*ENG	[-11 to 9 / **-1** / 1 mm/step]
008	By-pass:Middle Thick	*ENG	[-11 to 9 / **-1** / 1 mm/step]
009	By-pass:Thick1	*ENG	[-11 to 9 / **-3** / 1 mm/step]
010	Duplex:Plain	*ENG	[-11 to 9 / **-2** / 1 mm/step]
011	Duplex:Middle Thick	*ENG	[-11 to 9 / **-2** / 1 mm/step]
012	Duplex:Thick1	*ENG	[-11 to 9 / **-3** / 1 mm/step]
013	Paper Tray1:Plain:1200	*ENG	[-11 to 9 / **-1** / 1 mm/step]
014	Paper Tray1: Middle Thick:1200	*ENG	[-11 to 9 / **-1** / 1 mm/step]
015	Paper Tray1:Thick1:1200	*ENG	[-11 to 9 / **-3** / 1 mm/step]
016	Paper Tray2/3/4: Plain:1200	*ENG	[-11 to 9 / **-1** / 1 mm/step]
017	Paper Tray2/3/4: Middle Thick:1200	*ENG	[-11 to 9 / **-1** / 1 mm/step]
018	Paper Tray2/3/4: Thick1:1200	*ENG	[-11 to 9 / **-3** / 1 mm/step]
019	By-pass:Plain:1200	*ENG	[-11 to 9 / **-1** / 1 mm/step]
020	By-pass:Middle Thick:1200	*ENG	[-11 to 9 / **-1** / 1 mm/step]
021	By-pass:Thick1:1200	*ENG	[-11 to 9 / **-3** / 1 mm/step]
022	Duplex:Plain:1200	*ENG	[-11 to 9 / **-1** / 1 mm/step]
023	Duplex:Middle Thick:1200	*ENG	[-11 to 9 / **-1** / 1 mm/step]
024	Duplex:Thick1:1200	*ENG	[-11 to 9 / **-3** / 1 mm/step]

1007	By-pass Size Detection LG		
	Selects the paper size detection.		
001	0: Letter A4, 1: Legal	*ENG	[0 to 1 / **0** / 1 /step]

1103	**[Fusing Idling]** Fusing Idling Adjustment		
012	Forced Idling Stop	*ENG	[0 to 1 / **0** / 1 /step] 0: OFF, 1; ON
013	Forced Idling Stop Temp.	*ENG	[100 to 180 / **100** / 1 deg/step]
014	Minimum Idling Time	*ENG	[0 to 10 / **2** / 1 sec/step]
016 to 018	Specifies how long the extra idling operation is executed for each environment. Each environment is determined with SP1112-001 and 002.		
016	Extra Idling Time (L)	*ENG	[0 to 60 / **20** / 1 sec/step]
017	Extra Idling Time (H)	*ENG	[0 to 60 / **0** / 1 sec/step]
018	Extra Idling Time (M)	*ENG	[0 to 60 / **0** / 1 sec/step]
019	Ex Idling Temp:P-Roll	*ENG	[0 to 160 / **110** / 1 deg/step]
020	Control Switch Temp	*ENG	[0 to 100 / **16** / 1 deg/step]

1104	**[Fusing Idling Before Job]**		
001	Environment Thresh	*ENG	[0 to 2 / **2** / 1 /step] 0: Low Temp, 1: Low/Normal 2: All Env
002	Idling Temp:P-Roll	*ENG	[0 to 160 / **160** / 1 deg /step]
	Specifies the threshold temperature for the pressure roller idling before a job.		
003	Idling Time: BW	*ENG	Specifies the fusing idling time for each printe mode before a job. [0 to 10 / **2** / 1 sec/step]
004	Idling Time: FC	*ENG	
005	Idling Time: M-Thick: BW	*ENG	

006	Idling Time: M-Thick: FC	*ENG	
007-009	Specifies the thereshold temperature of the paper feed before a job.		
007	Paper Feed Temp:P-Roller	*ENG	[0 to 160 / **90**/ 1 deg/step]
008	P.Feed Temp:MThick:P-Roll:BW	*ENG	[0 to 160 / **100**/ 1 deg/step]
009	P.Feed Temp:MThick:P-Roll:FC	*ENG	[0 to 160 / **100**/ 1 deg/step]
010	Upper Limit Temp	*ENG	[0 to 100 / **25**/ 1 deg/step]
011	Offset: Feed Start	*ENG	[0 to 100 / **20**/ 1 deg/step]
012	Offset: Feed Start: M-Thick	*ENG	[0 to 100 / **10**/ 1 deg/step]
013	Offset: Feed Start: 600: Plain1: BW	*ENG	[0 to 100 / **25**/ 1 deg/step]
014	Offset: Feed Start: 600: Plain2: BW	*ENG	[0 to 100 / **25**/ 1 deg/step]
030	Offset: Feed Start: Time	*ENG	[15 to 500 / **60** / 1 sec/step]
031	Offset:Feed Start:1200	*ENG	[0 to 100 / **15** / 1 deg/step]
033	Offset: Feed Start: Glossy	*ENG	[0 to 100 / **15**/ 1 deg/step]

1105	**[Fusing Temperature]** Fusing Temperature Adjustment		
	(Printing Mode, Roller Type, [Color], Simplex/Duplex) Roller Type –> Center and Ends: Heating roller, P-Roller –> Pressure roller Paper Type -> Plain, Thin, Thick, OHP, Middle Thick, Special		
001	Fusing Ready Temp	*ENG	[100 to 180 / **160** / 1 deg/step]
	Specifies the heating roller target temperature for the ready condition.		
002	Fusing Ready: Offset	*ENG	[5 to 30 / **11** / 1 deg/step]
003	P-Roll Ready Target Temp.	*ENG	[50 to 160 / **120** / 1 deg/step]
007	P-Roll Ready Temp	*ENG	[0 to 150 / **20** / 1 deg/step]
	Sets the heating roller offset temperature at the end of the heating roller. This value is one of the thresholds to determine if the machine is at the heating roller target temperature during warm-up.		
010	Stand-By: Center	* ENG	[50 to 180 / **160** / 1 deg/step]

011	Stand-By: Ends	* ENG	[50 to 180 / **160** / 1 deg/step]
012	Stand-By:P-Roller	* ENG	[50 to 160 / **140** / 1 deg/step]
	Sets the pressure roller offset temperature. This value is one of the thresholds to determine if the machine is at the heating roller target temperature during warm-up.		
013	Panel Off Mode: Center	* ENG	[50 to 180 / **140** / 1 deg /step]
	Specifies the heating roller temperature (center) in the panel off mode.		
014	Panel Off Mode: Ends	* ENG	[50 to 180 / **140** / 1 deg /step]
	Specifies the heating roller temperature (both ends) in the panel off mode.		
015	Panel Off Mode: P-Roller	*ENG	[50 to 160 / **120** / 1 deg /step]
	Specifies the presure roller temperature in the panel off mode.		
016	Low Power: Center	*ENG	Specifies the heating roller temperature (center or ends) in the low power mode. [30 to 180 / **40** / 1 deg /step]
017	Low Power: Ends	*ENG	
018	Low Power: P-Roller	*ENG	[30 to 160 / **110** / 1 deg /step]
	Specifies the pressure roller temperature in the low power mode.		
019	Off Mode: Center	*ENG	Specifies the heating roller temperature (center or ends) in the sleep mode. [0 to 180 / **0** / 1 deg /step]
020	Off Mode: Ends	*ENG	
021	Off Mode:P-Roller	*ENG	[0 to 170 / **0** / 1 deg /step]
	Specifies the pressure roller temperature in the sleep mode.		
030 to 239	The target fusing temperature for each paper type and mode can be adjusted by the following SPs.		
030	Plain1:FC:Simplex:Center	*ENG	[100 to 180 / **155** / 1 deg /step]
031	Plain1: FC: Simplex: Ends	*ENG	
032	Plain1:FC:Duplex:Center	*ENG	

033	Plain1: FC: Duplex: Ends	*ENG	
034	Plain1: BW: Simplex:Center	*ENG	
035	Plain1: BW: Simplex: Ends	*ENG	
036	Plain1: BW: Duplex:Center	*ENG	
037	Plain1: BW: Duplex: Ends	*ENG	
038	Thin: FC: Simplex:Center	*ENG	[100 to 180 / **145** / 1 deg /step]
039	Thin: FC: Simplex: Ends	*ENG	
040	Thin:FC:Duplex:Center	*ENG	
041	Thin:FC:Duplex:Ends	*ENG	
042	Thin: BW: Simplex:Center	*ENG	
043	Thin: BW: Simplex: Ends	*ENG	
044	Thin: BW: Duplex:Center	*ENG	
045	Thin:BW:Duplex:Ends	*ENG	
046	Thick 1: FC: Simplex:Center	*ENG	[100 to 180 / **165** / 1 deg /step]
047	Thick 1: FC: Simplex: Ends	*ENG	
048	Thick 1: FC: Duplex:Center	*ENG	
049	Thick 1: FC: Duplex:Ends	*ENG	
050	Thick 1: BW: Simplex:Center	*ENG	
051	Thick 1: BW: Simplex: Ends	*ENG	
052	Thick 1: BW: Duplex:Center	*ENG	
053	Thick 1:BW:Duplex:Ends	*ENG	
054	Thick 2: FC: Simplex:Center	*ENG	[100 to 180 / **140** / 1 deg /step]
055	Thick 2: BW: Simplex:Center	*ENG	
056	OHP: FC	*ENG	[100 to 180 / **160** / 1 deg /step]
057	OHP: BW	*ENG	

058	SP 1:FC:Simplex:Center	*ENG	[100 to 180 / **170** / 1 deg/step]
059	SP 1:FC:Simplex:Ends	*ENG	
060	SP 1:FC:Duplex:Center	*ENG	
061	SP 1:FC:Duplex:Ends	*ENG	
062	SP 1:BW:Simplex:Center	*ENG	
063	SP 1:BW:Simplex:Ends	*ENG	
064	SP 1:BW:Duplex:Center	*ENG	
065	SP 1: BW: Duplex: Ends	*ENG	
066	SP 2:FC:Simplex:Center	*ENG	[100 to 200 / **165** / 1 deg/step]
067	SP 2: FC: Simplex: Ends	*ENG	
068	SP 2:FC:Duplex:Center	*ENG	
069	SP 2:FC:Duplex:Ends	*ENG	
070	SP 2:BW:Simplex:Center	*ENG	
071	SP 2:BW:Simplex:Ends	*ENG	
072	SP 2:BW:Duplex:Center	*ENG	
073	SP 2:BW:Duplex:Ends	*ENG	
074	SP 3:FC:Simplex:Center	*ENG	[100 to 200 / **150** / 1 deg/step]
075	SP 3:FC:Simplex:Ends	*ENG	
076	SP 3:FC:Duplex:Center	*ENG	
077	SP 3:FC:Duplex:Ends	*ENG	
078	SP 3:BW:Simplex:Center	*ENG	
079	SP 3:BW:Simplex:Ends	*ENG	
080	SP 3:BW:Duplex:Center	*ENG	
081	SP 3:BW:Duplex:Ends	*ENG	
082	Target Temp. After Ready	*ENG	[100 to 180 / **160** / 1 deg/step]

	Specifies the target temperature for the maintain mode after the machine has reached the target temperature in warm-up mode.		
083	Recovery Target Temp.	*ENG	[100 to 180 / **160** / 1 deg /step]
	Specifies the target temperature for the print mode without printing job after the machine's recovery.		
087	Thick 2: FC: Simplex: Ends	*ENG	[100 to 180 / **140** / 1 deg/step]
088	Thick 2: BW: Simplex: Ends	*ENG	
089	Thick 3: FC: Simplex: Center	*ENG	[100 to 180 / **160** / 1 deg/step]
090	Thick 3: FC: Simplex: Ends	*ENG	
091	Thick 3: BW: Simplex: Center	*ENG	
092	Thick 3: BW: Simplex: Ends	*ENG	
109	M-Thick:FC:Simplex:Center	*ENG	[100 to 180 / **175** / 1 deg/step]
110	M-Thick:FC:Duplex:Center	*ENG	
111	M-Thick: BW: Simplex:Center	*ENG	
112	M-Thick: BW: Duplex:Center	*ENG	
113	M-Thick: FC: Simplex: Ends	*ENG	
114	M-Thick: FC: Duplex: Ends	*ENG	
115	M-Thick: BW: Simplex: Ends	*ENG	
116	M-Thick: BW: Duplex: Ends	*ENG	
120	Plain2: FC: Simplex:Center	*ENG	[100 to 180 / **160** / 1 deg/step]
121	Plain2: FC: Simplex:Ends	*ENG	
122	Plain2: FC: Duplex:Center	*ENG	
123	Plain2: FC: Duplex:Ends	*ENG	
124	Plain2: BW: Simplex:Center	*ENG	
125	Plain2: BW: Simplex: Ends	*ENG	
126	Plain2: BW: Duplex:Center	*ENG	

127	Plain2: BW: Duplex: Ends	*ENG	
128	F: Plain1: FC : Simplex:Center	*ENG	[100 to 180 / **125** / 1 deg/step]
129	F: Plain1: FC : Simplex: Ends	*ENG	
130	F: Plain1: BW : Simplex:Center	*ENG	
131	F: Plain1: BW : Simplex: Ends	*ENG	
132	F: Plain2: FC: Simplex:Center	*ENG	[100 to 180 / **130** / 1 deg /step]
133	F: Plain2: FC: Simplex: Ends	*ENG	
134	F: Plain2: BW: Simplex:Center	*ENG	
135	F: Plain2: BW: Simplex: Ends	*ENG	
136	F: MThick: FC: Simplex:Center	*ENG	
137	F: MThick: FC: Simplex: Ends	*ENG	
138	F: MThick: BW: Simplex:Center	*ENG	
139	F: MThick: BW: Simplex: Ends	*ENG	
142	Glossy: Plain1:Center	*ENG	
143	Glossy: Plain1: Ends	*ENG	
144	Glossy: Plain2:Center	*ENG	[100 to 180 / **135** / 1 deg/step]
145	Glossy: Plain2: Ends	*ENG	
146	Glossy: MThick:Center	*ENG	
147	Glossy: MThick: Ends	*ENG	
160	F: Thick1:FC:Simplex:Center	*ENG	
161	F: Thick1:FC:Simplex:Ends	*ENG	
162	F: Thick1:BW:Simplex:Center	*ENG	
163	F: Thick1:BW:Simplex:Ends	*ENG	
164	F: SP 1:FC:Simplex:Center	*ENG	
165	F: SP 1:FC:Simplex:Ends	*ENG	

166	F: SP 1:BW: Simplex:Center	*ENG	
167	F: SP 1:BW: Simplex:Ends	*ENG	
168	F: SP 2:FC Simplex:Center	*ENG	[100 to 180 / **140** / 1 deg/step]
169	F: SP 2:FC Simplex:Ends	*ENG	
170	F: SP 2:BW:Simplex:Center	*ENG	
171	F: SP 2:BW:Simplex:Ends	*ENG	
201	Plain1:Simplex:Press	*ENG	[50 to 160 / **120** / 1 deg/step]
202	Thin:Simplex:Press	*ENG	[50 to 160 / **115** / 1 deg/step]
203	Thick1:Simplex:Press	*ENG	[50 to 160 / **130** / 1 deg/step]
204	Thick2:Simplex:Press	*ENG	[50 to 160 / **115** / 1 deg/step]
205	Thick3:Simplex:Press	*ENG	[50 to 160 / **115** / 1 deg/step]
206	OHP:Simplex:Press	*ENG	[50 to 160 / **80** / 1 deg/step]
207	SP 1:Simplex: Press	*ENG	[50 to 160 / **120** / 1 deg/step]
208	SP 2:Simplex: Press	*ENG	[50 to 160 / **130** / 1 deg/step]
209	SP 3:Simplex: Press	*ENG	[50 to 160 / **115** / 1 deg/step]
210	MThick:Simplex: Press	*ENG	[50 to 160 / **130** / 1 deg/step]
211	Plain2:Simplex:Press	*ENG	[50 to 160 / **125** / 1 deg/step]
212	F: Plain1:Simplex:Press	*ENG	[50 to 160 / **105** / 1 deg/step]
213	F: Plain2:Simplex:Press	*ENG	[50 to 160 / **110** / 1 deg/step]
214	F: MThick:Simplex: Press	*ENG	[50 to 160 / **115** / 1 deg/step]
215	Glossy: Plain1:Simplex: Press	*ENG	[50 to 160 / **105** / 1 deg/step]
216	Glossy: Plain2:Simplex: Press	*ENG	[50 to 160 / **110** / 1 deg/step]
217	Glossy: MThick:Simplex: Press	*ENG	[50 to 160 / **115** / 1 deg/step]
220	F: Thick1:Simplex: Press	*ENG	[50 to 160 / **115** / 1 deg/step]
221	F: SP 1:Simplex: Press	*ENG	[50 to 160 / **105** / 1 deg/step]

222	F: SP 2:Simplex: Press	*ENG	[50 to 160 / **115** / 1 deg/step]
223	Plain1:Duplex: Press	*ENG	[50 to 160 / **90** / 1 deg/step]
224	Thick1:Duplex: Press	*ENG	
225	Thick2:Duplex: Press	*ENG	
226	SP 1:Duplex: Press	*ENG	
227	SP 2:Duplex: Press	*ENG	
228	SP 3:Duplex: Press	*ENG	
229	MThick:Duplex: Press	*ENG	
230	Plain2:Duplex: Press	*ENG	
231	F: Plain1:Duplex: Press	*ENG	
232	F: Plain2:Duplex: Press	*ENG	
233	F: MThick:Duplex: Press	*ENG	[50 to 160 / **90** / 1 deg/step]
234	Glossy: Plain1: Duplex: Press	*ENG	
235	Glossy: Plain2: Duplex: Press	*ENG	
236	Glossy: MThick: Duplex: Press	*ENG	
237	F: Thick1:Duplex: Press	*ENG	
238	F: SP 1:Duplex: Press	*ENG	
239	F: SP 2:Duplex: Press	*ENG	

1106	**[Fusing Temp. Display]** Fusing Temperature Display (Heating or Pressure)		
	Displays the current temperature of the heating and pressure rollers.		
001	Fusing Roller: Center	-	[–20 to 250 / 0 / 1 deg/step]
002	Fusing Roller: End	-	[–10 to 250 / 0 / 1 deg/step]
	The heating roller has two lamps. One heats the center of the heating roller and the other heats both ends of the heating roller.		
003	Pressure Roller: Center	-	[–10 to 250 / 0 / 1 deg/step]

	The pressure roller has two lamps. One heats the center of the heating roller and the other heats both ends of the heating roller.

1108	**[Ready Temp Setting]**		
	Japan use only		
007	Ready Temp Time	*ENG	[22 to 60 / **43** / 0.1 sec/step]

1109	**[Fusing Nip Band Check]**		
001	Execute	-	Executes the nip band measurement between fusing belt and pressure roller. If the nip band width is not 8 mm, and fusing is not good, replace the pressure roller or install a new fusing unit.
002	Pre-Idling Time	*ENG	[0 to 120 / **0** / 1 sec/step]
	Specifies the fusing rotation time before executing SP1109-001.		
003	Stop Time	* ENG	[5 to 30 / **20** / 1 sec/step]
	Specifies the time for measuring the nip.		

1112	**[Environment Correction: Fusing]**		
001	Temp.: Threshold: Low	*ENG	[10 to 23 / **17** / 1 deg/step]
	Specifies the threshold temperature for low temperature condition.		
002	Temp.: Threshold: High	*ENG	[24 to 40 / **30** / 1 deg/step]
	Specifies the threshold temperature for high temperature condition.		
003	Low Temp. Correction	*ENG	[0 to 15 / **5** / 1 deg/step]
	Specifies the temperature correction for the heating roller. When the low temperature condition (specified with SP1112-001) is detected, the value of this SP is added to the heating roller temperature.		
004	High Temp. Correction	*ENG	[0 to 15 / **3** / 1 deg/step]

	Specifies the temperature correction for the heating roller. When the high temperature condition (specified with SP1112-002) is detected, the value of this SP is subtracted from the heating roller temperature.		
005	Offset Temp:Low	*ENG	[0 to 15 / **5** / 0.1 deg/step]
006	Offset Temp:High	*ENG	[0 to 15 / **3** / 0.1 deg/step]

1113	**[Stand-by Mode Setting]**		
001	Wait Time AF Ready	*ENG	[0 to 60 / **30** / 1 sec/step]
003	Wait Time AF Recovery	*ENG	[0 to 60 / **10** / 1 sec/step]
	Specifies the time for keeping the target temperature without any jobs after recovery (SP1105-083).		
004	Wait Time AF Job	*ENG	[0 to 60 / **10** / 1 sec/step]
	Specifies the time for keeping the target temperature without any jobs after a last job.		
005	P-Roll Thresh AF Ready	*ENG	[0 to 160 / **120** / 1 deg/step]
	Specifies the threshold temperature of the pressure roller for entering the wait time mode (SP1-113-001).		
006	P-Roll Thresh AF Job	*ENG	[0 to 160 / **100** / 1 deg/step]
	Specifies the threshold temperature of the pressure roller for entering the wait time mode (SP1-113-004).		
008	On/Off SW Timer	*ENG	[0 to 999 / **300** / 1 sec/step]
	Specifies the interval for entering the PID control from the On/Off control.		

1115	**[Stand-by Idling]**		
001	Interval	*ENG	[0 to 240 / **60** / 1 min/step]
	Specifies the interval between idling during stand-by mode. This idling during the stand-by mode prevents the roller deformation.		
002	Idling Time	*ENG	[0 to 60 / **2** / 0.1 sec/step]

	Specifies the length of each idling operation during stand-by mode.		
003	Idling Speed	*ENG	[0 to 1 / **0** / 1 mm/sec/step]

1116	**[Fusing Temp Change]** Paper Type –> MThick: Middle Thick		
010	Center Temp. 1	ENG	[-10 / 10 / **0** / 1 deg/step]
	Specifies the temperature correction for the heating roller (center) when the paper width is 226 mm or more. The start time of this SP can be adjusted with SP1116-018.		
011	Ends Temp. 1	ENG	[-10 to 10 / **0** / 1 deg/step]
	Specifies the temperature correction for the heating roller (ends) when the paper width is 226 mm or more. The start time of this SP can be adjusted with SP1116-018.		
012	Center Temp. 2	ENG	[-10 to 10 / **0** / 1 deg/step]
	Specifies the temperature correction for the heating roller (center) when the paper width is 226 mm or more. The start time of this SP can be adjusted with SP1116-019.		
013	Ends Temp. 2	ENG	[-10 to 10 / **0** / 1 deg/step]
	Specifies the temperature correction for the heating roller (ends) when the paper width is 226 mm or more. The start time of this SP can be adjusted with SP1116-019.		
018	Control Time 1	ENG	[0 to 250 / **0** / 1 sec/step]
	Specifies the start time of the temperature correction that is set with SP1116-010 and -011. The temperature correction is added when the time specified with this SP has passed after feeding the paper.		
019	Control Time 2	ENG	[0 to 250 / **0** / 1 sec/step]
	Specifies the start time of the temperature correction that is set with SP1116-012 and -013. The temperature correction is added when the time specified with this SP has		

	passed after feeding the paper.		
022	Center Temp.1:MThick	ENG	[-10 to 10 / **0** / 1 deg/step]
023	Ends Temp.1:MThick	ENG	
024	Center Temp.2:MThick	ENG	
025	Ends Temp.2:MThick	ENG	
030	Center Temp.1:Other	ENG	
031	Ends Temp.1:Other	ENG	
032	Center Temp.2:Other	ENG	
033	Ends Temp.2:Other	ENG	

1117	**[Idling Time AF Heater OFF]**		
001	After Ready	ENG	[0 to 10 / **5** / 1 sec/step] **DFU**
	Specifies the idling time without the lamp on after reaching the ready temperature.		
002	After Job End	ENG	[0 to 10 / **5** / 1 sec/step]
	Specifies the idling time without the lamp on after job end. This idling prevents the heating roller overheating after job end.		

1118	**[Curl Correction]**		
001	Execute Pattern	*ENG	[0 to 4 / **0** / 1]
	Selects the curl correction mode. 0: Invalid 1: 600 dpi 2: 1200 dpi 3: 600/1200 dpi Note ▪ This SP is not effective for all curl situations. Use this SP if you see a sharp back curl after the machine recovered from "OFF mode" in a high temperature and humidity environment.		

002	Humidity Thresh 1	*ENG	[0 to 100 / **65** / 1 %]
	Specifies the first threshold humidity for executing the curl correction.		
003	Humidity Thresh 2	*ENG	[0 to 100 / **80** / 1 %]
	Specifies the second threshold humidity for executing the curl correction.		
004	Pattern 1: MM: H-Roll	*ENG	[-30 to 0 / **-3** / 1 deg]
005	Pattern 1: MM: P-Roll	*ENG	[0 to 60 / **0** / 1 deg]
006	Pattern 1: HM: H-Roll	*ENG	[-30 to 0 / **0** / 1 deg]
007	Pattern 1: HM: P-Roll	*ENG	[0 to 60 / **0** / 1 deg]
008	Pattern 2: MM: H-Roll	*ENG	[-30 to 0 / **-5** / 1 deg]
009	Pattern 2: MM: P-Roll	*ENG	[0 to 60 / **50** / 1 deg]
010	Pattern 2: HM: H-Roll	*ENG	[-30 to 0 / **-5** / 1 deg]
011	Pattern 2: HM: P-Roll	*ENG	[0 to 60 / **50** / 1 deg]

1120	**[Multi-Print Mode]**		
001	Feed Condition	*ENG	[0 or 2 / **0** / 1]
	Selects the paper feed timing. 0: Productivity priority, 1: Fusing quality priory		
	Note: When the print paper size changes from a small to a large size, you can stop the print job in order to ensure that the fusing temperature is high enough, and then resume it when the proper temperature has been reached. This mode is used on machines in which the fusing ability is low, for example when there is one fusing lamp. And it is mainly used on A3 MFPs which change repeatedly between A3 and A4 size. However, it is not used on machines in which there are two heating lamps, such as A4 MFPs which almost never change between A4 and A5.		

1121	**[Maximum Duty Switch]**		
001	Control Method Switch	*ENG	[0 or 1 / **1** / 1]

	Selects the power control method for the fusing unit. 0: Fixed control, 1: Power control

1159	**[Fusing Jam Detection]**		
001	SC Display	*ENG	[0 or 1 / **0** / 1]
	Enables or disables the fusing consecutive jam (three times) SC detection. 0: No detection, 1: Detection		

1902	**[Gain Control]**		
001	Execute	*ENG	Execute drum phase adjustment.
002	Result	*ENG	[0 to 3 / **0**/ 1] Displays the result of drum phase adjustment. 0: Successfully done 2: Sampling failure 3: Insufficient detection number
003	Auto Execute	*ENG	[0 or 1 / **1**/ -] Turns the automatic drum phase adjustment on or off. 0: Off, 1: On

1950	**[Fan Cool Timeset]**		
	Adjust the rotation time for each fan motor after a job end.		
001	Development Fan1	*ENG	[0 to 600 / **0**/ 1 sec/step]
002	Development Fan2	*ENG	
003	Imaging Fan (Laser Unit Fan)	*ENG	
004	Fusing Exit Sensor Cooling Fan	*ENG	
005	Fusing Exit Fan	*ENG	
006	PSU Fan	*ENG	

007	Paper Feed Drive Fan (Toner Supply Fan)	*ENG	
008	Toner Supply Fan (Drive Unit Fan)	*ENG	
009	CTL Upper Fan (Fusing Cooling Fan)	*ENG	

5.3 MAIN SP TABLES-2

5.3.1 SP2-XXX (DRUM)

2013	**[Environmental Correction:PCU]**		
001	Current Environmental: Display	*ENG	Displays the environmental condition, which is measured in absolute humidity. [1 to 5 / **–** / 1 /step] 1: LL (LL <= 4.3 g/m^3) 2: ML (4.3 < ML <= 11.3 g/m^3) 3: MM (11.3 < MM <= 18.0 g/m^3) 4: MH (18.0 < MH <= 24.0 g/m^3) 5: HH (24.0 g/m^3 < HH)
002	Forced Setting	*ENG	Selects the environmental condition manually. **DFU** [0 to 5 / **0** / 1 /step] 0: The environmental condition is determined automatically. 1: LL, 2: ML, 3: MM, 4: MH, 5: HH
003	Absolute Humidity: Thresh 1	*ENG	Changes the humidity threshold between LL and ML. **DFU** [0 to 100 / **4.3** / 0.01 g/m^3/step]
004	Absolute Humidity: Thresh 2	*ENG	Changes the humidity threshold between ML and MM. **DFU** [0 to 100 / **11.3** / 0.01 g/m^3/step]
005	Absolute Humidity: Thresh 3	*ENG	Changes the humidity threshold between MM and MH. **DFU** [0 to 100 / **18.0** / 0.01 g/m^3/step]
006	Absolute Humidity: Thresh 4	*ENG	Changes the humidity threshold between MH and HH. **DFU** [0 to 100 / **24.0** / 0.01 g/m^3/step]

007	Current Temp.: Display	*ENG	Displays the current temperature. [0 to 100 / **0** / 1 deg/step]
008	Current Relative Humidity: Display	*ENG	Displays the current relative humidity. [0 to 100 / **0** / 1%RH/step]
009	Current Absolute Humidity: Display	*ENG	Displays the absolute humidity. [0 to 100 / **0** / 0.01 g/m^3/step]
010	Previous Environmental: Display	*ENG	Displays the previous environmental condition, which is measured in absolute humidity. [1 to 5 / **–** / 1 /step] 1: LL, 2: ML, 3: MM, 4: MH, 5: HH
011	Previous Temp.: Display	*ENG	Displays the previous temperature. [0 to 100 / **0** / 1 deg/step]
012	Previous Relative Humidity: Display	*ENG	Displays the previous relative humidity. [0 to 100 / **0** / 1%RH/step]
013	Previous Absolute Humidity: Display	*ENG	Displays the previous absolute humidity. [0 to 100 / **0** / 0.01 g/m^3/step]

2015	**[Charge AC Adjustment Result]**		
001	Plain Bk	*ENG	[0 to 9 / **0** / 1 /step]
002	Plain C	*ENG	
003	Plain M	*ENG	
004	Plain Y	*ENG	

2101	**[Color Registration Correction]**		
	These values are the parameters for the automatic line position adjustment and are adjusted at the factory. However, you must input a value for SP2101-001 after replacing the laser unit. For details, see "Laser Unit" in the "Replacement and Adjustment" section. The value should be provided with the new laser unit.		
001	Main Dot: Bk	*ENG	[–511 to 511 / **0** / 1 dot/step]
002	Main Dot: C	*ENG	
003	Main Dot: M	*ENG	
004	Main Dot: Y	*ENG	
005	Sub Line: Bk	*ENG	[–800 to 800 / **0** / 1 line/step]
006	Sub Line: C	*ENG	
007	Sub Line: M	*ENG	
008	Sub Line: Y	*ENG	

2103	**[Erase Margin Adjustment]** (Area, Paper Size)		
	Adjusts the erase margin by deleting image data at the margins.		
001	Lead Edge Width	*ENG	[0 to 9.9 / **4.2** / 0.1 mm/step]
002	Trailing Edge Width	*ENG	
003	Left	*ENG	[0 to 9.9 / **2** / 0.1 mm/step]
004	Right	*ENG	

2104	**[Unit LD Power Adj.]**		
	Adjusts the LD initial power. These SPs must be input only when a new laser unit is installed.		
001	LD1: K	*ENG	[60 to 140 / **100** / 0.1 %/step]
002	LD2: K	*ENG	
003	LD1: C	*ENG	
004	LD2: C	*ENG	
005	LD1: M	*ENG	
006	LD2: M	*ENG	
007	LD1: Y	*ENG	
008	LD2: Y	*ENG	

2109	**[Test Pattern]**		
	Generates the test pattern.		
003	Pattern Selection	-	[0 to 23 / **0** / 1/step]
	0 None 1: Vertical Line (1dot) 2: Vertical Line (2dot) 3: Horizontal (1dot) 4: Horizontal (2dot) 5: Grid Vertical Line 6: Grid Horizontal Line 7: Grid pattern Small 8: Grid pattern Large 9: Argyle Pattern Small 10: Argyle Pattern Large 11. Independent Pattern (1dot)		12. Independent Pattern (2dot) 13. Independent Pattern (4dot) 14. Trimming Area 15: Hound's Tooth Check (Vertical) 16: Hound's Tooth Check (Horizontal) 17: Band (Vertical) 18: Band (Horizontal) 19: Checker Flag Pattern 20: Grayscale Vertical Margin 21: Grayscale Horizontal Margin 22: Two Beam 23: Full Dot Pattern
005	Color Selection	-	Specifies the color for the test pattern. [1 to 4 / **1** / 1/step]

			1: All colors, 2: C, 3: M, 4: Y
006	Density: Bk	-	Specifies the color density for the test pattern. [0 to 15 / **15** / 1 /step] 0: Lightest density 15: Darkest density
007	Density: C	-	
008	Density: M	-	
009	Density: Y	-	

2111	**[Forced Line Position Adj.]**		
001	Mode a	-	Executes the fine line position adjustment twice. If this SP is not completed (NG is displayed), do SP2111-003 first and then try this SP again.
002	Mode b	-	Executes the fine line position adjustment once. If this SP is not completed, do SP2111-003 first and then try this SP again.
003	Mode c	-	Executes the rough line position adjustment once. After doing this SP, make sure to execute SP2111-001 or -002. Otherwise, the line position adjustment is not perfectly done.
004	Mode d	-	Rough adjustment and fine adjustment, once each.

2117	**[Skew Adjustment]**		
	Specifies a skew adjustment value for the skew motor M, C or Y.		
001	Pulse: C	*ENG	[–100 to 100 / **0** / 1 pulse/step]
002	Pulse: M	*ENG	
003	Pulse: Y	*ENG	

2118	[Skew Adjustment]		
001	Execute: C	*ENG	Changes the current skew adjustment values to the values specified with SP2117.
002	Execute: M	*ENG	
003	Execute: Y	*ENG	

2119	[Skew Adjustment Display]		
	Displays the current skew adjustment value for each skew motor.		
001	C	*ENG	[–75 to 75 / **0** / 1 pulse/step]
002	M	*ENG	
003	Y	*ENG	

2140	[ID Sensor Check Result]		
	Displays the maximum result values of the ID sensor check. Front, Center, Rear: ID sensors for the automatic line position adjustment and the process control		
001	PWM: Bk	*ENG	[0 to 1024 / **0** / 1/step]
002	PWM: C	*ENG	
003	PWM: M	*ENG	
004	PWM: Y	*ENG	
005	PWM: Front	*ENG	
006	PWM: Center	*ENG	
007	PWM: Rear	*ENG	

2141	[ID Sensor Check Result]
	Displays the maximum result values of the ID sensor check. Front, Center, Rear: ID sensors for the automatic line position adjustment and the process control

001	Average: Bk	*ENG	[0 to 5.5 / **0** / 0.01V/step]
002	Average: C	*ENG	
003	Average: M	*ENG	
004	Average: Y	*ENG	
005	Average: Front	*ENG	
006	Average: Center	*ENG	
007	Average: Rear	*ENG	

2142	**[ID Sensor Check Result]**		
	Displays the maximum result values of the ID sensor check. Front, Center, Rear: ID sensors for the automatic line position adjustment and the process control		
001	Maximum: Bk	*ENG	[0 to 5.5 / **0** / 0.01V/step]
002	Maximum: C	*ENG	
003	Maximum: M	*ENG	
004	Maximum: Y	*ENG	
005	Maximum: Front	*ENG	
006	Maximum: Center	*ENG	
007	Maximum: Rear	*ENG	

2143	**[ID Sensor Check Result]**		
	Displays the minimum result values of the ID sensor check. Front, Center, Rear: ID sensors for the automatic line position adjustment and the process control		
001	Minimum: Bk	*ENG	[0 to 5.5 / **0** / 0.01V/step]
002	Minimum: C	*ENG	
003	Minimum: M	*ENG	
004	Minimum: Y	*ENG	
005	Minimum: Front	*ENG	
006	Minimum: Center	*ENG	
007	Minimum: Rear	*ENG	

2144	**[ID Sensor Check Result]**		
	Displays the maximum result 2 values of the ID sensor check. Front, Center, Rear: ID sensors for the automatic line position adjustment and the process control		
001	Maximum 2: Bk	*ENG	[0 to 5.5 / **0** / 0.01V/step]
002	Maximum 2: C	*ENG	
003	Maximum 2: M	*ENG	
004	Maximum 2: Y	*ENG	
005	Maximum 2: Front	*ENG	
006	Maximum 2: Center	*ENG	
007	Maximum 2: Rear	*ENG	

2145	**[ID Sensor Check Result]**		
	Displays the minimum result 2 values of the ID sensor check. Front, Center, Rear: ID sensors for the automatic line position adjustment and the process control		
001	Minimum 2: Bk	*ENG	[0 to 5.5 / **0** / 0.01V/step]
002	Minimum 2: C	*ENG	
003	Minimum 2: M	*ENG	
004	Minimum 2: Y	*ENG	
005	Minimum 2: Front	*ENG	
006	Minimum 2: Center	*ENG	
007	Minimum 2: Rear	*ENG	

2150	**[Area Mag. Correction]** LD Pulse Area Correction (Color, Area) **FA**		
	Adjusts the magnification for each area. The main scan (297 mm) is divided into 13 areas. Area 1 is at the front side of the machine (left side of the image) and area 13 is at the rear side of the machine (right side of the image). Decreasing a value makes the image shift to the left side on the print. Increasing a value makes the image shift to the right side on the print. 1 pulse = 1/16 dot		
027	Area 0: Bk: LD1	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
028	Area 1: Bk: LD1	*ENG	[-255 to 255 / **-233** / 1sub-dot/step]
029	Area 2: Bk: LD1	*ENG	[-255 to 255 / **-193** / 1sub-dot/step]
030	Area 3: Bk: LD1	*ENG	[-255 to 255 / **58** / 1sub-dot/step]
031	Area 4: Bk: LD1	*ENG	
032	Area 5: Bk: LD1	*ENG	[-255 to 255 / **143** / 1sub-dot/step]
033	Area 6: Bk: LD1	*ENG	
034	Area 7: Bk: LD1	*ENG	[-255 to 255 / **47** / 1sub-dot/step]

035	Area 8: Bk: LD1	*ENG	[-255 to 255 / **-23** / 1sub-dot/step]
036	Area 9: Bk: LD1	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
037	Area 10: Bk: LD1	*ENG	
038	Area 11: Bk: LD1	*ENG	
039	Area 12: Bk: LD1	*ENG	
040	Area 0: Bk: LD2	*ENG	
041	Area 1: Bk: LD2	*ENG	[-255 to 255 / **-233** / 1sub-dot/step]
042	Area 2: Bk: LD2	*ENG	[-255 to 255 / **-193** / 1sub-dot/step]
043	Area 3: Bk: LD2	*ENG	[-255 to 255 / **58** / 1sub-dot/step]
044	Area 4: Bk: LD2	*ENG	
045	Area 5: Bk: LD2	*ENG	[-255 to 255 / **143** / 1sub-dot/step]
046	Area 6: Bk: LD2	*ENG	
047	Area 7: Bk: LD2	*ENG	[-255 to 255 / **47** / 1sub-dot/step]
048	Area 8: Bk: LD2	*ENG	[-255 to 255 / **-23** / 1sub-dot/step]
049	Area 9: Bk: LD2	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
050	Area 10: Bk: LD2	*ENG	
051	Area 11: Bk: LD2	*ENG	
052	Area 12: Bk: LD2	*ENG	
079	Area 0: C: LD1	*ENG	
080	Area 1: C: LD1	*ENG	[-255 to 255 / **-234** / 1sub-dot/step]
081	Area 2: C: LD1	*ENG	[-255 to 255 / **-195** / 1sub-dot/step]
082	Area 3: C: LD1	*ENG	[-255 to 255 / **56** / 1sub-dot/step]
083	Area 4: C: LD1	*ENG	[-255 to 255 / **57** / 1sub-dot/step]
084	Area 5: C: LD1	*ENG	[-255 to 255 / **143** / 1sub-dot/step]
085	Area 6: C: LD1	*ENG	

086	Area 7: C: LD1	*ENG	[-255 to 255 / **50** / 1sub-dot/step]
087	Area 8: C: LD1	*ENG	[-255 to 255 / **-20** / 1sub-dot/step]
088	Area 9: C: LD1	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
089	Area 10: C: LD1	*ENG	
090	Area 11: C: LD1	*ENG	
091	Area 12: C: LD1	*ENG	
092	Area 0: C: LD2	*ENG	
093	Area 1: C: LD2	*ENG	[-255 to 255 / **-234** / 1sub-dot/step]
094	Area 2: C: LD2	*ENG	[-255 to 255 / **-195** / 1sub-dot/step]
095	Area 3: C: LD2	*ENG	[-255 to 255 / **56** / 1sub-dot/step]
096	Area 4: C: LD2	*ENG	[-255 to 255 / **57** / 1sub-dot/step]
097	Area 5: C: LD2	*ENG	[-255 to 255 / **143** / 1sub-dot/step]
098	Area 6: C: LD2	*ENG	
099	Area 7: C: LD2	*ENG	[-255 to 255 / **50** / 1sub-dot/step]
100	Area 8: C: LD2	*ENG	[-255 to 255 / **-20** / 1sub-dot/step]
101	Area 9: C: LD2	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
102	Area 10: C: LD2	*ENG	
103	Area 11: C: LD2	*ENG	
104	Area 12: C: LD2	*ENG	
131	Area 0: M: LD1	*ENG	
132	Area 1: M: LD1	*ENG	[-255 to 255 / **-232** / 1sub-dot/step]
133	Area 2: M: LD1	*ENG	[-255 to 255 / **-192** / 1sub-dot/step]
134	Area 3: M: LD1	*ENG	[-255 to 255 / **60** / 1sub-dot/step]
135	Area 4: M: LD1	*ENG	
136	Area 5: M: LD1	*ENG	[-255 to 255 / **142** / 1sub-dot/step]

137	Area 6: M: LD1	*ENG	
138	Area 7: M: LD1	*ENG	[-255 to 255 / **45** / 1sub-dot/step]
139	Area 8: M: LD1	*ENG	[-255 to 255 / **-26** / 1sub-dot/step]
140	Area 9: M: LD1	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
141	Area 10: M: LD1	*ENG	
142	Area 11: M: LD1	*ENG	
143	Area 12: M: LD1	*ENG	
144	Area 0: M: LD2	*ENG	
145	Area 1: M: LD2	*ENG	[-255 to 255 / **-232** / 1sub-dot/step]
146	Area 2: M: LD2	*ENG	[-255 to 255 / **-192** / 1sub-dot/step]
147	Area 3: M: LD2	*ENG	[-255 to 255 / **60** / 1sub-dot/step]
148	Area 4: M: LD2	*ENG	
149	Area 5: M: LD2	*ENG	[-255 to 255 / **142** / 1sub-dot/step]
150	Area 6: M: LD2	*ENG	
151	Area 7: M: LD2	*ENG	[-255 to 255 / **45** / 1sub-dot/step]
152	Area 8: M: LD2	*ENG	[-255 to 255 / **-26** / 1sub-dot/step]
153	Area 9: M: LD2	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
154	Area 10: M: LD2	*ENG	
155	Area 11: M: LD2	*ENG	
156	Area 12: M: LD2	*ENG	
183	Area 0: Y: LD1	*ENG	
184	Area 1: Y: LD1	*ENG	[-255 to 255 / **-233** / 1sub-dot/step]
185	Area 2: Y: LD1	*ENG	[-255 to 255 / **-194** / 1sub-dot/step]
186	Area 3: Y: LD1	*ENG	[-255 to 255 / **60** / 1sub-dot/step]
187	Area 4: Y: LD1	*ENG	

188	Area 5: Y: LD1	*ENG	[-255 to 255 / **144** / 1sub-dot/step]
189	Area 6: Y: LD1	*ENG	
190	Area 7: Y: LD1	*ENG	[-255 to 255 / **46** / 1sub-dot/step]
191	Area 8: Y: LD1	*ENG	[-255 to 255 / **-25** / 1sub-dot/step]
192	Area 9: Y: LD1	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
193	Area 10: Y: LD1	*ENG	
194	Area 11: Y: LD1	*ENG	
195	Area 12: Y: LD1	*ENG	
196	Area 0: Y: LD2	*ENG	
197	Area 1: Y: LD2	*ENG	[-255 to 255 / **-233** / 1sub-dot/step]
198	Area 2: Y: LD2	*ENG	[-255 to 255 / **-194** / 1sub-dot/step]
199	Area 3: Y: LD2	*ENG	[-255 to 255 / **60** / 1sub-dot/step]
200	Area 4: Y: LD2	*ENG	
201	Area 5: Y: LD2	*ENG	[-255 to 255 / **144** / 1sub-dot/step]
202	Area 6: Y: LD2	*ENG	
203	Area 7: Y: LD2	*ENG	[-255 to 255 / **46** / 1sub-dot/step]
204	Area 8: Y: LD2	*ENG	[-255 to 255 / **-25** / 1sub-dot/step]
205	Area 9: Y: LD2	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
206	Area 10: Y: LD2	*ENG	
207	Area 11: Y: LD2	*ENG	
208	Area 12: Y: LD2	*ENG	

2180	[Line Pos. Adj. Clear]		
001	Color Regist.	-	
002	Mag Adjust	-	
003	MUSIC Result	-	
004	Area Mag. Correction	-	

2153	[Shade: SP Clear]		
001	SP Clear Execute	*ENG	
Clears "Shading Correct Setting" (SP2152)			

2194	[MUSIC Execution Result] Line Position Adjustment: Execution Result		
001	Year	*ENG	[0 to 99 / **0** / 1 year/step]
002	Month	*ENG	[1 to 12 / **1** / 1 month/step]
003	Day	*ENG	[1 to 31 / **1** / 1 day/step]
004	Hour	*ENG	[0 to 23 / **0** / 1 hour/step]
005	Minute	*ENG	[0 to 59 / **0** / 1 minute/step]
006	Temperature	*ENG	[0 to 100 / **0** / 1 deg/step]
007	Execution Result	*ENG	[0 or 1 / **0** / 1 /step] 0: Completed successfully, 1: Failed
008	Number of Execution	*ENG	[0 to 999999 / **0** / 1 times/step]
009	Number of Failure	*ENG	[0 to 999999 / **0** / 1 times/step]
010	Error Result: C	*ENG	[0 to 9 / **0** / 1 /step] 0: Not done 1: Completed successfully 2: Cannot detect patterns 3: Fewer lines on the pattern than the target 4: Out of the adjustment range
011	Error Result: M	*ENG	
012	Error Result: Y	*ENG	

			5 to 9: Not used

2220	**[Skew Origin Set]**		
	Resets the value of the skew adjustment motor for each color. These SPs must be executed when a new laser optics housing unit is installed.		
001	C:Skew Motor	*ENG	-
002	M:Skew Motor	*ENG	
003	Y:Skew Motor	*ENG	

2241	**[Temperature/Humidity: Display]**		
	Displays the environment temperature and humidity.		
001	Temperature	-	[–1280 to 1270 / **0** / 0.1 deg/step]
002	Relative Humidity	-	[0 to 1000 / **0** / 0.1 %RH/step]
003	Absolute Humidity	-	[0 to 100 / **0** / 0.01 g/m^3/step]

2351	**[Common: BW: Bias]** Image Transfer Belt: B/W: Bias Adjustment Standard: 260 mm/sec, Middle: 182 mm/sec, Low: 85 mm/sec		
001	Image Transfer:Standard Speed	*ENG	[0 to 80 / **26** / 1 μA]
	Adjusts the current for the image transfer belt in B/W mode for plain paper.		
002	Image Transfer:Middle Speed	*ENG	[0 to 80 / **17** / 1 μA]
	Adjusts the current for the image transfer belt in B/W mode for M-Thick paper.		
003	Image Transfer:Low Speed	*ENG	[0 to 80 / **7** / 1 μA]
	Adjusts the current for the image transfer belt in B/W mode for thick 1 paper.		

2401	**[Plain1: Bias]**		
	Adjusts the DC voltage of the discharge plate for plain 1 paper. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Separation DC: Standard-Spd: 1st	*ENG	[0 to 6000 / **2000** / 10 -V/step]
002	Separation DC: Standard-Spd: 2nd	*ENG	
003	Separation DC: Low-Spd: 1st	*ENG	
004	Separation DC: Low-Spd: 2nd	*ENG	

2403	**[Plain1: Bias: BW]**		
	Adjusts the current for the paper transfer roller for plain 1 paper in black-and-white mode. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard-Spd: 1st	*ENG	[0 to 230 / **21** / 1 –μA /step]
002	Paper Transfer: Standard-Spd: 2nd	*ENG	[0 to 230 / **23** / 1 –μA /step]
003	Paper Transfer: Low-Spd: 1st	*ENG	[0 to 230 / **15** / 1 –μA /step]
004	Paper Transfer: Low-Spd: 2nd	*ENG	

2407	**[Plain1: Bias: FC]**		
	Adjusts the current for the paper transfer roller for plain 1 paper in full color mode. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard-Spd: 1st	*ENG	[0 to 230 / **38** / 1 –μA /step]
002	Paper Transfer: Standard-Spd: 2nd	*ENG	[0 to 230 / **40** / 1 –μA /step]
003	Paper Transfer: Low-Spd: 1st	*ENG	[0 to 230 / **21** / 1 –μA /step]
004	Paper Transfer: Low-Spd: 2nd	*ENG	[0 to 230 / **18** / 1 –μA /step]

2425	[HH-Small: L-Edge Correction]		
001	Paper Transfer: Standard & Low: 1	*ENG	[0 to 995 / **100** / 5 %/step]
002	Paper Transfer: Standard & Low: 2	*ENG	

2439	[Plain2: Bias]		
	Adjusts the DC voltage of the discharge plate for plain2 paper. Standard: 260 mm/sec, Low: 85mm/sec		
001	Separation DC: Standard Spd: 1st	*ENG	[0 to 6000 / **2000** / 10 -V/step]
002	Separation DC: Standard Spd: 2nd	*ENG	
003	Separation DC: Low Spd: 1st	*ENG	
004	Separation DC: Low Spd: 2nd	*ENG	

2440	[Plain2: Bias: BW]		
	Adjusts the current for the paper transfer roller for plain2 paper in black-and-white mode. Standard: 260 mm/sec, Low: 85mm/sec		
001	Paper Transfer: Standard Spd: 1st	*ENG	[0 to 230 / **21** / 1 -μA /step]
002	Paper Transfer: Standard Spd: 2nd	*ENG	[0 to 230 / **23** / 1 -μA /step]
003	Paper Transfer: Low Spd: 1st	*ENG	[0 to 230 / **15** / 1 -μA /step]
004	Paper Transfer: Low Spd: 2nd	*ENG	

2441	**[Plain2: Bias: FC]**		
	Adjusts the current for the paper transfer roller for plain2 paper in full color mode. Standard: 260 mm/sec, Low: 85mm/sec		
001	Paper Transfer: Standard Spd: 1st	*ENG	[0 to 230 / **38** / 1 -µA /step]
002	Paper Transfer: Standard Spd: 2nd	*ENG	[0 to 230 / **40** / 1 -µA /step]
003	Paper Transfer: Low Spd: 1st	*ENG	[0 to 230 / **21** / 1 -µA /step]
004	Paper Transfer: Low Spd: 2nd	*ENG	[0 to 230 / **18** / 1 -µA /step]

2450	**[Plain2: Env. Correction]**		
013	Table Separation DC: Standard: 1st	*ENG	[1 to 100 / **30** / 1 /step]
014	Table Separation DC: Standard: 2nd	*ENG	
015	Table Separation DC: Low: 1st	*ENG	
016	Table Separation DC: Low: 2nd	*ENG	
[Plain2: Env. Correction]			
017	Edge Separation DC: Standard: 1st	*ENG	[1 to 100 / **50** / 1 /step]
018	Edge Separation DC: Standard: 2nd	*ENG	
019	Edge Separation DC: Low: 1st	*ENG	
020	Edge Separation DC: Low: 2nd	*ENG	

2451	**[Thin: Bias]**		
	Adjusts the DC voltage of the discharge plate for thin paper. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Separation DC: Standard Spd: 1st	*ENG	[0 to 6000 / 2000 / 10 -V /step
003	Separation DC: Low Spd: 1st	*ENG	

2453	**[Thin: Bias: BW]**		
	Adjusts the current for the paper transfer roller for thin paper in black-and-white mode. Normal: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 230 / **23** / 1 –μA /step]
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **12** / 1 –μA /step]

2457	**[Thin: Bias: FC]**		
	Adjusts the current for the paper transfer roller for thin paper in full color mode. Normal: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 230 / **29** / 1 –μA /step]
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **18** / 1 –μA /step]

2501	**[Thick1: Bias]**		
	Adjusts the DC voltage of the discharge plate for thick 1 paper. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Separation DC: Middle Spd: 1st	*ENG	[0 to 6000 / **2000** / 10 -V / step]
002	Separation DC: Middle Spd: 2nd	*ENG	
003	Separation DC: Low Spd: 1st	*ENG	
004	Separation DC: Low Spd: 2nd	*ENG	

2502	**[Thick 1: Bias: BW]**		
	Adjusts the current for the paper transfer roller for thick 1 paper in black-and-white mode. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Middle Spd: 1st	*ENG	[0 to 230 / **15** / 1 –µA /step]
002	Paper Transfer: Middle Spd: 2nd	*ENG	Not used
003	Paper Transfer: Low Spd: 1st	*ENG	[0 to 230 / **9** / 1 –µA /step]
004	Paper Transfer: Low Spd: 2nd	*ENG	[0 to 230 / **12** / 1 –µA /step]

2507	**[Thick 1: Bias: FC]**		
	Adjusts the current for the paper transfer roller for thick 1 paper in full color mode. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Middle Spd: 1st	*ENG	[0 to 230 / **24** / 1 –µA /step]
002	Paper Transfer: Middle Spd: 2nd	*ENG	Not used
003	Paper Transfer: Low Spd: 1st	*ENG	[0 to 230 / **12** / 1 –µA /step]
004	Paper Transfer: Low Spd: 2nd	*ENG	[0 to 230 / **18** / 1 –µA /step]

2551	**[Thick2: Bias]**		
	Adjusts the DC voltage of the discharge plate for thick 2 paper.		
003	Separation DC: 1st	*ENG	[0 to 6000 / **2000** / 10 -V/step]
004	Separation DC: 2nd	*ENG	

2561	**[Thick 2: Paper Size Correction: BW]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2553 and SP2558 are multiplied by these SP values.		
003	Paper Transfer: 1 Side: S1	*ENG	[100 to 995 / **100** / 5% /step] S1 size ≥ 194 mm (Paper width)
004	Paper Transfer: 2 Side: S1	*ENG	[100 to 995 / **100** / 5% /step] S1 size ≥ 194 mm (Paper width)
007	Paper Transfer: 1 Side: S2	*ENG	[100 to 995 / **150** / 5% /step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: 2 Side: S2	*ENG	[100 to 995 / **160** / 5% /step] 194 mm > S2 size ≥ 165 mm (Paper width)
011	Paper Transfer: 1 Side: S3	*ENG	[100 to 995 / **150** / 5% /step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: 2 Side: S3	*ENG	[100 to 995 / **270** / 5% /step] 165 mm > S3 size ≥ 139 mm (Paper width)
015	Paper Transfer: 1 Side: S4	*ENG	[100 to 995 / **200** / 5% /step] 139 mm > S4 (Paper width)
016	Paper Transfer: 2 Side: S4	*ENG	[100 to 995 / **435** / 5% /step] 139 mm > S4 (Paper width)

2562	**[Thick 2: Size Correction: FC]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2553 and SP2558 are multiplied by these SP values.		
003	Paper Transfer: 1 Side: S1	*ENG	[100 to 995 / **100** / 5% /step] S1 size ≥ 194 mm (Paper width)
004	Paper Transfer: 2 Side: S1	*ENG	
007	Paper Transfer: 1 Side: S2	*ENG	[100 to 995 / **150** / 5% /step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: 2 Side: S2	*ENG	[100 to 995 / **160** / 5% /step] 194 mm > S2 size ≥ 165 mm (Paper width)
011	Paper Transfer: 1 Side: S3	*ENG	[100 to 995 / **150** / 5% /step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: 2 Side: S3	*ENG	[100 to 995 / **270** / 5% /step] 165 mm > S3 size ≥ 139 mm (Paper width)
015	Paper Transfer: 1 Side: S4	*ENG	[100 to 995 / **200** / 5% /step] 139 mm > S4 (Paper width)
016	Paper Transfer: 2 Side: S4	*ENG	[100 to 995 / **435** / 5% /step] 139 mm > S4 (Paper width)

2601	**[OHP: Bias]**		
	Adjusts the DC voltage of the discharge plate for OHP.		
001	Separation DC	*ENG	[0 to 6000 / **2000** / 10 -V /step]

2603	**[OHP: Bias: BW]**		
	Adjusts the current for the paper transfer roller for OHP in black-and-white mode.		
001	Paper Transfer	*ENG	[0 to 230 / **8** / 1 –μA /step]

2608	**[OHP: Bias: FC]**		
	Adjusts the current for the paper transfer roller for OHP in full color mode.		
001	Paper Transfer	*ENG	[0 to 230 / **21** / 1 –μA /step]

2611	**[OHP: Paper Size Correction: BW]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2603 and SP2608 are multiplied by these SP values.		
003	Paper Transfer: S1	*ENG	[100 to 995 / **100** / 5% /step] S1 size ≥ 194 mm (Paper width)
007	Paper Transfer: S2	*ENG	[100 to 995 / **150** / 5% /step] 194 mm > S2 size ≥ 165 mm (Paper width)
011	Paper Transfer: S3	*ENG	[100 to 995 / **150** / 5% /step] 165 mm > S3 size ≥ 139 mm (Paper width)
015	Paper Transfer: S4	*ENG	[100 to 995 / **200** / 5% /step] 139 mm > S4 (Paper width)

2612	**[OHP: Size Correct: FC]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2603 and SP2608 are multiplied by these SP values.		
003	Paper Transfer: S1	*ENG	[100 to 995 / **100** / 5% /step] S1 size ≥ 194 mm (Paper width)
007	Paper Transfer: S2	*ENG	[100 to 995 / **150** / 5% /step] 194 mm > S2 size ≥ 165 mm (Paper width)
011	Paper Transfer: S3	*ENG	[100 to 995 / **150** / 5% /step] 165 mm > S3 size ≥ 139 mm (Paper width)
015	Paper Transfer: S4	*ENG	[100 to 995 / **200** / 5% /step] 139 mm > S4 (Paper width)

2647	**[Thick3: Bias]**		
	Adjusts the DC voltage of the discharge plate for thick paper 3.		
001	Separation DC: 1st	*ENG	[0 to 6000 / **2000** / 10 -V /step]
002	Separation DC: 2nd	*ENG	

2648	**[Thick3: Bias: BW]**		
	Adjusts the current for the paper transfer roller for thick paper 3 in black-and-white mode.		
001	Paper Transfer: 1st	*ENG	[0 to 230 / **9** / 1 –μA /step]
002	Paper Transfer: 2nd	*ENG	[0 to 230 / **12** / 1 –μA /step]

2649	**[Thick3: Bias: FC]**		
	Adjusts the current for the paper transfer roller for thick paper 3 in full color mode.		
001	Paper Transfer: 1st	*ENG	[0 to 230 / **12** / 1 –μA /step]
002	Paper Transfer: 2nd	*ENG	[0 to 230 / **18** / 1 –μA /step]

2650	**[Thick3: Size Correct: BW]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2648 and SP2649 are multiplied by these SP values.		
001	Paper Transfer: 1 Side: S1	*ENG	[100 to 995 / **100** / 5%/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: 2 Side: S1	*ENG	
003	Paper Transfer: 1 Side: S2	*ENG	[100 to 995 / **150** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
004	Paper Transfer: 2 Side: S2	*ENG	[100 to 995 / **160** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
005	Paper Transfer: 1 Side: S3	*ENG	[100 to 995 / **150** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
006	Paper Transfer: 2 Side: S3	*ENG	[100 to 995 / **270** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
007	Paper Transfer: 1 Side: S4	*ENG	[100 to 995 / **200** / 5%/step] 139 mm > S4 (Paper width)
008	Paper Transfer: 2 Side: S4	*ENG	[100 to 995 / **435** / 5%/step] 139 mm > S4 (Paper width)

2651	**[Thick 3: Size Correct: FC]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2648 and SP2649 are multiplied by these SP values.		
001	Paper Transfer: 1 Side: S1	*ENG	[100 to 995 / **100** / 5%/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: 2 Side: S1	*ENG	
003	Paper Transfer: 1 Side: S2	*ENG	[100 to 995 / **150** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
004	Paper Transfer: 2 Side: S2	*ENG	[100 to 995 / **160** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
005	Paper Transfer: 1 Side: S3	*ENG	[100 to 995 / **150** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
006	Paper Transfer: 2 Side: S3	*ENG	[100 to 995 / **270** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
007	Paper Transfer: 1 Side: S4	*ENG	[100 to 995 / **200** / 5%/step] 139 mm > S4 (Paper width)
008	Paper Transfer: 2 Side: S4	*ENG	[100 to 995 / **435** / 5%/step] 139 mm > S4 (Paper width)

2701	**[Middle Thick: Bias]**		
	Adjusts the DC voltage of the discharge plate for middle thick paper.		
001	Separation DC: Standard Spd: 1st	*ENG	[0 to 6000 / **2000** / 10 -V /step]
002	Separation DC: Standard Spd: 2nd	*ENG	
003	Separation DC: Low Spd: 1st	*ENG	
004	Separation DC: Low Spd: 2nd	*ENG	

2703	**[Middle Thick:Bias:BW]** Standard: 260mm/sec, Low: 85mm/sec		
	Adjusts the current for the paper transfer roller for middle thick in black-and-white mode.		
001	Paper Transfer:Standard:1st	*ENG	[0 to 230 / **20** / 1-µA /step]
002	Paper Transfer: Standard:2nd	*ENG	[0 to 230 / **18** / 1-µA /step]
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **10** / 1-µA /step]
004	Paper Transfer: Low: 2nd	*ENG	[0 to 230 / **12** / 1-µA /step]

2707	**[Middle Thick:Bias:FC]** Standard: 260mm/sec, Low: 85mm/sec		
	Adjusts the current for the paper transfer roller for middle thick in full color mode.		
001	Paper Transfer: Standard:1st	*ENG	[0 to 230 / **35** / 1-µA /step]
002	Paper Transfer: Standard:2nd	*ENG	[0 to 230 / **25** / 1-µA /step]
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **12**/ 1-µA /step]
004	Paper Transfer: Low: 2nd	*ENG	[0 to 230 / **14** / 1-µA /step]

2751	**[Special 1: Bias]**		
	Adjusts the DC voltage of the discharge plate for special paper 1. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Separation DC: Standard Spd: 1st	*ENG	[0 to 6000 / **2000** / 10 -V /step]
002	Separation DC: Standard Spd: 2nd	*ENG	
003	Separation DC: Low Spd: 1st	*ENG	
004	Separation DC: Low Spd: 2nd	*ENG	

2753	**[Special 1: Bias: BW]**		
	Adjusts the current for the paper transfer roller for special paper 1 in black-and-white mode. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 230 / **20** / 1 –µA /step]
002	Paper Transfer: Standard: 2nd	*ENG	[0 to 230 / **18** / 1 –µA /step]
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **10** / 1 –µA /step]
004	Paper Transfer: Low: 2nd	*ENG	[0 to 230 / **12** / 1 –µA /step]

2757	**[Special 1: Bias: FC]**		
	Adjusts the current for the paper transfer roller for special paper 1 in full color mode. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 230 / **35** / 1 –µA /step]
002	Paper Transfer: Standard: 2nd	*ENG	[0 to 230 / **25** / 1 –µA /step]
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **12** / 1 –µA /step]
004	Paper Transfer: Low: 2nd	*ENG	[0 to 230 / **14** / 1 –µA /step]

2801	**[Special 2: Bias]**		
	Adjusts the DC voltage of the discharge plate for special paper 2. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Separation DC: Middle Spd: 1st	*ENG	[0 to 6000 / **2000** / 10 -V /step]
002	Separation DC: Middle Spd: 2nd	*ENG	
003	Separation DC: Low Spd: 1st	*ENG	
004	Separation DC: Low Spd: 2nd	*ENG	

2803	**[Special 2: Bias: BW]**		
	Adjusts the current for the paper transfer roller for special paper 2 in black-and-white mode. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Middle: 1st	*ENG	[0 to 230 / **15** / 1 –µA /step]
002	Paper Transfer: Middle: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **9** / 1 –µA /step]
004	Paper Transfer: Low: 2nd	*ENG	[0 to 230 / **12** / 1 –µA /step]

2807	**[Special 2: Bias: FC]**		
	Adjusts the current for the paper transfer roller for special paper 2 in full color mode. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Middle: 1st	*ENG	[0 to 230 / **24** / 1 –µA /step]
002	Paper Transfer: Middle: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **12** / 1 –µA /step]
004	Paper Transfer: Low: 2nd	*ENG	[0 to 230 / **18** / 1 –µA /step]

2851	**[Special 3: Bias]**		
	Adjusts the DC voltage of the discharge plate for special paper 3. Low: 85 mm/sec		
003	Separation DC: Low Spd: 1st	*ENG	[0 to 6000 / **2000** / 10 -V/step]
004	Separation DC: Low Spd: 2nd	*ENG	

2852	**[Special 3: Bias: BW]**		
	Adjusts the current for the paper transfer roller for special paper 3 in black-and-white mode. Low: 85 mm/sec		
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **9** / 1 –µA /step]
004	Paper Transfer: Low: 2nd	*ENG	[0 to 230 / **12** / 1 –µA /step]

2857	**[Special 3: Bias: FC]**		
	Adjusts the current for the paper transfer roller for special paper 3 in full color mode. Low: 85 mm/sec		
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **12** / 1 –µA /step]
004	Paper Transfer: Low: 2nd	*ENG	[0 to 230 / **18** / 1 –µA /step]

2920	**[Bk Transfer Motor Ctrl]**		
001	Bk TransferMotorCtrl	*ENG	**DFU** [0 or 1 / **1** / 1 /step] 0: FG Control 1: ENC Control
002	BkTransferMotorCtrl: SC443 Count	*ENG	[0 to 3 / **0** / 1 /step]
	Displays the detection times of SC443.		
003	BkTransferMotorCtrl 85	*ENG	**DFU** [0 or 1 / **1** / 1 /step] 0: FG Control 1: ENC Control

5.4 MAIN SP TABLES-3

5.4.1 SP3-XXX (PROCESS)

3011	**[Process Cont. Manual Execution]**		
001	Normal	-	Executes the normal process control manually (potential control). Check the result with SP3-325-001 after executing this SP.
002	Density Adjst	-	Executes the toner density adjustment manually. Check the result with SP3-325-001 after executing this SP.
003	Pre-ACC	-	Executes the process control that is normally done before ACC. The type of process control is selected with SP3-041-004.
004	Full MUSIC	-	[0 or 1 / **0** / 1 /step] Executes the process control that is normally done at the same time as MUSIC. This SP does the MUSIC (line position adjustment) twice.
005	Normal MUSIC	-	Executes the process control that is normally done at the same time as MUSIC. This SP does the MUSIC (line position adjustment) once.

3012	**[Process Cont. Check Result]** Process Control Self-check Result		
	Displays the result of the latest process control self-check. All colors are displayed. The results are displayed in the order "Y C M K" e.g., 11 (Y) 99 (C) 11 (M) 11 (K): The self-check for Cyan failed but the others were successful. See the "Error Condition Tables" in the Process Control Error section for details.		
001	History: Latest	*ENG	[1111 to 99999999 / **-** / 1/step]
002	Result: Latest 1	*ENG	
003	Result: Latest 2	*ENG	
004	Result: Latest 3	*ENG	
005	Result: Latest 4	*ENG	
006	Result: Latest 5	*ENG	
007	Result: Latest 6	*ENG	
008	Result: Latest 7	*ENG	
009	Result: Latest 8	*ENG	
010	Result: Latest 9	*ENG	

3013	**[T Sensor Initial Set: Exe]** Developer Initialization Setting		
001	Execution: ALL	-	Executes the developer initialization for each color.
002	Execution: COL	-	
003	Execution: Bk	-	
004	Execution: C	-	
005	Execution: M	-	
006	Execution: Y	-	

3014	**[T Sensor Initial Set Result]** Developer Initialization Result: Display		
	Display: Latest YMCK	*ENG	[0 to 9999 / **-** / 1 /step] 1: Success 2 to 9: Failure
001	Displays the developer initialization result. See the "Error Condition Tables" in the Process Control Error section for details on the meaning of each code. All colors are displayed. Values are displayed in the order Y M C Bk. e.g., 1 (Y) 1 (M) 2 (C) 1 (Bk): Initialization of Cyan failed but the others succeeded.		

3015	**[Forced Toner Supply: Execute]** Forced Toner Supply ([Color])		
001	Execution: ALL	-	Executes the manual toner supply to the development unit.
002	Execution: COL (MCY)	-	
003	Execution: Bk	-	
004	Execution: C	-	
005	Execution: M	-	
006	Execution: Y	-	

3016	**[Forced Toner Supply Cntl]** Forced Toner Supply Setting ([Color])		
	Specifies the manual toner supply time for each color.		
001	Supply Time: Bk	*ENG	[0 to 30 / **4** / 1 sec/step]
002	Supply Time: C	*ENG	
003	Supply Time: M	*ENG	
004	Supply Time: Y	*ENG	

3021	**[TD Sensor Initial Set]** Developer Initialization Setting		
	Specifies the developer agitation time for each color at the developer initialization.		
001	Agitation Time: Bk	*ENG	[0 to 200 / **65** / 1 sec/step]
002	Agitation Time: C	*ENG	
003	Agitation Time: M	*ENG	
004	Agitation Time: Y	*ENG	
005-008	Sets the execution flag of the developer initialization for each color.		
005	Execution Flag: Bk	*ENG	[0 or 1 / **0** / 1/step] 0: Flag OFF, 1: Flag ON This flag is cleared after executing TD sensor initialization.
006	Execution Flag: C	*ENG	
007	Execution Flag: M	*ENG	
008	Execution Flag: Y	*ENG	
009	Prohibition	*ENG	Enables or disables developer initialization. **DFU** [0 or 1 / **0** / 1/step] 0: Enable, 1: Disable

3022	**[Toner Replenishment Mode]**		
	Sets the toner supply flag of each color.		
005	Execution Flag: Bk	*ENG	[0 or 1 / **0** / 1/step] 0: Flag OFF, 1: Flag ON This flag is cleared after executing TD sensor initialization.
006	Execution Flag: C	*ENG	
007	Execution Flag: M	*ENG	
008	Execution Flag: Y	*ENG	

3041	**[Process Control Type]**		
001	Voltage Control	*ENG	[0 or 1 / **1** / 1/step] Alphanumeric 0: FIXED (Use the fixed values for the charge DC bias and development DC bias set with SP2-005 and SP2-229.) 1: CONTROL
	Enables or disables the process control.		
002	LD Power Control	*ENG	[0 or 1 / **1** / 1/step] Alphanumeric 0: FIXED (at the value in SP2221-xxx) 1: CONTROL (adjusted by process control)
	Selects the LD power control mode.		
003	Auto Control Prohibition Set	*ENG	[0 or 1 / **0** / 1/step] 0: Permit, 1: Forbid
	-		
004	Pre-ACC Process Control	*ENG	[0 to 2 / **2** / 1/step] 0: Not Execute 1: Process Control 2: TC Control
	Selects the process control mode that is done before ACC.		
005	Pattern Caluculation Method	*ENG	[0 to 2 / **0** / 1/step] 0: FIXED 1: INITIALIZED 2: CALCULATED

3043	**[TD Adjustment Mode]**		
001	Repeat Number: Power ON	*ENG	[0 to 9 / **4** / 1 time/step]
	Specifies the maximum number of repeats of the toner density adjustment at power on. 0: Disabled, 1 to 3: Repeat number, 4: Repeat three times (No consumption mode) 5: Repeat three times (Toner is supplied only when the toner density is too low, and toner is consumed only when the toner density is too dark.) 6 to 9: Disabled		
002	Repeat Number: Initiallization	*ENG	[0 to 9 / **3** / 1 time/step]
	Specifies the maximum number of repeats of the toner density adjustment at the developer initialization. 0: Disabled, 1 to 3: Repeat number, 4: Repeat three times (No consumption mode) 5: Repeat three times (Toner is supplied only when the toner density is too low, and toner is consumed only when the toner density is too dark.) 6 to 9: Disabled		
003	Repeat Number: Non-use	*ENG	[0 to 9 / **0** / 1 time/step]
	Specifies the maximum number of repeats of the toner density adjustment in stand by mode. 0: Disabled, 1 to 3: Repeat number, 4: Repeat three times (No consumption mode) 5: Repeat three times (Toner is supplied only when the toner density is too low, and toner is consumed only when the toner density is too dark.) 6 to 9: Disabled		
004	Repeat Number: ACC	*ENG	[0 to 9 / **3** / 1 time/step]
	Specifies the maximum number of repeats of the toner density adjustment at ACC. 0: Disabled, 1 to 3: Repeat number, 4: Repeat three times (No consumption mode) 5: Repeat three times (Toner is supplied only when the toner density is too low, and toner is consumed only when the toner density is too dark.)		

	6 to 9: Disabled		
005	Repeat Number: Recovery	*ENG	[0 to 9 / **3** / 1 time/step]
	Not used		
006	Repeat Number: Job End	*ENG	[0 to 9 / **4** / 1 time/step]
	Specifies the maximum number of repeats of the toner density adjustment at job end. 0: Disabled, 1 to 3: Repeat number, 4: Repeat three times (No consumption mode) 5: Repeat three times (Toner is supplied only when the toner density is too low, and toner is consumed only when the toner density is too dark.) 6 to 9: Disabled		
007	Repeat Number:Interrupt	*ENG	[0 to 9 / **0** / 1 time/step]
	-		
008	Toner Supply Coeff.	*ENG	[0 to 25.5 / **10** / 0.1 sec/step]
	Adjusts the time for the toner supply mode when a toner density is detected to be low.		
009	Consumption Pattern: Bk	*ENG	[0 to 255 / **5** / 1 time/step]
	Specifies the belt mark generating time for checking the black toner density when toner density is detected to be low at the toner density adjustment.		
010	Consumption Pattern: C	*ENG	[0 to 255 / **5** / 1 time/step]
	Specifies the belt mark generating time for checking the magenta toner density when toner density is detected to be low at the toner density adjustment.		
011	Consumption Pattern: M	*ENG	[0 to 255 / **5** / 1 time/step]
	Specifies the belt mark generating time for checking the cyan toner density when toner density is detected to be low at the toner density adjustment.		
012	Consumption Pattern: Y	*ENG	[0 to 255 / **5** / 1 time/step]
	Specifies the belt mark generating time for checking the yellow toner density when toner density is detected to be low at the toner density adjustment.		

013	T1 Bias: Bk	*ENG	[0 to 80 / **26** / 1 µA/step]
	Adjusts the image transfer belt bias for Black.		
014	T1 Bias: C	*ENG	[0 to 80 / **22** / 1 µA/step]
	Adjusts the image transfer belt bias for Magenta.		
015	T1 Bias: M	*ENG	[0 to 80 / **22** / 1 µA/step]
	Adjusts the image transfer belt bias for Cyan.		
016	T1 Bias: Y	*ENG	[0 to 80 / **22** / 1 µA/step]
	Adjusts the image transfer belt bias for Yellow.		
017	Developer Mixing Time	*ENG	[0 to 255 / **10** / 1 sec/step]
	Specifies the developer mixing time at the toner density adjustment.		
018	Consumption Pattern: LD: DUTY: Bk	*ENG	[0 to 15 / **15** / 1 /step]
	Adjusts the LD duty for the toner consumption mode at the toner density adjustment. In toner consumption mode, toner is discharged when the detected development gamma values (SP3611-001) exceed the target values (SP3611-005) by more than the specified thresholds (SP3239-009).		
019	Consumption Pattern: LD: DUTY: C	*ENG	[0 to 15 / **15** / 1 /step]
	Adjusts the LD duty for the toner consumption mode at the toner density adjustment. In toner consumption mode, toner is discharged when the detected development gamma values (SP3611-002) exceed the target values (SP3611-006) by more than the specified thresholds (SP3239-009).		
020	Consumption Pattern: LD: DUTY: M	*ENG	[0 to 15 / **15** / 1 /step]
	Adjusts the LD duty for the toner consumption mode at the toner density adjustment. In toner consumption mode, toner is discharged when the detected		

	development gamma values (SP3611-003) exceed the target values (SP3611-007) by more than the specified thresholds (SP3239-009).		
021	Consumption Pattern: LD: DUTY: Y	*ENG	[0 to 15 / **15** / 1 /step]
	Adjusts the LD duty for the toner consumption mode at the toner density adjustment. In toner consumption mode, toner is discharged when the detected development gamma values (SP3611-004) exceed the target values (SP3611-008) by more than the specified thresholds (SP3239-009).		

3044	**[Toner Supply Type]** Toner Supply Type ([Color])		
	Selects the toner supply method type.		
001	Bk	*ENG	[0 to 4 / **4** / 1/step] Alphanumeric 0: FIXED (with the supply rates stored with SP 3401) 1: PID (Vtref_Fixed) 2: PID (Vtref_Control) 3: MBD (Vtref_Fixed) 4: MBD (Vtref_Control)
002	C	*ENG	
003	M	*ENG	
004	Y	*ENG	

3131	**[TE Count: Display]**		
	Display the number of toner end detections for each color.		
001	Bk	*ENG	[0 to 99 / **0** / 1 time/step]
002	C	*ENG	
003	M	*ENG	
004	Y	*ENG	

3201	**[TD Sensor: Vt Display]**		
	Display the current voltage of the TD sensor for each color.		
001	Current: Bk	*ENG	[0 to 5.5 / **0.01** / 0.01 V/step]
002	Current: C	*ENG	
003	Current: M	*ENG	
004	Current: Y	*ENG	

3211	**[Vt Shift: Display/Set]**		
	Adjusts the Vt correction value for each line speed. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Med Speed Shift:Bk	*ENG	[0 to 5 / **0.46** / 0.01 V/step]
002	Med Speed Shift:C	*ENG	[0 to 5 / **0.48** / 0.01 V/step]
003	Med Speed Shift:M	*ENG	[0 to 5 / **0.5** / 0.01 V/step]
004	Med Speed Shift:Y	*ENG	[0 to 5 / **0.45** / 0.01 V/step]
005	Low Speed Shift:Bk	*ENG	[0 to 5 / **0.84** / 0.01 V/step]
006	Low Speed Shift:C	*ENG	[0 to 5 / **0.87** / 0.01 V/step]
007	Low Speed Shift:M	*ENG	
008	Low Speed Shift:Y	*ENG	[0 to 5 / **0.84** / 0.01 V/step]
009	Mid TC Shift: Bk	*ENG	[-0.5 to 0.5 / **0** / 0.01 V/step]
010	Mid TC Shift: C	*ENG	
011	Mid TC Shift: M	*ENG	
012	Mid TC Shift: Y	*ENG	
013	Low TC Shift: Bk	*ENG	
014	Low TC Shift: C	*ENG	
015	Low TC Shift: M	*ENG	

016	Low TC Shift: Y	*ENG	

3221	**[Vtcnt: Display/Set]**		
	Displays or adjusts the current Vtcnt value for each color.		
001	260 Current: Bk	*ENG	[2.45 to 5 / **3.7** / 0.01 V/step]
002	260 Current: C	*ENG	
003	260 Current: M	*ENG	
004	260 Current: Y	*ENG	
005	260 Initial: Bk	*ENG	[2.45 to 5 / **3.7** / 0.01 V/step]
006	260 Initial: C	*ENG	
007	260 Initial: M	*ENG	
008	260 Initial: Y	*ENG	
009	182 Current: Bk	*ENG	[2.45 to 5 / **3.5** / 0.01 V/step]
010	182 Current: C	*ENG	
011	182 Current: M	*ENG	
012	182 Current: Y	*ENG	
013	182 Initial: Bk	*ENG	
014	182 Initial: C	*ENG	
015	182 Initial: M	*ENG	
016	182 Initial: Y	*ENG	

3222	**[Vtcnt: Display/Set]**		
	Displays or adjusts the current Vtref value for each color.		
001	Current: Bk	*ENG	[0 to 5.5 / **3** / 0.01 V/step]
002	Current: C	*ENG	

003	Current: M	*ENG	
004	Current: Y	*ENG	
005	Initial: Bk	*ENG	[0 to 5.5 / **3** / 0.01 V/step]
006	Initial: C	*ENG	
007	Initial: M	*ENG	
008	Initial: Y	*ENG	
009	Pixel Correction: Bk	*ENG	[-5 to 5.5 / **0** / 0.01 V/step]
010	Pixel Correction: C	*ENG	
011	Pixel Correction: M	*ENG	[-5 to 5 / **0** / 0.01 V/step]
012	Pixel Correction: Y	*ENG	

3239	**[Vtref Correction: Setting]**		
	Adjusts the parameter for Vtref correction at the process control.		
001	(+)Consumption: Bk	*ENG	[0 to 1 / **0.08** / 0.01 V/step]
002	(+)Consumption: C	*ENG	
003	(+)Consumption: M	*ENG	
004	(+)Consumption: Y	*ENG	
005	(-)Consumption: Bk	*ENG	
006	(-)Consumption: C	*ENG	
007	(-)Consumption: M	*ENG	
008	(-)Consumption: Y	*ENG	
009-012	Threshold for development gamma rank.		
009	P Rank 1 Threshold	*ENG	[0 to 2 / **0.5** / 0.01 /step]
010	P Rank 2 Threshold	*ENG	[0 to 2 / **0.25** / 0.01 /step]
011	P Rank 3 Threshold	*ENG	[-2 to 0 / **-0.25** / 0.01 /step]

012	P Rank 4 Threshold	*ENG	[-2 to 0 / **-0.5** / 0.01 /step]
013-014	Threshold for image density rank on the image transfer belt.		
013	T Rank 1 Threshold	*ENG	[-1 to 0 / **-0.16** / 0.01 V/step]
014	T Rank 2 Threshold	*ENG	[0 to 1 / **0.16** / 0.01 V/step]
015	Correct Value Coef	*ENG	[1 to 2.5 / **9.99** / 0.01 /step]

3241	**[Background Potential Setting]**		
001	Coefficient: Bk	*ENG	These are parameters for calculating the charge bias referring to the development bias at process control. [-1000 to 1000 / **0** / 1 /step] DC charge bias = Development bias x (1 + 0.001 x these vales) + SP3-241-005 to -008
002	Coefficient: C	*ENG	
003	Coefficient: M	*ENG	
004	Coefficient: Y	*ENG	
005	Offset: Bk	*ENG	These are additional values for calculating the charge bias referring to the development bias at process control. [0 to 255 / **158** / 1 V/step] DC charge bias = Development bias x (1 + 0.001 x SP3-241-001 to -004) + these values
006	Offset: C	*ENG	
007	Offset: M	*ENG	
008	Offset: Y	*ENG	

3242	**[LD Power Setting]**		
	Adjusts the coefficient for LD power control value at the process control.		
001	Standard Speed: Coefficient: Bk	*ENG	[-1000 to 1000 / **152** / 1 /step]
002	Standard Speed: Coefficient: C	*ENG	
003	Standard Speed: Coefficient: M	*ENG	
004	Standard Speed: Coefficient: Y	*ENG	
005	Standard Speed: Offset: Bk	*ENG	[-1000 to 1000 / **7** / 1 /step]
006	Standard Speed: Offset: C	*ENG	

007	Standard Speed: Offset: M	*ENG	
008	Standard Speed: Offset: Y	*ENG	
009	Middle Speed: Coef: Bk	*ENG	[-1000 to 1000 / **141** / 1 /step]
010	Middle Speed: Coef: C	*ENG	
011	Middle Speed: Coef: M	*ENG	
012	Middle Speed: Coef: Y	*ENG	
013	Middle Speed: Offset: Bk	*ENG	[-1000 to 1000 / **13** / 1 /step]
014	Middle Speed: Offset: C	*ENG	
015	Middle Speed: Offset: M	*ENG	
016	Middle Speed: Offset: Y	*ENG	
017	Low Speed Coeff.:Bk	*ENG	[-1000 to 1000 / **123** / 1 /step]
018	Low Speed Coeff.:C	*ENG	
019	Low Speed Coeff.:M	*ENG	
020	Low Speed Coeff.:Y	*ENG	
021	Low Speed Offset:Bk	*ENG	[-1000 to 1000 / **16** / 1 /step]
022	Low Speed Offset:C	*ENG	
023	Low Speed Offset:M	*ENG	
024	Low Speed Offset:Y	*ENG	

3251	**[Coverage]**		
	These (-001 to -016) are coefficients for SP3-222-009 to -012.		
001	Latest: Pixcel Bk	*ENG	Displays the latest coverage for each color. [0 to 9999 / **0** / 1 cm^2/step]
002	Latest: Pixcel C	*ENG	
003	Latest: Pixcel M	*ENG	
004	Latest: Pixcel Y	*ENG	

005-008	Displays the average coverage of each color for the Vtref correction. "Average S" is defined when the number of developed pages does not reach the number specified with SP3251-017.		
005	Average S: Bk	*ENG	[0 to 100 / **5** / 0.01 %/step]
006	Average S: C	*ENG	
007	Average S: M	*ENG	
008	Average S: Y	*ENG	
009-012	Displays the average coverage of each color for the Vtref correction. "Average M" is defined when the number of developed pages does not reach the number specified with SP3251-018.		
009	Average M: Bk	*ENG	[0 to 100 / **5** / 0.01 %/step]
010	Average M: C	*ENG	
011	Average M: M	*ENG	
012	Average M: Y	*ENG	
013-016	Displays the average coverage of each color for the Vtref correction. "Average L" is defined when the number of developed pages does not reach the number specified with SP3-251-019.		
013	Average L: Bk	*ENG	[0 to 100 / **5** / 0.01 %/step]
014	Average L: C	*ENG	
015	Average L: M	*ENG	
016	Average L: Y	*ENG	
017-019	Adjusts the threshold for SP3-251-005 to -016.		
017	Total Page Setting: S	*ENG	[1 to 100 / **50** / 1 sheet/step]
018	Total Page Setting: M	*ENG	[1 to 500 / **10** / 1 sheet/step]
019	Total Page Setting: L	*ENG	[1 to 999 / **50** / 1 sheet/step]
020-022	Adjusts the threshold for SP3-251-024 to -027.		
020	Total Page Setting: S2	*ENG	[1 to 100 / **20** / 1 sheet/step]

021	Total Page Setting: M2	*ENG	[1 to 500 / **10** / 1 sheet/step]
022	Total Page Setting: L2	*ENG	[1 to 999 / **50** / 1 sheet/step]
024-027	Displays the latest coverage ratio for each color.		
024	Latest Coverage: Bk	*ENG	[0 to 100 / - / 0.01 %/step]
025	Latest Coverage: C	*ENG	
026	Latest Coverage: M	*ENG	
027	Latest Coverage: Y	*ENG	
028	Displays the threshold of whether to perform developer churning or not.		
	DevAgi. Theresh BF ProCon	*ENG	[0 to 100 / **20** / 1 %/step]

3311	**[ID Sensor Detection Value: Voffset]**		
	Displays the ID sensor (regular) offset voltage for Vsg adjustments.		
001	Voffset reg: Bk	*ENG	[0 to 5 / **0** / 0.01 V/step]
002	Voffset reg: C	*ENG	[0 to 5.5 / **0** / 0.01 V/step]
003	Voffset reg: M	*ENG	
004	Voffset reg: Y	*ENG	
005-007	Displays the ID sensor (diffusion) offset voltage for Vsg adjustments.		
005	Voffset dif: C	*ENG	[0 to 5.5 / **0** / 0.01 V/step]
006	Voffset dif: M	*ENG	
007	Voffset dif: Y	*ENG	
008-010	Displays the ID sensor offset voltage for Vsg adjustments.		
008	Voffset TM (Front)	*ENG	[0 to 5.5 / **0** / 0.01 V/step]
009	Voffset TM (Center)	*ENG	
010	Voffset TM (Rear)	*ENG	

3321	[Vsg Adjust: Execution]		
010	P/TM Sensor All	-	Execute the ID sensor initialization setting for all sensors

3322	[Vsg Adjustment Result: Vsg]		
	Displays the result value of the Vsg adjustment for each sensor.		
001	Vsg reg: Bk	*ENG	[0 to 5.5 / **0** / 0.01 V/step]
002	Vsg reg: C	*ENG	
003	Vsg reg: M	*ENG	
004	Vsg reg: Y	*ENG	
005	Vsg dif: C	*ENG	
006	Vsg dif: M	*ENG	
007	Vsg dif: Y	*ENG	
008	Vsg TM (Front)	*ENG	
009	Vsg TM (Center)	*ENG	
010	Vsg TM (Rear)	*ENG	

3325	[Vsg Adjustment Result]		
	Displays the result of the Vsg adjustment. The displayed numbers mean the result of each sensor (sensor for Front, sensor for Bk, sensor for Cyan, sensor for Center, sensor for Magenta, sensor for Yellow and sensor for Rear).		
001	Latest	*ENG	[111 to 9999 / **9999** / 1 /step] 9: Unexpected error 3: Offset voltage error 2: Vsg adjustment value error 1: O.K
002	Latest 1	*ENG	
003	Latest 2	*ENG	
004	Latest 3	*ENG	
005	Latest 4	*ENG	

006	Latest 5	*ENG	
007	Latest 6	*ENG	
008	Latest 7	*ENG	
009	Latest 8	*ENG	
010	Latest 9	*ENG	

3401	**[Fixed Supply Mode]**		
	Adjusts the toner supply rate in the fixed toner supply mode.		
001	Fixed Rate: Bk	*ENG	[0 to 100 / **5** / 1 %/step] These SPs are used only when SP3-044 is set to "0".
002	Fixed Rate: C	*ENG	
003	Fixed Rate: M	*ENG	
004	Fixed Rate: Y	*ENG	

3411	**[Toner Supply Rate: Display]**		
	Displays the current toner supply rate.		
001	Latest: Bk	*ENG	[0 to 100 / **-** / 1 %/step]
002	Latest: C	*ENG	
003	Latest: M	*ENG	
004	Latest: Y	*ENG	

3421	**[Toner Supply Range]**		
001	Upper Limit: Bk	*ENG	Adjusts the toner supply rate during printing. [0 to 100 / **100** / 1%/step]
002	Upper Limit: C	*ENG	
003	Upper Limit: M	*ENG	
004	Upper Limit: Y	*ENG	
005	Minimum Supply Time: Bk	*ENG	Adjusts the minimum toner supply

006	Minimum Supply Time: C	*ENG	time. [0 to 1000 / **200** / 1 msec/step]
007	Minimum Supply Time: M	*ENG	
008	Minimum Supply Time: Y	*ENG	

3451	**[Toner Supply Carry Over: Display]**		
001	Bk	*ENG	Displays the toner supply time carried over from a previous toner supply mode for each color. [0 to 10000 / **0** / 1 msec/step]
002	C	*ENG	
003	M	*ENG	
004	Y	*ENG	

3453	**[Toner Supply: Setting]**		
	Adjusts the toner supply time.		
001	Motor Control Max Drive Time	*ENG	[0 to 10000 / **800** / 1 msec/step]
002	Motor Break Time	*ENG	[0 to 10000 / **200** / 1 msec/step]

3501	**[Process Control Target M/A]**		
	Adjusts the target M/A of the full coverage in single color printer mode.		
001	Maximum M/A: Bk	*ENG	[0 to 1 / **0.482** / 0.001 mg/cm^2/step]
002	Maximum M/A: C	*ENG	[0 to 1 / **0.5** / 0.001 mg/cm^2/step]
003	Maximum M/A: M	*ENG	
004	Maximum M/A: Y	*ENG	

3510	**[Image Quality Adj. Counter:Display]**		
	Displays the total page counter for each adjustment mode.		
001	Process Control: BW	*ENG	[0 to 2000 / **0** / 1 page/step]

002	Process Control: FC	*ENG	
003	Power ON: BW	*ENG	
004	Power ON: FC	*ENG	
005	MUSIC: BW	*ENG	
006	MUSIC: FC	*ENG	
007	Vsg Adj.	*ENG	
008	Charge AC Control	*ENG	
009	MUSIC: Power ON: BW	*ENG	
010	MUSIC: Power ON: FC	*ENG	

3511	**[Execution Interval: Setting]**		
	Adjusts the threshold for each adjustment mode.		
001	Job End: Process Control: BW	*ENG	[0 to 2000 / **250** / 1 page/step]
002	Job End: Process Control: FC	*ENG	[0 to 2000 / **85** / 1 page/step]
003	Interrupt: Process Control: BW	*ENG	[0 to 2000 / **500** / 1 page/step]
004	Interrupt: Process Control: FC	*ENG	[0 to 2000 / **200** / 1 page/step]
005	Initial: Potential Control: BW	*ENG	[0 to 2000 / **250** / 1 page/step]
006	Initial: Potential Control: FC	*ENG	[0 to 2000 / **100** / 1 page/step]
007	Vsg Adj. Counter	*ENG	[0 to 2000 / **0** / 1 page/step]
008	Charge AC Control Counter	*ENG	[0 to 2000 / **500** / 1 page/step]
019	Envir.Correction:ON/OFF	*ENG	[0 or 1 / **1** / 1 /step] 0: Not Correct (OFF), 1: Correct (ON)
020	Gamma Correction: ON/OFF	*ENG	
021	Non-use Time Correct:ON/OFF	*ENG	
022	Correction Coeff. 1: JE: BW	*ENG	[0 to 1 / **0.2** / 0.01 /step]
023	Correction Coeff. 2: JE: BW	*ENG	[0 to 1 / **1** / 0.01/step]

024	Correction Coeff. 1: JE: FC	*ENG	[0 to 1 / **0.59** / 0.01/step]
025	Correction Coeff. 2: JE: FC	*ENG	[0 to 1 / **1** / 0.01/step]
026	Correction Coeff. 1: Interrupt: BW	*ENG	[0 to 1 / **0.1** / 0.01/step]
027	Correction Coeff. 2: Interrupt: BW	*ENG	[0 to 1 / **1** / 0.01/step]
028	Correction Coeff. 1: Interrupt: FC	*ENG	[0 to 1 / **0.25** / 0.01/step]
029	Correction Coeff. 2: Interrupt: FC	*ENG	[0 to 1 / **1** / 0.01/step]
030	Max. Number Correction Threshold	*ENG	[0 to 99 / **5** / 1/step]
031	Max. Number Correction Counter	*ENG	[0 to 255 / **0** / 1/step]

3512	**[Image Quality Adj.: Interval]**		
	Adjusts the timing for execution of process control and line position adjustment during printing.		
001	During Job	*ENG	[0 to 100 / **10** / 1 page/step]
002	During Stand-by	*ENG	[0 to 100 / **10** / 1 minute/step]

3513	**[PCU Motor Stop Time: Bk]**		
	Displays the last time that the PCU motors stopped. These are used for process control execution timing.		
001	Year	*ENG	[0 to 99 / **0** / 1/step]
002	Month	*ENG	[1 to 12 / **1** / 1/step]
003	Day	*ENG	[1 to 31 / **1** / 1/step]
004	Hour	*ENG	[0 to 23 / **0** / 1/step]

005	Minute	*ENG	[0 to 59 / **0** / 1/step]

3514	**[Environmental Display: Job End]**		
	Displays the environmental conditions at the last job. These are used for process control execution timing.		
001	Temperature	*ENG	[-1280 to 1270 / **0** / 0.1°C/step]
002	Relative Humidity	*ENG	[0 to 1000 / **-** / 0.1%RH/step]
003	Absolute Humidity	*ENG	[0 to 1000 / **-** / 0.1 g/cm^3/step]

3515	**[Execution Interval: Display]**		
	Displays the current interval for process control execution. When the machine calculates the timing for process control, it uses a number of conditions. These are the results after considering all the conditions.		
001	Job End: Process Control: BW	*ENG	[0 to 2000 / **500** / 1 page/step]
002	Job End: Process Control: FC	*ENG	[0 to 2000 / **200** / 1 page/step]
003	Interrupt: Process Control: BW	*ENG	[0 to 2000 / **500** / 1 page/step]
004	Interrupt: Process Control: FC	*ENG	[0 to 2000 / **200** / 1 page/step]

3517	**[Blade Damage Prevention Mode]**		
	Adjusts the threshold temperature for preventing the cleaning blade in the transfer belt cleaning unit from being damaged. If the temperature is above this value, toner is applied to the transfer belt at set intervals during the job to prevent the blade from flipping over.		
001	Execution Temp. Thresh	*ENG	[0 to 50 / **0** / 1 deg/step]

3519	**[Toner End Prohibition Setting]**		
	Enables or disables each adjustment at toner end.		
001	Process Control	*ENG	[0 or 1 / **1** / 1/step]

002	MUSIC	*ENG	0: Permit (adjustment is done even toner end condition) 1: Forbid (adjustment is not done at toner end condition)
003	TC Adjustment	*ENG	

3522	**[Initial Process Control Setting]**		
	Adjusts the threshold for the process control at power on. When the current condition has changed by more than the values of these SPs when compared with the conditions at the previous operation, the process control at power on is executed.		
002	Non-use Time Setting	*ENG	[0 to 1440 / **360** / 1 minute/step]
003	Temp. Range	*ENG	[0 to 99 / **10** / 1 deg/step]
004	Relative Humidity Change	*ENG	[0 to 99 / **50** / 1 %RH/step]
005	Absolute Humidity Change	*ENG	[0 to 99 / **6** / 1 g/m^3/step]
100	**[Rapi Timer]**		
	Time Setting	*ENG	[0 to 255 / **30** / 1 sec/step]
	Adjusts the time-out time to get the Rapi timer.		

3531	**[Non-use Time Process Control Setting]**		
	Adjusts the threshold for the process control at stand-by. When the current condition has changed by more than the values of these SPs when compared with the conditions at the previous operation, the process control at stand-by is executed.		
001	Non-use Time Setting	*ENG	[0 to 1440 / **360** / 1 minute/step]
002	Temp. Range	*ENG	[0 to 99 / **10** / 1 deg/step]
003	Relative Humidity Change	*ENG	[0 to 99 / **50** / 1 %RH/step]
004	Absolute Humidity Change	*ENG	[0 to 99 / **6** / 1 g/m^3/step]

005	Maximum Execution Number	*ENG	Adjusts the maximum execution time for the process control at stand-by. [0 to 99 / **10** / 1 time/step]

3611	**[Development Gamma: Display/Set]**		
001	Bk (Current)	*ENG	Displays the current development gamma for Bk [0 to 5 / **0** / 0.01 mg/cm^2/kV /step]
002	C (Current)	*ENG	Displays the current development gamma for C/M/Y. [0 to 5 / **0** / 0.01 mg/cm^2/kV /step]
003	M (Current)	*ENG	
004	Y (Current)	*ENG	
005	Bk (Target Display)	*ENG	Displays the target development gamma for Bk. [0 to 5 / **0.85** / 0.01 mg/cm^2/kV /step]
006	C (Target Display)	*ENG	Displays the target development gamma for C/M/Y. [0 to 5 / **0.85** / 0.01 mg/cm^2/kV /step]
007	M (Target Display)	*ENG	[0 to 5 / **0.8** / 0.01 mg/cm^2/kV /step]
008	Y (Target Display)	*ENG	[0 to 5 / **0.77** / 0.01 mg/cm^2/kV /step]
009	Bk (Standard Target Set)	*ENG	Displays the standard target development gamma for each color. [0 to 5 / **1.37** / 0.01 mg/cm^2/kV /step]
010	C (Standard Target Set)	*ENG	[0 to 5 / **1.32** / 0.01 mg/cm^2/kV /step]
011	M (Standard Target Set)	*ENG	
012	Y (Standard Target Set)	*ENG	
013	Environmental Correction	*ENG	Turns on or off the environmental correction for target development gamma. [0 or 1 / **1** / -] 0: Not Correct, 1: Correct

014	K (Max Correction)	*ENG	[0 to 5 / **0.23** / 0.01 mg/cm2/kv/step]
015	C (Max Correction)	*ENG	
016	M (Max Correction)	*ENG	
017	Y (Max Correction)	*ENG	
018	K (Max Abs Hum)	*ENG	[1 to 99 / **10** / 1 g/m3/step]
019	C (Max Abs Hum)	*ENG	
020	M (Max Abs Hum)	*ENG	
021	Y (Max Abs Hum)	*ENG	

3612	**[Vk Display]**		
	Displays Vk for each color.		
001	Bk	*ENG	[-300 to 300 / **0** / 1 V/step]
002	C	*ENG	
003	M	*ENG	
004	Y	*ENG	

3621	**[Development DC Control:Display]** Standard: 260 mm/sec, Middle: 182 mm/sec, Low: 85 mm/sec		
	Displays the development DC bias adjusted with the process control for each line speed and color.		
001	Standard Speed:Bk	*ENG	[0 to 800 / **550** / 1 -V/step]
002	Standard Speed:C	*ENG	
003	Standard Speed:M	*ENG	
004	Standard Speed:Y	*ENG	
005	Middle Speed:Bk	*ENG	
006	Middle Speed:C	*ENG	

007	Middle Speed:M	*ENG	
008	Middle Speed:Y	*ENG	
009	Low Speed:Bk	*ENG	
010	Low Speed:C	*ENG	
011	Low Speed:M	*ENG	
012	Low Speed:Y	*ENG	

3631	**[Charge DC Control: Display]** Standard: 260 mm/sec, Middle: 182 mm/sec, Low: 85 mm/sec		
	Displays the charge DC voltage adjusted with the process control for each line speed and color.		
001	Standard Speed:Bk	*ENG	[0 to 2000 / **690** / 1 -V/step]
002	Standard Speed:C	*ENG	
003	Standard Speed:M	*ENG	
004	Standard Speed:Y	*ENG	
005	Middle Speed:Bk	*ENG	
006	Middle Speed:C	*ENG	
007	Middle Speed:M	*ENG	
008	Middle Speed:Y	*ENG	
009	Low Speed:Bk	*ENG	
010	Low Speed:C	*ENG	
011	Low Speed:M	*ENG	
012	Low Speed:Y	*ENG	

3641	**[Charge AC Control: Display]** Standard: 260 mm/sec		
	Displays the charge AC voltage adjusted with the process control for each color.		
001	Standard Speed:Bk	*ENG	[0 to 3 / **1.75** / 0.01 kV/step]
002	Standard Speed:C	*ENG	
003	Standard Speed:M	*ENG	
004	Standard Speed:Y	*ENG	

3651	**[LD Power Control: Display]** Standard: 260 mm/sec, Middle: 182 mm/sec, Low: 85 mm/sec		
	Displays the LD power adjusted for each environment.		
001	Standard Speed:Bk	*ENG	[0 to 200 / **100** / 1 %/step]
002	Standard Speed:C	*ENG	
003	Standard Speed:M	*ENG	
004	Standard Speed:Y	*ENG	
005	Middle Speed:Bk	*ENG	
006	Middle Speed:C	*ENG	
007	Middle Speed:M	*ENG	
008	Middle Speed:Y	*ENG	
009	Low Speed:Bk	*ENG	
010	Low Speed:C	*ENG	
011	Low Speed:M	*ENG	
012	Low Speed:Y	*ENG	

3710	**[HST Controll Setting]** TD Sensor: Toner Concentration Control Setting		
	Selects the toner concentration control method by HST memory, which is in the TD sensor.		
001	Control Selection	*ENG	[0 or 1 / **1** / -] 0: Not Use, 1: Use

3711	**[HST Concentration Control: Bk]**		
	Displays the factory settings of the black PCU.		
001	Vcnt	*ENG	[0 to 5 / **4** / 0.1 V/step]
002	Vt	*ENG	[0 to 5 / **2.5** / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / **2.5** / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0 to 2.55 / **1.3** / 0.01 V/step]
005	Sensitivity: ML	*ENG	[0 to 2.55 / **1.2** / 0.01 V/step]
006	Set Detection	*ENG	[0 to 5 / **1** / 0.1 V/step]
007	Without Developer	*ENG	[0 to 5 / **1.2** / 0.1 V/step]
008	With Developer	*ENG	[0 to 5 / **1.3** / 0.1 V/step]
009	Serial Number 1	*ENG	[0 to 255 / **-** / 1 V/step]
010	Serial Number 2	*ENG	
011	Adjustment: Vt	*ENG	[0 to 5 / **3** / 0.1 V/step]
012	Adjustment: Vtref	*ENG	
013	260 Adjustment: Vtcnt	*ENG	[0 to 5 / **4** / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0 to 2.55 / **0** / 0.01 mg/cm^2/kV /step]
015	Adjustment: Vcnt Result	*ENG	[0 to 9 / **9** / 1 /step]
016	182 Adjustment: Vtcnt	*ENG	[0 to 5 / **4** / 0.01 V/step]

3712	**[HST Concentration Control: C]**		
	Displays the factory settings of the magenta PCU.		
001	Vcnt	*ENG	[0 to 5 / **4** / 0.1 V/step]
002	Vt	*ENG	[0 to 5 / **2.5** / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / **2.5** / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0 to 2.55 / **1.3** / 0.01 V/step]
005	Sensitivity: ML	*ENG	[0 to 2.55 / **1.2** / 0.01 V/step]
006	Set Detection	*ENG	[0 to 5 / **1** / 0.1 V/step]
007	Without Developer	*ENG	[0 to 5 / **1.2** / 0.1 V/step]
008	With Developer	*ENG	[0 to 5 / **1.3** / 0.1 V/step]
009	Serial Number 1	*ENG	[0 to 255 / **-** / 1 V/step]
010	Serial Number 2	*ENG	
011	Adjustment: Vt	*ENG	[0 to 5 / **3** / 0.1 V/step]
012	Adjustment: Vtref	*ENG	
013	260 Adjustment: Vtcnt	*ENG	[0 to 5 / **4** / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0 to 2.55 / **0** / 0.01 mg/cm^2/kV /step]
015	Adjustment: Vcnt Result	*ENG	[0 to 9 / **9** / 1 /step]
016	182 Adjustment: Vtcnt	*ENG	[0 to 5 / **4** / 0.01 V/step]

3713	**[HST Concentration Control: M]**		
	Displays the factory settings of the cyan PCU.		
001	Vcnt	*ENG	[0 to 5 / **4** / 0.1 V/step]
002	Vt	*ENG	[0 to 5 / **2.5** / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / **2.5** / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0 to 2.55 / **1.3** / 0.01 V/step]

005	Sensitivity: ML	*ENG	[0 to 2.55 / **1.2** / 0.01 V/step]
006	Set Detection	*ENG	[0 to 5 / **1** / 0.1 V/step]
007	Without Developer	*ENG	[0 to 5 / **1.2** / 0.1 V/step]
008	With Developer	*ENG	[0 to 5 / **1.3** / 0.1 V/step]
009	Serial Number 1	*ENG	[0 to 255 / **-** / 1 V/step]
010	Serial Number 2	*ENG	
011	Adjustment: Vt	*ENG	[0 to 5 / **3** / 0.1 V/step]
012	Adjustment: Vtref	*ENG	
013	260 Adjustment: Vtcnt	*ENG	[0 to 5 / **4** / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0 to 2.55 / **0** / 0.01 mg/cm^2/kV /step]
015	Adjustment: Vcnt Result	*ENG	[0 to 9 / **9** / 1 /step]
016	182 Adjustment: Vtcnt	*ENG	[0 to 5 / **4** / 0.01 V/step]

3714	**[HST Concentration Control:Y]**		
	Displays the factory settings of the yellow PCU.		
001	Vcnt	*ENG	[0 to 5 / **4** / 0.1 V/step]
002	Vt	*ENG	[0 to 5 / **2.5** / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / **2.5** / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0 to 2.55 / **1.3** / 0.01 V/step]
005	Sensitivity: ML	*ENG	[0 to 2.55 / **1.2** / 0.01 V/step]
006	Set Detection	*ENG	[0 to 5 / **1** / 0.1 V/step]
007	Without Developer	*ENG	[0 to 5 / **1.2** / 0.1 V/step]
008	With Developer	*ENG	[0 to 5 / **1.3** / 0.1 V/step]
009	Serial Number 1	*ENG	[0 to 255 / **-** / 1 V/step]
010	Serial Number 2	*ENG	

011	Adjustment: Vt	*ENG	[0 to 5 / **3** / 0.1 V/step]
012	Adjustment: Vtref	*ENG	
013	260 Adjustment: Vtcnt	*ENG	[0 to 5 / **4** / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0 to 2.55 / **0** / 0.01 mg/cm^2/kV /step]
015	Adjustment: Vcnt Result	*ENG	[0 to 9 / **9** / 1 /step]
016	182 Adjustment: Vtcnt	*ENG	[0 to 5 / **4** / 0.01 V/step]

3800	**[Toner Collection Bttl Full]**		
	Displays/ adjusts the PCDU toner collection bottle detection settings.		
001	Condition	*ENG	[0 to 4 / **0** / 1 /step]
	Displays the current condition of the PCDU toner collection bottle. 0: Factory default, 1: Before near full, 2; Near full, 3: Full, 4: Reserved		
002	Print Page After Near Full	*ENG	Not used [0 to 10000 / **0** / 1 sheet/step]
003	Pixel Count After Near Full	*ENG	Not used [0 to 10000000 / **0** / 1 /step]
004	Print Page After Near Full2	*ENG	Not used [0 to 100000 / **0** / 1 sheet /step]
005	Pixel Count After Near Full2	*ENG	Not used Displays the pixel counter after replacement of toner collection bottle. [0 to 100000000 / **0** / 1 /step]
006	Print Page After Replacement	*ENG	[0 to 100000 / **0** / 1 sheet /step]
007	Pixel Count After Replacement	*ENG	[0 to 100000000 / **0** / 1 /step]
008	Print Page Threshold	*ENG	[0 to 10000 / **3000** / 1 sheet /step]
009	Pixel Count Threshold	*ENG	[0 to 100000 / **25000** / 1 /step]

010	Print Page Threshold 2	*ENG	[0 to 100000 / **100000** / 1 sheet /step]
011	Pixel Count Threshold 2	*ENG	[0 to 1000000 / **120000** / 1 /step]
014	Mechanism Full Detection Date	*ENG	Displays the date of the near full detection for the PCDU toner collection bottle.

3901	**[New Unit Detection]**		
	Turns new PCU detection on or off.		
001	ON/OFF Setting	*ENG	[0 or 1 / **1** / -] 0: OFF, 1: ON

3902	**[Manual New Unit Set]**		
	Turns the new unit detection flag for each PM unit on or off.		
001	Development Unit: Bk	*ENG	[0 or 1 / **0** / -] 0: OFF, 1: ON
002	Development Unit: C	*ENG	
003	Development Unit: M	*ENG	
004	Development Unit: Y	*ENG	
009	PCU: Bk	*ENG	[0 or 1 / **0** / -] 0: OFF, 1: ON
010	PCU: C	*ENG	
011	PCU: M	*ENG	
012	PCU: Y	*ENG	
013	ITB Unit	*ENG	[0 or 1 / **0** / -] 0: OFF, 1: ON Do not use 3902-013 if you only change the cleaning unit. 3902-015: This is for the image transfer belt cleaning unit.
014	Fusing Unit	*ENG	
015	Fusing Roller	*ENG	
016	Fusing Belt	*ENG	
017	Image Transfer Cleaning Unit	*ENG	

018	Paper Transfer Unit	*ENG	[0 or 1 / **0** / -] 0: OFF, 1: ON
020	Image Transfer Toner Collection Bottle	*ENG	

5.5 MAIN SP TABLES-4

5.5.1 SP4-XXX (SCANNER)

4013	[Scanner Free Run]		
	Performs the scanner free run with the exposure lamp on or off in the following mode. Full color mode / Full Size / A4 or LT		
001	Lamp: OFF	*ENG	[0 or 1 / **0** / -] 0: OFF, 1: ON
002	Lamp: ON		

4014	[Scan]		
	Execute the scanner free fun with each mode.		
001	HP Detection Enable	-	Scanner free run with HP sensor check.
002	HP Detection Disable	-	Scanner free run without HP sensor check.

4020	[DF Dust Check]		
001	Dust Detection: ON/OFF	*ENG	Turns the ARDF scan glass dust check on/ off. [0 or 1 / **0** / 1 /step] 0: OFF, 1: ON
002	Dust Detect: Level	*ENG	Selects the detect level. [0 to 8 / **4** / 1 /step] 0: lowest detection level 8: highest detection level
003	Dust Reject: Level	*ENG	Selects the level of the sub scan line correction when using the ARDF. [0 to 4 / **0** / 1 /step] 0: Off 1: Weakest

			2: Weak 3: Strong 4: Strongest

4400	[Org Erase Mask]	*ENG	
	Set the Mask for Original. These SPs set the area to be masked during platen (book) mode scanning.		
001	Book: Sub LEdge	[0 to 3.0 / **0** / 0.1 mm/step]	
002	Book: Sub TEdge		
003	Book: Main: LEdge		
004	Book: Main: TEdge		
005	ADF: Sub LEdge		
007	ADF: Main: LEdge		
008	ADF: Main: TEdge		

4417	[IPU Test Pattern]	
	Selects the IPU test pattern.	
001	Test Pattern Selection	[0 to 24 / **0** / 1/step]
	0: Scanned image 1: Gradation main scan A 2: Gradation main scan B 3: Gradation main scan C 4: Gradation main scan D 5: Gradation sub scan (1) 6: Grid pattern 7: Slant grid pattern 8: Gradation RGBCMYK 9: UCR pattern 10: Color patch 16 (1) 11: Color patch 16 (2) 12: Color patch 64	13: Grid pattern CMYK 14: Color patch CMYK 15: Gray pattern (1) 16: Gray pattern (2) 17: Gray Pattern (3) 18: Shading pattern 19: Thin line pattern 20: Scanned + Grid pattern 21: Scanned + Gray scale 22: Scanned + Color patch 23: Scanned + Slant Grid C 24: Scanned + Slant Grid D

4429	[Select Copy Data Security]		
001	Coping	*ENG	[0 to 3 / **3** / 1 /step]
002	Scanning		
003	Fax Operation		

4450	[Scan Image Path Selection]	
001	Black Subtraction ON/OFF	[0 or 1 / **1** / -] 0: OFF, 1: ON
	Uses or does not use the black reduction image path.	
002	SH ON/OFF	[0 or 1 / **0** / 1 /step] 0: ON, 1: OFF
	Uses or does not use the shading image path.	

4460	[Degital AE]		
	Adjust the background level.		
001	Low Limit Value	*ENG	[0 to 1023 / **364** / 1 /step]
002	Background Level		[512 to 1535 / **932** / 1 /step]

4501	[ACC Target Density]		
	Selects the ACC result.		
001	Copy: K: Text	*ENG	[0 to 10 / **5** / 1 /step] 10: Darkest density
002	Copy: C: Text	*ENG	
003	Copy: M: Text	*ENG	
004	Copy: Y: Text	*ENG	
005	Copy: K: Photo	*ENG	
006	Copy: C: Photo	*ENG	
007	Copy: M: Photo	*ENG	

008	Copy: Y: Photo	*ENG	

4505	[ACC Cor:Bright]		
	Adjusts the offset correction for light areas of the ACC pattern.		
001	Text:K	*ENG	[-128 to 127 / **0** / 1 /step]
002	Text:C	*ENG	
003	Text:M	*ENG	
004	Text:Y	*ENG	
005	Photo:K	*ENG	[-128 to 127 / **0** / 1 /step]
006	Photo:C	*ENG	
007	Photo:M	*ENG	
008	Photo:Y	*ENG	

4506	[ACC Cor:Dark]		
	Adjusts the offset correction for dark areas of the ACC pattern.		
001	Text:K	*ENG	[-128 to 127 / **0** / 1 /step]
002	Text:C	*ENG	
003	Text:M	*ENG	
004	Text:Y	*ENG	
005	Photo:K	*ENG	[-128 to 127 / **0** / 1 /step]
006	Photo:C	*ENG	
007	Photo:M	*ENG	
008	Photo:Y	*ENG	

4540	[Printer Correction]		
	This SP corrects the printer coverage of 12 hues (RY, YR, YG, etc. x 4 Colors [R, G, B, Option]) for a total of 48 parameters.		
001-004	RY Phase: Option/R/G/B	*ENG	Specifies the printer vector correction value. [0 to 255 / **0** / 1 /step]
005-008	YR Phase: Option/R/G/B		
009-012	YG Phase: Option/R/G/B		
013-016	GY Phase: Option/R/G/B		
017-020	GC Phase: Option/R/G/B		
021-024	CG Phase: Option/R/G/B		
025-028	CB Phase: Option/R/G/B		
029-032	BC Phase: Option/R/G/B		
033-036	BM Phase: Option/R/G/B		
037-040	MB Phase: Option/R/G/B		
041-044	MR Phase: Option/R/G/B		
045-048	RM Phase: Option/R/G/B		
049-052	White: Option/R/G/B		
053-056	Black: Option/R/G/B		

4600	[SBU Version Display]		
001	SBU_ID	-	Displays the ID of the SBU.
002	GASBU-N_ID	-	Displays the ID of the GASBU.
003	VSP5100_ID	-	Displays t he ID of the VSP5100.

4602	[Scanner Memory Access]		
001	Scanner Memory Access	-	Enables the read and write check for the SBU registers.

4603	[AGC Execution]		
001	HP Detection Enable	-	Executes the AGC.
002	HP Detection Disable	-	-

4609	[Gray Balance Set: R]		
001	Book Read	-	[-512 to 511 / **-46** / 1 digit/step]
002	DF Read	-	[-512 to 511 / **-46** / 1 digit/step]

4610	[Gray Balance Set: G]		
001	Book Read	-	[-512 to 511 / **-20** / 1 digit/step]
002	DF Read		

4611	[Gray Balance Set: B]		
001	Book Read	-	[-512 to 511 / **-28** / 1 digit/step]
002	DF Read		

4623	[Black Level Fine Adj. Display] RE: Red Even signal, RO: Red Odd signal		
001	Latest: RE Color	-	Displays the black offset value (rough adjustment) for the even red signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]
002	Latest: RO Color	-	Displays the black offset value (rough adjustment) for the odd red signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]

4624	[Black Level Adj. Display] GE: Green Even signal, GO: Green Odd signal		
001	Latest: GE Color	-	Displays the black offset value (rough adjustment) for the even green signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]
002	Latest: GO Color	-	Displays the black offset value (rough adjustment) for the odd green signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]

4625	[Black Level Adj. Display] BE: Blue Even signal, BO: Blue Odd signal		
001	Latest: BE Color	-	Displays the black offset value (rough adjustment) for the even blue signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]
002	Latest: BO Color	-	Displays the black offset value (rough adjustment) for the odd blue signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]

4628	[Analog Gain Adjustment]		
	Displays the gain value of the amplifiers on the controller for Red.		
001	Latest: R Color	-	[0 to 7 / **0** / 1 digit/step]

4629	[Analog Gain Adjustment]		
	Displays the gain value of the amplifiers on the controller for Green.		
001	Latest: G Color	-	[0 to 7 / **0** / 1 digit/step]

4630	[Analog Gain Adjustment]		
	Displays the gain value of the amplifiers on the controller for Blue.		
001	Latest: B Color	-	[0 to 7 / **0** / 1 digit/step]

4631	[Digital Gain Adjustment]		
	Displays the gain value of the amplifiers on the controller for Red.		
001	Latest: RE Color	-	[0 to 1023 / **0** / 1 digit/step]
002	Latest: RO Color	-	

4632	[Digital Gain Adjustment]		
	Displays the gain value of the amplifiers on the controller for Green.		
001	Latest: GE Color	-	[0 to 1023 / **0** / 1 digit/step]
002	Latest: GO Color	-	

4633	[Digital Gain Adjustment]		
	Displays the gain value of the amplifiers on the controller for Blue.		
001	Latest: BE Color	-	[0 to 1023 / **0** / 1 digit/step]
002	Latest: BO Color	-	

4645	[Scan Adjust Error]		
001	White level	-	[0 to 65535 / **0** / 1 digit/step]
002	Black level	-	

4647	[Scanner Hard Error]		
	Displays the result of the SBU connection check.		
001	Power-ON	-	[0 to 35535 / **0** / 1digit /step] 0: OK, Other: SBU connection check failure If the SBU connection check fails, SC144 occurs.

4654	[Black Level Adj. Display] RE: Red Even signal, RO: Red Odd signal		
001	Last Correct Value: RE Color	*ENG	Displays the black offset value for the even red signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]
002	Last Correct Value: RO Color	*ENG	Displays the black offset value for the odd red signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]

4655	[Black Level Adj. Display] GE: Green Even signal, GO: Green Odd signal		
001	Last Correct Value: GE Color	*ENG	Displays the black offset value for the even green signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]
002	Last Correct Value: GO Color	*ENG	Displays the black offset value for the odd green signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]

4656	[Black Level Adj. Display] BE: Blue Even signal, BO: Blue Odd signal		
001	Last Correct Value: BE Color	*ENG	Displays the black offset value for the even blue signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]
002	Last Correct Value: BO Color	*ENG	Displays the black offset value for the odd blue signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]

4658	[Analog Gain Adjustment]		
	Displays the previous gain value of the amplifiers on the controller for Red.		
001	Last Correct Value: RE Color	*ENG	[0 to 7 / **0** / 1 digit/step]

4659	[Analog Gain Adjustment]		
	Displays the previous gain value of the amplifiers on the controller for Green.		
001	Last Correct Value: GE Color	*ENG	[0 to 7 / **0** / 1 digit/step]

4660	[Analog Gain Adjustment]		
	Displays the previous gain value of the amplifiers on the controller for Blue.		
001	Last Correct Value: BE Color	*ENG	[0 to 7 / **0** / 1 digit/step]

4661	[Digital Gain Adjustment] RE: Red Even signal, RO: Red Odd signal		
001	Last Correct Value: RE Color	*ENG	[0 to 1023 / **0** / 1 digit/step]
002	Last Correct Value: RO Color	*ENG	

4662	[Digital Gain Adjustment] GE: Green Even signal, GO: Green Odd signal		
001	Last Correct Value: GE Color	*ENG	[0 to 1023 / **0** / 1 digit/step]
002	Last Correct Value: GO Color	*ENG	

4663	[Digital Gain Adjustment] BE: Blue Even signal, BO: Blue Odd signal		
001	Last Correct Value: BE Color	*ENG	[0 to 1023 / **0** / 1 digit/step]
002	Last Correct Value: BO Color	*ENG	

4673	[Black Level Adj. Display] RE: Red Even signal, RO: Red Odd signal		
001	Factory Setting: RE Color	*ENG	Displays the factory setting values of the black level adjustment for the even red signal in the CCD circuit board (color printing speed).. [0 to 16383 / **0** / 1 digit/step]
002	Factory Setting: RO Color	*ENG	Displays the factory setting values of the black level adjustment for the odd red signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]

4674	[Black Level Adj. Display] GE: Green Even signal, GO: Green Odd signal		
001	Factory Setting: GE Color	*ENG	Displays the factory setting values of the black level adjustment for the even green signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]
002	Factory Setting: GO Color	*ENG	Displays the factory setting values of the black level adjustment for the odd green signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]

4675	[Black Level Adj. Display] BE: Blue Even signal, BO: Blue Odd signal		
001	Factory Setting: BE Color	*ENG	Displays the factory setting values of the black level adjustment for the even blue signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]
002	Factory Setting: BO Color	*ENG	Displays the factory setting values of the black level adjustment for the odd blue signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]

4677	[Analog Gain Adjustment]		
	Displays the factory setting values of the gain adjustment for Red.		
001	Factory Setting: RE Color	*ENG	[0 to 7 / **0** / 1 digit/step]

4678	[Analog Gain Adjustment]

	Displays the factory setting values of the gain adjustment for Green.		
001	Factory Setting: GE Color	*ENG	[0 to 7 / **0** / 1 digit/step]

4679	[Analog Gain Adjustment]		
	Displays the factory setting values of the gain adjustment for Blue.		
001	Factory Setting: BE Color	*ENG	[0 to 7 / **0** / 1 digit/step]

4680	[Digital Gain Adjustment]		
	Displays the gain value of the amplifiers on the controller for Red.		
001	Latest: RE Color	*ENG	[0 to 1023 / **0** / 1 digit/step]
002	Latest : RO Color	*ENG	

4681	[Digital Gain Adjustment]		
	Displays the gain value of the amplifiers on the controller for Green.		
001	Latest: GE Color	*ENG	[0 to 1023 / **0** / 1 digit/step]
002	Latest: GO Color	*ENG	

4682	[Digital Gain Adjustment]		
	Displays the gain value of the amplifiers on the controller for Blue.		
001	Latest: BE Color	*ENG	[0 to 1023 / **0** / 1 digit/step]
002	Latest: BO Color	*ENG	

4688	[DF Density Adjustment]		
	Adjusts the white shading parameter when scanning an image with the ARDF. Adjusts the density level if the ID of outputs made in the DF and Platen mode is different.		
001	-	*ENG	[50 to 150 / **98** / 1%/ step]

4690	[White Level Peak Read]		
	Displays the peak level of the white level scanning.		
001	RE	-	[0 to 1023 / **0** / 1 digit/step]
002	RO	-	

4691	[White Level Peak Read]		
	Displays the peak level of the white level scanning.		
001	GE	-	[0 to 1023 / **0** / 1 digit/step]
002	GO	-	

4692	[White Level Peak Read]		
	Displays the peak level of the white level scanning.		
001	BE	-	[0 to 1023 / **0** / 1 digit/step]
002	BO	-	

4693	[Black Level Peak Read]		
	Displays the peak level of the black level scanning.		
001	RE	-	[0 to 1023 / **0** / 1 digit/step]
002	RO	-	

4694	[Black Level Peak Read]		
	Displays the peak level of the black level scanning.		
001	GE	-	[0 to 1023 / **0** / 1 digit/step]
002	GO	-	

4695	[Black Level Peak Read]

	Displays the peak level of the black level scanning.		
001	BE	-	[0 to 1023 / **0** / 1 digit/step]
002	BO	-	

4802	[DF Shading FreeRun]		
001	Lamp OFF	-	Executes the scanner free run of shading movement with exposure lamp on or off. Press "OFF" to stop this free run. Otherwise, the free run lasts.
002	Lamp ON		

4804	[Home Position Operation]		
001	-	-	Executes the scanner HP detection.

4806	[Carriage Move]		
001	-	-	Moves the carriage from the scanner home position. Dust may fall through the DF exposure glass. Therefore, do this SP when you transport the machine a long distance.

4807	[SBU Test Pattern Change]		
001	-	-	[0 to 250 / **0** / 1 /step] 1: Grid pattern 2: Gradation main scan 3: Gradation sub scan 4 to 250: Default (Scanning Image)

4902	[ACC Data Display]
	This SP outputs the final data read at the end of ACC execution. A zero is returned if there was an error reading the data. [0 to 255 / **0** / 1 /step]

001	R DATA1	*ENG	Photo C Patch Level 1 (8-bit)
002	G DATA1	*ENG	Photo M Patch Level 1 (8-bit)
003	B DATA1	*ENG	Photo Y Patch Level 1 (8-bit)
004	R DATA2	*ENG	Photo C Patch Level 17 (8-bit)
005	G DATA2	*ENG	Photo M Patch Level 17(8-bit)
006	B DATA2	*ENG	Photo Y Patch Level 17 (8-bit)

4918	[Manual Gamma Adj]		
	Adjusts the offset data of the printer gamma for yellow in Photo mode. See “Printer Gamma Correction" in the Replacement and Adjustment for how to use.		
009	-	-	Enter the manual gamma adjustment screen (-001 to 008). For details, see the "Printer Gamma Correction" in the section "Replace and Adjustment".

4991	[IPU Image Path Selection]		
	Selects the image path. Enter the number to be selected using the 10-key pad.		
001	RGB Frame Memory	*ENG	[0 to 11 / **2** / 1 /step]
	0: Scanner input RGB images 1: Scanner I/F RGB images 2: RGB images done by Shading correction (Shading ON, Black offset ON) 3: Shading data 4 to 11: Not used		

4993	[High Light Correction]		
001	Sensitivity Selection	*ENG	Selects the Highlight correction level. [0 to 9 / **4** / 1 /step] 0: weakest sensitivity

			9: strongest sensitivity
002	Range Selection	*ENG	Selects the range level of Highlight correction. [0 to 9 / **4** / 1 /step] 0: weakest skew correction, 9: strongest skew correction

4994	[Text/Photo Detection Level Adj.]		
	Selects the definition level between Text and Photo for high compression PDF.		
001	High Compression PDF	*ENG	[0 to 2 / **1** / 1 /step] 0: Text priority 1: Normal 2: Photo priority

4996	[White Paper Detect Level]		
	Adjust the white paper detect level for fax.		
001	-	*ENG	[0 to 6 / **3** / 1 /step]

5.6 MAIN SP TABLES-5

5.6.1 SP5-XXX (MODE)

5024	**[mm/inch Display Selection]**		
	Display units (mm or inch) for custom paper sizes.		
001	0:mm 1:inch	*CTL	0: mm (Europe/Asia) 1: inch (USA)

5045	**[Accounting Counter]**		
	Selects the counting method. **NOTE:** The counting method can be changed only once, regardless of whether the counter value is negative or positive.		
001	Counter Method	*CTL	[0 or 1 / **1** / -] 0: Developments 1: Prints

5051	**[Toner Refill Detection Display]**		
	Enables or disables the toner refill detection display.		
001	-	*CTL	[0 or 1 / **0** / -] Alphanumeric 0: ON 1: OFF

5055	**[Display IP Address]**		
	Display or does not display the IP address on the operation panel.		
001	-	*CTL	[0 or 1 / **0** / -] 0: OFF 1: ON

5056	**[Coverage Counter Display]**		
	Display or does not display the coverage counter on the operation panel.		
001	-	*CTL	[0 or 1 / **0** / -] 0: Not display, 1: Display

5061	[Toner Remaining Icon Display Change]		
	Display or does not display the remaining toner display icon on the LCD.		
001	-	*CTL	[0 or 1 / **0** / -] 0: Not display, 1: Display

5062	[Part Replacement Alert Display]		
	Display or does not display the PM part yield on the LCD.		
001	PCU: Bk	*CTL	[0 or 1 / **0** / -] 0: No display, 1: Display
002	PCU: M	*CTL	
003	PCU: C	*CTL	
004	PCU: Y	*CTL	
005	Development Unit: Bk	*CTL	[0 or 1 / **0** / -] 0: No display, 1: Display
006	Development Unit: M	*CTL	
007	Development Unit: C	*CTL	
008	Development Unit: Y	*CTL	
013	Image Transfer Belt	*CTL	[0 or 1 / **0** / -] 0: No display, 1: Display
014	Image Transfer Cleaning	*CTL	
015	Fusing Unit	*CTL	
016	PTR Unit	*CTL	
017	Toner Collection Bottle	*CTL	
018	Fusing Roller (Heating	*CTL	

	Roller)		
019	Fusing Belt	*CTL	

5066	[PM Parts Display] Display or does not display the "PM parts" button on the LCD.		
001	-	*CTL	[0 or 1 / **0** / -] 0: No display, 1: Display

5067	[Parts PM System Setting]		
	Selects the service maintenance or user maintenance for each PM parts. If the user service is selected, PM alart is displayed on the LCD.		
001	PCU (Drum Unit):Bk	*CTL	**[0: Service]** or [1: User]
002	PCU (Drum Unit):M	*CTL	
003	PCU (Drum Unit):C	*CTL	
004	PCU (Drum Unit):Y	*CTL	
005	Development Unit:Bk	*CTL	**[0: Service]** or [1: User]
006	Development Unit:M	*CTL	
007	Development Unit:C	*CTL	
008	Development Unit:Y	*CTL	
013	Image Transfer Belt	*CTL	**[0: Service]** or [1: User]
014	Image Transfer Cleaning	*CTL	**[0: Service]** or [1: User]
015	Fusing Unit	*CTL	**[0: Service]** or [1: User]
016	PTR Unit	*CTL	**[0: Service]** or [1: User]
017	Toner Collection Bottle	*CTL	**[0: Service]** or [1: User]
018	Fusing Roller (Heating Roller)	*CTL	**[0: Service]** or [1: User]
019	Fusing Belt	*CTL	**[0: Service]** or [1: User]

5073	[Supply Part Replacement Operation Type] This SP makes it possible for users to replace the bottle.		
001	Waste Toner Bottle	*CTL	[0 or 1 / **0** / -] 0: Service, 1: User

5113	[Optional Counter Type]		
001	Default Optional Counter Type	*CTL	This program specifies the counter type. **0**: **None**, 1: Key card (RK 3, 4) 2: Key card (down), 3: Prepaid card 4: Coin rack, 5: MF key card 8: Key counter + Vendor 9: Bar-code Printer
002	External Optional Counter Type	*CTL	This program specifies the external counter type. **0**: **None** 1: Expansion Device 1 2: Expansion Device 2 3: Expansion Device 3

5114	[Optional Counter I/F]		
001	MF Key Card Extension	*CTL	[**0: Not installed/** 1: Installed (scanning accounting)]

5118	[Disable Copying]	*CTL	[**0**: Not disabled/ 1: Disabled]
001	This program disables copying.		

5120	[Mode Clear Opt. Counter Removal]	*CTL	[**0**: **Yes (removed)**/ 1: Standby (installed but not used)/ 2: No (not removed)]
001	This program updates the information on the optional counter. When you install or remove an optional counter, check the settings.		

5121	[Counter Up Timing]	*CTL	[**0: Feed**/ 1: Exit]
001	This program specifies when the counter goes up. The settings refer to "paper feed" and "paper exit" respectively.		

5127	[APS Mode]	*CTL	[**0**: Not disabled/ 1: Disabled]
001	This program disables the APS.		

5131	**[Paper Size/Type Select]**		
001	1.NA 2.EU ASIA	*ENG	[0 to 2 / **1: NA, 2: EU** / 1] 0: Japan, 1: NA, 2: EU
	Selects the paper size type (for originals and paper). After changing the value, turn the main power switch off and on.		

5150	[By-Pass Length Setting]	*CTL	[**0**: OFF/ 1: ON]
001	Determines whether the transfer sheet from the by-pass tray is used or not. Normally the paper length for sub scanning paper from the by-pass tray is limited to 600 mm, but this can be extended with this SP to 1260 mm.		

5162	[App. Switch Method]	*CTL	[**0**: Soft Key Set/ 1: Hard Key Set]
001	This program specifies the switch that selects an application program.		

5167	[Fax Printing Mode at Optional]		
	Enables or disables the automatic print out without an accounting device. This SP is used when the receiving fax is accounted by an external accounting device.		
001	Fax Printing Mode at Optional Counter Off	*CTL	[0 or 1 / **0** / -] 0: Automatic printing 1: No automatic printing

5169	**[CE Login]**

	If you will change the printer bit switches, you must 'log in' to service mode with this SP before you go into the printer SP mode.		
001	-	*CTL	[0 or 1 / **0** / -] 0: Disabled 1: Enabled

5188	[Copy NvVersion]		
	Displays the version number of the NVRAM on the controller board.		
001	-	-	-

5199	[Paper Exit After Staple End.]		
001	-	*CTL	[0 or 1 / **0** / -] 0: OFF, 1: ON
	Enables or disables the paper feeding out from the finisher without stapling. ▪ If this setting is "1: ON", paper is fed out without stapling at the maximum number of the finisher stapling when the machine gets a multiple printing job (over maximum number). ▪ If this setting is "0: OFF", paper is fed out with stapling at the maximum number of the finisher stapling when the machine gets a multiple printing job (over maximum number).		

5212	[Page Numbering]	*CTL	
	This program adjusts the position of the second side page numbers. A "– value" moves the page number positions to the left edge. A "+ value" moves the page number positions to the right edge.		
003	Duplex Printout Right/Left Position	[–10 to 10 / **0** / 1 mm/step]	
004	Duplex Printout High/Low Position	[–10 to 10 / **0** / 1 mm/step]	

5302	**[Set Time]**

	Adjusts the RTC (real time clock) time setting for the local time zone. Examples: For Japan (+9 GMT), enter 540 (9 hours x 60 min.) DOM: +540 (Tokyo) NA: -300 (New York) EU: + 60 (Paris) CH: +480 (Peking) TW: +480 (Taipei) AS: +480 (Hong Kong) KO: +540 (Korea)		
002	Time Difference	*CTL#	[-1440 to 1440 / **Area** / 1 min./step]

5307	**[Summer Time]**		
001	Setting	-	[0 to 1 / **NA, EU, ASIA** / 1 /step] 0: Disabled 1: Enabled NA and EUR: 1, ASIA: 0
	Enables or disables the summer time mode. Note ▪ Make sure that both SP5-307-3 and -4 are correctly set. Otherwise, this SP is not activated even if this SP is set to "1".		
003	Rule Set (Start)	-	
	Specifies the start setting for the summer time mode. There are 8 digits in this SP. For months 1 to 9, the "0" cannot be input in the first digit, so the eight-digit setting for -2 or -3 becomes a seven-digit setting. 1st and 2nd digits: The month. [1 to 12] 3rd digit: The week of the month. [1 to 5] 4th digit: The day of the week. [0 to 6 = Sunday to Saturday] 5th and 6th digits: The hour. [00 to 23] 7th digit: The length of the advanced time. [0 to 9 / 1 hour /step] 8th digit: The length of the advanced time. [0 to 5 / 10 minutes /step] For example: 3500010 (EU default) The timer is advanced by 1 hour at am 0:00 on the 5th Sunday in March ▪ The digits are counted from the left. ▪ Make sure that SP5-307-1 is set to "1".		

004	Rule Set (End)	-	-
	Specifies the end setting for the summer time mode. There are 8 digits in this SP. 1st and 2nd digits: The month. [1 to 12] 3rd digit: The week of the month. [0 to 5] 4th digit: The day of the week. [0 to 7 = Sunday to Saturday] 5th and 6th digits: The hour. [00 to 23] The 7th and 8 digits must be set to "00". ▪ The digits are counted from the left. ▪ Make sure that SP5-307-1 is set to "1".		

5404	**[User Code Counter Clear]**		
001	-	*CTL	Clears all counters for users.

5411	**[LDAP Certification]**		
004	Easy Certification	*CTL	Determines whether easy LDAP certification is done. [0 to 1 / **1** / 1] 1: On, 0: Off
005	Password Null Not Permit	*CTL	This SP is referenced only when SP5411-4 is set to "1" (On). [0 to 1 / **0** / 1] 0: Password NULL not permitted. 1: Password NULL permitted.
006	Detail Option	*CTL	-

5413	**[Lockout Setting]**		
001	Lockout On/Off	*CTL	Switches on/off the lock on the local address book account. [0 to 1 / **0** / 1] 0: Off, 1: On
002	Lockout Threshold	*CTL	Sets a limit on the frequency of lockouts for account lockouts.

			[1 to 10 / **5** / 1]
003	Cancellation On/Off	*CTL	Determines whether the system waits the prescribed time for input of a correct user ID and password after an account lockout has occurred. [0 to 1 / **0** / 1] 0: Off (no wait time, lockout not cancelled) 1: On (system waits, cancels lockout if correct user ID and password are entered.
004	Cancellation Time	*CTL	Determines the length of time that the system waits for correct input of the user ID and password after a lockout has occurred. This setting is used only if SP5413-3 is set to "1" (on). [1 to 9999 / **60** / 1 min.]

5414	**[Access Mitigation]**		
001	Mitigation On/Off	*CTL	Switches on/off masking of continuously used IDs and passwords that are identical. [0 to 1 / **0** /1] 0: Off 1: On
002	Mitigation Time	*CTL	Sets the length of time for excluding continuous access for identical user IDs and passwords. [0 to 60 / **15** / 1 min.]

5415	**[Password Attack]**		
001	Permissible Number	*CTL	Sets the number of attempts to attack the system with random passwords to gain illegal access to the system.

			[0 to 100 / **30** / 1 attempt]
002	Detect Time	*CTL	Sets the time limit to stop a password attack once such an attack has been detected. [1 to 10 / **5** / 1 sec.]

5416	**[Access Information]**		
001	Access User Max Num	*CTL	Limits the number of users used by the access exclusion and password attack detection functions. [50 to 200 / **200** / 1 users]
002	Access Password Max Num	*CTL	Limits the number of passwords used by the access exclusion and password attack detection functions. [50 to 200 / **200** / 1 passwords]
003	Monitor Interval	*CTL	Sets the processing time interval for referencing user ID and password information. [1 to 10 / **3** / 1 sec.]

5417	**[Access Attack]**		
001	Access Permissible Number	*CTL	Sets a limit on access attempts when an excessive number of attempts are detected for MFP features. [0 to 500 / **100** / 1]
002	Attack Detect Time	*CTL	Sets the length of time for monitoring the frequency of access to MFP features. [10 to 30 / **10** / 1 sec.]
003	Productivity Fall Wait	*CTL	Sets the wait time to slow down the speed of certification when an excessive number of access attempts have been detected. [0 to 9 / **3** / 1 sec.]

004	Attack Max Num	*CTL	Sets a limit on the number of requests received for certification in order to slow down the certification speed when an excessive number of access attempts have been detected. [50 to 200 / **200** /1 attempt]

5420	**[User Authentication]**		
	These settings should be done with the System Administrator. **Note**: These functions are enabled only after the user access feature has been enabled.		
001	Copy	*CTL	Determines whether certification is required before a user can use the copy applications. [0 to 1 / **0** /1] 0: On, 1: Off
002	Color Security Setting	*CTL	-
	Enables or disables the color copy limitation for each copy mode when the user authentication is "ON". **0: Enable (default)**, 1: Disable Bit0: B/W mode Bit1: Mono color mode Bit2: Two colors mode Bit3: Full color mode Bit4: Automatic color mode Bit5 to 7: Reserved		
011	DocumentServer	*CTL	Determines whether certification is required before a user can use the document server. [0 or 1/ **0** /1] 0: On, 1: Off
021	Fax	*CTL	Determines whether certification is required before a user can use the fax application. [0 or 1/ **0** /1] 0: On, 1: Off

031	Scanner	*CTL	Determines whether certification is required before a user can use the scan applications. [0 or 1/ **0** /1] 0: On, 1: Off
041	Printer	*CTL	Determines whether certification is required before a user can use the printer applications. [0 or 1/ **0** /1] 0: On, 1: Off
051	SDK1	*CTL	[0 or 1 / **0** / 1] 0: ON. 1: OFF Determines whether certification is required before a user can use the SDK application.
061	SDK2		
071	SDK3		

5481	**[Authentication Error Code]**		
	These SP codes determine how the authentication failures are displayed.		
001	System Log Disp	*CTL	Determines whether an error code appears in the system log after a user authentication failure occurs. [0 or 1/ **0** /1] 0: Off, 1: On
002	Panel Disp	*CTL	Determines whether an error code appears on the operation panel after a user authentication failure occurs. [0 or 1/ **1** /1] 1: On, 0: Off

5501	**[PM Alarm]**	*CTL	-
001	PM Alarm Level	[0 to 9999 / **0** / 1 /step] 0: Alarm off 1 to 9999: Alarm goes off when **Value (1 to 9999) x 1000 > PM counter**	

002	Original Count Alarm	[0 or 1 / **0** / –] 0: No alarm sounds 1: Alarm sounds after the number of originals passing through the ARDF > 10,000

5504	**[Jam Alarm]**	*CTL	-
001	Sets the alarm to sound for the specified jam level (document misfeeds are not included). [0 to 3 / **3** / 1 /step] 0: Zero (Off) 1: Low (2.5K jams) 2: Medium (3K jams) 3: High (6K jams)		

5505	**[Error Alarm]**		
	Sets the error alarm level. The error alarm counter counts "1" when any SC is detected. However, the error alarm counter decreases by "1" when an SC is not detected during a set number of copied sheets (for example, default 1500 sheets). The error alarm occurs when the SC error alarm counter reaches "5".		
001	-	*CTL	[0 to 255 / **32** / 100 copies /step]

5507	**[Supply Alarm]**	*CTL	-
	Enables or disables the notifying a supply call via the @Remote.		
001	Paper Supply Alarm	**0**: Off, 1: On	
002	Staple Supply Alarm	0: Off, **1: On**	
003	Toner Supply Alarm	0: Off, **1**: On	
005	Drum Life Remain Supply Alarm	0: Off, **1**: On	
006	Waste Toner Bottle Supply Alarm	0: Off, **1**: On	

080	Toner Call Timing	Changes the timing of the "Toner Supply Call" via the @Remote, when the following conditions occur. 0: At replacement 1: At near end
128	Interval :Others	[250 to 10000 / **1000** / 1 /step]
133	Interval :A4	
134	Interval :A5	
142	Interval :B5	
164	Interval :LG	
166	Interval :LT	
172	Interval :HLT	

5508*	**[CC Call]**	*CTL	-
001*	Jam Remains	0: Disable, **1**: Enable	
	Enables/disables initiating a call for an unattended paper jam.		
002*	Continuous Jams	0: Disable, **1**: Enable	
	Enables/disables initiating a call for consecutive paper jams.		
003*	Continuous Door Open	0: Disable, **1**: Enable	
	Enables/disables initiating a call when the front door remains open.		
011*	Jam Detection: Time Length	[3 to 30 / **10** / 1 minute /step]	
	Sets the time a jam must remain before it becomes an “unattended paper jam”. This setting is enabled only when SP5508-004 is set to "1".		
012*	Jam Detection: Continuous Count	[2 to 10 / **5** / 1 /step]	
	Sets the number of consecutive paper jams required to initiate a call. This setting is enabled only when SP5508-004 is set to "1".		
013*	Door Open: Time Length	[3 to 30 / **10** / 1 /step]	

	Sets the length of time the door remains open before the machine initiates a call. This setting is enabled only when SP5-508-004 is set to "1".

5515	**[SC/Alarm Setting]**	
	With @Remote in use, these SP codes can be set to issue an SC call when an SC error occurs. If this SP is switched off, the SC call is not issued when an SC error occurs.	
001	SC Call	[0 or 1 / **1** / -] 0: Off, 1: On
002	Service Parts Near End Call	[0 or 1 / **1** / -] 0: Off, 1: On
003	Service Parts End Call	
004	User Call	[0 or 1 / **1** / -] 0: Off, 1: On
006	Communication Test Call	
007	Machine Information Notice	
008	Alarm Notice	[0 or 1 / **1** / -] 0: Off, 1: On
009	Non Genuin Tonner Alarm	[0 or 1 / **1** / -] 0: Off, 1: On
010	Supply Automatic Ordering Call	
011	Supply Manegement Report Call	
012	Jam/Door Open Call	

Note

- Memory Clear (SP5-801)
- The following tables list the items that are cleared. The serial number information, meter charge setting and meter charge counters are not cleared.

5610	[Base Gamma Control Point: Execute]		
004	Get Factory Default	-	-
	Recalls the factory settings.		
005	Set Factory Default	-	-
	Overwrites the current values onto the factory settings.		
006	Restore Original Value	-	-
	Recalls the previous settings.		

5611	[Toner Color in 2C]		
001	B-C	*ENG	[0 to 128 / **100** / 1 /step] 128: Darkest density
	Adjusts the Cyan correction value of the blue signal in two-color mode.		
002	B-M	*ENG	[0 to 128 / **100** / 1 /step] 128: Darkest density
	Adjusts the Magenta correction value of the blue signal in two-color mode.		
003	G-C	*ENG	[0 to 128 / **100** / 1 /step] 128: Darkest density
	Adjusts the Cyan correction value of the blue signal in two-color mode.		
004	G-Y	*ENG	[0 to 128 / **100** / 1 /step] 128: Darkest density
	Adjusts the Yellow correction value of the blue signal in two-color mode.		
005	R-M	*ENG	[0 to 128 / **100** / 1 /step] 128: Darkest density
	Adjusts the Magenta correction value of the blue signal in two-color mode.		
006	R-Y	*ENG	[0 to 128 / **100** / 1 /step] 128: Darkest density
	Adjusts the Yellow correction value of the blue signal in two-color mode.		

5618	[Color Mode Display Selection]		
001	-	*CTL	[0 or 1 / **1** / -] 0: ACS, Colour, Black & White, Two Colour, Single colour 1: ACD, Full Colour, Black & White
	Selects the color selection display on the LCD.		

Note

- Memory Clear (SP5-801)
- The following tables list the items that are cleared. The serial number information, meter charge setting and meter charge counters (SP8-581, 582, 583, 584, and 586) are not cleared.

5801	[Memory Clear]	
001	All Clear	Resets all correction data for process control and all software counters, and returns all modes and adjustments to their default values.
002	Engine	Clears the engine settings.
003	SCS	Initializes default system settings, SCS (System Control Service) settings, operation display coordinates, and ROM update information.
004	IMH Memory Clr	Initializes the IMH settings.
005	Mcs	Initializes the Mcs settings.
006	Copier Application	Initializes all copier application settings.
007	Fax Application	Initializes the fax reset time, job login ID, all TX/RX settings, local storage file numbers, and off-hook timer.
008	Printer Application	The following service settings: ▪ Bit switches ▪ Gamma settings (User & Service) ▪ Toner Limit

		The following user settings: ▪ Tray Priority ▪ Menu Protect ▪ System Setting except for setting of Energy Saver ▪ I/F Setup (I/O Buffer and I/O Timeout) ▪ PCL Menu
009	Scanner Application	Initializes the scanner defaults for the scanner and all the scanner SP modes.
010	Web Service	Deletes the network file application management files and thumbnails, and initializes the job login ID.
011	NCS	All setting of Network Setup (User Menu) (NCS: Network Control Service)
012	R-Fax	Initializes the job login ID, SmartDeviceMonitor for Admin, job history, and local storage file numbers.
014	Clear DCS Setting	Initializes the DCS (Delivery Control Service) settings.
015	Clear UCS Setting	Initializes the UCS (User Information Control Service) settings.
016	MIRS Setting	Initializes the MIRS (Machine Information Report Service) settings.
017	CCS	Initializes the CCS (Certification and Charge-control Service) settings.
018	SRM Memory Clr	Initializes the SRM (System Resource Manager) settings.
019	LCS	Initializes the LCS settings.
020	Web Uapli	Initializes the web user application settings.
021	ECS	Initializes the ECS settings.

5803	**[Input Check]**	See "Input Check Table" in this section.	
5804	**[Output Check]**	See "Output Check Table" in this section.	

5805	**[Anti-Condensation Heater]**		
	0: Default setting. The heater is on when the main switch is off or when the machine is in energy saver mode. 1: The heater is always on.		
001	0:OFF/ 1:ON	*ENG	[0 or 1/ **0** / -]

5810	**[SC Reset]**		
	Resets a type A service call condition. Note ▪ Turn the main switch off and on after resetting the SC code.		
001	Fusing SC Reset	-	-

5811	**[Machine Serial]** Machine Serial Number Display		
002	Display	*ENG	Displays the machine serial number.
004	BCU	*ENG	Inputs the serial number.

5812	**[Service Tel. No. Setting]**		
001	Telephone	*CTL	-
	Sets the telephone number for a service representative. This number is printed on the Counter List, which can be printed with the user's "Counter" menu. This can be up to 20 characters (both numbers and alphabetic characters can be input).		
002	Facsimile	*CTL	-
	Sets the fax or telephone number for a service representative. This number is printed on the Counter List.		

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	This can be up to 20 characters (both numbers and alphabetic characters can be input).

5816	**[Remote Service]**	*CTL	**-**
	I/F Setting		
001	Selects the remote service setting. [0 to 2 / **2** / 1 /step] 0: Remote service off 1: CSS remote service on 2: @Remote service on		
	CE Call		
002	Performs the CE Call at the start or end of the service. [0 or 1 / **0** / 1 /step] 0: Start of the service 1: End of the service **NOTE:** This SP is activated only when SP 5816-001 is set to "2".		
	Function Flag		
003	Enables or disables the remote service function. [0 to 1 / **0** / 1 /step] 0: Disabled, 1: Enabled **NOTE:** This SP setting is changed to "1" after @Remote registor has been completed.		
	SSL Disable		
007	Uses or does not use the RCG certification by SSL when calling the RCG. [0 to 1 / **0** / 1 /step] 0: Uses the RCG certification 1: Does no use the RCG certification		
	RCG Connect Timeout		
008	Specifies the connect timeout interval when calling the RCG. [1 to 90 / **10** / 1 second /step]		
009	RCG Write Timeout		

	Specifies the write timeout interval when calling the RCG. [1 to 100 / **60** / 1 second /step]
010	RCG Read Timeout
	Specifies the read timeout interval when calling the RCG. [1 to 100 / **60** / 1 second /step]
011	Port 80 Enable
	Enables/disables access via port 80 to the SOAP method. [0 or 1 / **0** / –] 0: Disabled, 1: Enabled
013	RFU (Remote Frimware Update) Timing
	Selects the RFU timing. [0 or 1 / **1** / –] 0: RFU is executed whenever update request is received. 1: RFU is executed only when the machine is in the sleep mode.
021	Function Flag
	This SP displays the Embedded RC Gate installation end flag. 0: Installation not completed 1: Installation completed
022	Install Status
	This SP displays the Embedded RC Gate installation status. 0: RCG device not registered 1: RCG device registered 2: Device registered
023	Connect Mode (N/M)
	This SP displays and selects the Embedded RC Gate connection method. [0 or 1 / **0** / 1 /step 0: Internet connection 1: Dial-up connection
061	-
062	Use Proxy

	This SP setting determines if the proxy server is used when the machine communicates with the service center.
063	Proxy Host
	This SP sets the address of the proxy server used for communication between Embedded RC Gate-N and the gateway. Use this SP to set up or display the customer proxy server address. The address is necessary to set up Embedded RC Gate-N. Note ▪ The address display is limited to 128 characters. Characters beyond the 128 character are ignored. ▪ This address is customer information and is not printed in the SMC report.
064	Proxy Port Number
	This SP sets the port number of the proxy server used for communication between Embedded RC Gate-N and the gateway. This setting is necessary to set up Embedded RC Gate-N. Note ▪ This port number is customer information and is not printed in the SMC report.
065	Proxy User Name
	This SP sets the HTTP proxy certification user name. Note ▪ The length of the name is limited to 31 characters. Any character beyond the 31st character is ignored. ▪ This name is customer information and is not printed in the SMC report.
066	Proxy Password
	This SP sets the HTTP proxy certification password. Note ▪ The length of the password is limited to 31 characters. Any character beyond the 31st character is ignored. ▪ This name is customer information and is not printed in the SMC report.

067	CERT: Up State	
	Displays the status of the certification update.	
	0	The certification used by Embedded RC Gate is set correctly.
	1	The certification request (setAuthKey) for update has been received from the GW URL and certification is presently being updated.
	2	The certification update is completed and the GW URL is being notified of the successful update.
	3	The certification update failed, and the GW URL is being notified of the failed update.
	4	The period of the certification has expired and new request for an update is being sent to the GW URL.
	11	A rescue update for certification has been issued and a rescue certification setting is in progress for the rescue GW connection.
	12	The rescue certification setting is completed and the GW URL is being notified of the certification update request.
	13	The notification of the request for certification update has completed successfully, and the system is waiting for the certification update request from the rescue GW URL.
	14	The notification of the certification request has been received from the rescue GW controller, and the certification is being stored.
	15	The certification has been stored, and the GW URL is being notified of the successful completion of this event.
	16	The storing of the certification has failed, and the GW URL is being notified of the failure of this event.
	17	The certification update request has been received from the GW URL, the GW URL was notified of the results of the update after it was completed, but a certification error has been received, and the rescue certification is being recorded.
	18	The rescue certification of No. 17 has been recorded, and the GW URL is being notified of the failure of the certification update.

068	CERT: Error	
	Displays a number code that describes the reason for the request for update of the certification.	
	0	Normal. There is no request for certification update in progress.
	1	Request for certification update in progress. The current certification has expired.
	2	An SSL error notification has been issued. Issued after the certification has expired.
	3	Notification of shift from a common authentication to an individual certification.
	4	Notification of a common certification without ID2.
	5	Notification that no certification was issued.
	6	Notification that GW URL does not exist.
069	CERT: Up ID	The ID of the request for certification.
083	Firmware Up Status	Displays the status of the firmware update.

5821	**[Remote Service Address]**		
002	RCG IP Address	*CTL	Sets the IP address of the RCG (Remote Communication Gate) destination for call processing at the remote service center.

5824	**[NV-RAM Data Upload]**		
	Uploads the UP and SP mode data (except for counters and the serial number) from the NVRAM to an SD card. For details, see the "NVRAM Data Upload/Download" in the "System Maintenance Reference" of the Field Service Manual.		
001	-	#	-

5825	**[NV-RAM Data Download]**		
	Downloads the UP and SP mode data from an SD card to the NVRAM. For details, see the "NVRAM Data Upload/Download" in the "System Maintenance Reference" of the Field Service Manual.		
001	-	#	-

5828	**[Network Setting]**	*CTL	**-**
050	1284 Compatibility (Centro)	Enables or disables 1284 Compatibility. 0 or 1 / 1 / 1 / step] 0: Disabled, 1: Enabled	
052	ECP (Centro)	Enables or disables ECP Compatibility. [0 or 1 / 1 / 1 / step] 0: Disabled, 1: Enabled Note ▪ This SP is activated only when SP5-828-50 is set to "1".	
065	Job Spooling	Enables/disables Job Spooling. [0 or 1 / **0** / 1 / step] 0: Disabled, 1: Enabled	
066	Job Spooling Clear: Start Time	Treatment of the job when a spooled job exists at power on. 0: ON (Data is cleared) **1**: OFF (Automatically printed)	
069	Job Spooling	Validates or invalidates the job spooling function for	

	(Protocol)	each protocol. **0**: Validates 1: Invalidates bit0: LPR bit1: FTP bit2: IPP bit3: SMB bit4: BMLinkS bit5: DIPRINT bit6: sftp bit7: (Reserved)
090	TELNET (0: OFF 1: ON)	Enables or disables the Telnet protocol. [0 or 1 / **1** / –] 0: Disable, 1: Enable
091	Web (0: OFF 1: ON)	Enables or disables the Web operation. [0 or 1 / **1** / –] 0: Disable, 1: Enable
145	Active IPv6 Link Local Address	This is the IPv6 local address link referenced on the Ethernet or wireless LAN (802.11b) in the format: "Link Local Address" + "Prefix Length" The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
147	Active IPv6 Stateless Address 1	These SPs are the IPv6 status addresses (1 to 5) referenced on the Ethernet or wireless LAN (802.11b) in the format: "Status Address" + "Prefix Length" The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
149	Active IPv6 Stateless Address 2	
151	Active IPv6 Stateless Address 3	
153	Active IPv6 Stateless Address 4	
155	Active IPv6 Stateless Address 5	
156	IPv6 Manual Address	This SP is the IPv6 manually set address referenced

		on the Ethernet or wireless LAN (802.11b) in the format: "Manual Set Address" + "Prefix Length" The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
158	IPv6 Gateway Address	This SP is the IPv6 gateway address referenced on the Ethernet or wireless LAN (802.11b). The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
161	IPv6 Stateless Auto Setting	Enables or disables the automatic setting for IPv6 stateless. [0 or 1 / 1 / 1 /step] 0: Disable, 1: Enable
236	Web Item visible	Displays or does not display the Web system items. [0 x 0000 to 0 x ffff / **0 x ffff**] 0: Not displayed, 1: Displayed bit0: Net RICOH bit1: Consumable Supplier bit2-15: Reserved (all)
237	Web shopping link visible	Displays or does not display the link to Net RICOH on the top page and link page of the web system. [0 to 1 / **1** / 1] 0: Not display, 1:Display
238	Web supplies Link visible	Displays or does not display the link to Consumable Supplier on the top page and link page of the web system. [0 to 1 / **1** / 1] 0: Not display, 1:Display
239	Web Link1 Name	This SP confirms or changes the URL1 name on the link page of the web system. The maximum characters for the URL name are 31 characters.
240	Web Link1 URL	This SP confirms or changes the link to URL1 on the link page of the web system. The maximum characters for the URL are 127 characters.

241	Web Link1 visible	Displays or does not display the link to URL1 on the top page of the web system. [0 to 1 / **1** / 1] 0: Not display, 1:Display
242	Web Link2 Name	Same as "-239"
243	Web Link2 URL	Same as "-240"
244	Web Link2 visible	Same as "-241"

5832	**[HDD] HDD Initialization**	*CTL	**-**
001	HDD Formatting (ALL)	Initializes the hard disk. Use this SP mode only if there is a hard disk error.	
002	HDD Formatting (IMH)		
003	HDD Formatting (Thumbnail)		
004	HDD Formatting (Job Log)		
005	HDD Formatting (Printer Fonts)		
006	HDD Formatting (User Info)		
007	Mail RX Data		
008	Mail TX Data		
009	HDD Formatting (Data for a Design)		
010	HDD Formatting (Log)		
011	HDD Formatting (Ridoc I/F)		

5836	**[Capture Settings]**	*CTL	-
001	Capture Function (0:Off 1:On)		**0**: Disable, 1: Enable
	With this function disabled, the settings related to the capture feature cannot be initialized, displayed, or selected.		
002	Panel Setting		**0**: Displayed, 1: Not displayed

	Displays or does not display the capture function buttons.	
	5836-71 to 5836-78, Copier and Printer Document Reduction The following 6 SP modes set the default reduction for stored documents sent to the document management server via the MLB. Enabled only when optional MLB (Media Link Board) is installed.	
071	Reduction for Copy Color	0: 1to-1, 1: 1/2, **2: 1/3**, 3: 1/4
072	Reduction for Copy B&W Text	**0: 1to-1**, 1: 1/2, 2: 1/3, 3: 1/4, 6: 2/3
073	Reduction for Copy B&W Other	**0: 1to-1**, 1: 1/2, 2: 1/3, 3: 1/4, 6: 2/3
074	Reduction for Printer Color	0: 1to-1, 1: 1/2, **2: 1/3**, 3: 1/4
075	Reduction for Printer B&W	**0: 1to-1**, 1: 1/2, 2: 1/3, 3: 1/4, 6: 2/3
076	Reduction for Printer B&W HQ	**0: 1to-1**, 1: 1/2, 2: 1/3, 3: 1/4
077	Reduction for Printer Color 1200	1: 1/2, 3: 1/4, **4: 1/6**, 5: 1/8 (2: skipped) , 6: 2/3
078	Reduction for Printer B&W 1200	**1: 1/2**, 3: 1/4, 4: 1/6, 5: 1/8 (2: skipped) , 6: 2/3
	5836-81 to 5836-86, Stored document format The following 6 SP modes set Sets the default format for stored documents sent to the document management server via the MLB. Enabled only when optional MLB (Media Link Board) is installed.	
081	Format for Copy Color	**0: JFIF/JPEG**, 1: TIFF/MMR, 2: TIFF/MH, 3: TIFF/MR Note ▪ This SP is not used in this model.
082	Format for Copy B&W Text	0: JFIF/JPEG, **1: TIFF/MMR**, 2: TIFF/MH, 3: TIFF/MR
083	Format Copy B&W Other	0: JFIF/JPEG, **1: TIFF/MMR**, 2: TIFF/MH, 3: TIFF/MR

084	Format for Printer Color	**0: JFIF/JPEG**, 1: TIFF/MMR, 2: TIFF/MH, 3: TIFF/MR Note ▪ This SP is not used in this model.
085	Format for Printer B&W	0: JFIF/JPEG, **1: TIFF/MMR**, 2: TIFF/MH, 3: TIFF/MR
086	Format for Printer B&W HQ	0: JFIF/JPEG, 1: TIFF/MMR, **2: TIFF/MH**, 3: TIFF/MR
091	Default for JPEG	[5 to 95 / **50** / 1 /step]
	Sets the JPEG format default for documents sent to the document management server via the MLB with JPEG selected as the format. Enabled only when optional MLB (Media Link Board) is installed.	
101	Primary srv IP address	Sets the IP address for the primary capture server. This is basically adjusted by the remote system.
102	Primary srv scheme	This is basically adjusted by the remote system.
103	Primary srv port number	This is basically adjusted by the remote system.
104	Primary srv URL path	This is basically adjusted by the remote system.
111	Secondary srv IP address	Sets the IP address for the secondary capture server. This is basically adjusted by the remote system.
112	Secondary srv scheme	This is basically adjusted by the remote system.
113	Secondary srv port number	This is basically adjusted by the remote system.
114	Secondary srv URL path	This is basically adjusted by the remote system.
120	Default Reso Rate Switch	This is basically adjusted by the remote system.

121	Reso: Copy (Color)	[0 to 3 / **2** / 1/step]
	Selects the resolution for color copy mode. This is basically adjusted by the remote system. 0: 600dpi/ 1: 300dpi/ 2: 150dpi/ 3: 75dpi	
122	Reso: Copy (Mono)	[0 to 5 / **3** / 1/step]
	Selects the resolution for BW copy mode. This is basically adjusted by the remote system. 0: 600dpi/ 1: 400dpi/ 2: 300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi	
123	Reso: Print (Color)	This is basically adjusted by the remote system. [0 to 3 / **2** / 1/step]
	Selects the resolution for color print mode. This is basically adjusted by the remote system. 0: 600dpi/ 1: 300dpi/ 2: 150dpi/ 3: 75dpi	
124	Reso: Print (Mono)	This is basically adjusted by the remote system. [0 to 5 / **3** / 1/step]
	Selects the resolution for BW print mode. This is basically adjusted by the remote system. 0: 600dpi/ 1: 400dpi/ 2: 300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi	
125	Reso: Fax (Color)	This is basically adjusted by the remote system. [0 to 6 / **4** / 1/step]
	Selects the resolution for color fax mode. This is basically adjusted by the remote system. 0: 600dpi/ 1: 400dpi/ 2: 300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi/ 6: 75dpi	
126	Reso: Fax (Mono)	This is basically adjusted by the remote system. [0 to 6 / **3** / 1/step]
	Selects the resolution for BW fax mode. This is basically adjusted by the remote system. 0: 600dpi/ 1: 400dpi/ 2: 300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi/ 6: 75dpi	
127	Reso: Scan (Color)	This is basically adjusted by the remote system. [0 to 6 / **4** / 1/step]
	Selects the resolution for color scanning mode. This is basically adjusted by	

	the remote system. 0: 600dpi/ 1: 400dpi/ 2: 300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi/ 6: 75dpi	
128	Reso: Scan (Mono)	This is basically adjusted by the remote system. [0 to 6 / **3** / 1/step]
	Selects the resolution for BW scanning mode. This is basically adjusted by the remote system. 0: 600dpi/ 1: 400dpi/ 2: 300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi/ 6: 75dpi	

5840	**[IEEE 802.11]**		
5840 006	Channel MAX	*CTL	Sets the maximum number of channels available for data transmission via the wireless LAN. The number of channels available varies according to location. The default settings are set for the maximum end of the range for each area. Adjust the upper 4 bits to set the maximum number of channels. EU: [1 to 13 / **13** / 1/step] NA: [1 to 11 / **11** / 1/step] AS: [1 to 14 / **14** / 1/step]
5840 007	Channel MIN	*CTL	Sets the minimum number of channels available for data transmission via the wireless LAN. The number of channels available varies according to location. The default settings are set for the minimum end of the range for each area. Adjust the lower 4 bits to set the minimum number of channels. EU: [1 to 13 / **1** / 1/step] NA/ AS: [1 to 11 / **1** / 1/step] AS: [1 to 14 / **14** / 1/step]
5840 008	Transmission Speed	*CTL	[0 x 00 to 0 x FF / **0 x FF to Auto** / -] **0 x FF to Auto** [Default] 0 x 11 - 55M Fix

			0 x 10 - 48M Fix 0 x 0F - 36M Fix 0 x 0E - 18M Fix 0 x 0D - 12M Fix 0 x 0B - 9M Fix 0 x 0A - 6M Fix 0 x 07 - 11M Fix 0 x 05 - 5.5M Fix 0 x 08 - 1M Fix 0 x 13 - 0 x FE (reserved) 0 x 12 - 72M (reserved) 0 x 09 - 22M (reserved)
5840 011	WEP Key Select	*CTL	Selects the WEP key. [00 to 11 / **00** / 1 binary] 00: Key #1 01: Key #2 (Reserved) 10: Key #3 (Reserved) 11: Key #4 (Reserved)
5840 042	Fragment Thresh	*CTL	Adjusts the fragment threshold for the IEEE802.11 card. [256 to 2346 / **2346** / 1] This SP is displayed only when the IEEE802.11 card is installed.
5840 043	11g CTS to Self	*CTL	Determines whether the CTS self function is turned on or off. [0 to 1 / **1** / 1] 0: Off, 1: On This SP is displayed only when the IEEE802.11 card is installed.
5840 044	11g Slot Time	*CTL	Selects the slot time for IEEE802.11. [0 to 1 / **0** / 1] 0: 20 µm, 1: 9 µm This SP is displayed only when the IEEE802.11 card is installed.

5840 045	WPA Debug Lvl	*CTL	Selects the debug level for WPA authentication application. [1 to 3 / **3** / 1] 1: Info, 2: warning, 3: error This SP is displayed only when the IEEE802.11 card is installed.

5841	**[Supply Name Setting]**		
001	Toner Name Setting: Black	*CTL	Specifies supply names. These appear on the screen when the user presses the Inquiry button in the user tools screen.
002	Toner Name Setting: Cyan		
003	Toner Name Setting: Yellow		
004	Toner Name Setting: Magenta		
011	Staple Std1		
012	Staple Std2		
013	Staple Std3		
014	Staple Std4		

5842	**[GWWS Analysis] DFU**		
001	Setting 1	*CTL	Default: **00000000** – do not change Netfiles: Jobs to be printed from the document server using a PC and the DeskTopBinder software
002	Setting 2	*CTL	Adjusts the debug program modesetting. Bit7: 5682 mmseg-log setting 0: Date/Hour/Minute/Second 1: Minute/Second/Msec. 0 to 6: Not used

5844	**[USB]**		
001	Transfer Rate	*CTL	Adjusts the USB transfer rate. [0001 or 0004 / **0004** / -] 0001: Full speed, 0004: Auto Change
002	Vendor ID	*CTL	Displays the vendor ID.
003	Product ID	*CTL	Displays the product ID.
004	Dev Release Num	*CTL	Displays the device release version number.
005	Fixed USB Port	*CTL	Displays the fixed USB Port.
006	PnP Model Name	*CTL	Displays the PnP Model Name.
007	PnP Serial Number	*CTL	Displays the PnP Serial Number.
100	Notify Unsupport	*CTL	Displays a message of the unspported USB device for the USB host slot. [0 or 1 / **1** / -] 0: Not displayed, 1: Displayed

5845	**[Delivery Server Setting]**	*CTL	-
	Provides items for delivery server settings.		
001	FTP Port No.	[0 to 65535 / **3670** / 1 /step]	
	Sets the FTP port number used when image files to the Scan Router Server.		
002	IP Address (Primary)	Range: **000.000.000.000** to 255.255.255.255	
	Use this SP to set the Scan Router Server address. The IP address under the transfer tab can be referenced by the initial system setting.		
006	Delivery Error Display Time	[0 to 999 / **300** / 1 second /step]	
	Use this setting to determine the length of time the prompt message is displayed when a test error occurs during document transfer with the NetFile application and an external device.		

008	IP Address (Secondary)	Range: **000.000.000.000** to 255.255.255.255
	Specifies the IP address assigned to the computer designated to function as the secondary delivery server of Scan Router. This SP allows only the setting of the IP address without reference to the DNS setting.	
009	Delivery Server Model	[0 to 4/ **0** / 1 /step]
	Allows changing the model of the delivery server registered by the I/O device. 0: Unknown 1: SG1 Provided 2: SG1 Package 3: SG2 Provided 4: SG2 Package	
010	Delivery Svr. Capability	[0 to 255 / **0** / 1 /step]
	Bit7 = 1 Comment information exits	Changes the capability of the registered that the I/O device registered.
	Bit6 = 1 Direct specification of mail address possible	
	Bit5 = 1 Mail RX confirmation setting possible	
	Bit4 = 1 Address book automatic update function exists	
	Bit3 = 1 Fax RX delivery function exists	
	Bit2 = 1 Sender password function exists	
	Bit1 = 1 Function to link MK-1 user and Sender exists	
	Bit0 = 1 Sender specification required (if set to 1, Bit6 is set to “0”)	
011	Delivery Svr Capability (Ext)	[0 to 255 / **0** / 1 /step]
	Changes the capability of the registered that the I/O device registered.	
	Bit7 = 1 Address book usage limitation (Limitation for each authorized user) Bit6 = 1 RDH authorization link Bit5 to 0: Not used	

013	-
014	-
015	-
016	-
017	-
018	-
022	Rapid Sending Control
	Enables or disables the prevention function for the continuous data sending error. [0 to 1 / **0** / -] 0: Disable, 1: Enable

5846	**[UCS Settings]**	*CTL	-
010	LDAP Search Timeout		[1 to 255 / **60** / 1 /step]
	Sets the length of the timeout for the search of the LDAP server.		
041	Fill Addr Acl Info.		
	This SP must be executed immediately after installation of an HDD unit in a basic machine that previously had no HDD. The first time the machine is powered on with the new HDD installed, the system automatically takes the address book from the NVRAM and writes it onto the new HDD. However, the new address book on the HDD can be accessed only by the system administrator at this stage. Executing this SP by the service technician immediately after power on grants full address book access to all users.		
	Procedure 1. Turn the machine off. 2. Install a new HDD. 3. Turn the machine on. 4. The address book and its initial data are created on the HDD automatically. 5. However, at this point the address book can be accessed by only the system administrator or key operator. 6. Enter the SP mode and do SP5846-041. After this SP executes		

	successfully, any user can access the address book.	
043	Addr Book Media	Displays the slot number where an address book data is in. [0 to 30 / **-** /1] 0: Unconfirmed 1: SD Slot 1 2: SD Slot 2 4: USB Flash ROM 20: HDD 30: Nothing
047	Initialize Local Addr Book	Clears the local address book information, including the user code.
049	Initialize LDAP Addr Book	Clears the LDAP address book information, except the user code.
050	Initialize All Addr Book	Clears all directory information managed by UCS, including all user codes.
051	Backup All Addr Book	Uploads all directory information to the SD card.
052	Restore All Addr Book	Downloads all directory information from the SD card.
053	Clear Backup Info	Deletes the address book data from the SD card in the service slot. Deletes only the files that were uploaded from this machine. This feature does not work if the card is write-protected. Note ▪ After you do this SP, go out of the SP mode, and then turn the power off. ▪ Do not remove the SD card until the Power LED stops flashing.

060	Search Option	
	This SP uses bit switches to set up the fuzzy search options for the UCS local address book. Bit: Meaning 0: Checks both upper/lower case characters 1: Japan Only 2: Japan Only 3: Japan Only 4 to 7: Not Used	
062	Complexity Option 1	
	Use this SP to set the conditions for password entry to access the local address book. Specifically, this SP limits the password entry to **upper case** and sets the length of the password. [0 to 32 / **0** / 1 /step] Note ▪ This SP does not normally require adjustment. ▪ This SP is enabled only after the system administrator has set up a group password policy to control access to the address book.	
063	-	
064	-	
065	-	
094	Encryption Stat	Shows the status of the encryption function for the address book data.

5847	**[Rep Resolution Reduction]**	*CTL	-
	SP5847-1 through SP5847-8 changes the default settings of image data transferred externally by the Net File page reference function. [0 to 5 / **2** / 1 /step] SP5847-21 sets the default for JPEG image quality of image files handled by NetFile. “Net files” are jobs to be printed from the document server using a PC and the DeskTopBinder software.		

001	Rate for Copy Color	0: 1x 1: 1/2x **2: 1/3x** 3: 1/4x 4: 1/6x 5: 1/8x
002	Rate for Copy B&W Text	
003	Rate for Copy B&W Other	
004	Rate for Printer Color	
005	Rate for Printer B&W	
006	Rate for Printer Color 1200dpi	0: 1x 1: 1/2x 2: 1/3x 3: 1/4x **4: 1/6x** 5: 1/8x
007	Rate for Printer B&W 1200dpi	0: 1x **1: 1/2x** 2: 1/3x 3: 1/4x 4: 1/6x 5: 1/8x
021	Network Quality Default for JPEG	
	Sets the default value for the quality of JPEG images sent as NetFile pages. This function is available only with the MLB (Media Link Board) option installed. [5 to 95 / **50** / 1 /step]	

5848	**[Web Service]**	*CTL	-
	SP5848-2 sets the 4-bit switch assignment for the access control setting. Setting of 0001 has no effect on access and delivery from Scan Router. 5848 100 sets the maximum size allowed for downloaded images. The default is equal to 1 gigabyte.		
004	Access Ctrl: user Directory (only Lower 4 bits)	Switches access control on and off. **0000**: No access control 0001: Denies access to DeskTop Binder.	
009	Access Ctrl: Job Ctrl (Lower		

	4 bits)	
011	Access Ctrl: Device management (Lower 4 bits)	
022	Access Ctrl: uadministration (Lower 4bits)	
210	Setting: LogType: Job1	-
211	Setting: LogType: Job2	
212	Setting: LogType: Access	
213	Setting: Primary Srv	
214	Setting: Secondary Srv	
215	Setting: Start Time	
216	Setting: Interval Time	
217	Setting: Timing	

5849	**[Installation Date]**	*CTL	-
001	Display	The "Counter Clear Day" has been changed to "Installation Date" or "Inst. Date".	
002	Switch to Print	Determines whether the installation date is printed on the printout for the total counter. [0 or 1 / **1** / -] 0: OFF (No Print) 1: ON (Print)	
003	Total Counter	-	

5853	**[Stamp Data Download]**
	Use this SP to download the fixed stamp data stored in the firmware of the ROM and copy it to the HDD. This SP can be executed as many times as required. This SP must be executed after replacing or formatting the hard disks.

	Note ▪ This SP can be executed only with the hard disks installed.

5856	**[Remote ROM Update]**		
	Allows the technician to upgrade the firmware using a local port (IEEE1284) when updating the remote ROM.		
002	Local Port	*CTL	[0 to 1 / **0** / 1/step] 0: Disable 1: Enable

5857	**[Save Debug Log]**	*CTL	-
001	On/Off (1:ON 0:OFF)	**0**: OFF, 1: ON	
	Switches the debug log feature on and off. The debug log cannot be captured until this feature is switched on.		
002	Target (2: HDD 3: SD)	**2**: HDD, 3: SD Card	
	Selects the storage device to save debug logs information when the conditions set with SP5-858 are satisfied. [2 to 3 / **2** / 1 /step]		
005	Save to HDD		
	Saves the debug log of the input SC number in memory to the HDD. A unique file name is generated to avoid overwriting existing file names on the SD Card. Up to 4MB can be copied to an SD Card. 4 MB segments can be copied one by one to each SD Card.		
006	Save to SD Card		
	Saves the debug log of the input SC number in memory to the SD card.		
009	Copy HDD to SD Card (Latest 4 MB)		
010	Copy HDD to SD Card (Latest 4 MB Any Key)		
011	Erase HDD Debug Data		
012	Erase SD Card Debug Data		

013	Free Space on SD Card
014	Copy SD to SD (Latest 4 MB)
015	Copy SD to SD (Latest 4 MB Any Key)
016	Make HDD Debug
017	Make SD Debug

5858	**[Debug Save When]**	*CTL	-
	These SPs select the content of the debugging information to be saved to the destination selected by SP5857-002. SP5858-3 stores one SC specified by number. Refer to Section 4 for a list of SC error codes.		
001	Engine SC Error	Turns on/off the debug save for SC codes generated by printer engine errors. [0 or 1 / **0** / 1/ step] 0: OFF, 1: ON	
002	Controller SC Error	Turns on/off the debug save for SC codes generated by GW controller errors. [0 or 1 / **0** / 1/ step] 0: OFF, 1: ON	
003	Any SC Error	[0 to 65535 / **0** / 1 /step]	
004	Jam (0:OFF 1:ON)	Turns on/off the debug save for jam errors. [0 or 1 / **0** / 1/ step] 0: OFF, 1: ON	

5859	**[Debug Save Key No.]**	*CTL	**-**
001	Key 1	These SPs allow you to set up to 10 keys for log files for functions that use common memory on the controller board. [–9999999 to 9999999 / **0** / –]	
002	Key 2		
003	Key 3		
004	Key 4		
005	Key 5		
006	Key 6		
007	Key 7		
008	Key 8		
009	Key 9		
010	Key 10		

5860	**[SMTP/POP3/IMAP4]**	*CTL	**-**
020	Partial Mail Receive Timeout		[1 to 168 / **72** / –]
	Sets the amount of time to wait before saving a mail that breaks up during reception. The received mail is discarded if the remaining portion of the mail is not received during this prescribed time.		
021	MDN Response RFC2298 Compliance		[0 to 1 / **1** / –]
	Determines whether RFC2298 compliance is switched on for MDN reply mail. 0: No **1**: Yes		
022	SMTP Auth. From Field Replacement		[0 to 1 / **0** / –]
	Determines whether the FROM item of the mail header is switched to the validated account after the SMTP server is validated. **0**: No. "From" item not switched. 1: Yes. "From" item switched.		
025	SMTP Auth. Direct Setting		[0 or 1 / **0** / –]

	Selects the authentication method for SMPT. **Bit switch:** ▪ Bit 0: LOGIN ▪ Bit 1: PLAIN ▪ Bit 2: CRAM MD5 ▪ Bit 3: DIGEST MD5 ▪ Bit 4 to 7: Not used Note ▪ This SP is activated only when SMTP authorization is enabled by UP mode.		
026	S/MIME: MIME Header Setting	-	Selects the MIME header type of an E-mail sent by S/MIME. [0 to 2 / **0** / 1] 0: Microsoft Outlook Express standard 1: Internet Draft standard 2: RFC standard

5870	**[Common Key Info Writing]**		
001	Writing	*CTL	Rewrites the common certification used for the @Remote.
003	Initialize	*CTL	-
	Initializes the set certification. When the GW controller board is replaced with a new one for repair, you must execute the "Initiralize (-003)" and "Writing (-001)" just after the new board replacement. **NOTE:** Turn off and on the main power switch after the "Initiralize (-003)" and "Writing (-001)" have been done.		

5873	[SD Card Appli Move]	
001	Move Exec	This SP copies the application programs from the original SD card in SD card slot 2 to an SD card in SD card slot 1.
002	Undo Exec	This SP copies back the application programs from an SD card in SD Card Slot 2 to the original SD card in SD card slot 1. Use this menu when you have mistakenly copied some programs by using "Move Exec" (SP5873-1).

5875	[SC Auto Reboot]		
001	Reboot Setting	*CTL	Enables or disables the automatic reboot function when an SC error occurs. [0 or 1/ **0** / –] 0: The machine reboots automatically when the machine issues an SC error and logs the SC error code. If the same SC occurs again, the machine does not reboot. 1: The machine does not reboot when an SC error occurs. The reboot is not executed for Type A or C SC codes.
002	Reboot Type	*CTL	Selects the reboot method for SC. [0 or 1 / **0** / -] 0: Manual reboot, 1: Automatic reboot

5878	[Option Setup]		
001	Overwrite Security	-	Enables the Data Overwrite Security unit. Press "EXECUTE" on the operation panel. Then turn the machine off and on.
002	HDD Encryption	-	Installs the HDD Encryption unit.

5887	[SD Get Counter]		
	This SP determines whether the ROM can be updated.		
001	-	*CTL	This SP sends a text file to an SD card inserted in SD card Slot 2 (lower slot). The operation stores. The file is stored in a folder created in the root directory of the SD card called SD_COUNTER. The file is saved as a text file (*.txt) prefixed with the number of the machine. 1. Insert the SD card in SD card Slot 2 (lower slot). 2. Select SP5887 then touch [EXECUTE]. 3. Touch [Execute] in the message when you are prompted.

5888	[Personal Information Protect]		
001	-	*CTL	Selects the protection level for logs. [0 to 1 / **0** / 1} 0: No authentication, No protection for logs 1: No authentication, Protected logs (only an administrator can see the logs)

5893	[SDK Application Counter]		
	Displays the counter name of each SDK application.		
001	SDK-1	*CTL	-
002	SDK-2	*CTL	-
003	SDK-3	*CTL	-
004	SDK-4	*CTL	-
005	SDK-5	*CTL	-

006	SDK-6	*CTL	-

5894	**[External Counter Setting]**		
	DFU		
001	Switch Charge Mode	*ENG	[0 to 2 / **0** / 1/step]

5907	**[Plug & Play Maker/Model Name]**
001	Selects the brand name and the production name for Windows Plug & Play. This information is stored in the NVRAM. If the NVRAM is defective, these names should be registered again. After selecting, press the "Original Type" key and "#" key at the same time. When the setting is completed, the beeper sounds five times.

5913	**[Switchover Permission Time]**		
002	Print Application Timer	*CTL	[3 to 30 / **3** / 1 second /step]
	Sets the amount of time to elapse while the machine is in standby mode (and the operation panel keys have not been used) before another application can gain control of the display.		

5967	**[Copy Server Set Function]**	*CTL	**0**: ON, 1: OFF
	Enables and disables the document server. This is a security measure that prevents image data from being left in the temporary area of the HDD. After changing this setting, you must switch the main switch off and on to enable the new setting.		

5974	**[Cherry Server]**		
	Specifies which version of ScanRouter, “Lite” or “Full”, is installed.		
001	Cherry Server	*CTL	[0 or 1 / **0** / –] 0: Lite, 1: Full

5987	[Mech. Counter Protection]	
001	0: OFF / 1: ON	This SP detects that a mechanical counter device is removed. If it is detected, SC610 occurs.

5990	[SP print mode]	
	Prints out the SMC sheets.	
001	All (Data List)	-
002	SP (Mode Data List)	-
003	User Program	-
004	Logging Data	-
005	Diagnostic Report	-
006	Non-Default	-
007	NIB Summary	-
008	Capture Log	-
021	Copier User Program	-
022	Scanner SP	-
023	Scanner User Program	-
024	SDK/J Summary	-
025	SDK/J Application Info	-

5.7 MAIN SP TABLES-6

5.7.1 SP6-XXX (PERIPHERALS)

6006	[ADF Adj.] ADF Adjustment		
	Adjusts the side-to-side and leading registration of originals with the ARDF.		
001	Side-to-Side Registration	*ENG	[-3.0 to 3.0 / **0** / 0.1 mm/step]
003	Leading Edge Registration	*ENG	[-5.0 to 5.0 / **0** / 0.1 mm/step]
	Adjusts the amount of paper buckle to correct original skew for the front and rear sides.		
006	Buckle: Duplex Rear	*ENG	[-5 to 5 / **0** / 0.1 mm/step]
	Adjusts the erase margin at the original trailing edge.		
007	Rear Edge Erase	*ENG	[-5 to 5 / **0** / 0.1 mm/step]

6007	[ADF INPUT Check]
	Displays the signals received from the sensors and switches of the ARDF. Only Bit 0 is used for ADF input check (see "Input Check" in this section).

6008	[ADF OUTPUT Check]
	Activates the electrical components for functional check. It is not possible to activate more than one component at the same time (see "Output Check" in this section).

6009	[ADF Free Run]		
	Performs a DF free run in simplex, duplex mode or stamp mode.		
001	Free Run Simplex Motion	-	-
002	Free Run Duplex Motion	-	

6017	[DF Magnification Adj.] DF Magnification Adjustment		
	Adjusts the magnification in the sub-scan direction for the ARDF.		
001	DF Magnification Adj.	*CTL	[-5.0 to 5.0 / **0** / 0.1 %/step]

6132	[Jogger Fence Fine Adj]		
	This SP adjusts the distance between the jogger fences and the sides of the stack on the finisher stapling tray in the Finisher. The adjustment is done perpendicular to the direction of paper feed.		
003	A4T	*ENG	[-1.5 to 1.5 / **0** / 0.5 mm/step] + Value: Increases distance between jogger fences and the sides of the stack. - Value: Decreases the distance between the jogger fences and the sides of the stack.
005	B5T	*ENG	
008	LG-T	*ENG	
009	LT-T	*ENG	
012	Other	*ENG	

6137	[Finisher Free Run]		
	Execute the finisher free run.		
001	Free Run 1	*ENG	[0 to 1 / **0** / 1 /step]
002	Free Run 2		
003	Free Run 3		
004	Free Run 4		

6145	[FIN (BLO) INPUT Check] Finisher Input Check
	Displays the signals received from sensors and switches of the finisher (see "Input Check" in this section).

6146	[FIN (BLO) OUPUT Check] Finisher Output Check
	Displays the signals received from sensors and switches of the finisher (see "Output Check" in this section).

5.8 MAIN SP TABLES-7

5.8.1 SP7-XXX (DATA LOG)

7401	**[Total SC Counter]**		
	Displays the number of SC codes detected.		
001	-	*CTL	[0 to 9999 / **0** / 1/step]

7403	**[SC History]**		
	Logs the SC codes detected. The 10 most recently detected SC Codes are not displayed on the screen, but can be seen on the SMC (logging) outputs.		
001	Latest	*CTL	-
002	Latest 1		
003	Latest 2		
004	Latest 3		
005	Latest 4		
006	Latest 5		
007	Latest 6		
008	Latest 7		
009	Latest 8		
010	Latest 9		

7404	**[SC991 History]**		
	Logs the SC Code 991 detected. The 10 most recently detected SC Code 991 are not displayed on the screen, but can be seen on the SMC (logging) outputs.		
001	Latest	*CTL	-
002	Latest 1		
003	Latest 2		
004	Latest 3		
005	Latest 4		
006	Latest 5		
007	Latest 6		
008	Latest 7		
009	Latest 8		
010	Latest 9		

7502	**[Total Paper Jam Counter]**		
	Displays the total number of jams detected.		
001	-	* CTL	[0 to 9999 / **0** / 1 sheet/step]

7504	**[Paper Jam Location]** ON: On check, OFF: Off Check		
	Displays the number of jams according to the location where jams were detected.		
001	At Power On	*CTL	For details, ☛ "p.6-92 "Jam Detection""
003	Tray 1: ON	*CTL	
004	Tray 2: ON	*CTL	

005	Tray 3: ON	*CTL	
006	Tray 4: ON	*CTL	
008	Bypass: ON	*CTL	
009	Duplex: ON	*CTL	
011	Vertical Transport 1: ON	*CTL	
012	Vertical Transport 2: ON	*CTL	
013	Vertical Transport 3: ON	*CTL	
014	Vertical Transport 4: ON	*CTL	
017	Registration: ON	*CTL	For details, ☛ "p.6-92 "Jam Detection""
018	Fusing Entrance: ON	*CTL	
019	Fusing Exit: ON	*CTL	
020	Paper Exit: ON	*CTL	
021	1 bin: Eixt: ON	*CTL	
025	Duplex Exit: ON	*CTL	
026	Duplex Entrance: ON (In)	*CTL	
027	Duplex Entrance: ON (Out)	*CTL	
028	Inverter Sensor: ON (In)	*CTL	For details, ☛ "p.6-92 "Jam Detection""
029	Inverter Sensor: ON (Out)	*CTL	
047	Paper Feed Sensor 1: Off	*CTL	
048	Paper Feed Sensor 2: Off	*CTL	
049	Paper Feed Sensor 3: Off	*CTL	
050	Paper Feed Sensor 4: Off	*CTL	
051	Vertical Transport Sn1: Off	*CTL	For details, ☛ "p.6-92 "Jam Detection""
052	Vertical Transport Sn2: Off	*CTL	
053	Vertical Transport Sn3: Off	*CTL	

054	Vertical Transport Sn4: Off	*CTL	
057	Regist Sensor: Off	*CTL	
060	Exit Sensor: Off	*CTL	
061	1 bin: Exit Sensor: Off	*CTL	
065	Duplex Exit Sensor	*CTL	
066	Duplex Entrance: Off (In)	*CTL	
067	Duplex Entrance: Off (Out)	*CTL	
068	Inverter Sensor: Off (In)	*CTL	
069	Inverter Sensor: Off (Out)	*CTL	
230	FIN: Paper Exit Signal Error	*CTL	For details, ☛ "p.6-92 "Jam Detection""
240	FIN: Entrance Sensor: On	*CTL	
241	FIN: Entrance Sensor: Off	*CTL	
242	FIN: Paper Exit	*CTL	
243	FIN: Jogger Motor	*CTL	
244	FIN: Shift Roller Motor	*CTL	
245	FIN: Position Roller Motor	*CTL	
246	FIN: Exit Guide Plate Motor	*CTL	
247	FIN: Output Tray Motor	*CTL	
248	FIN: Stapler Motor	*CTL	
249	FIN: Pressing Roller SOL	*CTL	
250	FIN: Job Data Error	*CTL	

7505	**[ARDF Paper Jam Location]** ON: On check, OFF: Off Check
	Displays the number of jams according to the location where jams were detected.

001	At Power On	*CTL	For details, ☛ "p.6-92 "Jam Detection""
004	Registration: ON	*CTL	
008	Reverse: ON	*CTL	
054	Registration: OFF	*CTL	
058	Reverse: OFF	*CTL	

7506	**[Paper Jam/Size]**		
	Displays the number of jams according to the paper size.		
006	A5 LEF	*CTL	[0 to 9999 / **0** / 1 sheet/step]
044	HLT LEF		
133	A4 SEF		
134	A5 SEF		
142	B5 SEF		
164	LG SEF		
166	LT SEF		
172	HLT SEF		
255	Others		

7507	**[Plotter Jam History]**		
	Displays the 10 most recently detected paper jams.		
001	Latest	*CTL	-
002	Latest 1		
003	Latest 2		
004	Latest 3		
005	Latest 4		

006	Latest 5		
007	Latest 6		
008	Latest 7		
009	Latest 8		
010	Latest 9		

7801	**[ROM No./Firmware Version]**	
	Displays the ROM version numbers of the main machine and connected peripheral devices.	
255	-	Displays all versions and ROM numbers in the machine.

7803	**[PM Counter Display]**
	(Page, Unit, [Color])
-001 to -020	Displays the number of sheets printed for each current maintenance unit. PM counters click up based on the number of A4 (LT) LEF size sheets printed. When a unit is replaced, the machine automatically detects that the new unit is installed. Then, the current PM counter value is automatically moved to the PM Counter - Previous (SP7-906-1 to 21) and is reset to "0". The total number of sheets printed with the last unit replaced can be checked with SP7-906-1 to 19.
001	Paper
002	Page: PCU: Bk
003	Page: PCU: C
004	Page: PCU: M
005	Page: PCU: Y
006	Page: Development Unit: Bk
007	Page: Development Unit: C

008	Page: Development Unit: M
009	Page: Development Unit: Y
014	Page: Image Transfer
015	Page: Image Transfer Cleaning
016	Page: Fusing Unit
017	Page: Fusing Roller
018	Page: Fusing Belt
019	Page:PTR Unit
020	Measurement Toner Collection Bottle
-031 to -048	Displays the number of revolutions of motors or clutches for each current maintenance unit. [0 to 9999999 / **0** / 1 revolution/step] When a unit is replaced, the machine automatically detects that the new unit is installed. Then, the current PM counter value is automatically moved to the PM Counter - Previous (SP7-906-31 to 49) and is reset to "0". The total number of revolutions made with the last unit replaced can be checked with SP7-906-31 to 49.
031	Rotation: PCU: Bk
032	Rotation: PCU: C
033	Rotation: PCU: M
034	Rotation: PCU: Y
035	Rotation: Development Unit: Bk
036	Rotation: Development Unit: C
037	Rotation: Development Unit: M
038	Rotation: Development Unit: Y
043	Rotation: Image Transfer
044	Rotation: Image Transfer Cleaning

045	Rotation: Fusing Unit
046	Rotation: Fusing Roller
047	Rotation: Fusing Belt
048	Rotation: PTR Unit
049	Measurement Toner Collection Bottle
	[0 to 999999999 / - / 1 mg/step] Displays the total amount of each waiaaste toner bottle.
-061 to -078	[0 to 255 / - / 1 %/step] Displays the value given by the following formula: (Current revolution ÷ Target revolution) × 100. This shows how much of the unit's expected lifetime has been used up. The Rotation% counter is based on rotations, not prints. If the number of rotations reaches the limit, the machine enters the end condition for that unit. If the print count lifetime is reached first, the machine also enters the end condition, even though the R% counter is still less than 100%.
061	Rotation (%): PCU: Bk
062	Rotation (%): PCU: C
063	Rotation (%): PCU: M
064	Rotation (%): PCU: Y
065	Rotation (%): Development Unit: Bk
066	Rotation (%): Development Unit: C
067	Rotation (%): Development Unit:M
068	Rotation (%): Development Unit: Y
073	Rotation (%): Image Transfer
074	Rotation (%):Image Transfer Cleaning
075	Rotation (%): Fusing Unit
076	Rotation (%): Fusing Roller
077	Rotation (%): Fusing Belt

078	Rotation (%):PTR Unit		
079	Measurement (%) Toner Collection Bottle [0 to 255 / - / 1 %/step] Displays how much of the unit's expected lifetime has been used up.		
-091 to -108	Displays the value given by the following formula: (Target printouts/ Current printouts) × 100. This shows how much of the unit's expected lifetime has been used up. The Page% counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page% counter is still less than 100%.		
091	Page (%): PCU: Bk	*ENG	[0 to 255 / - / 1 %/step]
092	Page (%): PCU: C		
093	Page (%): PCU: M		
094	Page (%): PCU: Y		
095	Page (%): Development Unit: Bk		
096	Page (%): Development Unit: C		
097	Page (%): Development Unit: M		
098	Page (%): Development Unit: Y		
103	Page (%): Image Transfer	*ENG	[0 to 255 / - / 1 %/step]
104	Page (%):Image Transfer Cleaning		
105	Page (%): Fusing Unit		
106	Page (%): Fusing Roller		
107	Page (%): Fusing Belt		
108	Page (%): PTR Unit		

7804	**[PM Counter Reset]**
	(Unit, [Color])
	Clears the PM counter. Press the Enter key after the machine asks "Execute?", which will store the PM counter value in SP7-906 (PM Counter - Previous) and reset the value of the current PM counter (SP7-803) to "0".
001	Paper
002	PCU: Bk
003	PCU: C
004	PCU: M
005	PCU: Y
006	PCU: All
007	Development Unit: Bk
008	Development Unit: C
009	Development Unit: M
010	Development Unit: Y
011	Development Unit: All
016	Developer: All
017	Image Transfer Belt
018	Image Transfer Cleaning Unit
019	Fusing Unit
020	Fusing Roller
021	Fusing Belt
022	PTR Unit
023	Toner Collection Bottle

100	All

7807	**[SC/Jam Counter Reset]**		
	Clears the counters related to SC codes and paper jams.		
001	-	*CTL	-

7832	**[Self-Diagnose Result Display]**		
	Displays the result of the diagnostics.		
001	-	*CTL	-

7836	**Total Memory Size**		
	Displays the memory capacity of the controller system.		
001	-	*CTL	-

7852	[DF Scan Glass Dust Check Counter]		
	Counts the number of occurrences (0 to 65,535) when dust was detected on the scanning glass of the ARDF or resets the dust detection counter. Counting is done only if SP4-020-1 (ARDF Scan Glass Dust Check) is switched on.		
001	Dust Detection Counter	*CTL	[0 to 9999 / - / 1 /step]
002	Dust Detection Clear Counter	*CTL	[0 to 9999 / - / 1 /step]

7853	**[Replacement Counter]**
	Displays the PM parts replacement number.
001	PCU: Bk
002	PCU: C
003	PCU: M
004	PCU: Y

005	Development Unit: Bk
006	Development Unit: C
007	Development Unit: M
008	Development Unit: Y
013	Image Transfer
014	Image Transfer Belt Cleaning
015	Fusing Unit
016	Fusing Roller
017	Fusing Belt
018	PTR Unit
019	Toner Collection Bottle

7855	**[Coverage Range]** Sets the color coverage threshold. Coverage rate = Coverage per page / A4 full coverage (dots) × 100 There are three coverage counters: Color 1, Color 2, and Color 3 ▪ [A] 5% (default) is adjustable with SP7855-001. ▪ [B] 20% (default) is adjustable with SP7855-002.  Note ▪ The setting value [B] must be set larger than [A]. The total numbers of printouts (BW printing plus color printing) for each coverage range are displayed with the following SPs. ▪ Color1 counter: SP8601-021 ▪ Color2 counter: SP8601-022 ▪ Color3 counter: SP8601-023		
001	Coverage Range 1	*CTL	[1 to 200 / **5** /1]
002	Coverage Range 2	*CTL	[1 to 200 / **20** /1]

7901	**[Assert Info]**		
	Records the location where a problem is detected in the program. The data stored in this SP is used for problem analysis. **DFU**		
001	File Name	*CTL	-
002	Number of Lines		
003	Location		

7906	**[Prev. Unit PM Counter]**	
	(Page or Rotations, Unit, [Color]), Dev.: Development Unit	*ENG
-001 to -019	Displays the number of sheets printed with the previous maintenance units. [0 to 9999999 / **0** / 1 page/step]	
001	Page: PCU: Bk	
002	Page: PCU: C	
003	Page: PCU: M	
004	Page: PCU: Y	
005	Page: Development Unit: Bk	
006	Page: Development Unit: C	
007	Page: Development Unit: M	
008	Page: Development Unit: Y	
013	Page: Image Transfer	
014	Page: Image Transfer Cleaning	
015	Page: Fusing Unit	
016	Page: Fusing Roller	
017	Page: Fusing Belt	
018	Page: PTR Unit	

019	Page:Toner Collection Bottle
-031 to -049	Displays the number of revolutions for motors or clutches in the previous maintenance units. [0 to 9999999 / **0** / 1 mm/step]
031	Rotation: PCU: Bk
032	Rotation: PCU: C
033	Rotation: PCU: M
034	Rotation: PCU: Y
035	Rotation: Development Unit: Bk
036	Rotation: Development Unit: C
037	Rotation: Development Unit: M
038	Rotation: Development Unit: Y
043	Rotation: Image Transfer
044	Rotation: Image Transfer Cleaning
045	Rotation: Fusing Unit
046	Rotation: Fusing Roller
047	Rotation: Fusing Belt
048	Rotation: PTR Unit
049	MeasurementToner Collection Bottle
-061 to -079	Displays the number of sheets printed with the previous maintenance unit or toner cartridge. [0 to 255 / **0** / 1 %/step]
061	Rotation %: PCU: Bk
062	Rotation %: PCU: C
063	Rotation %: PCU: M
064	Rotation %: PCU: Y

065	Rotation %: Development Unit: Bk
066	Rotation %: Development Unit: C
067	Rotation %: Development Unit: M
068	Rotation %: Development Unit: Y
073	Rotation %: Image Transfer
074	Rotation %: Image Transfer Cleaning
075	Rotation %: Fusing Unit
076	Rotation %: Fusing Roller
077	Rotation %: Fusing Belt
078	Rotation %: PTR Unit
079	Measurement %: Toner Collection Bottle
-091 to -108	Displays the value given by the following formula: (Yield count / Current count) × 100, where "Current count" is the current values in the counter for the part, and "Yield count" is the recommended yield. [0 to 255 / **0** / 1 %/step]
091	Page (%): PCU: Bk
092	Page (%): PCU: C
093	Page (%): PCU: M
094	Page (%): PCU: Y
095	Page (%): Development Unit: Bk
096	Page (%): Development Unit: C
097	Page (%): Development Unit: M
098	Page (%): Development Unit: Y
103	Page (%):Image Transfer
104	Page (%):Image Transfer Cleaning
105	Page (%): Fusing Unit

106	Page (%): Fusing Roller
107	Page (%): Fusing Belt
108	Page (%): PTR Unit

7931	**[Toner Bottle Bk]**		
	Displays the toner bottle information for Bk.		
001	Machine Serial ID	*ENG	-
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Product Information	*ENG	
009	Recycle Counter	*ENG	
010	Date	*ENG	-
011	Serial No.	*ENG	
012	Toner Remaining	*ENG	
013	EDP Code	*ENG	
014	End History	*ENG	
015	Refill Information	*ENG	
016	Attachment: Total Counter	*ENG	
017	Attachment: Color Counter	*ENG	
018	End: Total Counter	*ENG	
019	End: Color Counter	*ENG	

020	Attachment Date	*ENG	
021	End Date	*ENG	

7932	**[Toner Bottle C]**		
	Displays the toner bottle information for C.		
001	Machine Serial ID	*ENG	-
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Product Information	*ENG	
009	Recycle Counter	*ENG	
010	Date	*ENG	
011	Serial No.	*ENG	-
012	Toner Remaining	*ENG	
013	EDP Code	*ENG	
014	End History	*ENG	
015	Refill Information	*ENG	
016	Attachment: Total Counter	*ENG	
017	Attachment: Color Counter	*ENG	
018	End: Total Counter	*ENG	
019	End: Color Counter	*ENG	
020	Attachment Date	*ENG	

021	End Date	*ENG	

7933	**[Toner Bottle M]**		
	Displays the toner bottle information for M.		
001	Machine Serial ID	*ENG	-
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Product Information	*ENG	
009	Recycle Counter	*ENG	
010	Date	*ENG	
011	Serial No.	*ENG	-
012	Toner Remaining	*ENG	
013	EDP Code	*ENG	
014	End History	*ENG	
015	Refill Information	*ENG	
016	Attachment: Total Counter	*ENG	
017	Attachment: Color Counter	*ENG	
018	End: Total Counter	*ENG	
019	End: Color Counter	*ENG	
020	Attachment Date	*ENG	
021	End Date	*ENG	

7934	[Toner Bottle Y]		
	Displays the toner bottle information for Y.		
001	Machine Serial ID	*ENG	-
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Product Information	*ENG	
009	Recycle Counter	*ENG	
010	Date	*ENG	
011	Serial No.	*ENG	-
012	Toner Remaining	*ENG	
013	EDP Code	*ENG	
014	End History	*ENG	
015	Refill Information	*ENG	
016	Attachment: Total Counter	*ENG	
017	Attachment: Color Counter	*ENG	
018	End: Total Counter	*ENG	
019	End: Color Counter	*ENG	
020	Attachment Date	*ENG	
021	End Date	*ENG	

7935	[Toner Bottle Log 1: Bk]		
001	Serial No.	*ENG	Displays the toner bottle information log 1 for Bk.
002	Attachment Date		
003	Attachment: Total Counter		
004	Refill Information		
005	Serial No.	*ENG	Displays the toner bottle information log 2 for Bk.
006	Attachment Date		
007	Attachment: Total Counter		
008	Refill Information		
009	Serial No.	*ENG	Displays the toner bottle information log 3 for Bk.
010	Attachment Date		
011	Attachment: Total Counter		
012	Refill Information		
013	Serial No.	*ENG	Displays the toner bottle information log 4 for Bk.
014	Attachment Date		
015	Attachment: Total Counter		
016	Refill Information		
017	Serial No.	*ENG	Displays the toner bottle information log 5 for Bk.
018	Attachment Date		
019	Attachment: Total Counter		
020	Refill Information		

7936	[Toner Bottle Log 1: M]		
001	Serial No.	*ENG	Displays the toner bottle information log 1 for M.
002	Attachment Date		
003	Attachment: Total Counter		
004	Refill Information		
005	Serial No.	*ENG	Displays the toner bottle information log 2 for M.
006	Attachment Date		
007	Attachment: Total Counter		
008	Refill Information		
009	Serial No.	*ENG	Displays the toner bottle information log 3 for M.
010	Attachment Date		
011	Attachment: Total Counter		
012	Refill Information		
013	Serial No.	*ENG	Displays the toner bottle information log 4 for M.
014	Attachment Date		
015	Attachment: Total Counter		
016	Refill Information		
017	Serial No.	*ENG	Displays the toner bottle information log 5 for M.
018	Attachment Date		
019	Attachment: Total Counter		
020	Refill Information		

7937	[Toner Bottle Log 1: C]		
001	Serial No.	*ENG	Displays the toner bottle information log 1 for C.
002	Attachment Date		
003	Attachment: Total Counter		
004	Refill Information		
005	Serial No.	*ENG	Displays the toner bottle information log 2 for C.
006	Attachment Date		
007	Attachment: Total Counter		
008	Refill Information		
009	Serial No.	*ENG	Displays the toner bottle information log 3 for C.
010	Attachment Date		
011	Attachment: Total Counter		
012	Refill Information		
013	Serial No.	*ENG	Displays the toner bottle information log 4 for C.
014	Attachment Date		
015	Attachment: Total Counter		
016	Refill Information		
017	Serial No.	*ENG	Displays the toner bottle information log 5 for C.
018	Attachment Date		
019	Attachment: Total Counter		
020	Refill Information		

7938	[Toner Bottle Log 1: Y]		
001	Serial No.	*ENG	Displays the toner bottle information log 1 for Y.
002	Attachment Date		
003	Attachment: Total Counter		
004	Refill Information		
005	Serial No.	*ENG	Displays the toner bottle information log 2 for Y.
006	Attachment Date		
007	Attachment: Total Counter		
008	Refill Information		
009	Serial No.	*ENG	Displays the toner bottle information log 3 for Y.
010	Attachment Date		
011	Attachment: Total Counter		
012	Refill Information		
013	Serial No.	*ENG	Displays the toner bottle information log 4 for Y.
014	Attachment Date		
015	Attachment: Total Counter		
016	Refill Information		
017	Serial No.	*ENG	Displays the toner bottle information log 5 for Y.
018	Attachment Date		
019	Attachment: Total Counter		
020	Refill Information		

7950	[Unit Replacement Date]		
	Displays the replacement date of each PM unit.		
001	Image Transfer Belt	*ENG	

002	Image Transfer Cleaning	*ENG	
003	Paper Transfer Unit	*ENG	
004	Fusing Unit	*ENG	
005	Fusing Roller	*ENG	
006	Fusing Belt	*ENG	
013	PCU: Bk	*ENG	
014	PCU: C	*ENG	
015	PCU: M	*ENG	
016	PCU: Y	*ENG	
017	Development Unit:Bk	*ENG	
018	Development Unit:C	*ENG	
019	Development Unit:M	*ENG	
020	Development Unit:Y	*ENG	

7951	**[Remaining Day Counter]**	*ENG	
	Displays the remaining unit life of each PM unit. [0 to 255 / **255** / 1 day/step]		
001	Page: PCU: Bk		
002	Page: PCU: C		
003	Page: PCU: M		
004	Page: PCU: Y		
005	Page: Development Unit: Bk		
006	Page: Development Unit: C		
007	Page: Development Unit: M		
008	Page: Development Unit: Y		
013	Page: Image Transfer Belt		

014	Page: Image Transfer Cleaning
015	Page: Fusing Unit
016	Page: Fusing Roller
017	Page: Fusing Belt
018	Page: PTR Unit
031	Rotation: PCU: Bk
032	Rotation: PCU: C
033	Rotation: PCU: M
034	Rotation: PCU: Y
035	Rotation: Development Unit: Bk
036	Rotation: Development Unit: C
037	Rotation: Development Unit: M
038	Rotation: Development Unit: Y
039	Rotation: Developer: Bk
040	Rotation: Developer: C
041	Rotation: Developer: M
042	Rotation: Developer: Y
043	Rotation: Image Transfer Belt
044	Rotation: Image Transfer Cleaning
045	Rotation: Fusing Unit
046	Rotation: Fusing Roller
047	Rotation: Fusing Belt
048	Rotation: PTR Unit
049	Measurement: Toner Collection Bottle

7952	**[PM Yield Setting]**		
	Adjusts the unit yield of each PM unit.		
001	Rotation: Image Transfer Belt	*ENG	[0 to 999999999 / **200696000** / 1000 mm/step]
002	Rotation: Image Transfer Cleaning	*ENG	[0 to 999999999 / **150522000** / 1000 mm/step]
003	Rotation: Fusing Unit	*ENG	[0 to 999999999 / **253311000** / 1000 mm/step]
004	Rotation: Fusing Roller	*ENG	
005	Rotation: Fusing Belt	*ENG	
006	Rotation: Paper Transfer Unit	*ENG	[0 to 999999999 / **150522000** / 1000 mm/step]
007	Measurement:Tone Collection Bottle	*ENG	[0 to 999999999 / **300000** / 1000 mg/step]
011	Page: Image Transfer Belt	*ENG	[0 to 999999 / **240000** / 1000 sheet/step]
012	Page: Image Transfer Cleaning	*ENG	[0 to 999999 / **180000** / 1000 sheet/step]
013	Page: Fusing Unit	*ENG	[0 to 999999 / **120000** / 1 sheet/step]
014	Page: Fusing Roller	*ENG	
015	Page: Fusing Belt	*ENG	
016	Page: Paper Transfer Unit	*ENG	[0 to 999999 / **180000** / 1000 sheet/step]
021	Day Threshold: PCU: Bk	*ENG	Adjusts the threshold day of the near end for each PM unit. [1 to 30 / **15** / 1 day/step] These threshold days are used for @Remote alarms.
022	Day Threshold: PCU: C	*ENG	
023	Day Threshold: PCU: M	*ENG	
024	Day Threshold: PCU: Y	*ENG	
025	Day Threshold:	*ENG	Adjusts the threshold day of the near end

	Development Unit: Bk		for each PM unit. [1 to 30 / **15** / 1 day/step] These threshold days are used for @Remote alarms.
026	Day Threshold: Development Unit: C	*ENG	
027	Day Threshold: Development Unit: M	*ENG	
028	Day Threshold: Development Unit: Y	*ENG	
033	Day Threshold: Image Transfer Belt	*ENG	
034	Day Threshold: Image Transfer Cleaning	*ENG	
035	Day Threshold: Fusing Unit	*ENG	
036	Day Threshold: Fusing Roller	*ENG	
037	Day Threshold: Fusing Belt	*ENG	
038	Rotation: PCU: Bk	*ENG	[0 to 999999999 / **0** / 1 mm/step]
039	Rotation: PCU: C	*ENG	
040	Rotation: PCU: M	*ENG	
041	Rotation: PCU: Y	*ENG	
042	Rotation: Development Unit: Bk	*ENG	
043	Rotation: Development Unit: C	*ENG	
044	Rotation: Development Unit: M	*ENG	
045	Rotation: Development Unit: Y	*ENG	

050	Page: PCU: Bk	*ENG	[0 to 999999 / **0** / 1 sheet/step]
051	Page: PCU: C		
052	Page: PCU: M		
053	Page: PCU: Y		
054	Page: Development Unit: Bk	*ENG	
055	Page: Development Unit: C	*ENG	
056	Page: Development Unit: M	*ENG	
057	Page: Development Unit: Y	*ENG	
062	Day Threshold:PTR Unit	*ENG	Adjusts the threshold day of the near end for each PM unit. [1 to 30 / **15** / 1 day/step] These threshold days are used for @Remote alarms.
063	Day Thresh: Toner Collection Bottle		

7953	**[Operation Env. Log: PCU: Bk]**		
	Displays the PCU rotation distance in each specified operation environment. T: Temperature (°C), H: Relative Humidity (%)		
001	T<=0	*ENG	[0 to 99999999 / - / 1 mm/step]
002	0<T<=5:0<=H<30		
003	0<T<=5:30<=H<70		
004	T<=5: 70<=H<=100		
005	5<T<15: 0<=H<30		
006	5<T<15: 30<=H<55		
007	5<T<15: 55<=H<80		

008	5<T<15: 80<=H<=100		
009	15<=T<25: 0<=H<30		
010	15<=T<25: 30<=H<55		
011	15<=T<25: 55<=H<80	*ENG	[0 to 99999999 / - / 1 mm/step]
012	15<=T<25: 80<=H<=100		
013	25<=T<30: 0<=H<30		
014	25<=T<30: 30<=H<55		
015	25<=T<30: 55<=H<80		
016	25<=T<30: 80<=H<=100		
017	30<=T: 0<=H<30		
018	30<=T: 30<=H<55		
019	30<=T: 55<=H<80		
020	30<=T: 80<=H<=100		

7954	**[Operation Env. Log Clear]**
	Clears the operation environment log.
001	-

5.9 MAIN SP TABLES-8

5.9.1 SP8-XXX (DATA LOG2)

Many of these counters are provided for features that are currently not available, such as sending color faxes, and so on. However, here are some Group 8 codes that when used in combination with others, can provide useful information.

SP Numbers	What They Do
SP8211 to SP8216	The number of pages scanned to the document server.
SP8401 to SP8406	The number of pages printed from the document server
SP8691 to SP8696	The number of pages sent from the document server

Specifically, the following questions can be answered:

- How is the document server actually being used?
- What application is using the document server most frequently?
- What data in the document server is being reused?

Most of the SPs in this group are prefixed with a letter that indicates the mode of operation (the mode of operation is referred to as an "application"). Before reading the Group 8 Service Table, make sure that you understand what these prefixes mean.

Prefixes	What it means	
T:	Total: (Grand Total).	Grand total of the items counted for all applications (C, F, P, etc.).
C:	Copy application.	Totals (pages, jobs, etc.) executed for each application when the job was not stored on the document server.
F:	Fax application.	
P:	Print application.	
S:	Scan application.	
L:	Local storage (document server)	Totals (jobs, pages, etc.) for the document server. The L: counters work differently case by case. Sometimes, they count jobs/pages stored on the document server; this can be in document server

		mode (from the document server window), or from another mode, such as from a printer driver or by pressing the Store File button in the Copy mode window. Sometimes, they include occasions when the user uses a file that is already on the document server. Each counter will be discussed case by case.
O:	Other applications (external network applications, for example)	Refers to network applications such as Web Image Monitor. Utilities developed with the SDK (Software Development Kit) will also be counted with this group in the future.

The Group 8 SP codes are limited to 17 characters, forced by the necessity of displaying them on the small LCDs of printers and faxes that also use these SPs. Read over the list of abbreviations below and refer to it again if you see the name of an SP that you do not understand.

Key for Abbreviations

Abbreviation	What it means
/	"By", e.g. "T:Jobs/Apl" = Total Jobs "by" Application
>	More (2> "2 or more", 4> "4 or more"
AddBook	Address Book
Apl	Application
B/W	Black & White
Bk	Black
C	Cyan
ColCr	Color Create
ColMode	Color Mode
Comb	Combine
Comp	Compression

Abbreviation	What it means
Deliv	Delivery
DesApl	Designated Application. The application (Copy, Fax, Scan, Print) used to store the job on the document server, for example.
Dev Counter	Development Count, no. of pages developed.
Dup, Duplex	Duplex, printing on both sides
Emul	Emulation
FC	Full Color
FIN	Post-print processing, i.e. finishing (punching, stapling, etc.)
Full Bleed	No Margins
GenCopy	Generation Copy Mode
GPC	Get Print Counter. For jobs 10 pages or less, this counter does not count up. For jobs larger than 10 pages, this counter counts up by the number that is in excess of 10 (e.g., for an 11-page job, the counter counts up 11-10 =1)
IFax	Internet Fax
ImgEdt	Image Edit performed on the original with the copier GUI, e.g. border removal, adding stamps, page numbers, etc.
K	Black (YMCK)
LS	Local Storage. Refers to the document server.
LSize	Large (paper) Size
Mag	Magnification
MC	One color (monochrome)
NRS	New Remote Service, which allows a service center to monitor machines remotely. "NRS" is used overseas, "CSS" is used in Japan.
Org	Original for scanning

Abbreviation	What it means
OrgJam	Original Jam
Palm 2	Print Job Manager/Desk Top Editor: A pair of utilities that allows print jobs to be distributed evenly among the printers on the network, and allows files to moved around, combined, and converted to different formats.
PC	Personal Computer
PGS	Pages. A page is the total scanned surface of the original. Duplex pages count as two pages, and A3 simplex count as two pages if the A3/DLT counter SP is switched ON.
PJob	Print Jobs
Ppr	Paper
PrtJam	Printer (plotter) Jam
PrtPGS	Print Pages
R	Red (Toner Remaining). Applies to the wide format model A2 only. This machine is under development and currently not available.
Rez	Resolution
SC	Service Code (Error SC code displayed)
Scn	Scan
Sim, Simplex	Simplex, printing on 1 side.
S-to-Email	Scan-to-E-mail
SMC	SMC report printed with SP5990. All of the Group 8 counters are recorded in the SMC report.
Svr	Server
TonEnd	Toner End
TonSave	Toner Save
TXJob	Send, Transmission

Abbreviation	What it means
YMC	Yellow, Magenta, Cyan
YMCK	Yellow, Magenta, Cyan, Black

Note

- All of the Group 8 SPs are reset with SP5 801 1 Memory All Clear.

8 001	T:Total Jobs	*CTL	These SPs count the number of times each application is used to do a job. [0 to 9999999/ **0** / 1] **Note**: The L: counter is the total number of times the other applications are used to send a job to the document server, plus the number of times a file already on the document server is used.
8 002	C:Total Jobs	*CTL	
8 003	F:Total Jobs	*CTL	
8 004	P:Total Jobs	*CTL	
8 005	S:Total Jobs	*CTL	
8 006	L:Total Jobs	*CTL	

- These SPs reveal the number of times an application is used, not the number of pages processed.
- When an application is opened for image input or output, this counts as one job.
- Interrupted jobs (paper jams, etc.) are counted, even though they do not finish.
- Only jobs executed by the customer are counted. Jobs executed by the customer engineer using the SP modes are not counted.
- When using secure printing (when a password is required to start the print job), the job is counted at the time when either "Delete Data" or "Specify Output" is specified.
- A job is counted as a fax job when the job is stored for sending.
- When a fax is received to fax memory, the F: counter increments but the L: counter does not (the document server is not used).
- A fax broadcast counts as one job for the F: counter (the fax destinations in the broadcast are not counted separately).
- A fax broadcast is counted only after all the faxes have been sent to their destinations. If one transmission generates an error, then the broadcast will not be counted until the transmission has been completed.
- A printed fax report counts as one job for the F: counter.
- The F: counter does not distinguish between fax sending or receiving.
- When a copy job on the document server is printed, SP8022 also increments, and when

a print job stored on the document server is printed, SP8024 also increments.

- When an original is both copied and stored on the document server, the C: and L: counters both increment.
- When a print job is stored on the document server, only the L: counter increments.
- When the user presses the Document Server button to store the job on the document server, only the L: counter increments.
- When the user enters document server mode and prints data stored on the document server, only the L: counter increments.
- When an image received from Palm 2 is received and stored, the L: counter increments.
- When the customer prints a report (user code list, for example), the O: counter increments. However, for fax reports and reports executed from the fax application, the F: counter increments.

8 011	T:Jobs/LS	*CTL	These SPs count the number of jobs stored to the document server by each application, to reveal how local storage is being used for input. [0 to 9999999/ **0** / 1] The L: counter counts the number of jobs stored from within the document server mode screen at the operation panel.
8 012	C:Jobs/LS	*CTL	
8 013	F:Jobs/LS	*CTL	
8 014	P:Jobs/LS	*CTL	
8 015	S:Jobs/LS	*CTL	
8 016	L:Jobs/LS	*CTL	
8 017	O:Jobs/LS	*CTL	

- When a scan job is sent to the document server, the S: counter increments. When you enter document server mode and then scan an original, the L: counter increments.
- When a print job is sent to the document server, the P: counter increments.
- When a network application sends data to the document server, the O: counter increments.
- When an image from Palm 2 is stored on the document server, the O: counter increments.
- When a fax is sent to the document server, the F: counter increments.

8 021	T:Pjob/LS	*CTL	These SPs reveal how files printed from the document server were stored on the document server originally. [0 to 9999999/ **0** / 1]
8 022	C:Pjob/LS	*CTL	
8 023	F:Pjob/LS	*CTL	

8 024	P:Pjob/LS	*CTL	The L: counter counts the number of jobs stored from within the document server mode screen at the operation panel.
8 025	S:Pjob/LS	*CTL	
8 026	L:Pjob/LS	*CTL	
8 027	O:Pjob/LS	*CTL	

- When a copy job stored on the document server is printed with another application, the C: counter increments.
- When an application like DeskTopBinder merges a copy job that was stored on the document server with a print job that was stored on the document server, the C: and P: counters both increment.
- When a job already on the document server is printed with another application, the L: counter increments.
- When a scanner job stored on the document server is printed with another application, the S: counter increments. If the original was scanned from within document server mode, then the L: counter increments.
- When images stored on the document server by a network application (including Palm 2), are printed with another application, the O: counter increments.
- When a copy job stored on the document server is printed with a network application (Web Image Monitor, for example), the C: counter increments.
- When a fax on the document server is printed, the F: counter increments.

8 031	T:Pjob/DesApl	*CTL	These SPs reveal what applications were used to output documents from the document server. [0 to 9999999/ **0** / 1] The L: counter counts the number of jobs printed from within the document server mode screen at the operation panel.
8 032	C:Pjob/DesApl	*CTL	
8 033	F:Pjob/DesApl	*CTL	
8 034	P:Pjob/DesApl	*CTL	
8 035	S:Pjob/DesApl	*CTL	
8 036	L:Pjob/DesApl	*CTL	
8 037	O:Pjob/DesApl	*CTL	

- When documents already stored on the document server are printed, the count for the application that started the print job is incremented.
- When the print job is started from a network application (Desk Top Binder, Web Image Monitor, etc.) the L: counter increments.

8 041	T:TX Jobs/LS	*CTL	These SPs count the applications that stored files on the document server that were later accessed for transmission over the telephone line or over a network (attached to an e-mail, or as a fax image by I-Fax). [0 to 9999999/ **0** / 1] **Note**: Jobs merged for sending are counted separately. The L: counter counts the number of jobs scanned from within the document server mode screen at the operation panel.
8 042	C:TX Jobs/LS	*CTL	
8 043	F:TX Jobs/LS	*CTL	
8 044	P:TX Jobs/LS	*CTL	
8 045	S:TX Jobs/LS	*CTL	
8 046	L:TX Jobs/LS	*CTL	
8 047	O:TX Jobs/LS	*CTL	

- When a stored copy job is sent from the document server, the C: counter increments.
- When images stored on the document server by a network application or Palm2 are sent as an e-mail, the O: counter increments.

8 051	T:TX Jobs/DesApl	*CTL	These SPs count the applications used to send files from the document server over the telephone line or over a network (attached to an e-mail, or as a fax image by I-Fax). Jobs merged for sending are counted separately. [0 to 9999999/ **0** / 1] The L: counter counts the number of jobs sent from within the document server mode screen at the operation panel.
8 052	C:TX Jobs/DesApl	*CTL	
8 053	F:TX Jobs/DesApl	*CTL	
8 054	P:TX Jobs/DesApl	*CTL	
8 055	S:TX Jobs/DesApl	*CTL	
8 056	L:TX Jobs/DesApl	*CTL	
8 057	O:TX Jobs/DesApl	*CTL	

- If the send is started from Desk Top Binder or Web Image Monitor, for example, then the O: counter increments.

8 061	T:FIN Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs total the finishing methods. The finishing method is specified by the application.		

8 062	C:FIN Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs total finishing methods for copy jobs only. The finishing method is specified by the application.		
8 063	F:FIN Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs total finishing methods for fax jobs only. The finishing method is specified by the application. **Note**: Finishing features for fax jobs are not available at this time.		
8 064	P:FIN Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs total finishing methods for print jobs only. The finishing method is specified by the application.		
8 065	S:FIN Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs total finishing methods for scan jobs only. The finishing method is specified by the application. **Note**: Finishing features for scan jobs are not available at this time.		
8 066	L:FIN Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs total finishing methods for jobs output from within the document server mode screen at the operation panel. The finishing method is specified from the print window within document server mode.		
8 067	O:FIN Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs total finishing methods for jobs executed by an external application, over the network. The finishing method is specified by the application.		
8 06x 1	Sort	Number of jobs started in Sort mode. When a stored copy job is set for Sort and then stored on the document server, the L: counter increments. (See SP8 066 1)	
8 06x 2	Stack	Number of jobs started out of Sort mode.	
8 06x 3	Staple	Number of jobs started in Staple mode.	
8 06x 4	Booklet	Number of jobs started in Booklet mode. If the machine is in staple mode, the Staple counter also	

		increments.
8 06x 5	Z-Fold	Number of jobs started In any mode other than the Booklet mode and set for folding (Z-fold).
8 06x 6	Punch	Number of jobs started in Punch mode. When Punch is set for a print job, the P: counter increments. (See SP8 064 6.)
8 06x 7	Other	Reserved. Not used.
8 06x 8	Inside-Fold	Not used
8 06x 9	Three-IN-Fold	Not used
8 06x 10	Three-OUT-Fold	Not used
8 06x 11	Four-Fold	Not used
8 06x 12	KANNON-Fold	Not used
8 06x 13	Perfect-Bind	Not used
8 06x 14	Ring-Bind	Not used

8 071	T:Jobs/PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of jobs broken down by the number of pages in the job, regardless of which application was used.		
8 072	C:Jobs/PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count and calculate the number of copy jobs by size based on the number of pages in the job.		
8 073	F:Jobs/PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count and calculate the number of fax jobs by size based on the number of pages in the job.		
8 074	P:Jobs/PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count and calculate the number of print jobs by size based on the number of pages in the job.		
8 075	S:Jobs/PGS		[0 to 9999999/ **0** / 1]

	These SPs count and calculate the number of scan jobs by size based on the number of pages in the job.		
8 076	L:Jobs/PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count and calculate the number of jobs printed from within the document server mode window at the operation panel, by the number of pages in the job.		
8 077	O:Jobs/PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count and calculate the number of "Other" application jobs (Web Image Monitor, Palm 2, etc.) by size based on the number of pages in the job.		

8 07x 1	1 Page	8 07x 8	21 to 50 Pages
8 07x 2	2 Pages	8 07x 9	51 to 100 Pages
8 07x 3	3 Pages	8 07x 10	101 to 300 Pages
8 07x 4	4 Pages	8 07x 11	301 to 500 Pages
8 07x 5	5 Pages	8 07x 12	501 to 700 Pages
8 07x 6	6 to 10 Pages	8 07x 13	701 to 1000 Pages
8 07x 7	11 to 20 Pages	8 07x 14	1001 to Pages

- For example: When a copy job stored on the document server is printed in document server mode, the appropriate L: counter (SP8076 0xx) increments.
- Printing a fax report counts as a job and increments the F: counter (SP 8073).
- Interrupted jobs (paper jam, etc.) are counted, even though they do not finish.
- If a job is paused and re-started, it counts as one job.
- If the finisher runs out of staples during a print and staple job, then the job is counted at the time the error occurs.
- For copy jobs (SP 8072) and scan jobs (SP 8075), the total is calculated by multiplying the number of sets of copies by the number of pages scanned. (One duplex page counts as 2.)
- The first test print and subsequent test prints to adjust settings are added to the number of pages of the copy job (SP 8072).
- When printing the first page of a job from within the document server screen, the page is counted.

8 111	T:FAX TX Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of jobs (color or black-and-white) sent by fax, either directly or using a file stored on the document server, on a telephone line. **Note**: Color fax sending is not available at this time.		
8 113	F: FAX TX Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of jobs (color or black-and-white) sent by fax directly on a telephone line. **Note**: Color fax sending is not available at this time.		
8 11x 1	B/W		
8 11x 2	Color		

- These counters count jobs, not pages.
- This SP counts fax jobs sent over a telephone line with a fax application, including documents stored on the document server.
- If the mode is changed during the job, the job will count with the mode set when the job started.
- If the same document is faxed to both a public fax line and an I-Fax at a destination where both are available, then this counter increments, and the I-Fax counter (8 12x) also increments.
- The fax job is counted when the job is scanned for sending, not when the job is sent.

8 121	T:IFAX TX Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of jobs (color or black-and-white) sent, either directly or using a file stored on the document server, as fax images using I-Fax. **Note**: Color fax sending is not available at this time.		
8 123	F: IFAX TX Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of jobs (color or black-and-white) sent (not stored on the document server), as fax images using I-Fax. **Note**: Color fax sending is not available at this time.		

8 12x 1	B/W
8 12x 2	Color

- These counters count jobs, not pages.
- The counters for color are provided for future use; the color fax feature is not available at this time.
- The fax job is counted when the job is scanned for sending, not when the job is sent.

8 131	T:S-to-Email Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of jobs (color or black-and-white) scanned and attached to an e-mail, regardless of whether the document server was used or not.		
8 135	S: S-to-Email Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of jobs (color or black-and-white) scanned and attached to e-mail, without storing the original on the document server.		
8 13x 1	B/W		
8 13x 2	Color		
8 13x 3	ACS		

- These counters count jobs, not pages.
- If the job is stored on the document server, after the job is stored it is determined to be color or black-and-white then counted.
- If the job is cancelled during scanning, or if the job is cancelled while the document is waiting to be sent, the job is not counted.
- If the job is cancelled during sending, it may or may not be counted, depending on what stage of the process had been reached when the job was cancelled.
- If several jobs are combined for sending to the Scan Router, Scan-to-Email, or Scan-to-PC, or if one job is sent to more than one destination. each send is counted separately. For example, if the same document is sent by Scan-to-Email as well as Scan-to-PC, then it is counted twice (once for Scan-to-Email and once for Scan-to-PC).

8 141	T:Deliv Jobs/Svr	*CTL	[0 to 9999999/ **0** / 1]

	These SPs count the total number of jobs (color or black-and-white) scanned and sent to a Scan Router server.		
8 145	S: Deliv Jobs/Svr	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of jobs (color or black-and-white) scanned in scanner mode and sent to a Scan Router server.		
8 14x 1	B/W		
8 14x 2	Color		
8 14x 3	ACS		

- These counters count jobs, not pages.
- The jobs are counted even though the arrival and reception of the jobs at the Scan Router server cannot be confirmed.
- If even one color image is mixed with black-and-white images, then the job is counted as a "Color" job.
- If the job is cancelled during scanning, or if the job is cancelled while the document is waiting to be delivered, the job is not counted.
- If the job is cancelled during sending, it may or may not be counted, depending on what stage of the process had been reached when the job was cancelled.
- Even if several files are combined for sending, the transmission counts as one job.

8 151	T:Deliv Jobs/PC	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of jobs (color or black-and-white) scanned and sent to a folder on a PC (Scan-to-PC). **Note**: At the present time, 8 151 and 8 155 perform identical counts.		
8 155	S:Deliv Jobs/PC	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of jobs (color or black-and-white) scanned and sent with Scan-to-PC.		
8 15x 1	B/W		
8 15x 2	Color		
8 15x 3	ACS		

- These counters count jobs, not pages.
- If the job is cancelled during scanning, it is not counted.
- If the job is cancelled while it is waiting to be sent, the job is not counted.
- If the job is cancelled during sending, it may or may not be counted, depending on what stage of the process had been reached when the job was cancelled.
- Even if several files are combined for sending, the transmission counts as one job.

8 161	T:PCFAX TX Jobs	*CTL	These SPs count the number of PC Fax transmission jobs. A job is counted from when it is registered for sending, not when it is sent. [0 to 9999999/ **0** / 1] **Note**: At the present time, these counters perform identical counts.
8 163	F:PCFAX TX Jobs	*CTL	

- This counts fax jobs started from a PC using a PC fax application, and sending the data out to the destination from the PC through the copier.

8 171	T:Deliv Jobs/WSD	*CTL	These SPs count the pages scanned by WS. [0 to 9999999/ **0** / 1]
8 175	S:Deliv Jobs/WSD	*CTL	
-001	B/W		
-002	Color		
-003	ACS		

8 181	T:Scan to Media Jobs	*CTL	These SPs count the scanned pages in a media by the scanner application. [0 to 9999999/ **0** / 1]
8 185	S:Scan to Media Jobs	*CTL	
-001	B/W		
-002	Color		
-003	ACS		

8 191	T:Total Scan PGS	*CTL	These SPs count the pages scanned by each application that uses the scanner to scan images. [0 to 9999999/ **0** / 1]
8 192	C:Total Scan PGS	*CTL	
8 193	F:Total Scan PGS	*CTL	
8 195	S:Total Scan PGS	*CTL	
8 196	L:Total Scan PGS	*CTL	

- SP 8 191 to 8 196 count the number of scanned sides of pages, not the number of physical pages.
- These counters do not count reading user stamp data, or reading color charts to adjust color.
- Previews done with a scanner driver are not counted.
- A count is done only after all images of a job have been scanned.
- Scans made in SP mode are not counted.

Examples

- If both sides of 3 A4 sheets are copied and stored to the document server using the Store File button in the Copy mode window, the C: count is 6 and the L: count is 6.
- If both sides of 3 A4 sheets are copied but not stored, the C: count is 6.
- If you enter document server mode then scan 6 pages, the L: count is 6.

8 201	T:LSize Scan PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of large pages input with the scanner for scan and copy jobs. Large size paper scanned for fax transmission are not counted. **Note**: These counters are displayed in the SMC Report, and in the User Tools display.		
8 203	F: LSize Scan PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of large pages input with the scanner for fax transmission. **Note**: These counters are displayed in the SMC Report, and in the User Tools display.		
8 205	S:LSize Scan PGS	*CTL	[0 to 9999999/ **0** / 1]

	These SPs count the total number of large pages input with the scanner for scan jobs only. Large size paper scanned for fax transmission are not counted. **Note**: These counters are displayed in the SMC Report, and in the User Tools display.

8 211	T:Scan PGS/LS	*CTL	These SPs count the number of pages scanned into the document server . [0 to 9999999/ **0** / 1] The L: counter counts the number of pages stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen
8 212	C:Scan PGS/LS	*CTL	
8 213	F:Scan PGS/LS	*CTL	
8 215	S:Scan PGS/LS	*CTL	
8 216	L:Scan PGS/LS	*CTL	

- Reading user stamp data is not counted.
- If a job is cancelled, the pages output as far as the cancellation are counted.
- If the scanner application scans and stores 3 B5 sheets and 1 A4 sheet, the S: count is 4.
- If pages are copied but not stored on the document server, these counters do not change.
- If both sides of 3 A4 sheets are copied and stored to the document server, the C: count is 6 and the L: count is 6.
- If you enter document server mode then scan 6 pages, the L: count is 6.

8 221	ADF Org Feeds	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of pages fed through the ADF for front and back side scanning.		
8 221 1	Front	Number of front sides fed for scanning: With an ADF that can scan both sides simultaneously, the Front side count is the same as the number of pages fed for either simplex or duplex scanning. With an ADF that cannot scan both sides simultaneously, the Front side count is the same as the number of pages fed for duplex front side scanning. (The front side is determined by which side the user loads face up.)	

8 221 2	Back	Number of rear sides fed for scanning: With an ADF that can scan both sides simultaneously, the Back count is the same as the number of pages fed for duplex scanning. With an ADF that cannot scan both sides simultaneously, the Back count is the same as the number of pages fed for duplex rear-side scanning.

- When 1 sheet is fed for duplex scanning the Front count is 1 and the Back count is 1.
- If a jam occurs during the job, recovery processing is not counted to avoid double counting. Also, the pages are not counted if the jam occurs before the first sheet is output.

8 231	Scan PGS/Mode	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of pages scanned by each ADF mode to determine the work load on the ADF.		
8 231 1	Large Volume	Selectable. Large copy jobs that cannot be loaded in the ADF at one time.	
8 231 2	SADF	Selectable. Feeding pages one by one through the ADF.	
8 231 3	Mixed Size	Selectable. Select "Mixed Sizes" on the operation panel.	
8 231 4	Custom Size	Selectable. Originals of non-standard size.	
8 231 5	Platen	Book mode. Raising the ADF and placing the original directly on the platen.	
8 231 6	Mixed 1side/ 2side	Simplex and Duplex mode.	

- If the scan mode is changed during the job, for example, if the user switches from ADF to Platen mode, the count is done for the last selected mode.
- The user cannot select mixed sizes or non-standard sizes with the fax application so if the original's page sizes are mixed or non-standard, these are not counted.
- If the user selects "Mixed Sizes" for copying in the platen mode, the Mixed Size count is enabled.
- In the SADF mode if the user copies 1 page in platen mode and then copies 2 pages with

SADF, the Platen count is 1 and the SADF count is 3.

8 241	T:Scan PGS/Org	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of scanned pages by original type for all jobs, regardless of which application was used.		
8 242	C:Scan PGS/Org	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of pages scanned by original type for Copy jobs.		
8 243	F:Scan PGS/Org	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of pages scanned by original type for Fax jobs.		
8 245	S:Scan PGS/Org	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of pages scanned by original type for Scan jobs.		
8 246	L:Scan PGS/Org	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen		

	8 241		**8 242**	**8 243**	**8 245**	**8 246**
8 24x 1: Text		Yes	Yes	Yes	Yes	Yes
8 24x 2: Text/Photo		Yes	Yes	Yes	Yes	Yes
8 24x 3: Photo		Yes	Yes	Yes	Yes	Yes
8 24x 4: GenCopy, Pale		Yes	Yes	No	Yes	Yes
8 24x 5: Map		Yes	Yes	No	No	Yes
8 24x 6: Normal/Detail		Yes	No	Yes	No	No
8 24x 7: Fine/Super Fine		Yes	No	Yes	No	No
8 24x 8: Binary		Yes	No	No	Yes	No
8 24x 9: Grayscale		Yes	No	No	Yes	No

8 24x 10: Color	Yes	No	No	Yes	No
8 24x 11: Other	Yes	Yes	Yes	Yes	Yes

- If the scan mode is changed during the job, for example, if the user switches from ADF to Platen mode, the count is done for the last selected mode.

8 251	T:Scan PGS/ImgEdt	*CTL	These SPs show how many times Image Edit features have been selected at the operation panel for each application. Some examples of these editing features are: ▪ Erase> Border ▪ Erase> Center ▪ Image Repeat ▪ Centering ▪ Positive/Negative [0 to 9999999/ **0** / 1] Note: The count totals the number of times the edit features have been used. A detailed breakdown of exactly which features have been used is not given.
8 252	C:Scan PGS/ImgEdt	*CTL	
8 255	S : Scan PGS/ImgEdr	*CTL	
8 256	L:Scan PGS/ImgEdt	*CTL	
8 257	O:Scan PGS/ImgEdt	*CTL	

The L: counter counts the number of pages stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen.

8 261	T:Scan PGS/ColCr	*CTL	-
8 262	C:Scan PGS/ ColCr	*CTL	-
8 265	S:Scn PGS/Color	*CTL	-
8 266	L:Scn PGS/ColCr	*CTL	-
8 26x 1	Color Conversion	These SPs show how many times color creation features have been selected at the operation panel.	
8 26x 2	Color Erase		
8 26x 3	Background		

8 26x 4	Other	

8 281	T:Scan PGS/TWAIN	*CTL	These SPs count the number of pages scanned using a TWAIN driver. These counters reveal how the TWAIN driver is used for delivery functions. [0 to 9999999/ **0** / 1] **Note**: At the present time, these counters perform identical counts.
8 285	S:Scan PGS/TWAIN	*CTL	

8 291	T:Scan PGS/Stamp	*CTL	These SPs count the number of pages stamped with the stamp in the ADF unit. [0 to 9999999/ **0** / 1] The L: counter counts the number of pages stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen
8 293	F:Scan PGS/Stamp	*CTL	
8 295	S:Scan PGS/Stamp	*CTL	

8 301	T:Scan PGS/Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by size the total number of pages scanned by all applications. Use these totals to compare original page size (scanning) and output (printing) page size [SP 8-441].		
8 302	C:Scan PGS/Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by size the total number of pages scanned by the Copy application. Use these totals to compare original page size (scanning) and output (printing) page size [SP 8-442].		
8 303	F:Scan PGS/Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by size the total number of pages scanned by the Fax application. Use these totals to compare original page size (scanning) and output page size [SP 8-443].		
8 305	S:Scan PGS/Size	*CTL	[0 to 9999999/ **0** / 1]

	These SPs count by size the total number of pages scanned by the Scan application. Use these totals to compare original page size (scanning) and output page size [SP 8-445].		
8 306	L:Scan PGS/Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by size the total number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen. Use these totals to compare original page size (scanning) and output page size [SP 8-446].		
8 30x 1	A3	-	
8 30x 2	A4		
8 30x 3	A5		
8 30x 4	B4		
8 30x 5	B5		
8 30x 6	DLT		
8 30x 7	LG		
8 30x 8	LT		
8 30x 9	HLT		
8 30x 10	Full Bleed		
8 30x 254	Other (Standard)		
8 30x 255	Other (Custom)		

8 311	T:Scan PGS/Rez	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by resolution setting the total number of pages scanned by applications that can specify resolution settings.		
8 315	S: Scan PGS/Rez	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by resolution setting the total number of pages scanned by applications that can specify resolution settings.		

	Note: At the present time, SP8-311 and SP8-315 perform identical counts.		
8 31x 1	1200dpi <		
8 31x 2	600dpi to 1199dpi		
8 31x 3	400dpi to 599dpi		
8 31x 4	200dpi to 399dpi		
8 31x 5	< 199dpi		

- Copy resolution settings are fixed so they are not counted.
- The Fax application does not allow finely-adjusted resolution settings so no count is done for the Fax application.

8 381	T:Total PrtPGS	*CTL	These SPs count the number of pages printed by the customer. The counter for the application used for storing the pages increments. [0 to 9999999/ **0** / 1] The L: counter counts the number of pages stored from within the document server mode screen at the operation panel. Pages stored with the Store File button from within the Copy mode screen go to the C: counter.
8 382	C:Total PrtPGS	*CTL	
8 383	F:Total PrtPGS	*CTL	
8 384	P:Total PrtPGS	*CTL	
8 385	S:Total PrtPGS	*CTL	
8 386	L:Total PrtPGS	*CTL	
8 387	O:Total PrtPGS	*CTL	

- When several documents are merged for a print job, the number of pages stored are counted for the application that stored them.
- These counters are used primarily to calculate charges on use of the machine, so the following pages are not counted as printed pages:
  - Blank pages in a duplex printing job.
  - Blank pages inserted as document covers, chapter title sheets, and slip sheets.
  - Reports printed to confirm counts.
  - All reports done in the service mode (service summaries, engine maintenance reports, etc.)
  - Test prints for machine image adjustment.
  - Error notification reports.
  - Partially printed pages as the result of a copier jam.

8 391	LSize PrtPGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count pages printed on paper sizes A4/LT and larger. **Note**: In addition to being displayed in the SMC Report, these counters are also displayed in the User Tools display on the copy machine.		

8 401	T:PrtPGS/LS	*CTL	These SPs count the number of pages printed from the document server. The counter for the application used to print the pages is incremented. The L: counter counts the number of jobs stored from within the document server mode screen at the operation panel. [0 to 9999999/ **0** / 1]
8 402	C:PrtPGS/LS	*CTL	
8 403	F:PrtPGS/LS	*CTL	
8 404	P:PrtPGS/LS	*CTL	
8 405	S:PrtPGS/LS	*CTL	
8 406	L:PrtPGS/LS	*CTL	

- Print jobs done with Web Image Monitor and Desk Top Binder are added to the L: count.
- Fax jobs done with Web Image Monitor and Desk Top Binder are added to the F: count.

8 411	Prints/Duplex	*CTL	This SP counts the amount of paper (front/back counted as 1 page) used for duplex printing. Last pages printed only on one side are not counted. [0 to 9999999/ **0** / 1]

8 421	T:PrtPGS/Dup Comb	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing. This is the total for all applications.		
8 422	C:PrtPGS/Dup Comb	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the copier application.		
8 423	F:PrtPGS/Dup Comb	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by binding and combine, and n-Up settings the number		

	of pages processed for printing by the fax application.			
8 424	P:PrtPGS/Dup Comb		*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the printer application.			
8 425	S:PrtPGS/Dup Comb		*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the scanner application.			
8 426	L:PrtPGS/Dup Comb		*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing from within the document server mode window at the operation panel.			
8 427	O:PrtPGS/Dup Comb		*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by Other applications			
8 42x 1	Simplex> Duplex			
8 42x 2	Duplex> Duplex			
8 42x 3	Book> Duplex			
8 42x 4	Simplex Combine			
8 42x 5	Duplex Combine			
8 42x 6	2>	2 pages on 1 side (2-Up)		
8 42x 7	4>	4 pages on 1 side (4-Up)		
8 42x 8	6>	6 pages on 1 side (6-Up)		
8 42x 9	8>	8 pages on 1 side (8-Up)		
8 42x 10	9>	9 pages on 1 side (9-Up)		
8 42x 11	16>	16 pages on 1 side (16-Up)		
8 42x 12	Booklet			
8 42x 13	Magazine			

- These counts (SP8 421 to SP8 427) are especially useful for customers who need to improve their compliance with ISO standards for the reduction of paper consumption.
- Pages that are only partially printed with the n-Up functions are counted as 1 page.
- Here is a summary of how the counters work for Booklet and Magazine modes:

Booklet			**Magazine**	
Original Pages	**Count**		**Original Pages**	**Count**
1	1		1	1
2	2		2	2
3	2		3	2
4	2		4	2
5	3		5	4
6	4		6	4
7	4		7	4
8	4		8	4

8 431	T:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of pages output with the three features below, regardless of which application was used.		
8 432	C:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of pages output with the three features below with the copy application.		
8 434	P:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of pages output with the three features below with the print application.		
8 436	L:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of pages output from within the document server mode window at the operation panel with the three		

	features below.		
8 437	O:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of pages output with the three features below with Other applications.		
8 43x 1	Cover/Slip Sheet	Total number of covers or slip sheets inserted. The count for a cover printed on both sides counts 2.	
8 43x 2	Series/Book	The number of pages printed in series (one side) or printed as a book with booklet right/left pagination.	
8 43x 3	User Stamp	The number of pages printed where stamps were applied, including page numbering and date stamping.	

8 441	T:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by print paper size the number of pages printed by all applications.		
8 442	C:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by print paper size the number of pages printed by the copy application.		
8 443	F:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by print paper size the number of pages printed by the fax application.		
8 444	P:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by print paper size the number of pages printed by the printer application.		
8 445	S:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by print paper size the number of pages printed by the scanner application.		
8 446	L:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by print paper size the number of pages printed from		

	within the document server mode window at the operation panel.		
8 447	O:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by print paper size the number of pages printed by Other applications.		
8 44x 1	A3		
8 44x 2	A4		
8 44x 3	A5		
8 44x 4	B4		
8 44x 5	B5		
8 44x 6	DLT		
8 44x 7	LG		
8 44x 8	LT		
8 44x 9	HLT		
8 44x 10	Full Bleed		
8 44x 254	Other (Standard)		
8 44x 255	Other (Custom)		

- These counters do not distinguish between LEF and SEF.

8 451	PrtPGS/Ppr Tray	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of sheets fed from each paper feed station.		
8 451 1	Bypass Tray	Bypass Tray	
8 451 2	Tray 1	Machine	
8 451 3	Tray 2	Paper Tray Unit (Option)	
8 451 4	Tray 3	Paper Tray Unit (Option)	
8 451 5	Tray 4	Paper Tray Unit (Option)	

8 451 6	Tray 5	Not used
8 451 7	Tray 6	Not used
8 451 8	Tray 7	Not used
8 451 9	Tray 8	Not used
8 451 10	Tray 9	Not used
8 451 11	Tray10	Not used
8 451 12	Tray11	Not used
8 451 13	Tray12	Not used
8 451 14	Tray13	Not used
8 451 15	Tray14	Not used
8 451 16	Tray15	Not used

8 461	T:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by paper type the number pages printed by all applications. ▪ These counters are not the same as the PM counter. The PM counter is based on feed timing to accurately measure the service life of the feed rollers. However, these counts are based on output timing. ▪ Blank sheets (covers, chapter covers, slip sheets) are also counted. ▪ During duplex printing, pages printed on both sides count as 1, and a page printed on one side counts as 1.		
8 462	C:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by paper type the number pages printed by the copy application.		
8 463	F:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by paper type the number pages printed by the fax application.		
8 464	P:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ **0** / 1]

	These SPs count by paper type the number pages printed by the printer application.		
8 466	L:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by paper type the number pages printed from within the document server mode window at the operation panel.		
8 46x 1	Normal		
8 46x 2	Recycled		
8 46x 3	Special		
8 46x 4	Thick		
8 46x 5	Normal (Back)		
8 46x 6	Thick (Back)		
8 46x 7	OHP		
8 46x 8	Other		

8 471	PrtPGS/Mag	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by magnification rate the number of pages printed.		
8 471 1	< 49%		
8 471 2	50% to 99%		
8 471 3	100%		
8 471 4	101% to 200%		
8 471 5	201% <		

- Counts are done for magnification adjusted for pages, not only on the operation panel but performed remotely with an external network application capable of performing magnification adjustment as well.
- Magnification adjustments done with printer drivers with PC applications such as Excel are also counted.
- Magnification adjustments done for adjustments after they have been stored on the document server are not counted.

- Magnification adjustments performed automatically during Auto Reduce/Enlarge copying are counted.
- The magnification rates of blank cover sheets, slip sheets, etc. are automatically assigned a rate of 100%.

8 481	T:PrtPGS/TonSave	*CTL	
8 484	P:PrtPGS/TonSave	*CTL	
	These SPs count the number of pages printed with the Toner Save feature switched on. **Note**: These SPs return the same results as this SP is limited to the Print application. [0 to 9999999/ **0** / 1]		

8 491	T:PrtPGS/Col Mode	*CTL	These SPs count the number of pages printed in the Color Mode by each application.
8 492	C:PrtPGS/Col Mode	*CTL	
8 493	F:PrtPGS/Col Mode	*CTL	
8 496	L:PrtPGS/Col Mode	*CTL	
8 497	O:PrtPGS/Col Mode	*CTL	
8 49x 1	B/W		
8 49x 2	Single Color		
8 49x 3	Two Color		
8 49x 4	Full Color		

8 501	T:PrtPGS/Col Mode	*CTL	These SPs count the number of pages printed in the Color Mode by the print application.
8 504	P:PrtPGS/Col	*CTL	

	Mode		
8 507	O:PrtPGS/Col Mode	*CTL	
8 50x 1	B/W		
8 50x 2	Mono Color		
8 50x 3	Full Color		
8 50x 4	Single Color		
8 50x 5	Two Color		

8 511	T:PrtPGS/Emul		*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by printer emulation mode the total number of pages printed.			
8 514	P:PrtPGS/Emul		*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by printer emulation mode the total number of pages printed.			
8 514 1	RPCS			
8 514 2	RPDL			
8 514 3	PS3			
8 514 4	R98			
8 514 5	R16			
8 514 6	GL/GL2			
8 514 7	R55			
8 514 8	RTIFF			
8 514 9	PDF			
8 514 10	PCL5e/5c			
8 514 11	PCL XL			

8 514 12	IPDL-C			
8 514 13	BM-Links	Japan Only		
8 514 14	Other			
8 514 15	IPDS			

- SP8 511 and SP8 514 return the same results as they are both limited to the Print application.
- Print jobs output to the document server are not counted.

8 521	T:PrtPGS/FIN	*CTL	[0 to 9999999 / **0** / 1]
	These SPs count by finishing mode the total number of pages printed by all applications.		
8 522	C:PrtPGS/FIN	*CTL	[0 to 9999999 / **0** / 1]
	These SPs count by finishing mode the total number of pages printed by the Copy application.		
8 523	F:PrtPGS/FIN	*CTL	[0 to 9999999 / **0** / 1]
	These SPs count by finishing mode the total number of pages printed by the Fax application. **NOTE**: Print finishing options for received faxes are currently not available.		
8 524	P:PrtPGS/FIN	*CTL	[0 to 9999999 / **0** / 1]
	These SPs count by finishing mode the total number of pages printed by the Print application.		
8 525	S:PrtPGS/FIN	*CTL	[0 to 9999999 / **0** / 1]
	These SPs count by finishing mode the total number of pages printed by the Scanner application.		
8 526	L:PrtPGS/FIN	*CTL	[0 to 9999999 / **0** / 1]
	These SPs count by finishing mode the total number of pages printed from within the document server mode window at the operation panel.		

8 52x 1	Sort
8 52x 2	Stack
8 52x 3	Staple
8 52x 4	Booklet
8 52x 5	Z-Fold
8 52x 6	Punch
8 52x 7	Other
8 52x 8	Inside-Fold
8 52x 9	Three-IN-Fold
8 52x 10	Three-OUT-Fold
8 52x 11	Four-Fold
8 52x 12	KANNON-Fold
8 52x 13	Perfect-Bind
8 52x 14	Ring-Bind

Note

- If stapling is selected for finishing and the stack is too large for stapling, the unstapled pages are still counted.
- The counts for staple finishing are based on output to the staple tray, so jam recoveries are counted.

8 531	Staples	*CTL	This SP counts the amount of staples used by the machine. [0 to 9999999 / **0** / 1]

8 581	T:Counter	*CTL	[0 to 9999999 / **0** / 1]
	These SPs count the total output broken down by color output, regardless of the application used. In addition to being displayed in the SMC Report, these counters are also displayed in the User Tools display on the copy		

	machine.
8 581 1	Total
8 581 2	Total: Full Color
8 581 3	B&W/Single Color
8 581 4	Development: CMY
8 581 5	Development: K
8 581 6	Copy: Color
8 581 7	Copy: B/W
8 581 8	Print: Color
8 581 9	Print: B/W
8 581 10	Total: Color
8 581 11	Total: B/W
8 581 12	Full Color: A3
8 581 13	Full Color: B4 JIS or Smaller
8 581 14	Full Color Print
8 581 15	Mono Color Print
8 581 16	Full Color GPC
8 581 17	Twin Colour Mode Print
8 581 18	Full Colour Print (Twin)
8 581 19	Mono Colour Print (Twin)
8 581 20	Full Colour Total (CV)
8 581 21	Mono Colour Total (CV)
8 581 22	Full Colour Print (CV)

8 582	C:Counter	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total output of the copy application broken down by color output.		
8 582 1	B/W		
8 582 2	Single Color		
8 582 3	Two Color		
8 582 4	Full Color		

8 583	F:Counter	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total output of the fax application broken down by color output.		
8 583 1	B/W		
8 583 2	Single Color		

8 584	P:Counter	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total output of the print application broken down by color output.		
8 584 1	B/W		
8 584 2	Mono Color		
8 584 3	Full Color		
8 584 4	Single Color		
8 584 5	Two Color		

8 586	L:Counter	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total output of the local storage broken down by color output.		
8 582 1	B/W		

8 582 2	Single Color
8 582 3	Two Color
8 582 4	Full Color

8 591	O:Counter	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the totals for A3/DLT paper use, number of duplex pages printed, and the number of staples used. These totals are for Other (O:) applications only.		
8 591 1	A3/DLT	-	
8 591 2	Duplex		

8 601	Coverage Counter	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total coverage for each color and the total printout pages for each printing mode.		
8 601 1	B/W	-	
8 601 2	Color		
8 601 11	B/W Printing Pages		
8 601 12	Color Printing Pages		
8 601 21	Coverage Counter 1		
8 601 22	Coverage Counter 2		
8 601 23	Coverage Counter 3		

8 617	SDK Apli Counter	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total printout pages for each SDK applicaion.		
8 617 1	SDK-1	-	
8 617 2	SDK-2		
8 617 3	SDK-3		
8 617 4	SDK-4		
8 617 5	SDK-5		
8 617 6	SDK-6		

8 631	T:FAX TX PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the number of pages sent by fax to a telephone number.		
8 633	F:FAX TX PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the number of pages sent by fax to a telephone number.		
8 63x 1	B/W		
8 63x 2	Color		

- If a document has color and black-and-white pages mixed, the pages are counted separately as B/W or Color.
- At the present time, this feature is provided for the Fax application only so SP8631 and SP8633 are the same.
- The counts include error pages.
- If a document is sent to more than one destination with a Group transmission, the count is done for each destination.
- Polling transmissions are counted but polling RX are not.
- Relay, memory, and confidential mailbox transmissions and are counted for each destination.

8 641	T:IFAX TX PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the number of pages sent by fax to as fax images using I-Fax.		
8 643	F:IFAX TX PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the number of pages sent by Fax as fax images using I-Fax.		
8 64x 1	B/W		
8 64x 2	Color		

- If a document has color and black-and-white pages mixed, the pages are counted separately as B/W or Color.
- At the present time, this feature is provided for the Fax application only so SP8641 and SP8643 are the same.
- The counts include error pages.
- If a document is sent to more than one destination with a Group transmission, the count is done for each destination.
- Polling transmissions are counted but polling RX are not.
- Relay, memory, and confidential mailbox transmissions and are counted for each destination.

8 651	T:S-to-Email PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the total number of pages attached to an e-mail for both the Scan and document server applications.		
8 655	S:S-to-Email PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the total number of pages attached to an e-mail for the Scan application only.		
8 65x 1	B/W		
8 65x 2	Color		

Note

- The count for B/W and Color pages is done after the document is stored on the HDD. If the job is cancelled before it is stored, the pages are not counted.
- If Scan-to-Email is used to send a 10-page document to 5 addresses, the count is 10 (the pages are sent to the same SMTP server together).
- If Scan-to-PC is used to send a 10-page document to 5 folders, the count is 50 (the document is sent to each destination of the SMB/FTP server).
- Due to restrictions on some devices, if Scan-to-Email is used to send a 10-page document to a large number of destinations, the count may be divided and counted separately. For example, if a 10-page document is sent to 200 addresses, the count is 10 for the first 100 destinations and the count is also 10 for the second 100 destinations, for a total of 20.).

8 661	T:Deliv PGS/Svr	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the total number of pages sent to a Scan Router server by both Scan and LS applications.		
8 665	S:Deliv PGS/Svr	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the total number of pages sent to a Scan Router server by the Scan application.		
8 66x 1	B/W		
8 66x 2	Color		

Note

- The B/W and Color counts are done after the document is stored on the HDD of the Scan Router server.
- If the job is canceled before storage on the Scan Router server finishes, the counts are not done.
- The count is executed even if regardless of confirmation of the arrival at the Scan Router server.

8 671	T:Deliv PGS/PC	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the total number of pages sent to a folder on a PC (Scan-to-PC) with the Scan and LS applications.		
8 675	S: Deliv PGS/PC	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the total number of pages sent with Scan-to-PC with the Scan application.		
8 67x 1	B/W		
8 67x 2	Color		

8 681	T:PCFAX TXPGS	*CTL	These SPs count the number of pages sent by PC Fax. These SPs are provided for the Fax application only, so the counts for SP8 681 and SP8 683 are the same. [0 to 9999999/ **0** / 1]
8 683	F:PCFAX TXPGS	*CTL	

- This counts pages sent from a PC using a PC fax application, from the PC through the copier to the destination.
- When sending the same message to more than one place using broadcasting, the pages are only counted once. (For example, a 10-page fax is sent to location A and location B. The counter goes up by 10, not 20.)

8 691	T:TX PGS/LS	*CTL	These SPs count the number of pages sent from the document server. The counter for the application that was used to store the pages is incremented. [0 to 9999999/ **0** / 1] The L: counter counts the number of pages stored from within the document server mode screen at the operation panel. Pages stored with the Store File button from within the Copy mode screen go to the C: counter.
8 692	C:TX PGS/LS	*CTL	
8 693	F:TX PGS/LS	*CTL	
8 694	P:TX PGS/LS	*CTL	
8 695	S:TX PGS/LS	*CTL	
8 696	L:TX PGS/LS	*CTL	

Note

- Print jobs done with Web Image Monitor and Desk Top Binder are added to the count.
- If several documents are merged for sending, the number of pages stored are counted for the application that stored them.
- When several documents are sent by a Fax broadcast, the F: count is done for the number of pages sent to each destination.

8 701	TX PGS/Port	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of pages sent by the physical port used to send them. For example, if a 3-page original is sent to 4 destinations via ISDN G4, the count for ISDN (G3, G4) is 12.		
8 701 1	PSTN-1		
8 701 2	PSTN-2		
8 701 3	PSTN-3		
8 701 4	ISDN (G3,G4)		
8 701 5	Network		

8 711	T:Scan PGS/Comp	*CTL	[0 to 9999999/ **0** / 1]
8 715	S:Scan PGS/Comp	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of pages sent by each compression mode.		
8 715 1	JPEG/JPEG2000		
8 715 2	TIFF(Multi/Single)		
8 715 3	PDF		
8 715 4	Other		
8 715 5	PDF/Comp		

8 721	T: Deliv PGS/WSD	*CTL	[0 to 9999999/ **0** / 1]
8 725	S: Deliv PGS/WSD	*CTL	
	These SPs count the number of pages scanned by each scanner mode.		
x 1	B/W	-	
x 2	Color	-	

8 731	T:Scan PGS/Media	*CTL	[0 to 9999999/ **0** / 1]
8 735	S:Scan PGS/Media	*CTL	
	These SPs count the number of pages scanned and saved in a meia by each scanner mode.		
x 1	B/W	-	
x 2	Color	-	

8 741	RX PGS/Port	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of pages received by the physical port used to receive them.		
8 741 1	PSTN-1	-	
8 741 2	PSTN-2	-	
8 741 3	PSTN-3	-	
8 741 4	ISDN (G3,G4)	-	
8 741 5	Network	-	

8 771	Dev Counter	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the frequency of use (number of rotations of the development rollers) for black and other color toners.		
8 771 1	Total		

8 771 2	K
8 771 3	Y
8 771 4	M
8 771 5	C

8 781	Toner_Bottle_Info.	*ENG	[0 to 9999999/ **0** / 1]
	These SPs display the number of already replaced toner bottles. **NOTE:** Currently, the data in SP7-833-011 through 014 and the data in SP8-781-001 through 004 are the same.		
8 781 1	BK	The number of black-toner bottles	
8 781 2	Y	The number of yellow-toner bottles	
8 781 3	M	The number of magenta-toner bottles	
8 781 4	C	The number of cyan-toner bottles	

8 791	LS Memory Remain	*CTL	This SP displays the percent of space available on the document server for storing documents. [0 to 100 / **0** / 1]

8 801	Toner Remain	*CTL	[0 to 100/ **0** / 1]
	These SPs display the percent of toner remaining for each color. This SP allows the user to check the toner supply at any time. **Note:** This precise method of measuring remaining toner supply (1% steps) is better than other machines in the market that can only measure in increments of 10 (10% steps).		
8 801 1	K		
8 801 2	Y		
8 801 3	M		
8 801 4	C		

8 851	CVr Cnt: 0-10%	*ENG	[0 to 9999999/ **0** / 1]
	These SPs display the number of scanned sheets on which the coverage of each color is from 0% to 10%.		
8 851 11	0 to 2%: BK	8 851 31	5 to 7%: BK
8 851 12	0 to 2%: Y	8 851 32	5 to 7%: Y
8 851 13	0 to 2%: M	8 851 33	5 to 7%: M
8 851 14	0 to 2%: C	8 851 34	5 to 7%: C
8 851 21	3 to 4%: BK	8 851 41	8 to 10%: BK
8 851 22	3 to 4%: Y	8 851 42	8 to 10%: Y
8 851 23	3 to 4%: M	8 851 43	8 to 10%: M
8 851 24	3 to 4%: C	8 851 44	8 to 10%: C

8 861	CVr Cnt: 11-20%	*ENG	[0 to 9999999/ **0** / 1]
	These SPs display the number of scanned sheets on which the coverage of each color is from 11% to 20%.		
8 861 1	BK		
8 861 2	Y		
8 861 3	M		
8 861 4	C		

8 871	CVr Cnt: 21-30%	*ENG	[0 to 9999999/ **0** / 1]
	These SPs display the number of scanned sheets on which the coverage of each color is from 21% to 30%.		
8 871 1	BK		
8 871 2	Y		
8 871 3	M		

8 871 4	C

8 881	CVr Cnt: 31%-	*ENG	[0 to 9999999/ **0** / 1]
	These SPs display the number of scanned sheets on which the coverage of each color is 31% or higher.		
8 881 1	BK		
8 881 2	Y		
8 881 3	M		
8 881 4	C		

8 891	Page/Toner Bottle	*ENG	[0 to 9999999/ **0** / 1]
	These SPs display the amount of the remaining current toner for each color.		
8 891 1	BK		
8 891 2	Y		
8 891 3	M		
8 891 4	C		

8 901	Page/Toner_Prev1	*ENG	[0 to 9999999/ **0** / 1]
	These SPs display the amount of the remaining previous toner for each color.		
8 901 1	BK		
8 901 2	Y		
8 901 3	M		
8 901 4	C		

8 911	Page/Toner_Prev2	*ENG	[0 to 9999999/ **0** / 1]
	These SPs display the amount of the remaining 2nd previous toner for each color.		
8 911 1	BK		
8 911 2	Y		
8 911 3	M		
8 911 4	C		

8 921	Cvr Cnt/Total	*CTL	[0 to 9999999/ **0** / 1]
	Displays the total coverage and total printout number for each color.		
8 921 1	Coverage (%) Bk		
8 921 2	Coverage (%) Y		
8 921 3	Coverage (%) M		
8 921 4	Coverage (%) C		
8 921 11	Coverage /P: Bk		
8 921 12	Coverage /P: Y		
8 921 13	Coverage /P: M		
8 921 14	Coverage /P: C		

8 941	Machine Status	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the amount of time the machine spends in each operation mode. These SPs are useful for customers who need to investigate machine operation for improvement in their compliance with ISO Standards.		
8 941 1	Operation Time	Engine operation time. Does not include time while controller is saving data to HDD (while engine is not operating).	
8 941 2	Standby Time	Engine not operating. Includes time while controller saves data to HDD. Does not include time spent in Energy Save, Low Power, or Off modes.	
8 941 3	Energy Save Time	Includes time while the machine is performing background printing.	
8 941 4	Low Power Time	Includes time in Energy Save mode with Engine on. Includes time while machine is performing background printing.	
8 941 5	Off Mode Time	Includes time while machine is performing background printing. Does not include time machine remains powered off with the power switches.	
8 941 6	SC	Total time when SC errors have been staying.	
8 941 7	PrtJam	Total time when paper jams have been staying during printing.	
8 941 8	OrgJam	Total time when original jams have been staying during scanning.	
8 941 9	Supply PM Unit End	Total time when toner end has been staying	

8 951	AddBook Register	*CTL		
	These SPs count the number of events when the machine manages data registration.			
8 951 1	User Code/User ID	User code registrations.		[0 to 9999999/ **0** / 1]
8 951 2	Mail Address	Mail address registrations.		
8 951 3	Fax Destination	Fax destination registrations.		
8 951 4	Group	Group destination registrations.		
8 951 5	Transfer Request	Fax relay destination registrations for relay TX.		
8 951 6	F-Code	F-Code box registrations.		
8 951 7	Copy Program	Copy application registrations with the Program (job settings) feature.		[0 to 255 / **0** / 255]
8 951 8	Fax Program	Fax application registrations with the Program (job settings) feature.		
8 951 9	Printer Program	Printer application registrations with the Program (job settings) feature.		
8 951 10	Scanner Program	Scanner application registrations with the Program (job settings) feature.		

8 999	Admin. Counter List	*CTL	[0 to 9999999/ **0** / 1]
	Displays the total coverage and total printout number for each color.		
8 999 1	Total		-
8 999 2	Copy: Full Color		
8 999 3	Copy: BW		
8 999 4	Copy: Single Color		
8 999 5	Copy: Two Color		
8 999 6	Printer Full Color		
8 999 7	Printer BW		
8 999 8	Printer Single Color		
8 999 9	Printer Two Color		
8 999 10	Fax Print: BW		
8 999 12	A3/DLT		-
8 999 13	Duplex		
8 999 14	Coverage: Color (%)		
8 999 15	Coverage: BW (%)		
8 999 16	Coverage: Color Print Page (%)		
8 999 17	Coverage: BW Print Page (%)		
8 999 101	Transmission Total: Color		
8 999 102	Transmission Total: BW		
8 999 103	FAX Transmission		
8 999 104	Scanner Transmission: Color		
8 999 105	Scanner Transmission: BW		

5.10 MAIN SP TABLES-9

5.10.1 INPUT CHECK TABLE

When entering the Input Check mode, 8 digits display the result for a section. Each digit corresponds to a different device as shown in the table.

Bit No.	7	6	5	4	3	2	1	0
Result	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1

Printer

5803	Description	Reading	
		0	1
5803 1	1 Tray Size	See table 1 following this table.	
5803 2	1 Tray Paper Height Sensor 1	See table 2 following this table.	
5803 3	1 Tray Paper Height Sensor 2	See table 2 following this table.	
5803 4	1 Tray Paper End Sensor	No paper	Paper remaining
5803 5	1 Tray Upper Limit Sensor	Not upper limit	Upper limit
5803 6	Bypass Paper End Sensor	No paper	Paper remaining
5803 7	Paper Feed Sensor	Paper detected	Paper not detected
5803 8	Paper Exit Sensor	Paper detected	Paper not detected
5803 9	Paper Exit Full Sensor	Paper not full	Paper full
5803 10	Fusing Exit Sensor	Paper not detected	Paper detected
5803 11	Fusing Entrance Sensor	Paper detected	Paper not detected
5803 12	Inverter Sensor	Paper detected	Paper not detected
5803 13	Duplex Entrance Sensor	Paper detected	Paper not detected

5803 14	Duplex Exit Sensor	Paper detected	Paper not detected
5803 15	Registration Sensor	Paper detected	Paper not detected
5803 16	Vertical Transport Sensor	Paper detected	Paper not detected
5803 17	Bypass Paper Size Sensor	Paper detected	Paper not detected
5803 18	Toner End Sensor: Y	Toner end	Toner remaining
5803 19	Toner End Sensor: C	Toner end	Toner remaining
5803 20	Toner End Sensor: M	Toner end	Toner remaining
5803 21	Toner End Sensor: K	Toner end	Toner remaining
5803 22	Drum Phase Sensor: K	Actuator not detected	Actuator detected
5803 23	Drum Phase Sensor: CMY	Actuator not detected	Actuator detected
5803 24	Interlock SW 1	Front door open	Front door closed
5803 25	Interlock SW 2	Front door open	Front door closed
5803 26	Right Door Sensor	Closed	Open
5803 30	Duplex Cover Sensor	Closed	Open
5803 31	LDU Shutter Sensor	Closed	Open
5803 32	Waste Toner Bottle Set Sensor	Set	Not set
5803 33	Waste Toner Bottle Full Sensor	Not full	Full
5803 34	ITB Unit: New	Not new	New
5803 35	Fusing Fan: Lock	Normal	Lock
5803 36	Fusing Fan 1: Lock	Normal	Lock
5803 37	Fusing Fan 2: Lock	Normal	Lock
5803 38	Fusing Front Fan: Lock	Normal	Lock
5803 40	Toner Supply Fan: Lock	Normal	Lock
5803 41	Drive Unit Fan: Lock	Normal	Lock

5803 43	Ventilation Fan: Front	Normal	Lock
5803 44	Ventilation Fan: Rear	Normal	Lock
5803 45	Development Fan: Lock	Normal	Lock
5803 46	Laser Unit Fan: Lock	Normal	Lock
5803 47	Feed Fan: Lock	Normal	Lock
5803 48	Transfer Belt Contact Sensor	Not contact	Contact
5803 49	Paper Transfer Roller Contact Sensor	Not contact	Contact
5803 50	Drum Motor: K: Lock	Normal	Lock
5803 51	Fusing Motor: Lock	Normal	Lock
5803 52	Development Motor:CMY: Lock	Normal	Lock
5803 53	Drum Motor:CMY: Lock	Normal	Lock
5803 54	PP: D: SC	SC detected	No SC
5803 55	PP: CB: SC	SC detected	No SC
5803 56	PP: T1T2: SC	SC detected	No SC
5803 57	Fusing: Generation	Not detected	Detected
5803 58	Fusing: New	New	Not new
5803 59	Fusing: Destination	Set	Not set
5803 60	Fusing: Set	Set	Not set
5803 61	Zero-cross Signal	Not detected	Detected
5803 62	Fusing: Temperature	Detected	Not detected
5803 63	1-Bin: Set	Set	Not set
5803 64	1-Bin: Paper Sensor	Paper detected	Paper not detected
5803 65	1-Bin: Exit Sensor	Paper detected	Paper not detected
5803 66	Side Tray: Set	Set	Not set

5803 67	Upper Cover Sensor	Closed	Open
5803 68	Key Card: Set	Set	Not set
5803 69	Mechanical Counter: K: Set	Set	Not set
5803 70	Mechanical Counter: CMY: Set	Set	Not set
5803 71	Key Counter: Set	Set	Not set
5803 72	BCU Version	-	-
5803 77	Bank Feed Sensor 1	Paper detected	Paper not detected
5803 78	Bank Feed Sensor 2	Paper detected	Paper not detected
5803 79	Bank Feed Sensor 3	Paper detected	Paper not detected
5803 80	Bank Vertical Feed Sensor 1	Paper detected	Paper not detected
5803 81	Bank Vertical Feed Sensor 2	Paper detected	Paper not detected
5803 82	Bank Vertical Feed Sensor 3	Paper detected	Paper not detected
5803 83	Bank Cover Sensor 1		
5803 84	Bank Cover Sensor 2		
5803 94	LD OFF Check:Factory	-	-
5803 200	Scanner HP Sensor	Not HP	HP
5803 201	Platen Cover Sensor	Open	Close

Table 1: Paper Size Switch (Tray 1)

Switch 1 is used for tray set detection.

0: Pushed, 1: Not pushed

Models		Paper size sensor		
North America	**Europe/Asia**	**1**	**2**	**3**
A4	A4	0	1	1
LT	LT	1	1	1
Exe	Exe	1	1	0
HLT	A5	0	0	0
-	A6	1	0	0

Table 2: Paper Size Switch (Tray 2)

Switch 1 is used for tray set detection.

0: Pushed, 1: Not pushed

Models		Paper size sensor		
North America	**Europe/Asia**	**1**	**2**	**3**
LG	LG	0	0	0
A4	A4	0	1	1
HLT	A5	0	1	0
LT	LT	1	1	1
Exe	Exe	1	1	0
A6	A6	0	0	1
B6, B5	B6, B5	1	0	0

Table 3: Paper Size Switch (Tray 3 and 4)

Switch 1 is used for tray set detection.

0: Pushed, 1: Not pushed

Models		Paper size sensor		
North America	**Europe/Asia**	**1**	**2**	**3**
LG	LG	0	0	0
A4	A4	0	1	1
HLT	A5	0	1	0
LT	LT	1	1	1
Exe	Exe	1	1	0
A6	A6	0	0	1
B6, B5	B6, B5	1	0	0

ARDF

6007	**Description**	**Reading**	
		0	**1**
6007 9	Original Detection	Paper not detected	Paper detected
6007 13	Registration Sensor	Paper not detected	Paper detected
6007 15	Feed Cover	ADF cover closed	ADF cover open
6007 17	Inverter Sensor	Paper not detected	Paper detected

Internal Finisher

6145	Description	Reading	
		0	1
6145 1	Entrance Sensor	Paper not detected	Paper detected
6145 2	Paper Exit Sensor	Paper not detected	Paper detected
6145 3	Jogger Fence HP Sensor	Paper not detected	Paper detected
6145 4	Shift Roller HP Sensor	Paper not detected	Paper detected
6145 5	Gathering Roller Sensor	Paper not detected	Paper detected
6145 6	Exit Guide Plate Sensor	Paper not detected	Paper detected
6145 7	Staple Tray Paper Sensor	Paper not detected	Paper detected
6145 8	Shift Tray Paper Sensor	Paper not detected	Paper detected
6145 9	Shift Tray Full Sensor	Paper not detected	Paper detected
6145 10	Stapler HP Sensor	Paper not detected	Paper detected
6145 11	Staple Near End Sensor	Paper not detected	Paper detected
6145 12	Staple Self Priming Sensor	Paper not detected	Paper detected
6145 13	Front Door SW	Front door closed	Front door open

5.10.2 OUTPUT CHECK TABLE

Copier

5804	Display	Description
5804 3	Drum Motor: K: 260mm/s	-
5804 4	Drum Motor: K: 182mm/s	-
5804 5	Drum Motor: K: 85mm/s	-
5804 10	Fusing Motor: 260mm/s	-
5804 11	Fusing Motor: 182mm/s	-
5804 12	Fusing Motor: 85mm/s	-
5804 17	Development Motor: CMY: 260mm/s	-
5804 18	Development Motor: CMY: 182mm/s	-
5804 19	Development Motor: CMY: 85mm/s	-
5804 24	Drum Motor: CMY: 260mm/s	-
5804 25	Drum Motor: CMY: 182mm/s	-
5804 26	Drum Motor: CMY: 85mm/s	-
5804 31	Feed Motor: 364mm/s	-
5804 32	Feed Motor: 260mm/s	-
5804 33	Feed Motor: 182mm/s	-
5804 34	Feed Motor: 85mm/s	-
5804 39	Registration Motor: 260mm/s	-
5804 40	Registration Motor: 182mm/s	-
5804 41	Registration Motor: 85mm/s	-
5804 46	Inverter Motor: CW: 468mm/s	-

5804 47	Inverter Motor: CW: 260mm/s	-
5804 48	Inverter Motor: CW: 182mm/s	-
5804 49	Inverter Motor: CW: 85mm/s	-
5804 54	Inverter Motor: CCW: 468mm/s	-
5804 55	Inverter Motor: CCW: 260mm/s	-
5804 56	Inverter Motor: CCW: 182mm/s	-
5804 57	Inverter Motor: CCW: 85mm/s	-
5804 62	By-pass Motor: CCW: 260mm/s	-
5804 63	By-pass Motor: CCW: 182mm/s	-
5804 64	By-pass Motor: CCW: 85mm/s	-
5804 69	Duplex Motor: CCW: 468mm/s	-
5804 70	Duplex Motor: CCW: 260mm/s	-
5804 71	Duplex Motor: CCW: 182mm/s	-
5804 72	Duplex Motor: CCW: 85mm/s	-
5804 77	Vertical Feed Motor: 364mm/s	-
5804 78	Vertical Feed Motor: 260mm/s	-
5804 79	Vertical Feed Motor: 182mm/s	-
5804 80	Vertical Feed Motor: 85mm/s	-
5804 83	Transfer Belt Contact Motor: CW	-
5804 84	Transfer Belt Contact Motor: CCW	-
5804 85	Paper Transfer Roller Contact Motor: CW	-
5804 86	Paper Transfer Roller Contact Motor: CCW	-
5804 87	Toner Collection Motor: CW	-
5804 88	Toner Collection Motor: CCW	-

5804 89	1 Tray Lift Motor: CW	-
5804 90	1 Tray Lift Motor: CCW	-
5804 91	Toner Supply Motor: K	-
5804 92	Toner Supply Motor: M	-
5804 93	Toner Supply Motor: C	-
5804 94	Toner Supply Motor: Y	-
5804 95	LDU Shutter Motor: CW	-
5804 96	LDU Shutter Motor: CCW	-
5804 100	Fusing Fan: H	-
5804 101	Fusing Fan: L	-
5804 102	Fusing Fan 1: H	-
5804 103	Fusing Fan 1: L	-
5804 104	Polygon Motor: Standard Speed	-
5804 105	Polygon Motor: Middle Speed	-
5804 106	Polygon Motor: Low Speed	-
5804 107	Fusing Fan 2: H	-
5804 108	Fusing Fan 2: L	-
5804 109	Fusing Front Fan: H	-
5804 110	Fusing Front Fan: L	-
5804 111	Toner Supply Fan	-
5804 112	Drive Unit Fan	-
5804 113	Development Fan 1	
5804 114	Development Fan 2	-
5804 115	Development Fan	-
5804 116	Laser Unit Fan	-

5804 117	Feed Fan	-
5804 118	PSU Fan	-
5804 120	Development Clutch	-
5804 121	By-pass Solenoid	-
5804 122	1 Tray Lock Solenoid	-
5804 123	1 Tray Feed Solenoid	-
5804 124	Junction Gate Solenoid 1	-
5804 125	Junction Gate Solenoid 2	-
5804 130	PP: Charge DC: Y	-
5804 131	PP: Charge DC: M	-
5804 132	PP: Charge DC: C	-
5804 133	PP: Charge DC: K	-
5804 134	PP: Development: Y	-
5804 135	PP: Development: M	-
5804 136	PP: Development: C	-
5804 137	PP: Development: K	-
5804 138	PP: D	-
5804 139	PP: T1: Y	-
5804 140	PP: T1: M	-
5804 141	PP: T1: C	-
5804 142	PP: T1: K	-
5804 143	PP: T2: +	-
5804 144	PP: T2: -	-
5804 147	PP: Charge AC: Y: 260mm/s	-
5804 148	PP: Charge AC: Y: 182mm/s	-

5804 149	PP: Charge AC: Y: 85mm/s	-
5804 154	PP: Charge AC: M: 260mm/s	-
5804 155	PP: Charge AC: M: 182mm/s	-
5804 156	PP: Charge AC: M: 85mm/s	-
5804 161	PP: Charge AC: C: 260mm/s	-
5804 162	PP: Charge AC: C: 182mm/s	-
5804 163	PP: Charge AC: C: 85mm/s	-
5804 168	PP: Charge AC: K: 260mm/s	-
5804 169	PP: Charge AC: K: 182mm/s	-
5804 170	PP: Charge AC: K: 85mm/s	-
5804 181	HST Sensor: Y	-
5804 182	HST Sensor: M	-
5804 183	HST Sensor: C	-
5804 184	HST Sensor: K	-
5804 185	TM/P Sensor: Front/Y	-
5804 186	P Sensor: M	-
5804 187	TM/P Sensor: Center/C	-
5804 188	TM/P Sensor: Rear/K	-
5804 189	PCL: FC	-
5804 190	PCL: BK	-
5804 191	Toner End Sensor 5V CTL	-
5804 192	RFID ON/OFF: K	-
5804 193	RFID ON/OFF: C	-
5804 194	RFID ON/OFF: M	-
5804 195	RFID ON/OFF: Y	-

5804 196	RFID COM ON: K	-
5804 197	RFID COM ON: C	-
5804 198	RFID COM ON: M	-
5804 199	RFID COM ON: Y	-
5804 202	Scanner Lamp	-
5804 216	LD1: K	-
5804 217	LD2: K	-
5804 218	LD1: C	-
5804 219	LD2: C	-
5804 220	LD1: M	-
5804 221	LD2: M	-
5804 222	LD1: Y	-
5804 223	LD2: Y	-
5804 224	Bank Motor 1: 364mm/s	-
5804 225	Bank Motor 1: 260mm/s	-
5804 226	Bank Motor 1: 182mm/s	-
5804 227	Bank Motor 1: 136mm/s	-
5804 228	Bank Motor 1: 85mm/s	-
5804 229	Bank Motor 2: 364mm/s	-
5804 230	Bank Motor 2: 260mm/s	-
5804 231	Bank Motor 2: 182mm/s	-
5804 232	Bank Motor 2: 136mm/s	-
5804 233	Bank Motor 2: 85mm/s	-
5804 234	Bank Motor 3: 364mm/s	-
5804 235	Bank Motor 3: 260mm/s	-

5804 236	Bank Motor 3: 182mm/s	-
5804 237	Bank Motor 3: 136mm/s	-
5804 238	Bank Motor 3: 85mm/s	-
5804 239	Bank Feed Clutch 1	-
5804 240	Bank Feed Clutch 2	-
5804 241	Bank Feed Clutch 3	-
5804 242	Bank Pick-up Solenoid 1	-
5804 243	Bank Pick-up Solenoid 2	-
5804 244	Bank Pick-up Solenoid 3	-
5804 245	Bank Tray Lock Solenoid 1	-
5804 246	Bank Tray Lock Solenoid 2	-

ARDF

6008	**Display**	**Description**
6008 3	Feed Motor: Forward	-
6008 4	Feed Motor: Reverse	-
6008 5	Relay Motor: Forward	-
6008 9	Feed Clutch	-
6008 11	Junction Gate Solenoid	-

Internal Finisher

6146	Display	Description
6146 001	Carry Motor	Transport Motor
6146 002	Exit Motor	-
6146 003	Jogger Motor	-
6146 004	Sft Motor	Shift Roller Motor
6146 005	Hitroll Motor	Gathering Roller Motor
6146 006	Exit Guide Plate Motor	-
6146 007	Tray Motor	Tray Lift Motor
6146 008	Staple Motor	-
6146 009	Stopper Solenoid	Pick-up Solenoid

5.10.3 PRINTER SERVICE MODE

SP1-XXX (Service Mode)

1001	Bit Switch			
001	Bit Switch 1		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	**No I/O Timeout**	0: Disable	1: Enable
		Enable: The machine I/O Timeout setting will have no effect. I/O Timeouts will never occur.		
	bit 4	**SD Card Save Mode**	0: Disable	1: Enable
		Enable: Print jobs will be saved to an SD Card in the GW SD slot.		
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	**[RPCS,PCL]: Printable area frame border**	0: Disable	1: Enable
		Prints all RPCS and PCL jobs with a border around the printable area.		

1001	Bit Switch			
002	Bit Switch 2		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	**Applying a Collate Type**	0: Shift Collate	1: Normal Collate
		A collate type (shift or normal) will be applied to all jobs that do not explicitely define a collate type.		

		Note: If BitSwitch 5-0 is enabled, this BitSwitch has no effect.		
	bit 3	**[PCL5e/c,PS]: PDL Auto Switching**	0: Enable	1: Disable
		Disable: The machine ability to change the PDL processor mid-job. Some host systems submit jobs that contain both PS and PCL5e/c. If Auto PDL switching is disabled, these jobs will not be printed properly.		
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	**Bit Switch**			
003	Bit Switch 3		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	**[PCL5e/c]: Legacy HP compatibility**	0: Disable	1: Enable
		Enable: Uses the same left margin as older HP models such as HP4000/HP8000. In other words, the left margin defined in the job (usually "<ESC>*r0A") will be changed to "<ESC>*r1A"		
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	**Bit Switch**		
004	Bit Switch 4 DFU	-	-

1001	Bit Switch			
005	Bit Switch 5		0	1
	bit 0	**Show "Collate Type", "Staple Type" and "Punch Type" buttons on the operation panel.**	0: Disable	1: Enable
		If enabled, users will be able to configure a Collate Type, Staple Type, and Punch Type from the operation panel. The available Types will depend on the device and configured options. After enabling this BitSw, the settings will appear under: "User Tools > Printer Features > System"		
	bit 1	**Multiple copies if a paper size or type mismatch occurs**	0: Disable (Single copy)	1: Enable (Multiple copy)
		If a paper size or type mismatch occurs during the printing of multiple copies, only a single copy is output by default. Using this BitSw, the device can be configured to print all copies even if a paper mismatch occurs.		
	bit 2	**Prevent SDK applications from altering the contents of a job.**	0: Disable	1: Enable
		If this BitSw is enabled, SDK applications will not be able to alter print data. This is achieved by preventing SDK applications from accessing a module called the "GPS Filter". **Note:** The main purpose of this BitSw is for troubleshooting the effects of SDK applications on data.		
	bit 3	**[PS] PS Criteria**	0: Pattern3	1: Pattern1
		Change the number of PS criterion used by the PS interpreter to determine whether a job is PS data or not. Pattern3: includes most PS commands. Pattern1: A small number of PS tags and headers		
	bit 4	**Increase max number of the stored jobs to 1000 jobs.**	0: Disable (100)	1: Enable (1000)
		Enable: Changes the maximum number of jobs that can be stored on the		

System Maintenance

		HDD via Job Type settings to 1000. The default is 100.		
	bit 5	DFU	-	-
	bit 6	**Method for determining the image rotation for the edge to bind on.**	0: Disable	1: Enable
		If enabled, the image rotation will be performed as they were in the specifications of older models for the binding of pages of mixed orientation jobs. The old models are below: - PCL: Pre-04A models - PS/PDF/RPCS:Pre-05S models		
	bit 7	**Letterhead mode printing**	0: Disable	1: Enable (Duplex)
		Routes all pages through the duplex unit. If this is disabled, simplex pages or the last page of an odd-paged duplex job are not routed through the duplex unit. This could result in problems with letterhead/pre-printed pages. Only affects pages specified as Letterhead paper.		

1001	**Bit Switch**		
006	Bit Switch 6 DFU	-	-

1001	**Bit Switch**			
007	Bit Switch 7		0	1
	bit 0	**Print path**	0: Disable	1: Enable
		If enabled, simplex pages (in mixed simplex/duplex PS/PCL5 jobs only) and the last page of an odd paged duplex job (PS, PCL5, PCL6) are always routed through the duplex unit. Not having to switch paper paths increases the print speed slightly.		
	bit 1 to 7	DFU	-	-

1001	Bit Switch			
008	Bit Switch 8		0	1
	bit 0 to 2	DFU	-	-
	bit 3	**[PCL,PS]: Allow BW jobs to print without requiring User Code**	0: Disable	1: Enable (allow BW jobs to print without a user code)
		BW jobs submitted without a user code will be printed even if user code authentication is enabled. **Note:** Color jobs will not be printed without a valid user code.		
	bit 4 to 7	DFU	-	-

1001	Bit Switch			
009	Bit Switch 9		0	1
	bit 0	PDL Auto Detection timeout of jobs submitted via USB or Parallel Port (IEEE 1284).	0: Disable (Immediately)	1: Enable (10 seconds)
		To be used if PDL auto-detection fails. A failure of PDL auto-detection does not necessarily mean that the job cannot 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	DFU	-	-
	bit 3 to 7	DFU	-	-

1003	[Clear Setting]	
1003 001	Initialize System	Initializes settings in the System menu of the

		user mode.
1003 003	Delete Program	DFU

1004	**[Print Summary]**	
1004 001	Service Summary	Prints the service summary sheet (a summary of all the controller settings).

1005	**[Display Version]**	
1005 001	Printer Version	Displays the version of the controller firmware.

1007	**[Supply Display]**	
	Enables or disables the display for information on each consumable supply.	
1007 001	Development	[0 or 1 / **1** / 1 /step] 0: OFF, 1: ON
1007 002	PCU	
1007 003	Transfer	
1007 004	Int. Transfer	
1007 005	Transfer Roller	
1007 006	Fuser	
1007 007	Fuser Oil	

1101	**[ToneCtlSet]**	
1101 001	Tone (Factory)	Recalls a set of gamma settings. This can be either a) the factory setting, b) the previous setting, or c) the current setting.
1101 2	Tone (Prev.)	
1101 3	Tone (Current)	

1102	**[ToneCtlSet]**

	Sets the printing mode (resolution) for the printer gamma adjustment. The asterisk (*) shows which mode is set. ▪ 00: *1200x1200Photo ▪ 01: 600x600Text ▪ 02: 1200x1200Text ▪ 03: 1200x600Text ▪ 04: 600x600Photo ▪ 05: 1200x600Photo

1103	**[PrnColorSheet]**	
1103 001	ToneCtlSheet	Prints the test page to check the color balance before and after the gamma adjustment.
1103 002	ColorChart	

1104	**[ToneCtlValue]**	
	Adjusts the printer gamma for the mode selected in the Mode Selection menu.	
1104 001	Set Black 1	[0 to 255 / **16** / 1/step]
1104 021	Set Cyan 1	
1104 041	Set Magenta 1	
1104 061	Set Yellow 1	
1104 002	Set Black 2	[0 to 255 / **32** / 1/step]
1104 022	Set Cyan 2	
1104 042	Set Magenta 2	
1104 062	Set Yellow 2	
1104 003	Set Black 3	[0 to 255 / **48** / 1/step]
1104 023	Set Cyan 3	
1104 043	Set Magenta 3	
1104 063	Set Yellow 3	

1104 004	Set Black 4	[0 to 255 / **64** / 1/step]
1104 024	Set Cyan 4	
1104 044	Set Magenta 4	
1104 064	Set Yellow 4	
1104 005	Set Black 5	[0 to 255 / **80** / 1/step]
1104 025	Set Cyan 5	
1104 045	Set Magenta 5	
1104 065	Set Yellow 5	
1104 006	Set Black 6	[0 to 255 / **96** / 1/step]
1104 026	Set Cyan 6	
1104 046	Set Magenta 6	
1104 066	Set Yellow 6	
1104 007	Set Black 7	[0 to 255 / **112** / 1/step]
1104 027	Set Cyan 7	
1104 047	Set Magenta 7	
1104 067	Set Yellow 7	
1104 008	Set Black 8	[0 to 255 / **128** / 1/step]
1104 028	Set Cyan 8	
1104 048	Set Magenta 8	
1104 068	Set Yellow 8	
1104 009	Set Black 9	[0 to 255 / **144** / 1/step]
1104 029	Set Cyan 9	
1104 049	Set Magenta 9	
1104 069	Set Yellow 9	
1104 010	Set Black 10	[0 to 255 / **160** / 1/step]

1104 030	Set Cyan 10	
1104 050	Set Magenta 10	
1104 070	Set Yellow 10	
1104 011	Set Black 11	[0 to 255 / **176** / 1/step]
1104 031	Set Cyan 11	
1104 051	Set Magenta 11	
1104 071	Set Yellow 11	
1104 012	Set Black 12	[0 to 255 / **192** / 1/step]
1104 032	Set Cyan 12	
1104 052	Set Magenta 12	
1104 072	Set Yellow 12	
1104 013	Set Black 13	[0 to 255 / **208** / 1/step]
1104 033	Set Cyan 13	
1104 053	Set Magenta 13	
1104 073	Set Yellow 13	
1104 014	Set Black 14	[0 to 255 / **224** / 1/step]
1104 034	Set Cyan 14	
1104 054	Set Magenta 14	
1104 074	Set Yellow 14	
1104 015	Set Black 15	[0 to 255 / **240** / 1/step]
1104 035	Set Cyan 15	
1104 055	Set Magenta 15	
1104 075	Set Yellow 15	

1105	**[ToneCtlSave]**

	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.

1106	**[Toner Limit Value]**	
	Adjusts the maximum toner amount for image development.	
1106 001	TonerLimitValue	[100 to 400 / **260** / 1%/step]

1110	**[Media Print Support]**	
	Enable or disable the media print support function.	
1110 001	-	[0 to 1 / **1** / 1/step]

5.10.4 SCANNER SERVICE MODE

SP1-xxx (System and Others)

1004	**[Compression Type]**		
	Selects the compression type for binary picture processing.		
1004 1	Compression Type	*CTL	[1 to 3 / **1** / 1/step] 1: MH, 2: MR, 3: MMR

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.		
1005 1	Range from 0 to 5 mm	*CTL	[0 to 5 / **0** / 1 mm/step]

1009	**[Remote scan disable]**	*CTL	[0 or 1 / **0** / -] 0: enable, 1: disable
1009 1	Enable or disable remote scan.		

1010	**[Non Display Clear Light PDF]**	*CTL	[0 or 1 / **0** / -] 0: Display, 1: No display
1010 1	Enable or disable remote scan.		

SP2-XXX (Scanning-image quality)

2021	**[Compression Level (Gray-scale)]**		
	Selects the compression ratio for grayscale processing mode (JPEG) for the three settings that can be selected at the operation panel.		
2021 1	Level 3 (Middle Image Quality)	*CTL	[5 to 95 / **40** / 1 /step]

2021 2	Level 2 (High Image Quality)		[5 to 95 / **50** / 1 /step]
2021 3	Level 4 (Low Image Quality)		[5 to 95 / **30** / 1 /step]
2021 4	Level 1 (Highest Image Quality)		[5 to 95 / **60** / 1 /step]
2021 5	Level 5 (Lowest Image Quality)		[5 to 95 / **20** / 1 /step]

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.		
2024 1	Compression Ratio (Normal image)	*CTL	[5 to 95 / **25** / 1 /step]
2024 2	Compression Ratio (High comp image)		[5 to 95 / **20** / 1 /step]

5.10.5 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.

1. Enter the SP mode and select **SP2-109-003**.
2. Enter the number for the test pattern that you want to print and press [OK].
3. When you want to select the single color of Magenta, Yellow or Cyan for printing a test pattern, select the color with SP2-109-005 (2: Cyan, 3: Magenta, 4: Yellow).
4. When you want to change the density of printing a test pattern, select the density with SP2-109-006 to -009 for each color.

   Note

   - If you select "0" with SP2-109-006 to -009, the color to be adjusted to "0" does not come up on a test pattern.
5. When you are prompted to confirm your selection, touch "Yes" to select the test pattern for printing.
6. Touch "Copy Window" to open the copy window, then select the settings for the test print (paper size etc.).

   Note

   - If you want to use black and white printing, touch "Black & White" on the LCD. If you want to use color printing, touch "Full Colour" on the LCD.
7. Press the "Start" key to start the test print.
8. After checking the test pattern, touch "SP Mode" on the LCD to return to the SP mode display.
9. Reset all settings to the default values.
10. Touch "Exit" twice to exit SP mode.

No.	Pattern	No.	Pattern
0	None	12	Independent Pattern (2dot)
1	Vertical Line (1dot)	13	Independent Pattern (4dot)
2	Vertical Line (2dot)	14	Ttrimming Area
3	Horizontal Line (1dot)	15	Hound's Tooth Check (Vertical)
4	Horizontal Line (2dot)	16	Hound's Tooth Check (Horizontal)
5	Grid Vertical Line	17	Band (Vertical)
6	Grid Horizontal Line	18	Band (Horizontal)
7	Grid Pattern Small	19	Checkered Flag Pattern
8	Grid Pattern Large	20	Grayscale (Vertical Margin)
9	Argyle Patter Small	21	Grayscale (Horizontal Margin)
10	Argyle Patter Large	22	Two Beam
11	Independent Pattern (1dot)	23	Full Dot Pattern

5.11 FIRMWARE UPDATE

To update the firmware for this machine, you must have the new version of the firmware downloaded onto an SD (Secure Digital) Card. The SD Card is inserted into SD Card Slot 2 on the left rear side of the controller box.

5.11.1 TYPE OF FIRMWARE

There are several types of firmware as shown below.

Type of firmware	**Function**	**Location of firmware**	**Message shown**
Engine	Printer engine control	BCU Flash ROM	Engine
System/Copy Application	Operating system	Flash ROM on the controller board	System/Copy
Lcdc	Panel control	LCDC	Lcdc
ADF	ADF control	ADF Main Control Board	ADF
Finisher	Finisher control	Finisher	Finisher1
NIB/DESS	Network Interface/ Security control	Flash ROM on the controller board	NetworkSupport
Security & Encryption	HDD encryption/ Data Overwrite	Standard Security & Encryption unit SD card	HDD Format Option
Language (16 languages)	Language firmware Two languages can be selected from 16 languages.	Operation Panel	Language1/ Language2
RPCS	Page description language (RPCS for XPS driver data process)	Flash ROM on the controller board	RPCS

PS3/ PDF Adobe	Page description language (PostScript3)	Flash ROM on the controller board	PS/ PDF
PCL	Page description language (PCL)	Flash ROM on the controller board	PCL/ PCLXL
PictBridge	PictBridge control	Flash ROM on the controller board	PictBridge
MediaPrint:JPEG/TIFF	MediaPrint control	Flash ROM on the controller board	MediaPrint:JPEG/TIFF
Summary Font	Summary fonts	Flash ROM on the controller board	FONT
PCL Font	PCL fonts	Flash ROM on the controller board	FONT1
PS Font	PostScript3 fonts	Flash ROM on the controller board	FONT2
Netfile Application	Feature application	Flash ROM on the controller board	NetworkDocBox
Fax Application	Feature application	Flash ROM on the controller board	Fax
Printer Application	Feature application	Flash ROM on the controller board	Printer
Scanner Application	Feature application	Flash ROM on the controller board	Scanner
Remote Fax	Fax control	Flash ROM on the controller board	RFax
WebSys	Web Service application	Flash ROM on the controller board	Web Support
WebDocBox	Document server application	Flash ROM on the controller board	Web Uapl

Java VM	Java VM platform	Standard Java VM SD card	SDK1

5.11.2 BEFORE YOU BEGIN

An SD card is a precision device. Always observe the following precautions when you handle SD cards:

- Always switch the machine off before you insert an SD card. Never insert the SD card into the slot with the power on.
- Do not remove the SD card from the service slot after the power has been switched on.
- Never switch the machine off while the firmware is downloading from the SD card.
- Keep SD cards in a safe location where they are not exposed to high temperature, high humidity, or exposure to direct sunlight.
- Always handle SD cards with care. Do not bend or scratch them. Do not let the SD card get exposed to shock or vibration.
- Make sure that the write protection of an SD card is unlocked when you download an application to it. If not, downloading fails and a download error (e.g. Error Code 44) occurs during a firmware upgrade.

Keep the following points in mind when you use the firmware update software:

- "Upload" means to send data from the machine to the SD card. "Download" means to send data from the SD card to the machine.
- To select an item on the LCD, touch the appropriate button on the soft touch-screen of the LCD, or, press the appropriate number key on the 10-key pad of the operation panel. For example, when "Exit (0)" shows on the screen you can touch the Exit button on the screen, or, press the "0" button on the operation panel of the copier.
- Make sure that the machine is disconnected from the network to prevent a print job for arriving while the firmware update is in progress before you start the firmware update procedure.

5.11.3 UPDATING FIRMWARE

Preparation

- If the SD card is blank, copy the entire "romdata" folder onto the SD card.
- If the card already contains the "romdata" folder, copy the "M022" folder onto the card.

If the card already contains folders up to " M022"", copy the necessary firmware files (e.g. D086xxxx.fwu) into this folder.

Note

- Do not put multiple machine firmware programs on the same SD card. Copy the only model firmware you want.

Updating Procedure

1. Turn the main power switch off.
2. Remove the slot cover (x 1).
3. Insert the SD card into SD Card Slot 2. Make sure the label on the SD card faces the front side of the machine.
4. Slowly push the SD card into the slot so it locks in place. You will hear it click. Make sure the SD card locks in place.

   Note

   - To remove the SD, push it in to unlock the spring lock. Then release it so it pops out of the slot.
5. Disconnect the network cable from the copier if the machine is connected to a network.
6. Switch the main power switch on. After about 45 seconds, the initial version update screen appears on the LCD in English.
7. On the screen, touch the button or press the corresponding number key on the operation panel to select the item in the menu that you want to update.

ROM/NEW	What it means
ROM:	Tells you the number of the module and name of the version currently installed. The first line is the module number, the second line the version name.
NEW:	Tells you the number of the module and name version on the SD card. The first line is the module number, the second line the version name.

Note

- Controller, engine and operation panel firmware cannot be updated at the same time. It is recommended to update firmware modules one by one.

8. Touch "UpDate (#)" (or) to start the update.

Note

- The progress bar does not show for the operation panel firmware after you touch "OpPanel". The power on key flashes on and off at 0.5 s intervals when the LCDC firmware is updating. The power key flashes on and off at 3 s intervals when the update is finished.

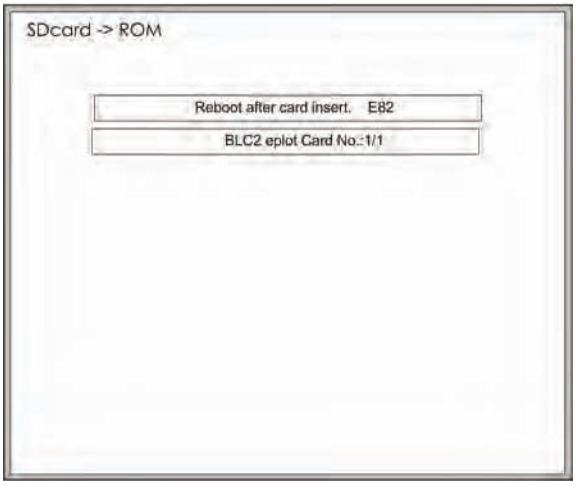
9. The "Update is Done" message appears on the operation panel after completing the updating. The message differs depending on the firmware that has been updated.
10. Switch the copier main power switch off when you see the "Update is Done" message or follow the procedure that is displayed on the operation panel.
11. Press in the SD card to release it. Then remove it from the slot.
12. Switch the copier on for normal operation.

Error Messages

An error message shows in the first line if an error occurs during the download.
The error code consists of the letter "E" and a number. The example above shows error "E24" displayed. For details, refer to the Error Message Table (see "Handling Firmware Update Error").

Firmware Update Error

If a firmware update error occurs, this means the update was cancelled during the update because the module selected for update was not on the SD card.



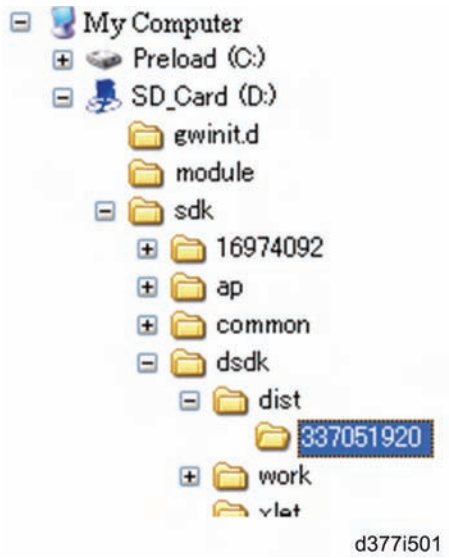
Recovery after Power Loss

If the ROM update is interrupted as a result of accidental loss of power while the firmware is updating, then the correct operation of the machine cannot be guaranteed after the machine is switched on again. If the ROM update does not complete successfully for any reason, then in order to ensure the correct operation of the machine, the ROM update error will continue to show until the ROM is updated successfully.
In this case, insert the card again and switch on the machine to continue the firmware download automatically from the card without the menu display.

5.11.4 UPDATE PROCEDURE FOR APP2ME PROVIDER

Follow this procedure to update App 2 Me if a new version is available.

1. Push the [User/Tools] key on the operation panel.
2. If an administrator setting is registered for the machine, Step 3 and Step 4 are required. Otherwise, skip to step 5.
3. Push [Login/Logout] on the operation panel.
4. Login with the administrator user name and password.
5. Touch "Extended Feature Settings" twice on the LCD.
6. Touch each of the applications until the status changes to "Stop".
7. Turn the machine off, and then remove the VM Card.



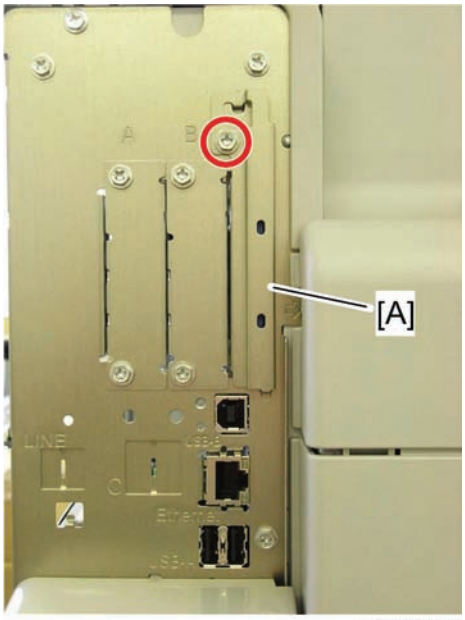
8. Prepare the newer App2Me Provider zip file from the Firmware Download Center, and then unzip the zip file (The folder name is "337051920").
9. Copy the App2Me Provider folder into the specified path for the VM card. The path is: "SD_Card Drive¥ sdk¥dsdk¥dist¥337051920"
10. Turn the SD card label face to the front of the machine, and then push it slowly into Slot 2 (lower slot) until you hear a click.

11. Turn the main power switch on.
12. Press [User Tools] on the operation panel.
13. Touch the "Extended Feature Settings" button twice.
14. Touch the "Extended Feature Info" tab on the LCD.
15. Touch the "App2Me" line.
16. Set the setting of the "Auto Start" to "On".
17. Touch the "Exit" button.
18. Exit the [User Tools/Counter] settings.

Important

- App2Me and all other running applications on the VM card must be shut down before removing the VM card in order to update the firmware, back up NVRAM, install the browser unit, or execute application move or undo with SP5873.
- After the VM card is re-inserted, App2Me (and any other VM card applications used by the customer) must be switched on after the machine is switched on.

5.11.5 BROWSER UNIT UPDATE PROCEDURE



m022i151b

1. Remove the slot cover [A] for SD cards (x 1).
2. Remove the VM card from slot 2.
3. Turn the SD-card label face of the browser unit to the front of the machine. Then push it slowly into slot 2 until you hear a click.
4. Plug in and turn on the main power switch.
5. Push the "User Tools" key.
   - If an administrator setting is registered for the machine, step 5 and 6 are required. Otherwise, skip to the step 7.

6. Push the "Login/ Logout" key.
7. Login with the administrator user name and password.
8. Touch "Extended Feature Settings" twice on the LCD.
9. Touch "Uninstall" on the LCD.
10. Touch the "Browser" line.
11. Confirmation message appears on the LCD.
12. Touch "Yes" to proceed.
13. Reconfirmation message appears on the LCD.
14. Touch "Yes" to uninstall the browser unit.
15. You will see "Uninstalling the extended feature... Please wait.", and then "Completed".
16. Touch "Exit" to go back to the setting screen.
17. Exit "User/Tools" setting, and then turn off the main power switch.
18. Remove the SD card of the browser unit from SD card slot 2.
19. Overwrite the updated program in the "sdk" folder of the browser unit application with PC.
20. Do the "Installation Procedure" to install the browser unit.

5.11.6 HANDLING FIRMWARE UPDATE ERRORS

An error message shows in the first line if an error occurs during a download. The error code consists of the letter "E" and a number ("E20", for example).

Error Message Table

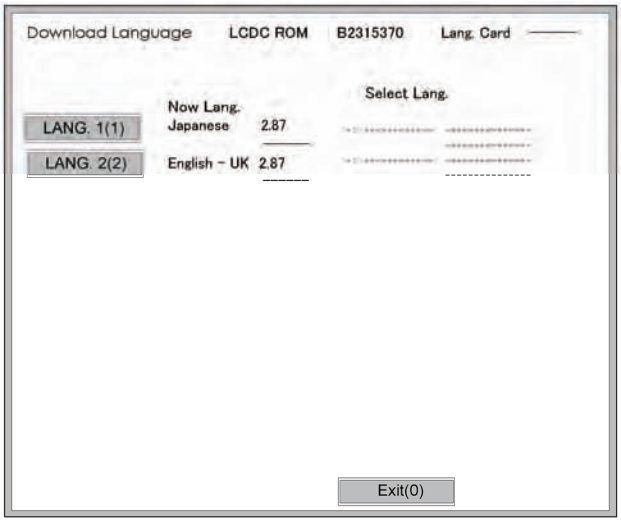
Code	Meaning	Solution
20	Cannot map logical address	Make sure the SD card is inserted correctly.
21	Cannot access memory	HDD connection incorrect or replace hard disks.
22	Cannot decompress compressed data	Incorrect ROM data on the SD card, or data is corrupted.
23	Error occurred when ROM update program started	Controller program abnormal. If the second attempt fails, replace controller board.
24	SD card access error	Make sure SD card inserted correctly, or use another SD card.
30	No HDD available for stamp data download	HDD connection incorrect or replace hard disks.
31	Data incorrect for continuous download	Insert the SD card with the remaining data required for the download, the re-start the procedure.
32	Data incorrect after download interrupted	Execute the recovery procedure for the intended module download, then repeat the installation procedure.
33	Incorrect SD card version	Incorrect ROM data on the SD card, or data is corrupted.
34	Module mismatch - Correct module is not on the SD card)	SD update data is incorrect. Acquire the correct data (Japan, Overseas, OEM, etc.) then install again.
35	Module mismatch - Module on SD card is not for this machine	SD update data is incorrect. The data on the SD card is for another machine. Acquire correct update data then install again.

36	Cannot write module - Cause other than E34, E35	SD update data is incorrect. The data on the SD card is for another machine. Acquire correct update data then install again.
40	Engine module download failed	Replace the update data for the module on the SD card and try again, or replace the BCU board.
42	Operation panel module download failed	Replace the update data for the module on the SD card and try again, or replace the LCDC.
43	Stamp data module download failed	Replace the update data for the module on the SD card and try again, or replace the hard disks.
44	Controller module download failed	Replace the update data for the module on the SD card and tray again, or replace controller board.
50	Electronic confirmation check failed	SD update data is incorrect. The data on the SD card is for another machine. Acquire correct update data then install again.

5.12 INSTALLING ANOTHER LANGUAGE

Many languages are available. But you can only switch between two languages at a time. Do the following procedure to select the two languages you want. You can select both of the languages you want from the user interface on the operation panel.

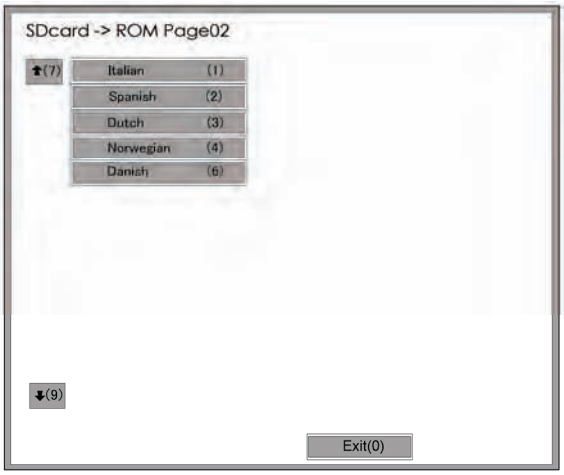
1. Switch the copier main power switch off.
2. Remove the SD slot cover (x 1).
3. Insert the SD card with the language data into SD Card Slot 2.
4. Switch the copier main power switch on. The initial screen opens after about 45 seconds.
5. Touch "Language Data (2)" on the screen (or press the "2" key).



6. Touch "LANG. 1(1)" or "LANG. 2(2)".

Key	What it does
LANG. 1(1)	Touch this button on the screen (or press the "1" key on the 10-key pad) to open the next screen so you can select the 1st language.
LANG. 1(2)	Touch this button on the screen (or press the "2" key on the 10-key pad) to open the next screen so you can select the 2nd language.
Exit(0)	Touch this key on the screen (or press the "0" key on the 10-key pad) to quit the update procedure and return to normal screen.

7. Touch "LANG 1(1)" to select the 1st Language. Touch "LANG (2)" to select the 2nd Language.



8. Touch the appropriate button on the screen (or press the number on the 10-keypad) to select a language as the 1st (or 2nd) language.
   - If a language is already selected, it will show in reverse.
   - Touching "Exit (0)" returns you to the previous screen.
9. If you do not see the language that you want to select, touch "↑ (7)" or "↓ (9)" on the screen (or press the "7" or "9" key) to show more choices.
   The Download Screen opens after you select a language.
   The 1st or 2nd language selected for updating shows.
   The following show to right of the selection:
   - 1. The first column shows the language currently selected.
   - 2. The 2nd column shows the language selected to replace that language.

   The example below shows that the download will replace "Japanese" with "Italian" as the 1st language.

10. Touch "Update(#)" on the screen (or press #) to start the download.
    Another screen with a progress bar does not show when the language is downloading.
    The following occur at the time the language is downloading:
    - The operation panel switches off.

- The LED on the power on key flashes rapidly.

11. After the message of installation completed has shown on the LCD, switch the copier main power switch off. Then remove the SD card from the slot.
12. Switch the copier main power switch on to resume normal operation.

5.13 REBOOT/SYSTEM SETTING RESET

5.13.1 SOFTWARE RESET

You can reboot the software with one of the following two procedures:

1. Turn the main power switch off and on.
2. Press and hold down ⊙ and # together for over 10 seconds. When the machine beeps once, release both buttons. After "Now loading. Please wait" shows for a few seconds, the copy window will open. The machine is ready for normal operation.

5.13.2 SYSTEM SETTINGS AND COPY SETTING RESET

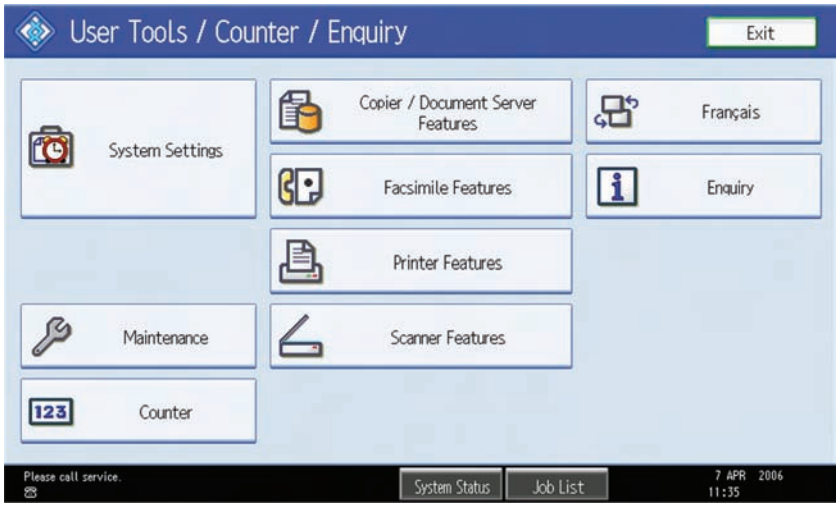
System Setting Reset

The system settings in the UP mode can be reset to their defaults. Use the following procedure.

1. Press User Tools/Counter.
2. Hold down # and then press System Settings.

Note

- You must press # first.



3. Press yes when the message prompts you to confirm that you want to reset the system settings.
4. Press exit when the message tells you that the settings have been reset.

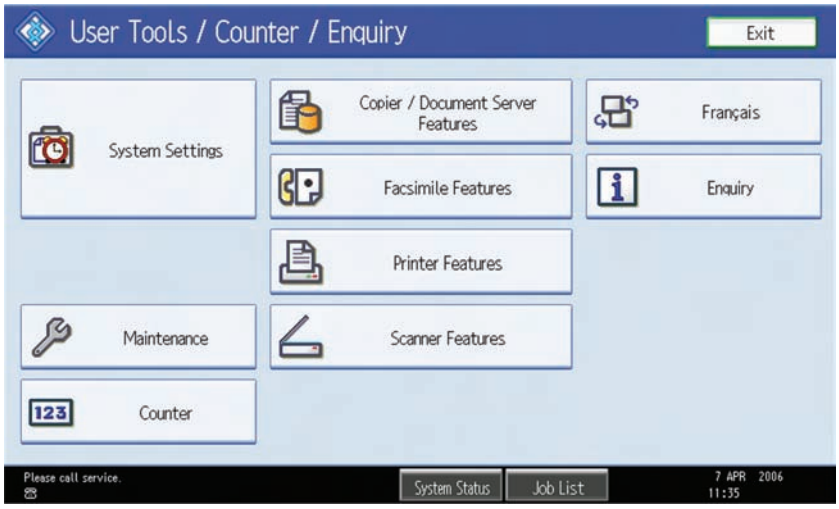
Copier Setting Reset

Use the following procedure to reset the copy settings in the UP mode to their defaults.

1. Press User Tools/Counter .
2. Hold down # and then press Copier/Document Server Settings.

Note

- You must press # first.



3. Press "Yes" when the message prompts you to confirm that you want to reset the Copier Document Server settings.
4. Press exit when the message tells you that the settings have been reset.

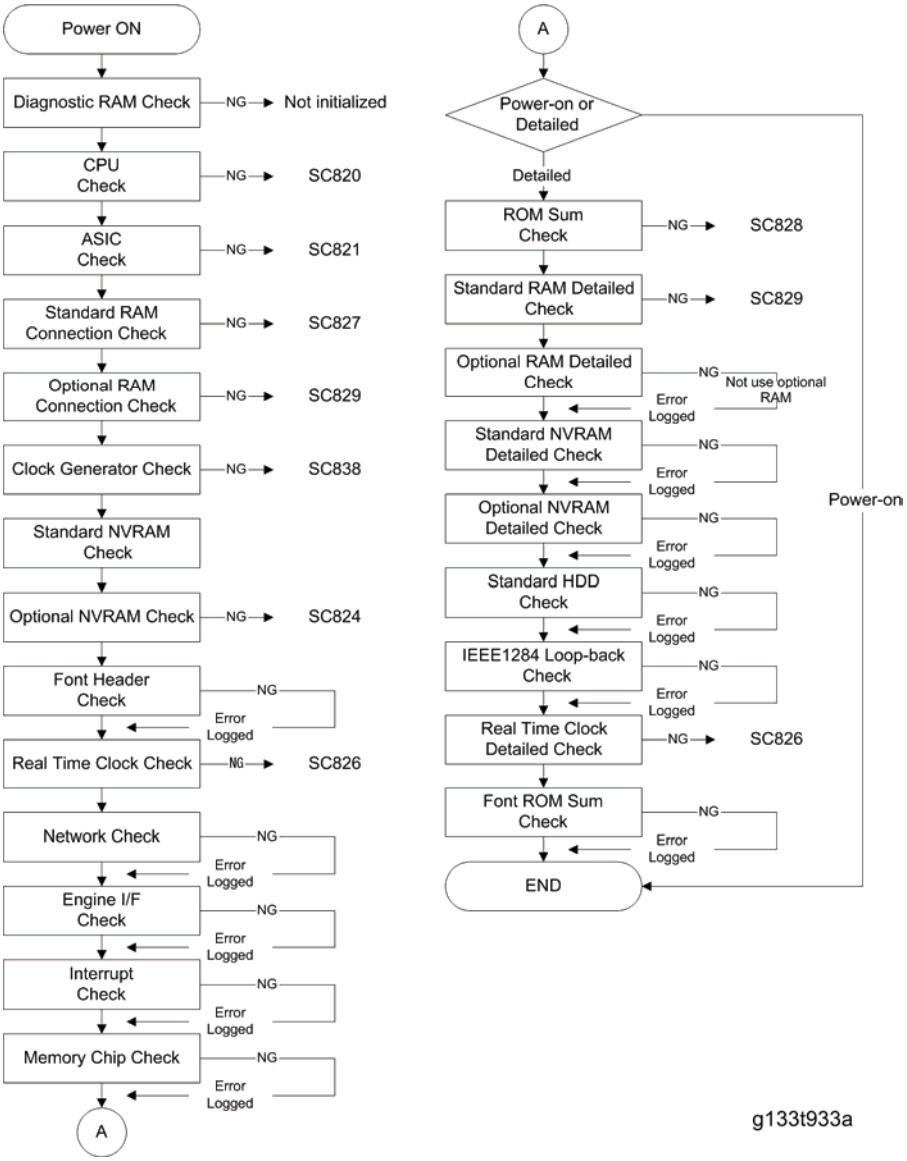
5.14 CONTROLLER SELF-DIAGNOSTICS

5.14.1 OVERVIEW

There are three types of self-diagnostics for the controller.

1. Power-on self-diagnostics: The machine automatically starts the self-diagnostics just after the power has been turned on.
2. SC detection: The machine automatically detects SC conditions at power-on or during operation.

The following shows the workflow of the power-on and detailed self-diagnostics.



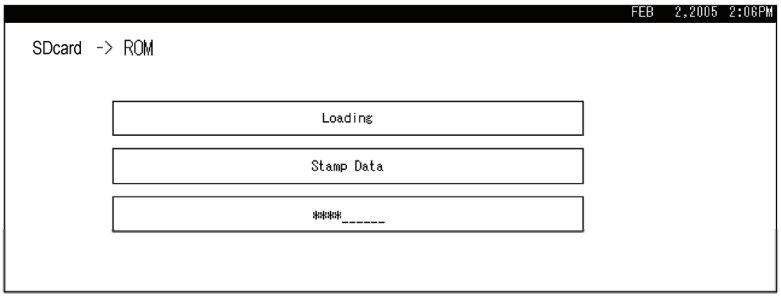
5.15 DOWNLOADING STAMP DATA

The stamp data should be downloaded from the controller firmware to the hard disks at the following times:

- After the hard disks have been replaced.

The print data contains the controller software. Execute SP 5853 to download the fixed stamp data required by the hard disks.

1. Enter the SP mode.
2. Select SP5853 and then press "EXECUTE". The following screen opens while the stamp data is downloading.



The download is finished when the message prompts you to close.

3. Press the "Exit" button. Then turn the copier off and on again.

5.16 NVRAM DATA UPLOAD/DOWNLOAD

5.16.1 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 SP5990-001 (SMC Print) before you switch the machine off. You will need a record of the NVRAM settings if the upload fails.
2. Switch the copier main power switch off.
3. Remove the SD slot cover (x 1).
4. Insert the SD card into SD card slot 2. Then switch the copier on.
5. Execute SP5824-001 (NVRAM Data Upload) and then press the "Execute" key.
6. The following files are coped to an NVRAM folder on the SD card when the upload procedure is finished. The file is saved to the path and the following filename:
   NVRAM¥<serial number>.NV
   Here is an example with Serial Number "K5000017114":
   NVRAM¥K5000017114.NV
7. 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.

5.16.2 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 and BCU is defective.
- Do the download procedure again if the download fails.
- Do the following procedure if the second attempt fails:
- Enter the NVRAM data manually using the SMC print you created before uploading the NVRAM data.

1. Switch the copier main power switch off.
2. Remove the SD slot cover (x 1).
3. Insert the SD card with the NVRAM data into SD Card Slot 2.
4. Switch the copier main power switch on.
5. Do SP5825-001 (NVRAM Data Download) and press the "Execute" key.

Note

- The serial number of the file on the SD card must match the serial number of the machine for the NVRAM data to download successfully. The download fails if the serial numbers do not match.

This procedure does not download the following data to the NVRAM:

- Total Count
- C/O, P/O Count

5.17 ADDRESS BOOK UPLOAD/DOWNLOAD

5.17.1 INFORMATION LIST

The following information is possible to be uploaded and downloaded.

Information	
▪ Registration No. ▪ User Code ▪ E-mail ▪ Protection Code ▪ Fax Destination ▪ Fax Option ▪ Group Name ▪ Key Display	▪ Select Title ▪ Folder ▪ Local Authentication ▪ Folder Authentication ▪ Account ACL ▪ New Document Initial ACL ▪ LDAP Authentication

5.17.2 DOWNLOAD

1. Prepare a formatted SD card.
2. Make sure that the write-protection on the SD card is off.
3. Turn off the main power switch of the main machine.
4. Remove the SD slot cover at the left rear side of the machine (x 1).
5. Install the SD card into the SD card slot 2 (for service use).
6. Turn on the main power switch.
7. Enter the SP mode.
8. Do SP5-846-051 (Backup All Addr Book).
9. Exit the SP mode, and then turn off the main power switch.
10. Remove the SD card form the SD card slot 2.
11. Install the SD slot cover.

Note

- If the capacity of SD card is not enough to store the local user information, an error message is displayed.
- Carefully handle the SD card, which contains user information. Do not take it back to your location.

5.17.3 UPLOAD

1. Turn off the main power switch of the main machine.
2. Remove the SD slot cover at the left rear side of the machine (x 1).
3. Install the SD card, which has already been uploaded, into the SD card slot 2.
4. Turn on the main power switch.
5. Enter the SP mode.
6. Do SP5-846-052 (Restore All Addr Book).
7. Exit the SP mode, and then turn off the main power switch.
8. Remove the SD card form the SD card slot 2.
9. Install the SD slot cover.

Note

- The counter in the user code information is initialized after uploading.
- The information of an administrator and supervisor cannot be downloaded nor uploaded.
- If there is no data of address book information in the SD card, an error message is displayed.

5.18 USING THE DEBUG LOG

5.18.1 OVERVIEW

This machine provides a Save Debug Log feature that allows the Customer Engineer to save and retrieve error information for analysis.

Every time an error occurs, debug information is recorded in volatile memory. But this information is lost when the machine is switched off and on.

To capture this debug information, the Save Debug Log feature provides two main features:

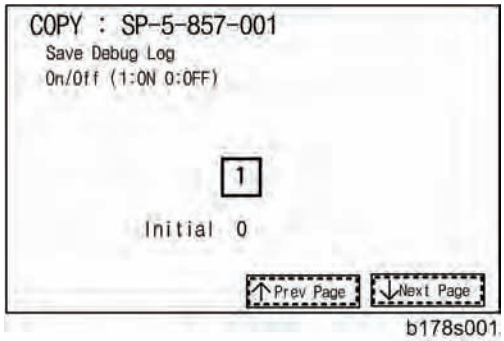
- Switching on the debug feature so error information is saved directly to the HDD for later retrieval.
- Copying the error information from the HDD to an SD card.

Do the following procedure below to set up the machine so the error information is saved automatically to the HDD when a user has problems with the machine. Then ask the user to reproduce the problem.

5.18.2 SWITCHING ON AND SETTING UP SAVE DEBUG LOG

The debug information cannot be saved until the "Save Debug Log" function has been switched on and a target has been selected.

1. Enter the SP mode and switch the Save Debug Log feature on.
   - Enter the SP mode.
   - Touch "System SP".
   - On the LCD panel, open SP5857.
2. Under "5857 Save Debug Log", touch "1 On/Off".

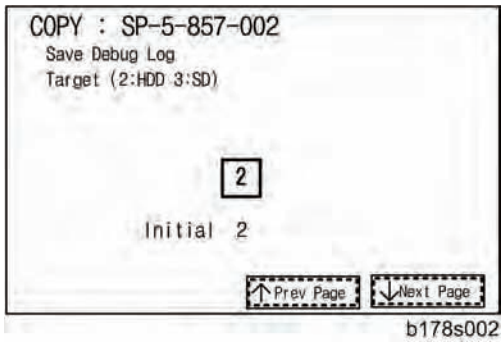


b178s001

3. On the control panel keypad, press "1". Then press #. This switches the Save Debug Log feature on.

Note

- The default setting is "0" (OFF). This feature must be switched on in order for the debug information to be saved.



b178s002

4. Select the target destination where the debug information will be saved. Under "5857 Save Debug Log", touch "2 Target", enter "2" with the operation panel key to select the hard disk as the target destination. Then press #.

Note

- Select "3 SD Card" to save the debug information directly to the SD card if it is inserted in the service slot.

5. Now touch "5858" and specify the events that you want to record in the debug log. SP5858 (Debug Save When) provides the following items for selection.

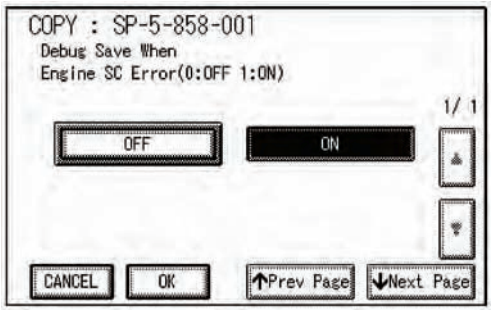
1	Engine SC Error	Saves data when an engine-related SC code is generated.
2	Controller SC Error	Saves debug data when a controller-related SC Code is generated.
3	Any SC Error	Saves data only for the SC code that you specify by entering code number.
4	Jam	Saves data for jams.

Note

- More than one event can be selected.

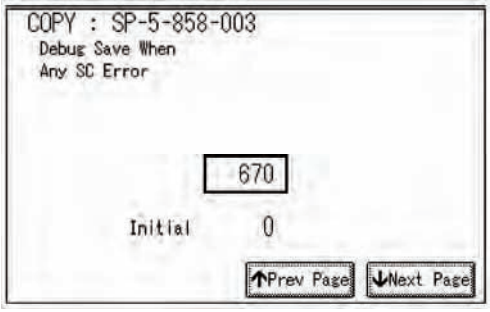
Example 1: To Select Items 1, 2, 4

Touch the appropriate items(s). Press "ON" for each selection. This example shows "Engine SC Error" selected.



Example 2: To Specify an SC Code

Touch "3 Any SC Error", enter the 3-digit SC code number with the control panel number keys. Then press #. This example shows an entry for SC670.



Note

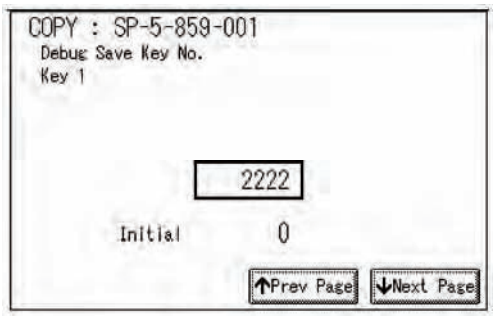
- For details about SC code numbers, please refer to the SC tables in Section 4. "Troubleshooting".

6. Select one or more memory modules for reading and recording debug information. Touch "5859".
   Under "5859" press the necessary key item for the module that you want to record.
   Enter the appropriate 4-digit number. Then press #.

Note

- Refer to the two tables below for the 4-digit numbers to enter for each key.

The example below shows "Key 1" with "2222" entered.



The following keys can be set with the corresponding numbers (The initials in parentheses indicate the names of the modules).

4-Digit Entries for Keys 1 to 10

Key No.	Copy	Printer	Scanner	Web
1	2222 (SCS)			
2	14000 (SRM)			
3	256 (IMH)			
4	1000 (ECS)			
5	1025 (MCS)			
6	4848 (COPY)	4400 (GPS)	5375 (Scan)	5682 (NFA)
7	2224 (BCU)	4500 (PDL)	5682 (NFA)	6600 (WebDB)
8		4600 (GPS-PM)	3000 (UCS)	3300 (PTS)
9		2000 (NCS)	2000 (NCS)	6666 (WebSys)
10		2224 (BCU)	4126 (DCS)	2000 (NCS)

Note

- The default settings for Keys 1 to 10 are all zero ("0").

Key to Acronyms

Acronym	Meaning	Acronym	Meaning
ECS	Engine Control Service	NFA	Net File Application
GPS	GW Print Service	PDL	Printer Design Language
GSP-PM	GW Print Service – Print Module	PTS	Print Server
IMH	Image Memory Handler	SCS	System Control Service
MCS	Memory Control Service	SRM	System Resource Management
NCS	Network Control Service	WebDB	Web Document Box (Document Server)

The machine is now set to record the debugging information automatically on the HDD (the target selected with SP5857-002) for the events that you selected with SP5858 and the memory modules selected with SP5859.

Please keep the following important points in mind when you do this setting:

- Note that the number entries for Keys 1 to 5 are the same for the Copy, Printer, Scanner, and Web memory modules.
- The initial settings are all zero.
- These settings remain in effect until you change them. Be sure to check all the settings, especially the settings for Keys 6 to 10. To switch off a key setting, enter a zero for that key.
- You can select any number of keys from 1 to 10 (or all) by entering the corresponding 4-digit numbers from the table.
- You cannot mix settings for the groups (COPY, PRINTER, etc.) for 006 to 010. For example, if you want to create a PRINTER debug log you must select the settings from the 9 available selections for the "PRINTER" column only.
- One area of the disk is reserved to store the debug log. The size of this area is limited to 4 MB.

5.18.3 RETRIEVING THE DEBUG LOG FROM THE HDD

Retrieve the debug log by copying it from the hard disk to an SD card.

1. Insert the SD card into slot 2 (service slot) of the copier.
2. Enter the SP mode and execute SP5857-009 (Copy HDD to SD Card (Latest 4 MB)) to write the debugging data to the SD card.
3. Use a card reader to copy the file and send it for analysis to your local Ricoh representative by email. You can also send the SD card by regular mail if you want.

5.18.4 RECORDING ERRORS MANUALLY

SC errors and jams only are recorded to the debug log automatically. Please instruct the user to do the following immediately after occurrence to save the debug data for any other errors that occur while the customer engineer is not on site. Such problems also include a controller or panel freeze.

Note

- You must previously switch on the Save Debug Feature (SP5857-001) and select the hard disk as the save destination (SP5857-002) if you want to use this feature.

1. Press (Clear Modes).on the operation panel when the error occurs.
2. On the control panel, enter "01". Then hold down for at least 3 seconds until the machine beeps and then release it. This saves the debug log to the hard disk for later retrieval with an SD card by the service representatives.
3. Switch the machine off and on to resume operation.
   The debug information for the error is saved on the hard disk. This lets the service representative retrieve it on their next visit by copying it from the HDD to an SD card.

5.18.5 DEBUG LOG CODES

SP5857-015 Copy SD Card-to-SD Card: Any Desired Key

This SP copies the log on an SD card (the file that contains the information written directly from shared memory) to a log specified by key number. The copy operation is executed in the log directory of the SD card inserted in the same slot. (This function does not copy from one slot to another.) Each SD card can hold up to 4 MB of file data. Unique file names are created for the data during the copy operation to prevent overwriting files of the same name. This means that log data from more than one machine can be copied onto the same SD card. This command does not execute if there is no log on the HDD for the name of the specified key.

SP5857-016 Create a File on HDD to Store a Log

This SP creates a 32 MB file to store a log on the HDD. However, this is not a completely empty file. The created file will hold the number "2225" as the SCS key number and other non-volatile information. Even if this SP is not executed, a file is created on the HDD when the first log is stored on the HDD (it takes some time to complete this operation). This creates the possibility that the machine may be switched off and on before the log can be created completely. If you execute this SP to create the log file beforehand, this will greatly reduce the amount of time required to acquire the log information and save onto the HDD. With the file already created on the HDD for the log file, the data only needs to be recorded. A new log file does not need to be created. To create a new log file, do SP5857-011 to delete the debug log data from the HDD. Then do SP5857-016.

SP5857-017 Create a File on SD Card to Store a Log

This SP creates a 4 MB file to store a log on an SD card. However, this is not a completely empty file. The created file will hold the number "2225" as the SCS key number and other non-volatile information. Even if this SP is not executed, a file is created on the SD card when the first log is stored on the SD card (it takes some time to complete this operation). This creates the possibility that the machine may be switched off and on before the log can be created completely. If you execute this SP to create the log file beforehand, this will greatly reduce the amount of time required to acquire the log information and save onto the SD card. With the file already created on the SD card for the log file, the data only needs to be recorded; a new log file does not require creation. To create a new log file, do SP5857-012 to delete the debug log data from the SD card. Then do SP5857-017.

5.19 CARD SAVE FUNCTION

5.19.1 OVERVIEW

Card Save:

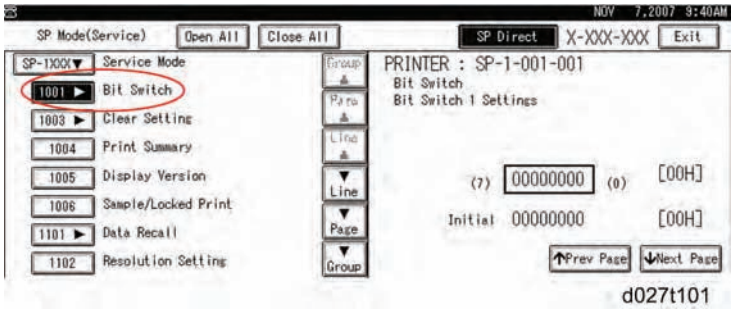
- The Card Save function is used to save print jobs received by the printer on an SD card with no print output. Card Save mode is toggled using printer Bit Switch #1 bit number 4. Card Save will remain enabled until the SD card becomes full, or until all file names have been used.
- Captures are stored 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:

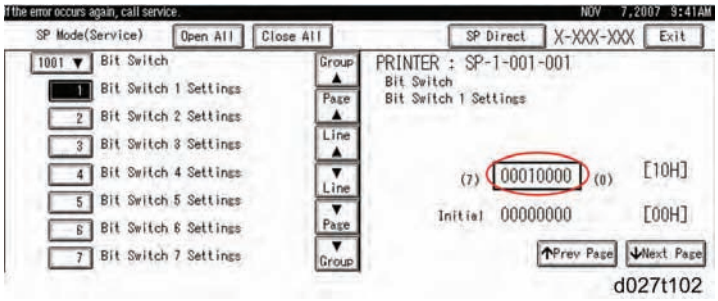
- Card Save cannot be used with PJL Status Readback commands. PJL Status Readbacks will not work. In addition they will cause the Card Save to fail.

5.19.2 PROCEDURE

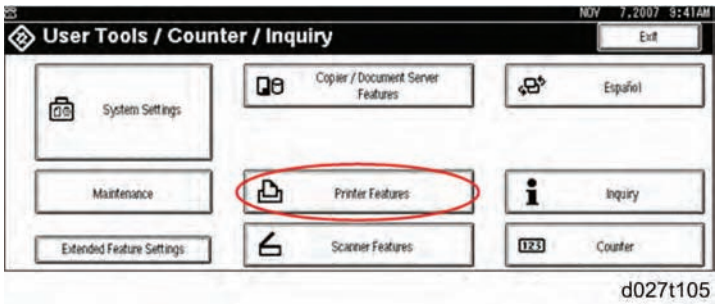
1. Turn the main power switch OFF.
2. Insert the SD card into slot 2. Then turn the power ON.
3. Enter SP mode.
4. Select the "Printer SP".
5. Select SP-1001 "Bit Switch".



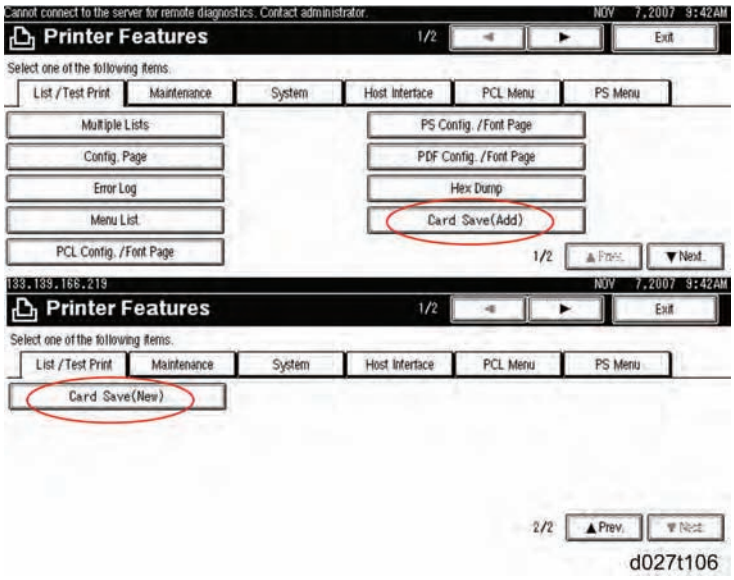
6. Select "Bit Switch 1 Settings" and use the numeric keypad to turn bit 4 ON and then press the "#" button to register the change. The result should look like: **00010000**. By doing this, Card Save option will appear in the "List/Test Print" menu.



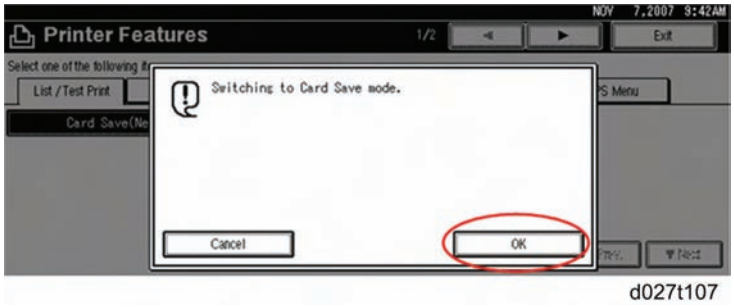
7. Press "Exit" to exit SP Mode.
8. Press the "User Tools/Counter" button.



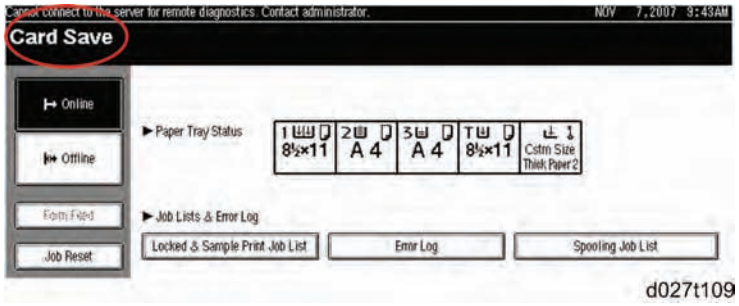
9. Select "Printer Features".



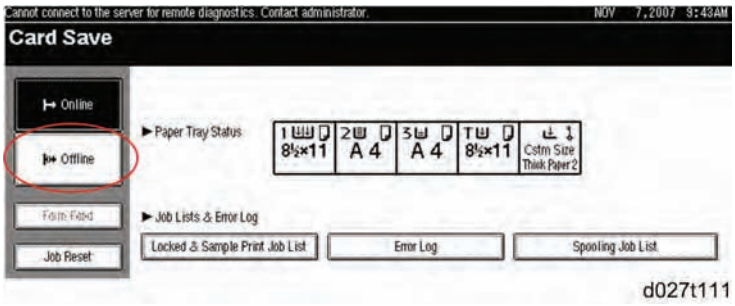
10. Card Save (Add) and Card Save (New) should be displayed on the screen. Select Card Save (Add) or Card Save (New).



11. Press "OK" and then exit the "User Tools/Counter" menu.
12. Press the "Printer" button.



13. Card Save should be displayed in the top left of the display panel.
14. Send a job to the printer. The Communicating light should start blinking.
15. As soon as the printer receives the data, it will be stored on the SD card automatically with no print output. Nothing is displayed on the screen, indicating that a Card Save operation was successful.



16. Press "Offline" and then the "Clear/Stop" button to exit Card Save mode.
17. Change the Bit Switch Settings back to the default **00000000**. Press the "#" button in the numeric keypad to register the changes.
18. Remove the SD card after the main power switch is turned off.

5.19.3 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

REVISION HISTORY		
Page	**Date**	**Added/Updated/New**
13	11/17/2011	Correct LD Error.
13	11/30/2011	SC241
43	03/16/2011	Add TSB info to SC681
51 ~ 53	3/17/2011	SC817
52	10/10/2011	SC833

6. TROUBLESHOOTING

6.1 SC TABLES

6.1.1 SERVICE CALL CONDITIONS

Summary

The ‘SC Table’ section shows the SC codes for controller errors and other errors. The latter (not controller errors) are put into four types. The type is determined by their reset procedures. The table shows the classification of the SC codes.

	Key	Definition	Reset Procedure
Controller errors	CTL	The error has occurred in the controller.	See "Troubleshooting Procedure" in the table.
Other errors	A	The error involves the fusing unit. The machine operation is disabled. The user cannot reset the error.	Turn the main switch off and on. Reset the SC (set SP5-810-1). Turn the main switch off and on.
	B	The error involves one or some specific units. The machine operates as usual, excluding the related units.	Turn the operation switch off and on.
	C	The error is logged. The SC-code history is updated. The machine operates as usual.	The SC will not show. Only the SC history is updated.
	D	The machine operation is disabled. You can reset the machine by turning the operation switch or main switch off and on. If the error occurs again, the same SC code is displayed.	Turn the operation switch or main power switch off and on.

After you turn the main power switch off, wait for one second or more before you turn the main power switch on (SC 672). All SCs are logged. The print log data (SP5-990-004) in SP mode can check the latest 10 SC codes detected and total counters when the SC code is detected.

Note

- If the problem concerns electrical circuit boards, first disconnect then reconnect the connectors before you replace the PCBs.
- If the problem concerns a motor lock, first check the mechanical load before you replace motors or sensors.

SC Code Classification

The table shows the classification of the SC codes:

Class 1	Section	SC Code	Detailed section
1XX	Scanning	100 -	Scanner
		190 -	Unique for a specific model
2XX	Laser exposure	200 -	Polygon motor
		220 -	Synchronization control
		230 -	FGATE signal related
		240 -	LD control
		280 -	Unique for a specific model
		290 -	Shutter
3XX	Image development 1	300 -	Charge
		330 -	Drum potential
		350 -	Development
		380 -	Unique for a specific model
4XX	Image development 2	400 -	Image transfer
		420 -	Paper separation
		430 -	Cleaning

Class 1	Section	SC Code	Detailed section
		440 -	Around drum
		460 -	Unit
		480 -	Others
5XX	Paper feed / Fusing	500 -	Paper feed
		515 -	Duplex
		520 -	Paper transport
5XX	Paper feed / Fusing	530 -	Fan motor
		540 -	Fusing
		560 -	Others
		570 -	Unique for a specific model
6XX	Communication	600 -	Electrical counters
		620 -	Mechanical counters
		630 -	Account control
		640 -	CSS
		650 -	Network
		670 -	Internal data processing
		680 -	Unique for a specific model
7XX	Peripherals	700 -	Original handling
		720 -	Two-tray finisher
		740 -	Booklet finisher
8XX	Controller	800 -	Error after ready condition
		820 -	Diagnostics error
		860 -	Hard disk
		880 -	Unique for a specific model

Class 1	Section	SC Code	Detailed section
9XX	Others	900 -	Counter
		920 -	Memory
		990 -	Others

6.1.2 SC1XX: SCANNING

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
101	D	Exposure lamp error
		The peak white level is less than 64/255 digits (8 bits) when scanning the shading plate.
		▪ Exposure lamp defective ▪ Lamp stabilizer defective ▪ Exposure lamp connector defective ▪ Standard white plate dirty ▪ Scanner mirror or scanner lens out of position or dirty
		1. Check and clean the scanner mirror(s) and scanner lens. 2. Check and clean the shading plate. 3. Replace the exposure lamp. 4. Replace the lamp stabilizer. 5. Replace the scanner mirror(s) or scanner lens.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
120	D	Scanner home position error 1
		The scanner home position sensor does not detect the "OFF" condition during operation.
		▪ Scanner motor driver defective ▪ Scanner motor defective ▪ Harness between SBU and scanner motor disconnected ▪ Scanner HP sensor defective

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		▪ Harness between SBU and HP sensor disconnected
		1. Check the cable connection between the SBU and scanner motor. 2. Check the cable connection between the SBU and HP sensor. 3. Replace the scanner motor. 4. Replace the HP sensor.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
121	D	Scanner home position error 2
		The scanner home position sensor does not detect the "ON" condition during operation.
		▪ Scanner motor driver defective ▪ Scanner motor defective ▪ Harness between SBU and scanner motor disconnected ▪ Scanner HP sensor defective ▪ Harness between SBU and HP sensor disconnected
		1. Check the cable connection between the SBU and scanner motor. 2. Check the cable connection between the SBU and HP sensor. 3. Replace the scanner motor. 4. Replace the HP sensor.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
141	D	Black level detection error
		The black level cannot be adjusted within the target value during the zero clamp.
		▪ Harness disconnected ▪ Defective SBU
		1. Check the cable connection 2. Replace the SBU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
142	D	White level detection error
		The white level cannot be adjusted within the target during auto gain control.
		▪ Dirty exposure glass or optics section ▪ SBU defective ▪ Exposure lamp defective ▪ Lamp stabilizer defective ▪ Scanner motor defective
		1. Clean the exposure glass, white plate, mirrors, and lens. 2. Check if the exposure lamp is lit during initialization. 3. Check the harness connection between SBU and IPU. 4. Replace the exposure lamp. 5. Replace the scanner motor. 6. Replace the SBU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
144	D	SBU communication error
		The SBU connection cannot be detected at power on or recovery from the energy save mode.
		▪ Defective SBU ▪ Defective harness ▪ Defective detection port on the IPU
		1. Replace the harness. 2. Replace the SBU. 3. Replace the IPU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
161	D	IPU error
001		The error result of self-diagnostic by the ASIC on the IPU is detected.
		▪ Defective IPU ▪ Defective connection between IPU and SBU
		1. Check the connection between IPU and SBU. 2. Replace the IPU.
002	D	The machine detects an error during an access to the Ri.
		▪ Defective IPU
		Replace the IPU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
165	D	Copy Data Security Unit error
		▪ The copy data security board is not detected when the copy data security function is set "ON" with the initial setting. ▪ A device check error occurs when the copy data security function is set "ON" with the initial setting.
		▪ Incorrect installation of the copy data security board ▪ Defective copy data security board
		1. Reinstall the copy data security board. 2. Replace the copy data security board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
195	D	Serial Number Mismatch
		▪ Serial number stored in the memory does not have the correct code.
		▪ EEPROM defective ▪ BCU replaced without original EEPROM
		1. Check the serial number with SP5-811-002. 2. If the stored serial number is incorrect, contact your supervisor.

6.1.3 SC 2XX: EXPOSURE

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
202	D	Polygon motor error 1: ON timeout
		The polygon mirror motor does not reach the targeted operating speed within the specified time after turning on or changing speed
		▪ Defective or disconnected harness to polygon motor driver board ▪ Defective polygon motor driver board ▪ Defective polygon motor.
		1. Replace the polygon motor. 2. Replace the laser optics housing unit. 3. Replace the harness. 4. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
203	D	Polygon motor error 2: OFF timeout
		The polygon mirror motor does leave the READY status within 3 seconds after the polygon motor switches off.
		▪ Disconnected or defective harness to polygon motor driver board ▪ Defective polygon motor driver board ▪ Defective polygon motor
		1. Check or replace the harness. 2. Replace the polygon motor.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
204	D	Polygon motor error 3: XSCRDY signal error
		The SCRDY_N signal goes HIGH (inactive) while the laser diode is firing.
		▪ Disconnected or defective harness to polygon motor driver board ▪ Defective polygon motor ▪ Defective polygon motor driver board
		1. Check or replace the harness. 2. Replace the polygon motor.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
220	D	Laser synchronizing detection error: start position [K]: LD0
222	D	Laser synchronizing detection error: start position [Y]: LD0
-	-	The laser synchronizing detection signal for the start position of the LDB [K], [Y] is not output for two seconds after LDB unit turns on while the polygon motor is rotating normally.
		▪ Disconnected cable from the laser synchronizing detection unit or defective connection ▪ Defective laser synchronizing detector ▪ Defective LDB ▪ Defective BCU
		1. Check the connectors. 2. Replace the laser-synchronizing detector. 3. Replace the LDB. 4. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
230	D	FGATE ON error: K
		The PFGATE ON signal does not assert within 5 seconds after processing the image in normal job or MUSIC for start position [K].
		▪ Defective ASIC (Lupus) ▪ Poor connection between controller and BCU. ▪ Defective BCU
		1. Check the connection between the controller board and the BCU. 2. Replace the BCU. 3. Replace the controller board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
231	D	FGATE OFF error: K
		▪ The PFGATE ON signal still asserts within 5 seconds after processing the image in normal job or MUSIC for end position [K]. ▪ The PFGATE ON signal still asserts when the next job starts.
		See SC 230 for troubleshooting details.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
232	D	FGATE ON error: Y
		The PFGATE ON signal does not assert within 5 seconds after processing the image in normal job or MUSIC for start position [Y].
		See SC 230 for troubleshooting details.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
233	D	FGATE OFF error: Y
		▪ The PFGATE ON signal still asserts within 5 seconds after processing the image in normal job or MUSIC for end position [Y]. ▪ The PFGATE ON signal still asserts when the next job starts.
		See SC 230 for troubleshooting details.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
234	D	FGATE ON error: M
		The PFGATE ON signal does not assert within 5 seconds after processing the image in normal job or MUSIC for start position [M].
		See SC 230 for troubleshooting details.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
235	D	FGATE OFF error: M
		▪ The PFGATE ON signal still asserts within 5 seconds after processing the image in normal job or MUSIC for end position [M]. ▪ The PFGATE ON signal still asserts when the next job starts.
		See SC 230 for troubleshooting details.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
236	D	FGATE ON error: C
		The PFGATE ON signal does not assert within 5 seconds after processing the image in normal job or MUSIC for start position [C].
		See SC 230 for troubleshooting details.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
237	D	FGATE OFF error: C
		▪ The PFGATE ON signal still asserts within 5 seconds after processing the image in normal job or MUSIC for end position [C]. ▪ The PFGATE ON signal still asserts when the next job starts.
		See SC 230 for troubleshooting details.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
240	C	LD error: K or C
241	C	LD error: Y or M
-		The IPU detects LDB error a few times consecutively when LDB unit turns on after LDB initialization.
⇒	-	▪ Worn-out LD ▪ Disconnected or broken harness of the LD
		1. Replace the harness of the LD. 2. Replace the laser optics housing unit. 3. Replace the IPU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
285	D	Line position adjustment (MUSIC) error
		Line position adjustment fails four consecutive times.
		▪ Pattern sampling error (insufficient image density) ▪ Defective ID sensors for the line position adjustment ▪ Defective image transfer belt unit ▪ Defective PCDU(s) ▪ Defective laser optics housing unit
		1. Check and reinstall the image transfer belt unit and PCDUs. 2. Check if each toner bottle has enough toner. 3. Replace the ID sensor. 4. Replace the image transfer belt unit. 5. Replace the PCDU(s). 6. Replace the laser optics housing unit.

6.1.4 SC3XX: IMAGE PROCESSING – 1

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
312	D	Charge P.P. output error [K]
313	D	Charge P.P. output error [M]
314	D	Charge P.P. output error [C]
315	D	Charge P.P. output error [Y]
-	-	The feedback voltage of the charge AC for each color is 0.3 V or less for 0.2 seconds after the charge AC has turned on.
		▪ Disconnected or broken harnesses of the HVPS ▪ Defective PCDU ▪ Defective HVPS
		1. Check or replace the harnesses of the HVPS. 2. Reinstall or replace the PCDU. 3. Replace the HVPS.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
325	D	Color development motor error
		The motor LOCK signal is not detected for more than two seconds while the motor START signal is on.
		▪ Color development motor slip due to an increase in the torque caused by connected components. ▪ Defective motor.
		1. Adjust the torque properly by replacing or cleaning the PCDU. 2. Replace the PCDU. 3. Replace the development motor: CMY if load torque is normal.

6.1.5 SC3XX: IMAGE PROCESSING – 2

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
360	D	TD sensor (Vt high) error 1: K
361	D	TD sensor (Vt high) error 1: M
362	D	TD sensor (Vt high) error 1: C
363	D	TD sensor (Vt high) error 1: Y
-	-	▪ The Vt value of the black, magenta, cyan, or yellow TD sensor exceeds the specified value (default: 4.7V) with SP3020-002 for twenty counts. ▪ The [Vt - Vtref] value of the black, magenta, cyan, or yellow TD sensor exceeds the specified value (default: 5.0V) with SP3020-001.
		▪ Black, magenta, cyan, or yellow TD sensor disconnected ▪ Harness between TD sensor and PCDU defective ▪ Defective TD sensor.
		1. Check the black, magenta, cyan, or yellow TD sensor connector and harness between the TD sensor and PCDU for damage. 2. Check the drawer connector. 3. Replace the defective PCDU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
364	D	TD sensor (Vt low) error 2: K
365	D	TD sensor (Vt low) error 2: M
366	D	TD sensor (Vt low) error 2: C
367	D	TD sensor (Vt low) error 2: Y
-	-	The Vt value of the black, magenta, cyan, or yellow TD sensor is below the specified value with SP3020-004 (default: 0.5V) for 10 counts.
		▪ TD sensor harness disconnected, loose, defective ▪ A drawer connector disconnected, loose, defective ▪ TD sensor defective
		1. Check the black, magenta, cyan, or yellow TD sensor connector and harness between the TD sensor and PCDU for damage. 2. Check the drawer connector. 3. Replace the defective PCDU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
372	D	TD sensor adjustment error: K
373	D	TD sensor adjustment error: M
374	D	TD sensor adjustment error: C
375	D	TD sensor adjustment error: Y
-	-	During TD sensor initialization, the output value of the black, magenta, cyan, or yellow TD sensor is not within the range of the specified value with SP3238-001 to -004 (default: 2.5V) ± 0.2V
		▪ Heat seal not removed from a new developer pack ▪ TD harness sensor disconnected, loose or defective ▪ TD sensor defective ▪ Harness between TD sensor and drawer disconnected, defective
		1. Remove the heat seal from each PCDU. 2. Replace the defective PCDU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
380	C	Drum gear position sensor error: K
381	C	Drum gear position sensor error: CMY
		The machine does not detect the drum position signal for 3 seconds at the drum phase adjustment.
		▪ Dirty or defective drum gear position sensor
		1. Clean the drum gear position sensor. 2. Check the harness connection. 3. Replace the drum gear position sensor. 4. Replace the PCDU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
396	D	Drum/Development motor error: K
397	D	Drum/Development motor error: CMY
-	-	The machine detects a High signal from the drum/development motor for 2 seconds after the drum/development motor turned on.
		▪ Overload on the drum/development motor ▪ Defective drum/development motor ▪ Defective harness ▪ Shorted 24 V fuse on the PSU ▪ Defective interlock system
		1. Check or replace the harness. 2. Replace the drum/development motor. 3. Replace the 24V fuse on the PSU.

6.1.6 SC4XX: IMAGE PROCESSING - 3

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
400	D	ID sensor adjustment error
		When the Vsg error counter reaches "3", the machine detects "SC400". The Vsg error counter counts "1" when the Vsg detected by ID sensor is more than the value (default: 4.5V) specified with SP3324-005 or less than the value (default: 3.5V) specified with SP3324-006.
		▪ Dirty or defective ID sensor ▪ Defective ID sensor shutter
		1. Check the harness of the ID sensor. 2. Clean or replace the ID sensor. Note ▪ After replacing the ID sensor, input the ID sensor correction coefficient with SP3362-013 to -018. For details, refer to "ID sensor board" in the Replacement and Adjustment section. 3. Replace the BCU. 4. Replace the image transfer belt unit.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
442	D	Image transfer belt contact motor error
		The image transfer belt contact sensor does not detect the movement of actuator at the sensor while the polygon motor rotates.
		▪ Dirty image transfer belt contact sensor ▪ Defective image transfer belt contact motor ▪ Disconnected connector of image transfer belt contact sensor or motor ▪ Disconnected cable
		1. Replace the image transfer belt contact sensor. 2. Replace the image transfer belt contact motor.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
443	C	Image transfer unit error
		The machine detects the encoder sensor error.
		▪ Defective encoder sensor ▪ Image transfer unit installation error ▪ Defective image transfer unit motor
		1. Check if the image transfer unit is correctly set. 2. Replace the image transfer unit motor. 3. Replace the image transfer unit.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
452	D	Paper transfer unit contact error
		The paper transfer unit contact sensor does not detect the movement of actuator at the sensor while the polygon motor rotates.
		▪ Defective paper transfer unit contact sensor ▪ Defective paper transfer unit contact motor ▪ Broken +24V fuse on PSU ▪ Defective BCU
		1. Check the connection between the paper transfer unit and PSU. 2. Replace the paper transfer unit contact sensor. 3. Replace the paper transfer unit contact motor. 4. Replace the +24V fuse on the PSU. 5. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
460	D	Separation power pack output error
		An interrupt checks the status of the power pack every 20 ms. This SC is issued if the BCU detects a short in the power pack 10 times at D(ac).
		▪ Damaged insulation on the high-voltage supply cable ▪ Damaged insulation around the high-voltage power supply.
		1. Replace the high-voltage supply cable. 2. Replace the high-voltage power supply unit. 3. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
491	D	High voltage power: Drum/ development bias output error
		An error signal is detected for 0.2 seconds when charging the drum or development.
		▪ High voltage leak ▪ Broken harness ▪ Defective drum unit or development unit ▪ Defective high voltage supply unit
		1. Check or replace the harness. 2. Replace the drum unit or paper transfer unit. 3. Replace the high voltage supply unit.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
492	C	High voltage power: Image transfer/ paper transfer bias output error
		An error signal is detected for 0.2 seconds when charging the separation, image transfer bet or paper transfer roller.
		▪ High voltage leak ▪ Broken harness ▪ Defective image transfer belt unit or paper transfer unit ▪ Defective high voltage supply unit

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		1. Check or replace the harness. 2. Replace the image transfer belt unit or paper transfer unit. 3. Replace the high voltage supply unit.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
495	D	Toner collection motor error
		The machine detects that the waste toner bottle is not set for one second when the toner collection motor is turned off.
		▪ Toner collection motor damaged ▪ Disconnect or defective harness ▪ Defective BCU
		1. Check or replace the harness. 2. Replace the toner collection motor. 3. Replace the BCU 4. Check and retry the connecting procedure.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
498	C	Temperature and humidity sensor error 2
		▪ The thermistor output of the temperature sensor was not within the prescribed range (0.2V to 3.5V). ▪ The thermistor output of the humidity sensor was not within the prescribed range (0.01V to 2.4V).
		▪ Temperature and humidity sensor harness disconnected, loose, defective ▪ Temperature and humidity sensor defective
		1. Check the connector and harness. 2. Replace the temperature/humidity sensor.

6.1.7 SC5XX: PAPER FEED AND FUSING

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
501	B	1st paper tray lift motor malfunction
502	B	2nd paper tray lift motor malfunction (optional paper feed unit)
503	B	3rd paper tray lift motor malfunction (optional paper feed unit)
504	B	4th paper tray lift motor malfunction (optional paper feed unit)
-	-	The paper lift sensor did not activate within 18 sec. after the tray lift motor switched on.
		▪ An obstruction (jammed paper, paper scraps, etc.) has blocked the motor drive and caused an overload. ▪ Paper lift sensor connection loose, disconnected, or damaged ▪ Paper lift sensor defective ▪ Tray lift motor connection loose, disconnected, or damaged ▪ Tray lift motor defective
		1. Check or replace the harness. 2. Replace the tray lift motor. 3. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
530	D	Development fan 1 error
531	D	Development fan 2 error
		The motor lock signal error is detected for 10 seconds after the motor lock signal was first detected.
		▪ Defective development fan 1 or development fan 2 ▪ Disconnected or defective harness ▪ Defective BCU
		1. Check or replace the harness. 2. Replace the development fan 1 (SC530) or development fan

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		2 (SC531). 3. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
532	D	Laser unit fan error
		The motor lock signal error is detected for 10 seconds after the motor lock signal was first detected.
		▪ Defective laser unit fan ▪ Disconnected or defective harness ▪ Defective BCU
		1. Check or replace the harness. 2. Replace the laser unit fan. 3. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
533	D	Fusing front fan error
		The motor lock signal error is detected for 10 seconds after the motor lock signal was first detected.
		▪ Defective fusing front fan ▪ Disconnected or defective harness ▪ Defective BCU
		1. Check or replace the harness. 2. Replace the fusing front fan. 3. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
534	D	Fusing rear fan error
		The motor lock signal error is detected for 10 seconds after the motor lock signal was first detected.
		▪ Defective fusing rear fan ▪ Disconnected or defective harness ▪ Defective BCU
		1. Check or replace the harness. 2. Replace the fusing rear fan. 3. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
535	D	Drive unit fan error
		The motor lock signal error is detected for 10 seconds after the motor lock signal was first detected.
		▪ Defective drive unit fan ▪ Disconnected or defective harness ▪ Defective BCU
		1. Check or replace the harness. 2. Replace the drive unit fan. 3. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
536	D	Toner supply fan error
		The motor lock signal error is detected for 10 seconds after the motor lock signal was first detected.
		▪ Defective toner supply fan ▪ Disconnected or defective harness ▪ Defective BCU
		1. Check or replace the harness. 2. Replace the toner supply fan. 3. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
540	D	Fusing/Paper exit motor error
		The BCU does not receive the lock signal 2 seconds after turning on the fusing/paper exit motor.
		▪ Motor overload ▪ Defective fusing/paper exit motor
		1. Check or replace the harness. 2. Replace the fusing/paper exit motor.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
541	A	Heating roller thermopile error
		The temperature detected by the heating roller thermopile does not reach 0°C for 6 seconds.
		▪ Loose connection of the heating roller thermopile ▪ Defective heating roller thermopile ▪ Defective thermopile
		1. Check if the heating roller thermopile is firmly connected. 2. Replace the heating roller thermopile.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
542	A	Heating roller warm-up error 1
		▪ The heating roller temperature does not reach 80°C for 20 seconds. ▪ The center temperature of the heating roller does not reach the ready temperature for 90 seconds.
		▪ Dirty or defective thermopile
		1. Check if the heating roller thermopile is firmly connected. 2. Replace the thermopile.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
543	A	Heating roller fusing lamp overheat 1 (software error)
		The temperature detected by the heating roller thermopile stays at 230°C for 1 second.
		▪ Defective PSU ▪ Defective IPU ▪ Defective BCU
		Related SC code: SC 553
		1. Replace the PSU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		2. Replace the IPU. 3. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
544	A	Heating roller fusing lamp overheat 1 (hardware error)
		During stand-by mode or a print job, the temperature detected by the heating roller thermopile reaches 250 °C.
		▪ Defective PSU ▪ Defective IPU ▪ Defective BCU ▪ Defective fusing control system
		Related SC code: SC 543
		1. Replace the PSU. 2. Replace the IPU. 3. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
545	A	Heating roller fusing lamp consecutive full power 1
		When the fusing unit is not running in the ready condition, the heating roller fusing lamp keeps on full power for 8 seconds.
		▪ Broken heating roller fusing lamp
		Related SC code: SC 555
		1. Replace the heating roller fusing lamp. 2. Replace the PSU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
547	D	Zero cross error
		▪ The zero cross signal is detected three times even though the heater relay is off when turning on the main power. ▪ The zero cross signal is not detected for 2 seconds even though the heater relay is on after turning on the main power or closing the front door. ▪ The detection error occurs twice or more in the 11 zero cross signal detections. This error is defined when the detected zero cross signal is less than 45.
		▪ Defective fusing lamp relay ▪ Defective fusing lamp relay circuit ▪ Unstable power supply
		1. Check the power supply source. 2. Replace the PSU

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
551	A	Heating roller thermistor error
		The temperature at the end of the heating roller measured by the heating roller thermistor does not reach 0°C for 7 seconds.
		▪ Loose connection of pressure roller thermistor ▪ Defective heating roller thermistor
		Related SC code: SC 541
		1. Check that the heating roller thermistor is firmly connected. 2. Replace the heating roller thermistor.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
552	A	Heating roller warm-up error 2
		▪ The heating roller temperature does not reach 80°C for 20 seconds. ▪ The temperature at the end of the heating roller does not reach the ready temperature for 89 seconds .
		▪ Defective heating roller thermistor
		Related SC code: SC 542
		1. Check if the heating roller thermistor is firmly connected.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
553	A	Heating roller fusing lamp overheat 2 (software error)
		The temperature detected by the heating roller thermistor stays at 230°C or more for 1 second.
		▪ Defective PSU ▪ Defective IPU ▪ Defective BCU
		1. Replace the PSU. 2. Replace the IPU. 3. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
554	A	Heating roller fusing lamp overheat 2 (hardware error)
		The temperature detected by the heating roller thermistor reaches 250°C or more.
		▪ Defective PSU ▪ Defective IPU ▪ Defective BCU ▪ Defective fusing control system
		1. Replace the PSU. 2. Replace the IPU. 3. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
555	A	Heating roller lamp consecutive full power 2
		The heating roller-fusing lamp stays ON for 15 seconds or more while the fusing unit is in the ready condition.
		▪ Broken heating roller fusing lamp
		1. Replace the heating roller fusing lamp. 2. Replace the PSU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
557	C	Zero cross frequency error
		When the zero cross signal is 66 or more and it is detected 10 times or more in 11 detections, the machine determines that input 60 Hz and SC557 occurs.
		▪ Noise (High frequency) ▪ Defective PSU
		1. Check the power supply source. 2. Replace the PSU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
559	A	Consecutive fusing jam
		The paper jam counter for the fusing unit reaches 3 times. The paper jam counter is cleared if the paper is fed correctly. This SC is activated only when SP1159-001 is set to "1" (default "0").
		▪ Paper jam in the fusing unit.
		Remove the paper that is jammed in the fusing unit. Then make sure that the fusing unit is clean and has no obstacles in the paper feed path.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
561	A	Pressure roller thermistor error
		The temperature detected by the pressure roller thermistor does not reach 0 °C for 20 seconds.
		▪ Loose connection of the pressure roller thermistor ▪ Defective thermopile ▪ Defective pressure roller thermistor
		1. Check if the pressure roller thermistor is firmly connected. 2. Replace the thermopile. 3. Replace the pressure roller thermistor.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
563	A	Pressure roller overheat (software error)
		The temperature detected by the pressure roller thermistor stays at 230°C or more for 1 second.
		▪ Defective PSU ▪ Defective IPU ▪ Defective BCU
		1. Replace the PSU. 2. Replace the IPU. 3. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
564	A	Pressure roller overheat (hardware error)
		The temperature detected by the pressure roller thermistor detects 250°C or more.
		▪ Defective PSU ▪ Defective IPU ▪ Defective BCU ▪ Defective fusing control system
		1. Replace the thermistor. 2. Replace the PSU. 3. Replace the IPU. 4. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
565	A	Pressure roller fusing lamp consecutive full power
		When the fusing unit is not running in the ready condition, the pressure roller fusing lamp keeps ON full power for 300 seconds or more.
		▪ Broken pressure roller fusing lamp ▪ Defective pressure roller thermistor
		1. Replace the pressure roller lamp. 2. Replace the pressure roller thermistor. 3. Replace the PSU.

6.1.8 SC6XX: DEVICE COMMUNICATION

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
610	D	Mechanical counter error: K
-	-	This SC is only for NA models. The machine detects the mechanical counter error when SP5987-001 is set to "1".
		▪ Disconnected mechanical counter ▪ Defective mechanical counter
		Check or replace the mechanical counter.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
620	D	ARDF communication error
		After the ARDF is detected, the break signal occurs or communication timeout occurs.
		▪ Incorrect installation of ARDF ▪ ARDF defective ▪ BCU board defective ▪ External noise
		1. Check the cable connection of the ARDF. 2. Shut out the external noise. 3. Replace the ARDF. 4. Replace the BCU board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
621	D	Finisher communication error
622	D	Paper tray unit communication error
-	-	While the BCU communicates with an optional unit, an SC code is displayed if one of following conditions occurs. ▪ The IPU receives the break signal which is generated by the peripherals only just after the main switch is turned on. ▪ When the BCU does not receive an OK signal from a peripheral 100ms after sending a command to it. The IPU resends the command. The IPU does not receive an OK signal after sending the command 3 times.
		▪ Cable problems ▪ IPU problems ▪ BCU problems ▪ PSU problems in the machine ▪ Main board problems in the peripherals
		1. Check if the cables of peripherals are correctly connected. 2. Replace the PSU if no power is supplied to peripherals. 3. Replace the IPU or main board of peripherals. 4. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
623	D	2nd Paper Bank communication error
		This SC is not issued for this machine. When a communication error signal between the 1st paper bank and 2nd paper bank is received.
		▪ Loose or disconnected connector
		Check the connection between the main machine and paper feed unit.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
632	CTL B	Counter device error 1
		After 3 attempts to send a data frame to the optional counter device via the serial communication line, no ACK signal was received within 100 ms.
		▪ Serial line between the optional counter device, the relay board and copier control board is disconnected or damaged ▪ Make sure that SP5113 is set to enable the optional counter device.
		Check the connection between the main machine and optional counter device.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
633	CTL B	Counter device error 2
		After communication is established, the controller receives the brake signal from the accounting device.
		▪ Serial line between the optional counter device, the relay board and copier control board is disconnected or damaged ▪ Make sure that SP5113 is set to enable the optional counter device.
		1. Check if the setting of the SP5113 is correctly set. 2. Check the connection between the main machine and optional counter device.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
634	CTL B	Counter device error 3
		A backup RAM error was returned by the counter device.
		▪ Counter device control board defective ▪ Backup battery of counter device defective

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Replace the counter device.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
635	CTL B	Counter device error 4
		A backup battery error was returned by the counter device.
		▪ Counter device control board defective ▪ Backup battery of counter device defective
		Replace the counter device.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
636	CTL	SD Card Error
-01	D	Expanded authentication module error
		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.
		▪ No expanded authentication module ▪ Defective SD card ▪ No DESS module
		1. Install the expanded authentication module. 2. Install the SD card. 3. Install the DESS module.
-02	D	Version error
		The version of the expanded authentication module is not correct.
		▪ Incorrect module version
		Install the correct file of the expanded authentication module.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
641	CTL D	BCU control data transfer abnormal
		A sampling of the control data sent from the BCU reveals an abnormality.
		▪ Controller board defective ▪ External noise ▪ BCU board defective
		1. Replace the controller board. 2. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
650	CTL B	Communication error of the remote service modem (Embedded RCG-M)
-001	-	Authentication error
		The authentication for the Embedded RCG-M fails at a dial up connection.
		▪ Incorrect SP settings ▪ Disconnected telephone line ▪ Disconnected modem board
		Check and set the correct user name (SP5816-156) and password (SP5816-157).
-004	-	Incorrect modem setting
		Dial up fails due to the incorrect modem setting.
		Same as -001
		Check and set the correct AT command (SP5819-160).
-005	-	Communication line error
		The supplied voltage is not sufficient due to the defective communication line or defective connection.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Same as -001
		Consult with the user's local telephone company.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
651	CTL C	Incorrect dial up connection
		-001: Program parameter error
		-002: Program execution error
		An unexpected error occurs when the modem (Embedded RCG-M) tries to call the center with a dial up connection.
		▪ Caused by a software bug
		No action required because this SC does not interfere with operation of the machine.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
652	CTL	Remote service ID2 mismatch error
		The ID2 in the individual certificate does not match the ID2 in the NVRAM on the controller board.
		▪ The controller board in this machine has already been used in a machine in which RC Gate was installed. ▪ The controller board NVRAM in this machine has already been used in a machine in which RC Gate was installed.
		If an error occurs at installation of the RC Gate: 1. Check that the individual certificate is correct for the NVRAM in the machine and that the ID2 is correct. 2. Reinstall the RC Gate after writing the common certificate. If an error occurs after installation of the RC Gate: 1. Clear the RC Gate data. 2. Check that the individual certificate is correct for the NVRAM in the machine and that the ID2 is correct. 3. Reinstall the RC Gate after writing the common certificate.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
653	CTL	Remote service ID2 incorrect error
		The ID2 in the NVRAM on the controller board is incorrect.
		▪ ID2 is not exactly 17 bytes. ▪ ID2 includes text which cannot be printed. ▪ ID2 is all filled by spaces. ▪ ID2 is null.
		1. Clear the RC Gate data. 2. Reinstall the RC Gate after writing the common certificate.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
669	D	EEPROM error
		Retry of EEPROM communication fails three times after the machine has detected the EEPROM error.
		▪ Caused by noise
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
670	CTL D	Engine start up error
		The ready signal from the engine board is not detected.
		▪ Defective BCU.
		Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
⇒ 681	D	RFID: Communication error (Refer to TSB M022/M024/M026/M028 – 002 SC681-XX for more information.) ▪ Communication error occurs when the RFID starts to communicate with the RFID receptor. ▪ Retry of RFID communication fails three times after the machine has detected the RFID communication error.
		▪ Defective RFID reader and writer ▪ Disconnected ASAP I/F ▪ No memory chip on the toner cartridge ▪ Noise
		1. Replace the RFID controller board. 2. Replace the toner cartridge.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
682	D	Memory chip at TD sensor: Communication error
		Retry of memory chip communication fails three times after the machine has detected the memory chip communication error.
		▪ Damaged memory chip data ▪ Disconnected inter face ▪ No memory chip on the development unit ▪ Noise
		1. Replace the PCDU. 2. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
683	B	RFID: Unit check error
		The machine gets RFID communication error even the toner cartridges have not been installed in the machine.
		Caused by noise
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
687	D	Memory address command error
		The BCU does not receive a memory address command from the controller 120 seconds after paper is in the position for registration.
		▪ Loose connection ▪ Defective controller ▪ Defective BCU
		1. Check if the controller is firmly connected to the BCU. 2. Replace the controller. 3. Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
690	D	GAVD communication error
		▪ The I2C bus device ID is not identified during initialization. ▪ A device-status error occurs during I2C bus communication. ▪ The I2C bus communication is not established due to an error other than a buffer shortage.
		▪ Loose connection ▪ Defective BCU ▪ Defective LD controller board
		1. Turn the main switch off and on. 2. Check the cable connection. 3. Replace the laser optics-housing unit. 4. Replace the BCU board.

6.1.9 SC7XX: PERIPHERALS

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
721	B	Finisher jogger motor error
		The jogger fences move out of the home position but the HP sensor output does not change within the specified number of pulses. The 1st failure issues an original jam message, and the 2nd failure issues this SC code.
		▪ Jogger HP sensor disconnected, defective ▪ Jogger motor disconnected, defective ▪ Jogger motor overloaded due to obstruction ▪ Finisher main board and jogger motor
		1. Check the connections and cables for the components mentioned above. 2. Check for blockages in the jogger motor mechanism. 3. Replace the jogger HP sensor and/or jogger motor. 4. Replace the finisher main board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
725	B	Finisher exit guide plate motor error (with the side tray installed)
		After moving away from the guide plate position sensor, the exit guide is not detected at the home position within the prescribed time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		▪ Guide plate motor disconnected, defective ▪ Guide plate motor overloaded due to obstruction ▪ Guide plate position sensor disconnected, defective
		1. Check the connections and cables for the components mentioned above. 2. Check for blockages in the guide plate motor mechanism. 3. Replace the guide plate position sensor and/or guide plate motor 4. Replace the finisher main board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
730	B	Finisher tray shift motor error (with the side tray installed)
		The shift roller HP sensor of the upper tray does not activate within the prescribed time after the shift tray starts to move toward or away from the home position. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		▪ Shift tray HP sensor of the upper tray disconnected, defective ▪ Shift tray motor of the upper tray is disconnected, defective ▪ Shift tray motor of the upper tray overloaded due to obstruction
		1. Check the connections and cables for the components mentioned above. 2. Check for blockages in shift motor mechanism. 3. Replace the shift tray HP sensor and/or shift motor 4. Replace the finisher main board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
740	B	Finisher corner stapler motor error
		The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. **For internal finisher** ▪ The stapler motor does not switch off within the prescribed time after operating. ▪ The HP sensor of the staple unit does not detect the home position after the staple unit moves to its home position. ▪ The HP sensor of the staple unit detects the home position after the staple unit moves from its home position.
		▪ Staple jam ▪ Motor overload ▪ Defective stapler motor
		1. Check the connections and cables for the components mentioned above. 2. Replace the HP sensor and/or stapler motor 3. Replace the finisher main board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
750	B	Finisher tray lift motor error (with the side tray installed)
		▪ Motor overload ▪ Loose connection of the tray lift motor ▪ Defective tray lift motor
		1. Check the connections to the tray lift motor. 2. Replace the tray lift motor.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
756	B	Finisher pick-up solenoid error (with the side tray installed)
		▪ Solenoid harness loose, broken ▪ Solenoid obstructed ▪ Solenoid defective
		1. Check or replace the solenoid harness. 2. Replace the pick-up solenoid.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
793	B	Finisher gathering roller motor error
		▪ Motor overload ▪ Loose connection of the gathering roller motor ▪ Defective gathering roller motor
		1. Check the connections to the gathering roller motor. 2. Replace the gathering roller motor.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
794	B	Finisher exit guide plate motor error
		▪ Motor overload ▪ Loose connection of the exit guide plate motor ▪ Defective exit guide plate motor
		1. Check the connections to the exit guide plate motor. 2. Replace the exit guide plate motor.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
795	B	Finisher shift roller motor error
		▪ Motor overload ▪ Loose connection of the shift roller motor ▪ Defective shift roller motor
		1. Check the connections to the shift roller motor. 2. Replace the shift roller motor.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
796	B	Finisher tray lift motor error
		▪ Motor overload ▪ Loose connection of the tray lift motor ▪ Defective tray lift motor
		1. Check the connections to the tray lift motor. 2. Replace the tray lift motor.

6.1.10 SC8XX: OVERALL SYSTEM

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
816	CTL D	Energy saving I/O sub-system error
		The energy saving I/O sub-system detects an error.
		▪ Controller board defective
		Replace the controller board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
817	CTL D	Monitor Error
		00FE File Detection/Electronic Signature Check Error
		▪ The boot loader failed to read the signature of one or more of the following files on the boot SD card: 1) Self-diagnostic module, 2) Kernel, 3) Root file system. One or more of these files in the flash ROM or on the SD card is false, missing, or revised.
		Replace the controller board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
819	CTL C	Fatal kernel error	
		Due to a control error, a RAM overflow occurred during system processing. One of the following messages was displayed on the operation panel.	
[0x5032]		HAIC-P2 error	▪ System program defective ▪ Controller board defective ▪ Optional board defective Replace controller firmware
[0x5245]		vm_pageout: VM is full	
[0x5355]		L2 status time out	
[554C]		USB error	

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
820	CTL D	Self-diagnostics error: CPU [XXXX]: Detailed error code
[0612]		Cut-in in ASIC occurs.
		▪ Defective ASIC ▪ Defective devices in which ASIC detects cut-in.
		Replace the controller board.

⇒

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
833	CTL C	Self-diagnostic error 8: Engine I/F ASIC
[0F30] [0F31]		▪ ASIC (Mandolin) for system control could not be detected. After the PCI configuration, the device ID for the ASIC could not be checked.
		Replace the controller board.
[0F41]		▪ ASIC (Mandolin) for system control could not be detected. After the PCI configuration, the device ID for the ASIC could not be checked.
		Replace the controller board.
[50B1]		Could not initialize or read the bus connection.
		▪ Check for loose connections at the mother board.
		Replace the controller board.
[50B2]		Value of the SSCG register is incorrect.
		▪ Check for loose connections at the mother board.
		Replace the mother board

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
851	CTL B	IEEE1394 interface error
		The 1394 interface is unusable.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		▪ Defective IEEE1394 ▪ Defective controller.
		1. Turn the main switch off and on. 2. Replace the IEEE1394 interface board. 3. Replace the controller.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
853	CTL B	Wireless LAN card not detected
		The wireless LAN card is not detected before communication is established, though the wireless LAN board is detected.
		▪ Loose connection
		Check the connection.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
854	CTL B	Wireless LAN/Bluetooth card not detected
		The wireless LAN/Bluetooth card is not detected after communication is established, but the wireless LAN board is detected.
		▪ Loose connection
		Check the connection.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
855 856	CTL B	Wireless LAN/Bluetooth card error
		An error is detected in the wireless LAN/Bluetooth card.
		▪ Loose connection ▪ Defective wireless LAN/Bluetooth card
		1. Check the connection. 2. Replace the wireless LAN/Bluetooth card.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
857	CTL B	USB interface error
		The USB interface cannot be used due to a driver error.
		▪ Defective USB driver ▪ Loose connection
		1. Check the connection. 2. Replace the controller board.

No.	Type		Details (Symptom, Possible Cause, Troubleshooting Procedures)
858	CTL C	HDD Encryption unit error 1	
		A serious error occurs when data is encrypted to update an encryption key with the HDD encryption unit.	
		[0]	Encryption key acquisition error: The controller fails to get a new encryption key.
			▪ Defective controller board 1. Replace the controller board.
		[1]	Encryption key setting for HDD error: The controller fails to copy a new encryption key to the HDD.
			▪ Defective SATA chip on the controller board 1. Replace the controller board.
		[2]	NVRAM data encryption error 1: An error occurs while the NVRAM data is encrypted.
			▪ Defective NVRAM on the controller board 1. Replace the NVRAM.
		[30]	NVRAM data encryption error 2: An error occurs before the NVRAM data is encrypted.
			▪ Defective controller board 1. Replace the controller board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
		[31]	Other error: A serious error occurs while the data is encrypted.
			▪ Same as SC991

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
859	CTL C	HDD Encryption unit error 2	
		A serious error occurs when the HDD data is encrypted to update an encryption key with the HDD encryption unit.	
		[8]	HDD check error: The HDD is not correctly installed.
			▪ No HDD installed ▪ Unformatted HDD ▪ The encryption key on the controller is different from the one on the HDD 1. Install the HDD correctly. 2. Initialize the HDD.
		[9]	Power failure during the data encryption: The data encryption (NVRAM and HDD) has not been completed.
			▪ Power failure during the data encryption 1. Initialize the HDD.
		[10]	Data read/write error: The DMAC error is detected twice or more.
			▪ Same as SC863

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
860	CTL B	HDD: Initialization error
		The controller detects that the hard disk fails.
		▪ HDD not initialized ▪ Defective HDD
		1. Reformat the HDD. 2. Replace the HDD.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
861	CTL D	HDD: Reboot error
		The HDD does not become ready within 30 seconds after the power is supplied to the HDD.
		▪ Loose connection ▪ Defective cables ▪ Defective HDD ▪ Defective controller
		1. Check the connection between the HDD and controller. 2. Check and replace the cables. 3. Replace the HDD. 4. Replace the controller.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
863	CTL D	HDD: Read error
		The data stored in the HDD cannot be read correctly.
		▪ Defective HDD ▪ Defective controller
		1. Replace the HDD. 2. Replace the controller.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
864	CTL D	HDD: CRC error
		While reading data from the HDD or storing data in the HDD, data transmission fails.
		▪ Defective HDD
		Replace the HDD.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
865	CTL D	HDD: Access error
		An error is detected while operating the HDD.
		▪ Defective HDD
		Replace the HDD.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
866	CTL B	SD card authentication error
		A correct license is not found in the SD card.
		▪ SD-card data is corrupted. ▪ Defective SD card
		1. Store correct data in the SD card. 2. Replace the SD card. 3. Replace the NVRAM.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
867	CTL D	SD card error
		▪ The SD card is ejected from the slot. ▪ Defective SD card
		1. Install the SD card. 2. Turn the main switch off and on. 3. Replace the SD card. 4. Replace the NVRAM.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
868	CTL D	SD card access error ▪ -13 to -3: File system error ▪ Other number: Device error
		An error report is sent from the SD card reader. ▪ An error is detected in the SD card. ▪ Defective SD card
		1. For a file system error, format the SD card on your PC. 2. For a device error, turn the mains switch off and on. 3. Replace the SD card. 4. Replace the controller. 5. Replace the NVRAM.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
870	CTL B	Address book error
		An error is detected in the data copied to the address book over a network.
		▪ Defective software program ▪ Defective HDD ▪ Incorrect path to the server
		1. Initialize the address book data (SP5-846-050). 2. Initialize the user information (SP5-832-006). 3. Replace the HDD.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
872	CTL B	HDD mail data error
		An error is detected in the HDD at machine initialization.
		▪ Defective HDD ▪ Power failure during an access to the HDD
		1. Turn the main switch off and on. 2. Initialize the HDD partition (SP5-832-007). 3. Replace the HDD.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
873	CTL B	HDD mail transfer error
		An error is detected in the HDD at machine initialization.
		▪ Defective HDD ▪ Power failure during an access to the HDD
		1. Initialize the HDD partition (SP5-832-008). 2. Replace the HDD.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
874	CTL D	Delete All error 1: HDD
		An error is detected while all of the HDD or NVRAM are formatted physically by the Security & Encryption Unit.
		▪ Security & Encryption Unit (SD card) not installed ▪ Defective HDD
		1. Install the Security & Encryption Unit. 2. Replace the HDD.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
875	CTL D	Delete All error 2: Data area
		An error is detected while all of the HDD or NVRAM are formatted logically by the Security & Encryption Unit.
		▪ The logical format for the HDD fails.
		Turn the main switch off/on and try the operation again

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
876	CTL D	Log Data Error
		An error was detected in the handling of the log data at power on or during machine operation. This can be caused by switching the machine off while it is operating.
-001		Log Data Error 1
		▪ Damaged log data file in the HDD
		Initialize the HDD with SP5832-004.
-002		Log Data Error 2
		▪ An encryption module not installed
		1. Disable the log encryption setting with SP9730-004 ("0" is off.)

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		2. Install the DESS module.
	-003	Log Data Error 3
		▪ Invalid log encryption key due to defective NVRAM data
		1. Initialize the HDD with SP5832-004. 2. Disable the log encryption setting with SP9730-004 ("0" is off.)
	-004	Log Data Error 4
		▪ Unusual log encryption function due to defective NVRAM data
		Initialize the HDD with SP5832-004.
	-005	Log Data Error 5
		▪ Installed NVRAM or HDD which is used in another machine
		1. Reinstall the previous NVRAM or HDD. 2. Initialize the HDD with SP5832-004.
	-099	Log Data Error 99
		▪ Other than the above causes
		Ask your supervisor.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
877	CTL D	SD card error
		The 'all delete' function cannot be executed but the Security & Encryption Unit is installed and activated.
		▪ Defective SD card ▪ SD card not installed
		1. Replace the NVRAM and then install the new SD card. 2. Check and reinstall the SD card.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
878	CTL D	TPM system authentication error
		The system firmware is not authenticated by TPM (security chip).
		▪ Incorrect updating for the system firmware ▪ Defective flash ROM on the controller board Replace the controller board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
880	CTL D	File format converter error
		The file format converter does not respond.
		▪ Defective file format converter
		Replace the file format converter.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
881	CTL D	Management area error
		This is a software error than can occur: ▪ At login ▪ When a print job was received ▪ When WEB browser was opened
		Cycle the machine off/on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
899	CTL D	Software error
		A software error occurred in the GW controller.
		▪ Cycle the machine off/on ▪ Update controller firmware ▪ Controller board defective

6.1.11 SC9XX: MISCELLANEOUS

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
900	CTL D	Electric counter error
		Abnormal data in the counters.
		▪ Defective NVRAM ▪ Defective controller
		1. Check the connection between the NVRAM and controller. 2. Replace the NVRAM. 3. Replace the controller.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
910	CTL D	External Controller Error 1
911		External Controller Error 2
912		External Controller Error 3
913		External Controller Error 4
914		External Controller Error 5
-	-	The external controller alerted the machine about an error.
-	-	▪ Please refer to the instructions for the external controller (application).

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
920	CTL D	Printer application error
		An error is detected in the printer application program.
		▪ Defective software ▪ Unexpected hardware resource (e.g., memory shortage)
		1. Software defective; switch off/on, or change the controller firmware if the problem is not solved 2. Insufficient memory

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
921	CTL D	Printer font error
		A necessary font is not found in the SD card.
		▪ A necessary font is not found in the SD card. ▪ The SD card data is corrupted.
		Check that the SD card has the correct data.

SC925	B	Net File function error *GW
		The NetFile file management on the HDD cannot be used, or a NetFile management file is corrupted and operation cannot continue. The HDDs are defective and they cannot be debugged or partitioned, so the Scan Router functions (delivery of received faxes, document capture, etc.), Web services, and other network functions cannot be used. HDD status codes are displayed below the SC code:
		▪ Refer to the four procedures below (Recovery from SC 925).

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
990	CTL D	Software performance error
		The software makes an unexpected operation.
		▪ Defective software ▪ Defective controller ▪ Software error
		1. Turn the main switch off and on. 2. Reinstall the controller and/or engine main firmware.
		Note ▪ See Note 1 at the end of the SC table.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
991	CTL C	Software continuity error
		The software has attempted to perform an unexpected operation. However, unlike SC 990, the object of the error is continuity of the software.
		▪ Software program error ▪ Internal parameter incorrect, insufficient working memory.
		This SC is not displayed on the LCD (logging only).

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
992	CTL D	Undefined error
		Defective software program
		▪ An error undetectable by any other SC code occurred

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
994	CTL C	Operation panel management records exceeded
		An error occurred because the number of records exceeded the limit for images managed in the service layer of the firmware. This can occur if there if there are too many application screens open on the operation panel.
		▪ No action required because this SC does not interfere with operation of the machine.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
995	D	CPM setting error
	-001	▪ Defective BCU ▪ EEPROM Replacement error
		1. Install the previous EEPROM. 2. Input the serial number with SP5811-004, and turn the main power switch off/on.
	-002	▪ Defective NVRAM ▪ Defective controller
		1. Update the controller firmware. 2. Install a new NVRAM, and turn off and on the main power switch after SC995-002 has occurred.
	-003	▪ Incorrect type controller installed ▪ Defective controller
		1. Replace the controller with the correct type.
	-004	▪ Incorrect model controller installed.
		1. Replace the controller with the correct model.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
997	CTL B	Application function selection error ▪ The application selected by the operation panel key does not start or ends abnormally.
		▪ Software (including the software configuration) defective ▪ An option required by the application (RAM, DIMM, board) is not installed ▪ Nesting of the fax group addresses is too complicated
		1. Check the devices necessary for the application program. If necessary devices have not been installed, install them. 2. Check that application programs are correctly configured. 3. For a fax operation problem, simplify the nesting of the fax group addresses. 4. Take necessary countermeasures specific to the application program. If the logs can be displayed on the operation panel, see the logs.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
998	CTL D	Application start error
		No applications start within 60 seconds after the power is turned on.
		▪ Loose connection of RAM-DIMM, ROM-DIMM ▪ Defective controller ▪ Software problem
		1. Check the setting of SP5875-001. If the setting is set to "1 (OFF)", change it to "0 (OFF)". 2. Check if the RAM-DIMM and ROM-DIMM are correctly connected. 3. Reinstall the controller system firmware. 4. Replace the controller.

Note 1

If a problem always occurs in a specific condition (for example. printer driver setting, image file), the problem may be caused by a software error. In this case, the following data and information needs to be sent back to your product specialist. Please understand that it may take some time to get a reply on how to solve the problem, because in some cases the design staff in Japan must analyze the data.

- Symptom / Possible Causes / Action taken
- Summary sheet (SP mode "Printer SP", SP1-004 [Print Summary])
- SMC - All (SP5-990-001)
- SMC - Logging (SP5-990-004)
- Printer driver settings used when the problem occurs
- All data displayed on the screen (SC code, error code, and program address where the problem is logged.)
- Image file which causes the problem, if possible

6.2 PROCESS CONTROL ERROR CONDITIONS

6.2.1 DEVELOPER INITIALIZATION RESULT

SP-3-014-001 (Developer Initialization Result)

No.	Result	Description	Possible Causes/Action
1	Successfully completed	Developer initialization is successfully completed.	-
2	Forced termination	Developer initialization was forcibly terminated.	▪ A cover was opened or the main switch was turned off during the initialization. 1. Do the developer initialization again when done in SP mode. Reinstall the engine main firmware if the result is the same. 2. Turn the main switch off and on when done at unit replacement.
6	Vt error	Vt is more than 0.7V when Vcnt is 4.3V.	1. Make sure that the heat seal on the development unit is not removed. 2. Defective TD sensor
7	Vcnt error 1	Vcnt is less than 4.7V when Vcnt is Vt target ±0.2V.	1. Defective TD sensor 2. Vt target settings are not correct. 3. Toner density error
8	Vcnt error 2	Vt is more than 0.7V when Vcnt is 4.3V and Vcnt is less than 4.7V when Vcnt is Vt target ±0.2V.	1. Make sure that the heat seal on the development unit is not removed. 2. Defective TD sensor

9	Vcnt error 3	Vcnt is less than 4.7V.	1. Make sure that the heat seal on the development unit is not removed. 2. Defective TD sensor 3. Vt target settings are not correct. 4. Toner density error

Note

- The machine starts developer initialization after you set "Enable" in SP3-902-005, 006, 007, or 008. Developer initialization automatically resumes when you open and close the front door or turn the main switch off and on if an error other than Error 8 occurs.

6.2.2 PROCESS CONTROL SELF-CHECK RESULT

Displayed number shows results of each color sensor check.

00000000 = YYCCMMKK

SP3-012-001 to -010 (Process Control Self-check Result)

No.	Result	Description	Possible Causes/Action
11	Successfully completed	Process control self-check successfully completed.	Check the Vsg adjustment. See the "Vsg Adjustment Result" following this table.
41	Vt error	Vt maximum or minimum error is detected.	▪ Defective development unit Vt maximum error and an image is faint: 1. Replace the toner supply pump unit. Vt maximum error and an image is O.K: 1. Replace the development unit. 2. Replace the BCU board. Vt minimum error: 1. Replace the development unit. 2. Replace the BCU board.
53	ID sensor coefficient (K5) detection error	Not enough data can be sampled.	▪ Solid image is not sufficient density: 1. Retry the process control. 2. Replace the ID sensors. 3. Replace the BCU board. ▪ Solid image is O.K. 1. Replace the ID sensors. 2. Replace the BCU board. ▪ ID sensor is dirty: 1. Clean the ID sensors. 2. Retry the process control.

No.	Result	Description	Possible Causes/Action
54	ID sensor coefficient (K5) maximum/ minimum error	When the K5 is more than the value of SP3-362-003 or less than the value of SP3-362-004, the error 54 is displayed.	▪ ID sensor pattern density is too high or low. ▪ ID sensor or shutter is defective. Same as 53
55	Gamma error: Maximum	Gamma is out of range. 5.0 < Gamma	▪ ID sensor pattern density is too high. ▪ Hardware defective. Same as 53
56	Gamma error: Minimum	Gamma is out of range. Gamma < 0.15	▪ ID sensor pattern density is too low. ▪ Hardware defective. 1. Same as 53 2. Replace the toner supply pump unit.
57	Vk error: Maximum	Vk is out of range. 150 < Vk	▪ ID sensor pattern density is too low. ▪ Hardware defective. Same as 53
58	Vk error: Minimum	Vk is out of range. Vk < –150	▪ ID sensor pattern density is too high. ▪ Background dirty ▪ Hardware defective Same as 53
59	Sampling data error during gamma correction	Not enough data can be sampled during the gamma correction.	▪ ID sensor pattern density is too high or low. ▪ Hardware defective Same as 53
99	Unexpected error	Process control fails.	▪ Power Failure Check the power source.

Vsg Adjustment Result

SP3-325-001 to -010 (Vsg Adjustment Result)

No.	Result	Description	Possible Causes/Action
1	O.K	Vsg adjustment is correctly done.	-
2	ID sensor adjustment error	Vsg cannot be adjusted within 4.0 ±0.5V.	▪ Dirty ID sensor (toner, dust, or foreign material) ▪ Dirty transfer belt ▪ Scratched image transfer belt ▪ Defective ID sensor ▪ Poor connection ▪ Defective BCU 1. Clean the ID sensor. 2. Check the belt cleaning. Clean or replace the transfer belt. 3. Replace the image transfer belt. 4. Replace the ID sensor. 5. Check the connection. 6. Replace the BCU board.
3	ID sensor output error	ID sensor output is more than "Voffset Threshold" (SP3-324-004)	▪ Defective ID sensor ▪ Poor connection ▪ Defective BCU 1. Replace the ID sensor. 2. Check the connection. 3. Replace the BCU board.
9	Vsg Adjustment error	Vsg adjustment has not been completed.	▪ Other cases Retry SP3-321-010.

6.2.3 LINE POSITION ADJUSTMENT RESULT

SP2-194-010 to -012 (Line Position Adjustment Result: M, C, Y)

This SP shows the number as a line position adjustment result on the LCD. It shows which color has an error (M, Y or C).

No.	Result	Description	Note
0	Not done	Line position adjustment has not been done.	-
1	Completed successfully	Line position adjustment has correctly been done,	-
2	Cannot detect patterns	ID sensors have not detected the patterns for line position adjustment.	See Note
3	Fewer lines on the pattern than the target	The patterns, which ID sensors have detected, are not enough for line position adjustment.	See Note
4	More lines on the pattern than the target	Not used in this machine.	-
5	Out of the adjustment range	ID sensors have correctly detected the patterns for line position adjustment, but a shift of patterns is out of adjustable range.	See Note
6-9	Not used	-	-

Note

- For details, see the "Troubleshooting Guide - Line Position Adjustment" section.

6.3 TROUBLESHOOTING GUIDE

6.3.1 LINE POSITION ADJUSTMENT

When there are color registration errors on the output, do the line position adjustment as follows.

Test

1. Do SP2-111-003 (Mode c: rough adjustment).
2. Use SP2-194-007 to check if the result of the line position adjustment is correct (0: Completed successfully, 1: Not completed). If the result is "1", refer to 'Countermeasure list for color registration errors'.
3. Do SP2-111-001 (Mode a: fine adjustment twice).
4. Use SP2-194-007 to check if the result of the line position adjustment is correct (0: Completed successfully, 1: Not completed). If the result is "1", refer to 'Countermeasure list for color registration errors'.
5. Put some A4/LT paper on the by-pass tray.

   Note

   - When you print a test pattern, use the by-pass tray to feed the paper.
6. Print out test pattern "7" with SP2-109-003.
7. Check the printed output with a loupe.
8. If there are no color registration errors on the output, the line position adjustment is correctly done. If not, refer to the countermeasure list for color registration errors.

Countermeasure list for color registration errors

After Executing SP2-111-003

- Result: "1" in SP2-194-007
- Result: "2" or "3" (Line pattern detection failure) in SP2-194-010, -011, -012

Test pattern check	Possible cause/Countermeasure
White image, Abnormal image, Low density	▪ Defective image processing unit ▪ Low density of test pattern ▪ Defective BCU 1. Replace the high voltage power supply unit. 2. Do the forced process control (SP3-011-001) or supply some toner (SP3-015-xxx). 3. Replace the BCU.
Normal image, but with color registration errors	▪ Defective ID sensor shutter ▪ Defective ID sensor ▪ Defective BCU 1. Replace the ID sensor shutter solenoid. 2. Replace the ID sensor. 3. Replace the BCU.

After Executing SP2-111-003

- Result: "1" in SP2-194-007
- One of results: "5" (Out of adjustable range) in SP2-194-010, -011, -012.

Test pattern check	Possible cause/Countermeasure
The main scan registrations of M, C, Y are shifted by more than ±15 mm from the main scan registration of K.	▪ Defective laser unit ▪ Defective BCU 1. Replace the laser unit. 2. Replace the BCU.
The sub scan registrations of M, C, Y are shifted by more than ±20 mm from the sub scan registration of K.	▪ Defective image transfer belt ▪ Defective drive units ▪ Defective BCU 1. Replace the image transfer belt. 2. Replace the drum motor. 3. Replace the BCU.
The main scan registration is shifted by more than ±0.66 mm, but only at the central area of the image on the output.	▪ Defective ID sensor at center ▪ Deformed center area on the image transfer belt ▪ Defective BCU 1. Replace the ID sensor. 2. Replace the image transfer belt. 3. Replace the BCU.
The skew for M, C, Y is more than ±0.75 mm from the main scan registration of K	▪ Defective PCDU ▪ Defective laser optics housing unit ▪ Defective BCU 1. Reinstall or replace the PCDU. 2. Replace the laser optics housing unit. 3. Replace the BCU.
Others	▪ Skew correction upper limit error ▪ Defective BCU ▪ Defective laser optics housing unit 1. Replace the BCU. 2. Replace the laser optics housing unit.

After Executing SP2-111-003

- Result: "1" in SP2-194-007
- Result: "0" in SP2-194-010, -011, -012.

Test pattern check	Possible cause/Countermeasure
	Do SP2-111-001 or -002.

After Executing SP2-111-001

- Result: "1" in SP2-194-007
- Result: "2" or "3" (Line pattern detection failure) in SP2-194-010, -011, -012

Test pattern check	Possible cause/Countermeasure
White image, Abnormal image, Low density	▪ Defective laser optics housing unit shutter ▪ Defective image processing unit ▪ Low density of test pattern ▪ Defective BCU 1. Replace the shutter motor. 2. Replace the high voltage power supply unit. 3. Do the forced process control (SP3-011-001) or supply some toner (SP3-015-xxx). 4. Replace the BCU.
Normal image, but with color registration errors	▪ Defective ID sensor shutter ▪ Defective ID sensor ▪ Defective BCU 1. Replace the ID sensor shutter solenoid. 2. Replace the ID sensor. 3. Replace the BCU.

After Executing SP2-111-001

- Result: "1" in SP2-194-007
- Result: "5" (Out of adjustable range) in SP2-194-010, -011, -012

Test pattern check	Possible cause/Countermeasure
Low image density on the output	▪ Low pattern density Do the forced process control (SP3-011-001) or supply some toner (SP3-015-xxx).
The main scan registrations of M, C, Y are shifted by more than ±1.4 mm from the main scan registration of K.	▪ No defective component ▪ Defective laser optics housing unit ▪ Defective BCU 1. Do SP2-111-003 again. 2. Replace the laser optics housing unit. 3. Replace the BCU.
The sub scan registrations of M, C, Y are shifted by more than ±1.4mm from the sub scan registration of K.	▪ No defective component ▪ Defective image transfer belt ▪ Defective drive units ▪ Defective BCU 1. Do SP2-111-003 again. 2. Replace the image transfer belt. 3. Replace the drum motor. 4. Replace the BCU.
The main scan registration is shifted by more than ±0.66 mm, but only at the central area of the image on the output.	▪ Defective ID sensor at center ▪ Deformed center area on the image transfer belt ▪ Defective BCU 1. Replace the ID sensor. 2. Replace the image transfer belt. 3. Replace the BCU.
The skew for M, C, Y is more than ± 0.75 mm from the main scan registration of K. – at the end of the scan line?	▪ Defective PCDU ▪ Defective laser optics housing unit ▪ Defective BCU 1. Reinstall or replace the PCDU. 2. Replace the laser optics housing unit. 3. Replace the BCU.

Test pattern check	Possible cause/Countermeasure
Others	▪ Skew correction upper limit error ▪ Defective BCU ▪ Defective laser optics housing unit 1. Replace the BCU. 2. Replace the laser optics housing unit.

After Executing SP2-111-001

- Result: "0" in SP2-194-007
- Result: No color registration errors in SP2-194-010, -011, -012

Test pattern check	Possible cause/Countermeasure
The main scan registration of K is shifted.	▪ Abnormal SP setting value of main scan: K Adjust the value with SP2-101-001.
The main scan length of K is shifted.	▪ Abnormal SP setting value of main scan length detection: K Adjust the value with SP2-185-001.

After Executing SP2-111-001

- Result: "0" in SP2-194-007
- Result: Color registration errors in SP2-194-010, -011, -012

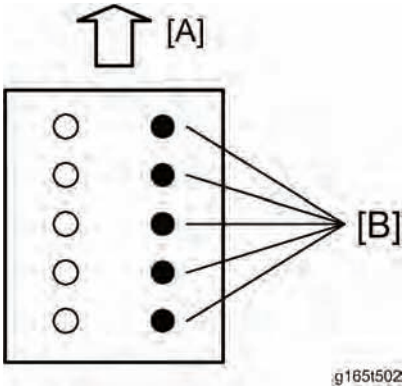
Test pattern check	Possible cause/Countermeasure
Low image density on the output	▪ Low pattern density Do the forced process control (SP3-011-001) or supply some toner (SP3-015-xxx).
The main scan registration is shifted, but only at the central area of the image on the output.	▪ Defective ID sensor at center ▪ Deformed center area on the image transfer belt ▪ Defective BCU 1. Replace the ID sensor. 2. Replace the image transfer belt. 3. Replace the BCU.

Test pattern check	Possible cause/Countermeasure
The main scan registrations of M, C, Y are shifted.	▪ Defective laser optics housing unit ▪ Defective ID sensor ▪ Defective BCU ▪ Incorrect SP value 1. Replace the laser optics housing unit. 2. Replace the ID sensor. 3. Replace the BCU. 4. Adjust the value with SP2-182-004 to -021.
The sub scan registrations of M, C, Y are shifted.	▪ Defective image transfer belt ▪ Defective drive units ▪ Defective ID sensor ▪ Defective BCU ▪ Incorrect SP value 1. Replace the image transfer belt. 2. Replace the ID sensor. 3. Replace the drum motor. 4. Replace the BCU. 5. Adjust the value with SP2-182-022 to -039.
The skew of M, C, Y is different.	▪ Defective PCDU ▪ Defective laser optics housing unit ▪ Defective IPU 1. Reinstall or replace the PCDU. 2. Replace the laser optics housing unit. 3. Replace the IPU.
The sub scan lines are shifted. Shifted lines appear cyclically.	▪ Defective PCDU ▪ Defective drive unit ▪ Drum phase adjustment error 1. Do SP1-902-001 (Drum phase adjustment); see Replacement and Adjustment – Drive Unit – Gear Unit for details. 2. Reinstall or replace the PCDU. 3. Check or replace the drive unit.

6.3.2 PROBLEM AT REGULAR INTERVALS

Image problems may appear at regular intervals that depend on the circumference of certain components.

The following diagram shows the possible symptoms (black or white dots at regular intervals).



[A]: Paper feed direction

[B]: Problems at regular intervals

- Abnormal image at 35-mm intervals: Charge roller
- Abnormal image at 795-mm intervals: Image transfer belt unit
- Colored spots at 41-mm intervals: Image transfer roller
- Colored spots at 82-mm intervals: Image transfer belt drive roller/ Image transfer belt idling roller
- Colored spots at 33-mm intervals: Development roller
- Abnormal image at 83-mm intervals: Paper transfer roller
- Colored spots at 94-mm intervals: OPC drum
- Spots at 141-mm intervals: Pressure roller
- Spots at 126-mm intervals: Fusing roller
- Spots at 204-mm intervals: Fusing belt

6.3.3 BLANK PRINT

Symptom	Possible cause	Necessary actions
No image is printed.	Defective laser unit	Replace the laser unit.
	Defective PCDU	Replace the PCDU.
	Defective image transfer belt unit	Replace the image transfer belt unit.
	Incorrect action of paper transfer roller	Check the guide and the paper transfer roller.
	Defective HVPS	Replace HVPS.
	Defective BCU	Replace the BCU.

6.3.4 ALL-BLACK PRINT

Symptom	Possible cause	Necessary actions
All the paper is black.	Incorrectly installed PCDU	Install the PCDU correctly.
	Defective PCDU	Replace the PCDU.
	Defective HVPS	Replace HVPS.
	Defective laser unit	Replace the laser unit.
	Defective BCU	Replace the BCU.
	Defective main board	Replace the main board.

6.3.5 MISSING CMY COLOR

Symptom	Possible cause	Necessary actions
C, M, or Y is missing.	Defective PCDU	Replace the PCDU.
	Loose connection between printer cartridge and BCU	Replace the drum positioning cover.
	Image transfer belt not contacting PCDU	Check the belt tension unit.
	Defective the drum motor: CMY	Replace the drum motor: CMY.
	Defective BCU	Replace the BCU.

6.3.6 LIGHT PRINT

Symptom	Possible cause	Necessary actions
Printed images are too weak.	Loose connection between paper transfer roller and HVPS	Check the connection between the paper transfer roller and the HVPS.
	Dust in the laser beam path	Clean the laser beam path.
	Image transfer belt not contacting PCDU	Check the image transfer belt unit.
	Defective PCDU	Replace the PCDU.
	Defective paper transfer roller	Repair the paper transfer roller.
	Defective fusing unit	Replace the fusing unit.
	Defective BCU	Replace the BCU.

6.3.7 REPEATED SPOTS OR LINES ON PRINTS

The same spots or lines appear at regular intervals.

Interval	Possible cause	Necessary actions
At intervals of 35 mm (1.38 inches)	Defective charge roller	Replace the PCDU.
At intervals of 33 mm (1.3 inches)	Defective development roller	Replace the PCDU.
At intervals of 83 mm (3.27 inches)	Defective paper transfer roller	Replace the paper transfer roller unit.
At intervals of 94 mm (3.7 inches)	Defective OPC drum	Replace the PCDU.
At intervals of 126 mm (4.96 inches)	Defective fusing roller	Replace the fusing roller or fusing unit.
At intervals of 141 mm (5.55 inches)	Defective pressure roller	Replace the pressure roller or fusing unit.
At intervals of 204 mm (8.03 inches)	Defective fusing belt	Replace the fusing unit.
At intervals of 795 mm (31.3 inches)	Defective image transfer belt	Replace the image transfer belt or image transfer belt unit.
At intervals of 41 mm (1.61 inches)	Defective image transfer roller	Replace the image transfer roller.
At intervals of 82 mm (3.23 inches)	Defective image transfer belt drive roller or image transfer belt idling roller	Replace the image transfer belt drive roller or image transfer belt idling roller.

6.3.8 DARK VERTICAL LINE ON PRINTS

Symptom	Possible cause	Necessary actions
A dark line appears. The line is parallel to the paper feed direction of one CMY color.	Defective PCDU	Replace the PCDU.
A dark line appears. The line is parallel to the paper feed direction of any color (not C, M, or Y).	Dust in the laser beam path	Clean the laser beam path.
	Defective image transfer belt unit	Replace the image transfer belt unit.
	Defective fusing unit	Replace the fusing unit.

6.3.9 WHITE HORIZONTAL LINES OR BANDS

Symptom	Possible cause	Necessary actions
White lines or bands appear in images of all toner colors.	Defective PCDU	Replace the PCDU.
	Defective image transfer belt unit	Replace the image transfer belt unit.
	Defective paper transfer roller	Replace the paper transfer roller.

6.3.10 MISSING PARTS OF IMAGES

Symptom	Possible cause	Necessary actions
Some parts of images are missing.	Defective PCDU	Replace the PCDU.
	Defective image transfer belt unit	Replace the image transfer belt unit.
	Defective paper transfer roller	Replace the paper transfer roller.
	Defective fusing unit	Replace the fusing unit.

6.3.11 DIRTY BACKGROUND

Symptom	Possible cause	Necessary actions
Backgrounds of one CMYK color are too dense.	Defective PCDU	Replace the PCDU.
Backgrounds of more than one CMYK are too dense.color	Defective HVPS	Replace the HVPS.

6.3.12 PARTIAL CMY COLOR DOTS

Symptom	Possible cause	Necessary actions
Unexpected dots of the same color appear at irregular intervals.	Defective PCDU	Replace the PCDU.
	Defective image transfer belt unit	Replace the image transfer belt unit.
	Defective fusing unit	Replace the fusing unit.

6.3.13 DARK IRREGULAR STREAKS ON PRINTS

Symptom	Possible cause	Necessary actions
Unexpected streaks appear at irregular intervals.	Defective image transfer belt	Replace the image transfer belt unit.

6.3.14 CMY COLOR IRREGULAR STREAKS

Symptom	Possible cause	Necessary actions
Unexpected streaks of the same color appear at irregular intervals.	Defective PCDU	Replace the PCDU.
	Defective image transfer belt unit	Replace the image transfer belt unit.

6.3.15 GHOSTING

Symptom	Possible cause	Necessary actions
The same or similar image appears two or more times. They get weaker and weaker.	Defective PCDU	Replace the PCDU.
	Defective transfer unit	Replace the transfer unit.

6.3.16 UNFUSED OR PARTIALLY FUSED PRINTS

Symptom	Possible cause	Necessary actions
Some parts of images are not fused very well.	Non-standard paper in use	Use recommended paper.
	Incorrect media type mode	Select an appropriate media mode.
	Defective fusing unit	Replace the fusing unit.

6.3.17 IMAGE SKEW

Symptom	Possible cause	Necessary actions
Images are skewed	Incorrect installation of paper	Install the paper correctly.
	Incorrect paper guide position	Adjust the paper guide correctly. Note ▪ When adjusting the paper width, use the right side guide only, with the green clip. Do not hold ▪ the left side guide at this time, or skew will occur.
	Defective registration roller	Repair the paper feed unit.
	Incorrect action of paper transfer roller	Check the paper transfer roller.
	Defective BCU	Replace the BCU.
	Incorrect installation of paper tray	Uninstall the paper tray units and re-install them.

6.3.18 BACKGROUND STAIN

Symptom	Possible cause	Necessary actions
The reverse side of the paper is not clean.	Unclean paper transfer roller	Clean the paper transfer roller.
	Unclean paper path	Clean the paper path.
	Unclean registration roller	Clean the registration roller.
	Defective fusing unit	Replace the fusing unit.

6.3.19 NO PRINTING ON PAPER EDGE

Symptom	Possible cause	Necessary actions
Images are not printed in the areas around the paper edges.	Defective PCDU	Replace the PCDU.
	Defective toner cartridge	Replace the toner cartridge.
	Defective image transfer belt unit	Replace the image transfer belt unit.
	Image transfer belt not contacting PCDU	Check the image transfer belt unit.

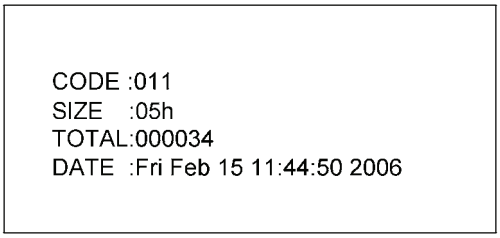
6.3.20 IMAGE NOT CENTERED WHEN IT SHOULD BE

Symptom	Possible cause	Necessary actions
Images do not come to the center.	Incorrect installation of paper	Install the paper correctly.
	Incorrect paper guide position	Adjust the paper guide correctly.
	Incorrect margin setting	Adjust the margin setting.
	Defective BCU	Replace the BCU.
	Incorrect installation of paper tray	Uninstall the paper tray units and re-install them.

6.4 JAM DETECTION

6.4.1 PAPER JAM DISPLAY

SP7-507 shows the paper jam history.



- **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.

6.4.2 JAM CODES AND DISPLAY CODES

SP7-504 shows how many jams occurred at each location.

Jam Code SP	Display	Description	LCD Display
7504 3	Tray 1: ON	Paper is not fed from tray 1.	A
7504 4	Tray 2: ON	Paper is not fed from tray 2.	Y
7504 5	Tray 3: ON	Paper is not fed from tray 3.	Y
7504 6	Tray 4: ON	Paper is not fed from tray 4.	Y
7504 8	Bypass: ON	Paper is not fed from the by-pass tray.	A
7504 9	Duplex: ON	Paper is jammed at the duplex unit.	Z
7504 11	Vertical Transport 1: ON	Vertical transport sensor 1 does not detect paper from tray 1.	A
7504 12	Bank Transport 1: ON	Vertical transport sensor 2 does not detect paper from tray 2.	Y
7504 13	Bank Transport 2: ON	Vertical transport sensor 3 or relay sensor does not detect paper from tray	Y

Jam Code SP	Display	Description	LCD Display
		3.	
7504 14	Bank Transport 3: ON	Vertical transport sensor 3 or relay sensor does not detect paper from tray 4.	Y
7504 17	Registration: ON	Registration sensor does not detect paper.	A
7504 18	Fusing Entrance: ON	Fusing entrance sensor does not detect paper.	B
7504 19	Fusing Exit: ON	Fusing exit sensor does not detect paper.	C
7504 20	Paper Exit: ON	Paper exit sensor does not detect paper.	C
7504 21	Relay Exit: ON	Tray exit sensor (bridge unit) does not detect paper.	C
7504 25	Duplex Exit: ON	Duplex exit sensor does not detect paper.	Z
7504 26	Duplex Entrance: ON (In)	Duplex entrance sensor does not detect paper.	Z
7504 27	Duplex Entrance: ON (Out)	Duplex entrance sensor does not detect paper again after paper has passed this sensor.	Z
7504 28	Inverter: ON (In)	Inverter sensor does not detect paper.	Z
7504 29	Inverter: ON (Out)	Inverter sensor does not detect paper again after paper has passed this sensor.	Z
7504 47	Paper Feed Sensor 1	Paper Feed Sensor 1 does not turn off.	A
7504 48	Bank Paper Feed Sensor 1	Paper Feed Sensor 2 does not turn off.	Y
7504 49	Bank Paper Feed	Paper Feed Sensor 3 does not turn off.	Y

Jam Code SP	Display	Description	LCD Display
	Sensor 2		
7504 50	Bank Paper Feed Sensor 3	Paper Feed Sensor 3 does not turn off.	Y
7504 51	Vertical Transport Sensor 1	Vertical transport sensor 1 does not turn off.	A
7504 52	Bank Vertical Transport Sensor 1	Vertical transport sensor 2 does not turn off.	Y
7504 53	Bank Vertical Transport Sensor 2	Vertical transport sensor or relay sensor 3 does not turn off.	Y
7504 54	Bank Vertical Transport Sensor 3	Vertical transport sensor 3 does not turn off.	Y
7504 57	Regist Sensor	Registration sensor does not turn off.	B
7504 60	Exit Sensor	Paper exit sensor does not turn off.	C
7504 61	Relay Exit Sensor	Tray exit sensor (bridge unit) does not turn off.	C
7504 62	Relay Sensor	Relay sensor (bridge unit) does not turn off.	D
7504 65	Duplex Exit Sensor	Duplex exit sensor does not turn off.	Z
7504 66	Duplex Entrance: OFF (In)	Duplex entrance sensor does not turn off.	Z
7504 67	Duplex Entrance: OFF (Out)	Duplex entrance sensor does not turn off after paper has passed this sensor.	Z
7504 68	Inverter: OFF (In)	Inverter sensor does not turn off.	Z
7504 69	Inverter: OFF (Out)	Inverter sensor does not turn off after paper has passed this sensor.	Z
7504 230	Finisher Entrance	Finisher entrance sensor does not detect paper.	R1

Jam Code SP	Display	Description	LCD Display
7504 240	Finisher Entrance	Finisher entrance sensor does not detect paper.	R1
7504 241	Finisher Entrance	Finisher entrance sensor does not turn off.	R1
7504 242	Finisher Exit	Finisher exit sensor does not detect paper. Finisher exit sensor does not turn off.	R2
7504 243	Finisher Jogger Motor	Jogger fence HP sensor does not turn off after the jogger fence has moved from its home position. Jogger fence HP sensor does not turn on after the jogger fence has returned to its home position.	R2
7504 244	Finisher Shift Roller Motor	Shift roller HP sensor does not turn off after the jogger fence has moved from its home position. Shift roller HP sensor does not turn on after the jogger fence has returned to its home position.	R1
7504 245	Finisher Gathering Roller Motor	Gathering roller HP sensor does not turn off after the jogger fence has moved from its home position. Gathering roller HP sensor does not turn on after the jogger fence has returned to its home position.	R2
7504 246	Finisher Exit Guide Plate Motor	Exit guide plate HP sensor does not turn off after the jogger fence has moved from its home position. Exit guide plate HP sensor does not turn on after the jogger fence has returned to its home position.	R2

Jam Code SP	Display	Description	LCD Display
7504 247	Finisher Tray Lift Motor	Tray lower limit sensor does not turn off after the jogger fence has moved from its home position. Tray lower limit sensor does not turn on after the jogger fence has returned to its home position.	R2
7504 248	Finisher Stapler Motor	Stapler HP sensor does not turn off after the jogger fence has moved from its home position. Stapler HP sensor does not turn on after the jogger fence has returned to its home position.	R2
7504 249	Finisher Pick-up Solenoid	Pick-up solenoid error	R1
7504 250	Data Error	Data error	R1
7505 004	ARDF Registration Sensor	ARDF registration sensor does not detect paper.	P
7505 008	ARDF Registration Sensor	ARDF registration sensor does not turn off.	P
7505 054	ARDF Inverter Sensor	ARDF inverter sensor does not detect paper.	P
7505 058	ARDF Inverter Sensor	ARDF inverter sensor does not turn off.	P

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

6.5 ELECTRICAL COMPONENT DEFECTS

6.5.1 SENSORS

No.	Sensor Name/ Sensor Board Name	Active	CN No./ Pin No.	Condition	Symptom
1	Drum Phase Sensor (CMY)	H	CN1/2	Open	SC381
				Shorted	
2	Drum Phase Sensor (K)	H	CN107/2	Open	SC380
				Shorted	
3	Toner End Sensor (K) Toner End Sensor (M) Toner End Sensor (C) Toner End Sensor (Y)	L	CN115/18 CN115/21 CN115/24 CN115/27	Open	Toner end cannot be detected.
				Shorted	Toner end is detected.
4	Transfer Belt Contact Sensor	L	CN128/21	Open	SC442
				Shorted	
5	Paper Transfer Roller Contact Sensor	L	CN128/8	Open	SC452
				Shorted	
6	TD Sensor (K) TD Sensor (M) TD Sensor (C) TD Sensor (Y)	A	CN108/19 CN109/17 CN108/8 CN109/25	Open	SC372 (K) SC373 (M) SC374 (C) SC375 (Y)
				Shorted	
7	ITB Rotation Sensor	A	CN128/18	Open	▪ Automatic line position adjustment error: Transfer belt unit speed cannot be detected, causing image skew. ▪ SC285
				Shorted	

No.	Sensor Name/ Sensor Board Name	Active	CN No./ Pin No.	Condition	Symptom
8	Right Door Sensor	L	CN104/1	Open	"Cover Open" is displayed
				Shorted	"Right cover open" cannot be detected.
9	Waste Toner Bottle Full Sensor	H	CN118/19	Open	Waste Toner near full is indicated.
				Shorted	Waste toner full cannot be detected.
10	Waste Toner Bottle Set Sensor	L	CN118/16	Open	"Check the Left Cover is closed and the Waste Toner Bottle is set correctly" is displayed.
				Shorted	▪ Left cover open cannot be detected. ▪ Waste toner bottle set cannot be detected.
11	Temperature/Humidity Sensor	A	CN127/1, 3	Open	▪ Printed image is wrong, such as rough image, dirty background or weak image. ▪ SC498
				Shorted	
12	Paper Size Switch	L	CN116	Open	▪ Paper Tray is detected ▪ Paper Tray is not detected
				Shorted	

No.	Sensor Name/ Sensor Board Name	Active	CN No./ Pin No.	Condition	Symptom
13	Right Tray Set Sensor	L	CN104/3	Open	Right Tray is detected
				Shorted	Right Tray is not detect
14	Paper Overflow Sensor	H	CN104/9	Open	Paper overflow is detected.
				Shorted	Paper overflow is not detected.
15	Paper Exit Sensor	L	CN104/6	Open	▪ Paper is not detected. ▪ Jam C
				Shorted	▪ Paper is detected. ▪ Jam C
16	ID Sensor	A	CN110/2, 5, 8, 11	Open	SC400
				Shorted	
17	Thermistor	A	CN125/5, 7	Open	SC554, SC544
				Shorted	
18	Pressure Roller Thermistor	A	CN125/9	Open	SC564
				Shorted	
19	ARDF Cover Sensor	L	CN111	Open	"Cover Open" is displayed.
				Shorted	
20	Duplex Cover Sensor	L	CN126/A5	Open	"Cover Open" is displayed.
				Shorted	Duplex cover open cannot be detected.

No.	Sensor Name/ Sensor Board Name	Active	CN No./ Pin No.	Condition	Symptom
21	Registration Sensor	L	CN1/2	Open	▪ Paper is not detected. ▪ Jam A
				Shorted	▪ Paper is detected. ▪ Jam B
22	Paper Feed Sensor	L	CN129/4	Open	Paper is not detected.
				Shorted	▪ Paper is detected. ▪ Jam A
23	Vertical Transport Sensor	L	CN129/7	Open	▪ Paper is not detected. ▪ Jam A
				Shorted	▪ Paper is detected. ▪ Jam A
24	Paper Lift Sensor	H	CN129/13	Open	SC501
				Shorted	
25	Paper End Sensor	L	CN129/10	Open	▪ Paper end is not detected. ▪ Jam A
				Shorted	▪ Paper end is detected.
26	Fusing Entrance Sensor	L	CN126/A14	Open	Paper jam is not detected.
				Shorted	▪ Paper jam is detected. ▪ Jam B

No.	Sensor Name/ Sensor Board Name	Active	CN No./ Pin No.	Condition	Symptom
27	Duplex Entrance Sensor	L	CN126/A2	Open	▪ Paper is not detected. ▪ Jam Z
				Shorted	▪ Paper is detected. ▪ Jam Z
28	Duplex Exit Sensor	L	CN126/A11	Open	▪ Paper is not detected. ▪ Jam Z
				Short	▪ Paper is detected. ▪ Jam Z
29	By-pass Paper End Sensor	L	CN126/B8	Open	▪ Paper end is not detected. ▪ Jam A
				Shorted	▪ Paper end is detected.
30	By-pass Paper Size Sensor	L	CN126	Open	▪ Paper is detected
				Shorted	▪ Paper is not detected

No.	Sensor Name/ Sensor Board Name	Active	CN No./ Pin No.	Condition	Symptom
31	Inverter Sensor	L	CN126/A8	Open	▪ Paper is not detected. ▪ Jam Z
				Shorted	▪ Paper is detected. ▪ Jam Z
32	Fusing Exit Sensor	H	CN104/12	Open	Jam C
33	Scanner HP Sensor	L	CN111/14	Open	SC120,121
				Shorted	

6.5.2 BLOWN FUSE CONDITIONS

Power Supply Unit

Fuse	Rating		Symptom when turning on the main switch
	120V-127V	220V-240V	
FU1	8A/125V	8A/125V	▪ 24V power to the BCU and IPU not supplied. ▪ 24VS2 power to the BCU not supplied.
FU2	8A/125V	8A/125V	▪ 24VS1 power to the BCU not supplied. ▪ 5VS power to the IPU not supplied.
FU3	5A/250V	5A/250V	▪ 5V power to the BCU and IPU not supplied. ▪ 5VS power to the IPU not supplied.
FU101	15A/250V	8A/250V	Fusing SC occurs.
FU102	10A/250V	6.3A/250V	No response
FU103	2A/250V	2A/250V	Power to all the anti-condensation heaters not supplied.

6.6 SCANNER TEST MODE

6.6.1 SBU TEST MODE

Output the SBU test pattern with SP4-807-001 to make sure the scanner SBU control operates correctly. The SBU test pattern prints out after you have set the SP mode settings and pressed the start key.

- The CCD on the SBU board may be defective if the copy is abnormal and the SBU test pattern is normal.
- The followings can be the cause if the copy is normal and the SBU test pattern is abnormal:
  - The harness may not be correctly connected between the SBU and the IPU.
  - The IPU or SBU board may be defective.

ENERGY SAVING

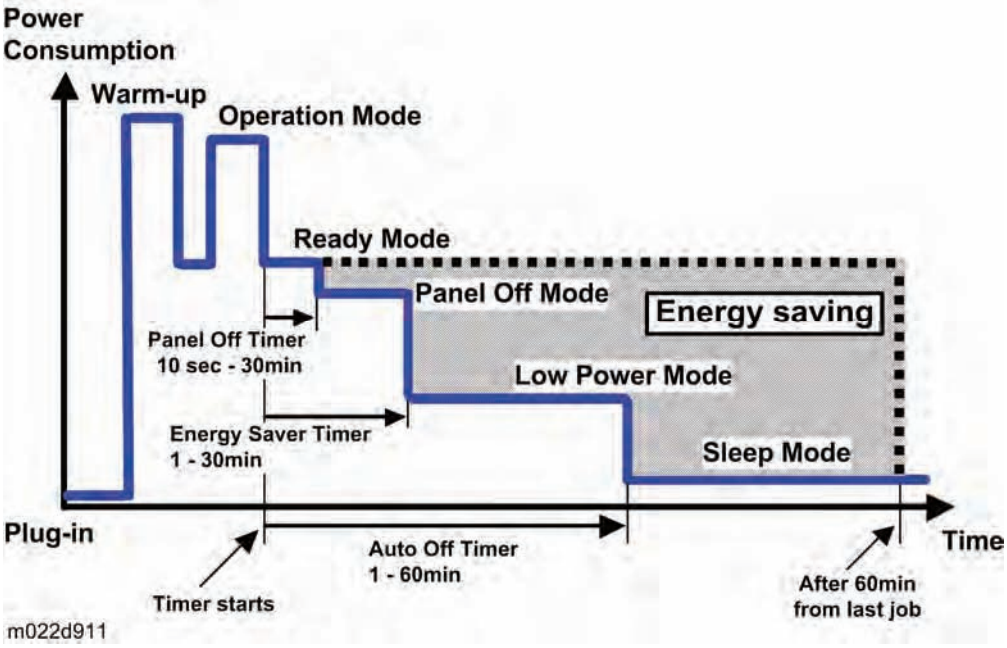
REVISION HISTORY		
Page	**Date**	**Added/Updated/New**
		None

7. ENERGY SAVING

7.1 ENERGY SAVE

7.1.1 ENERGY SAVER MODES

Customers should use energy saver modes properly, to save energy and protect the environment.



The area shaded grey in this diagram represents the amount of energy that is saved when the timers are at the default settings. If the timers are changed, then the energy saved will be different. For example, if the timers are all set to 60 min., the grey area will disappear, and no energy is saved before 60 min. expires.

Timer Settings

The user can set these timers with User Tools (System settings > Timer setting)

- Panel off timer (10 sec – 30 min): Panel Off Mode. Default setting: 1 min.
- Energy saver timer (1 – 30 min): Low Power Mode. Default setting: 5 min.
- Auto off timer (1 – 60 min): Sleep Mode. Default setting: 11 min.

Normally, Panel Off timer < Energy Saver timer < Auto Off timer. But, for example, if Auto Off timer < or = Panel Off timer and Energy Saver timer, the machine goes immediately to Off mode when the Auto Off timer expires. It skips the Panel Off and Energy Saver modes.

Example

- Panel off: 1 min.
- Low power: 15 min.
- Sleep: 1 min.
- The machine goes to sleep mode after 1 minute. Panel Off and Low Power modes are not used.

Return to Stand-by Mode

Panel Off Mode

- 9 sec.

Low Power Mode

The recovery time depends on the model and the region.

- 18 sec.

Sleep Mode

Recovery time.

- 45 sec.

Recommendation

We recommend that the default settings should be kept.

- If the customer requests that these settings should be changed, please explain that their energy costs could increase, and that they should consider the effects on the environment of extra energy use.
- If it is necessary to change the settings, please try to make sure that the Auto Off timer is not too long. Try with a shorter setting first, such as 30 min., then go to a longer one (such as 60 min.) if the customer is not satisfied.
- If the timers are all set to the maximum value, the machine will not begin saving energy until 240 minutes has expired after the last job. This means that after the customer has finished using the machine for the day, energy will be consumed that could otherwise be saved.
- If you change the settings, the energy consumed can be measured using SP8941, as explained below.

7.1.2 ENERGY SAVE EFFECTIVENESS

SP 8941 (Machine Status) keeps a record of the amount of time that the machine spends in each mode.

- 8941-001: Operating mode
- 8941-002: Standby mode
- 8941-003: Panel off mode
- 8941-004: Low power mode
- 8941-005: Sleep mode

With this data, and the power consumption values from the specifications, we can estimate the amount of energy that is used by the machine.

This should only be used as a reference value, because the power consumption specifications are measured in a controlled environment with a constant power supply.

To get an exact measurement at the customers site, a watt meter must be used to measure the actual energy consumed.

To use SP8941 to calculate the energy consumed:

- At the start of the measurement period, read the values of SP8941 001 to 005.
- At the end of the measurement period, read the values of SP8941 001 to 005 again.
- Find the amount of time spent in each mode (subtract the earlier measurement from the later measurement).
- Multiply this by the power consumption spec for each mode.
- Convert the result to kWh (kilowatt hours)

Here is an example calculation.

Machine Condition	SP8941: Machine Status	Time at Start (min.) ①	Time at End (min.) ②	Running time (hour) (②-①)/60 = ③	Power consumption Spec. (W) ④	Power consumption (KWH) (③x④)/1000 = ⑤
Operating	001: Operating Time	21089.0	21386.0	4.95	898	4.45
Stand by (Ready)	002: Standby Time	306163.0	308046.0	31.38	179	5.62
Energy save (Panel off)	003: Energy Save Time	74000	75111.0	18.52	148.09	2.74
Low power	004: Low Power Time	148000	150333	38.88	111	4.32
Sleep	005: Off Mode Time	508776.0	520377.0	193.35	1.8	0.35
Total						17.47

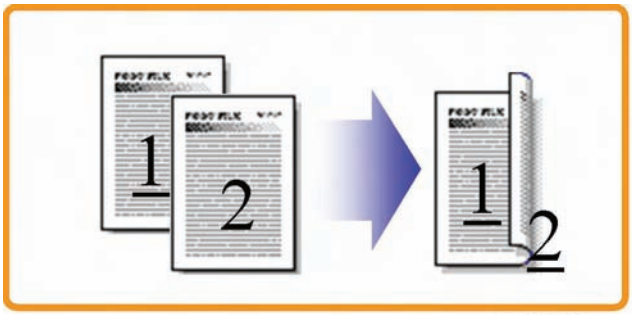
7.2 PAPER SAVE

7.2.1 EFFECTIVENESS OF DUPLEX/COMBINE FUNCTION

Duplexing and the combine functions reduce the amount of paper used. This means that less energy overall is used for paper production, which improves the environment.

1. Duplex:

Reduce paper volume in half!



d062d102

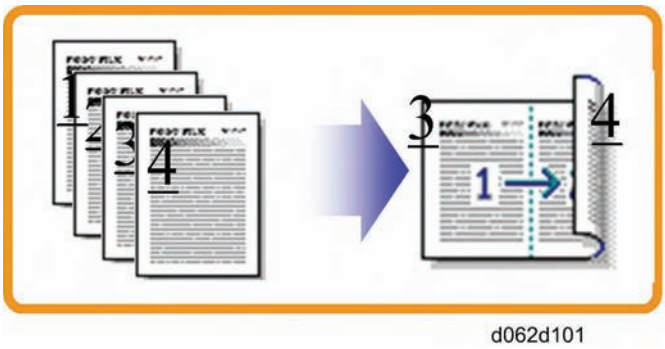
2. Combine mode:

Reduce paper volume in half!

d062d100

3. Duplex + Combine:

Using both features together can further reduce paper volume by 3/4!



d062d101

To check the paper consumption, look at the total counter and the duplex counter.

The total counter counts all pages printed.

- For one duplex page, the total counter goes up by 2.
- For a duplex job of a three-page original, the total counter goes up by 3.

The duplex counter counts pages that have images on both sides.

- For one duplex page, the duplex counter goes up by 1.
- For a duplex job of a three-page original, the duplex counter will only increase by 1, even though two sheets are used.

How to calculate the paper reduction ratio

How to calculate the paper reduction ratio, when compared with Single-sided copying, with no 2-in-1 combine mode

Paper reduction ratio (%) = Number of sheets reduced: A/Number of printed original images: B x 100

- Number of sheets reduced: A

  = Output pages in duplex mode/2 + Number of pages in Single-sided with combine mode + Number of pages in Duplex with combine mode x 3/2

  A = ((2) /2 + (3) + (4) x 3/2
- Number of printed original images: B

  = Total counter + Number of pages in Single-sided with combine mode + Number of pages in Duplex with combine mode

  B = (1) + (3) + (4)
- (1) Total counter: SP 8581 001 (pages)
- (2) Single-sided with duplex mode: SP 8421 001 (pages)
- (3) Single-sided with combine mode: SP 8421 004 (pages)
- (4) Duplex with combine mode: SP 8421 005 (pages)

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Ricoh Americas Corporation

LEGEND

PRODUCT CODE	COMPANY			
	GESTETNER	LANIER	RICOH	SAVIN
M022	MP C300	LD130C	Aficio MP C300	C230
M024	MP C300SR	LD130CSR	Aficio MP C300SR	C230SR
M025	MP C400	LD140C	Aficio MP C400	C240
M026	MP C400SR	LD140CSR	Aficio MP C400SR	C240SR

DOCUMENTATION HISTORY

REV. NO.	DATE	COMMENTS
*	01/2011	Original Printing

M022/M024/M026/M028
SERVICE MANUAL APPENDICES

M022/M024/M026/M028 APPENDICES

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APPENDIX:
SPECIFICATIONS

1. APPENDIX: SPECIFICATIONS

1.1 SPECIFICATIONS

1.1.1 GENERAL SPECIFICATIONS

Mainframe

Configuration:	Desktop		
Print Process:	Laser beam scanning and electro-photographic printing 4 drums tandem method		
Copy Speed:	M022/M024: 32 cpm (LT), 30 cpm (A4) M026/M028: 42 cpm (LT), 40 cpm (A4)		
First Copy Time:	Color: 15 seconds or less (A4, LT, SEF) Black and White: 10 seconds or less (A4, LT, SEF)		
Warm-up Time:	50 seconds or less		
Print Paper Capacity: (80 g/m^2, 20lb)	Standard tray: 550 sheets By-pass tray: 100 sheets Optional paper feed tray: 550 sheets		
Print Paper Size:	See "Supported Paper Sizes"		
	-	Minimum	Maximum
	Standard Tray	98 x 148 mm	216 x 355.6 mm
	By-pass	70 x 127 mm	216 x 1260 mm
	Optional Tray	98 x 148 mm	216 x 355.6 mm
Printing Paper Weight:	Standard tray: 52-220 g/m^2 (14-59 lb) By-pass tray: 52-256 g/m^2 (14-69 lb)		

	Optional paper feed tray: 52-220 g/m^2 (14-59 lb) Duplex: 60-163 g/m^2 (16-44 lb)
Output Paper Capacity:	Basic model: Up to 500 sheets (A4/ LT/ 80 g/m^2 / 20 lb) Finisher model: Up to 250 sheets (LG)
Memory:	Standard: 1.5GB (1GB+512MB)
Power Source:	120V -127 V, 60 Hz: More than 12 A (for North America) 220 V - 240 V, 50/60 Hz: More than 8 A (for Europe/Asia)
Power Consumption:	120 V: 1600 W or less 220-240 V: 1650 W or less Energy Saver: 2.5 W or less
Noise Emission: (Sound Power Level)	M022/M024: Color: 68.5 dB (A) Black and White: 68.3 dB (A) M026/M028: Color: 70.0 dB (A) Black and White: 70.0 dB (A)
Dimensions (W x D x H):	550 x 570 x 710 mm (21.7" x 22.4" x 28"): (including ARDF and operation panel)
Weight:	Basic model: 80 kg (176 lb) Finisher model: 85 kg (187 lb)

Printer

Printer Languages:	PCL5c, PCL6, PS3, XPS
Resolution:	PCL5c: 600 x 600 dpi (1, 2, 4 bit), 300 x 300 dpi Grayscale PCL-6: 1200 x 1200 dpi (1 bit), 600 x 600 dpi (1, 2, 4 bit) PS3: 1200 x 1200 dpi (1 bit), 600 x 600 dpi (1, 2, 4 bit) XPS: 1200 x 1200 dpi (1 bit), 600 x 600 dpi (1, 2, 4 bit)
Resident Fonts:	PCL5c/ 6: 45 fonts 13 International fonts Adobe PostScript 3: 136 fonts
Host Interfaces:	Ethernet (100 Base-TX/ 10 Base-T): Standard USB2.0 (Type A/ B): Standard IEEE802.11a/g (Wireless LAN): Optional Gigabit Ethernet (1000 Base-T): Optional Bluetooth: Optional
Network Protocols:	TCP/IP (IPv4, IPv6), Bonjour

Scanner

Scanning Speed	B&W: over 30ipm (A4, SEF, 200dpi, Mono 1bit, MH compression with ADF) Color: over 30ipm (A4, SEF, 200dpi with FC letter/ photo/ JPEG standard compression with ADF)
Standard Scanner Resolution:	DF: 600 x 300 dpi Book: 600 x 600 dpi
Network Interface:	100/10Base-TX, IEEE802.11a/g

ARDF

Paper Size/Weight:	Simplex	Size	A4 to A5, LG to HLT
		Weight	52 to 128 g/m^2 (14 to 34 lb.)
	Duplex	Size	A4 to A5, LG to HLT
		Weight	60 to 105 g/m^2 (17 to 28 lb.)
Table Capacity:	50 sheets (80 g/m^2 , 20 lb.)		
Separation:	Friction pad		
Original Transport:	Roller transport		
Original Feed Order:	From the top original		
Power Source:	DC 24V, 5V from the scanner unit		
Power Consumption:	50 W or less		
Dimensions (W x D x H):	450 x 400 x 110 mm (17.7" x 15.7" x 4.3")		
Weight:	5 kg (11 lb.) or less		

Internal Finisher

Paper Size:	A6 to LG
Paper Weight:	52 to 256 g/m^2 (14 to 68 lb.)
Tray Capacity:	250 sheets: A4, LT or smaller
Staple capacity:	50 sheets (A4, LT or smaller)
Staple position:	1 position
Staple replenishment:	Cartridge (5000 staples)

1.2 SUPPORTED PAPER SIZES

Paper	Size (W x L)	Main Tray		PFU		By-pass Tray		Duplex
		NA	E/A	NA	E/A	NA	E/A	
A4 SEF	210 x 297 mm	Y	Y	Y	Y	Y#	Y#	Y
A5 SEF	148 x 210 mm	Y#	Y	Y#	Y	Y#	Y#	Y
A6 SEF	105 x 148 mm	Y#	Y	Y#	Y	Y#	Y#	Y
B5 SEF	182 x 257 mm	Y#	Y#	Y#	Y#	Y#	Y#	Y
B6 SEF	128 x 182 mm	Y#	Y#	Y#	Y#	Y#	Y#	Y
Letter SEF	8.5" x 11"	Y	Y	Y	Y	Y#	Y#	Y
Legal SEF	8.5" x 14"	Y	Y	Y	Y	Y#	Y#	Y
Half Letter SEF	5.5" x 8.5"	Y	Y#	Y	Y#	Y#	Y#	Y
Executive SEF	7.25" x 10.5"	Y	Y	Y	Y	Y#	Y#	Y
F/GL SEF	8" x 13"	Y#	Y#	Y#	Y#	Y#	Y#	Y
Foolscap SEF	8.5" x 13"	Y#	Y#	Y#	Y#	Y#	Y#	Y
Folio SEF	8.25" x 13"	Y#	Y#	Y#	Y#	Y#	Y#	Y
16K SEF	7.25" x 10.5"	Y#	Y#	Y#	Y#	Y#	Y#	Y
Custom (Width)	mm	98 x 216				70 x 216		102 x 216
	inch	3.94" x 8.5"				2.76" x 8.5"		4.02" x 8.5"
Custom (Length)	mm	148 x 355.6				127 x 1260		148 x 355.6

Paper	Size (W x L)	Main Tray		PFU		By-pass Tray		Duplex
		NA	E/A	NA	E/A	NA	E/A	
	inch	5.83" x 14"				5.00" x 49.61"		5.83" x 14"
Com10 Env.	4.13" x 9.5"	Y#	Y#	Y#	Y#	Y#	Y#	N
Monarch Env.	3.88" x 7.5"	Y#	Y#	Y#	Y#	Y#	Y#	N
C6 Env.	114 x 162 mm	Y#	Y#	Y#	Y#	Y#	Y#	N
C5 Env.	162 x 229 mm	Y#	Y#	Y#	Y#	Y#	Y#	N
DL Env.	110 x 220 mm	Y#	Y#	Y#	Y#	Y#	Y#	N

Y: Supported: the sensor detects the paper size.

Y#: Supported: the user specifies the paper size.

N: Not supported

1.3 SOFTWARE ACCESSORIES

The printer drivers and utility software are provided on one CD-ROM. An auto-run installer allows you to select which components to install.

1.3.1 PRINTER DRIVERS

Printer Language	Windows 2000	Windows XP	Vista	Macintosh
PCL 5c/6	Yes	Yes	Yes	No
PS3	Yes	Yes	Yes	Yes
XPS	No	No	Yes	No

Note

- The PS3 drivers are all genuine AdobePS drivers, except for Windows 2000, which uses Microsoft PS. A PPD file for each operating system is provided with the driver.
- The PS3 driver for Macintosh supports Mac OS 7.6 or later versions.

1.4 OPTIONAL EQUIPMENT

1.4.1 PAPER FEED UNIT (M367)

Paper Feed System:	FRR
Paper Height Detection:	5 steps (100%, 70%, 30%, 10% (Near end), and Empty)
Capacity:	550 sheets
Paper Weight:	52 to 256 g/m^2 (14 to 68 lb.)
Paper Size:	A5/HLT to A4/LG SEF
Power Source:	DC 24V, 5V (from the main frame)
Power Consumption:	Less than 62 W
Dimensions (W x D x H):	520 mm x 563 mm x 121 mm (20.5" x 22.2" x 4.8")
Weight:	13 kg (28.7 lb.) or less

1.4.2 PAPER FEED UNIT (M368)

Paper Feed System:	FRR
Paper Height Detection:	5 steps (100%, 70%, 30%, 10% (Near end), and Empty)
Capacity:	550 sheets x 2 trays
Paper Weight:	52 to 256 g/m^2 (14 to 68 lb.)
Paper Size:	A5/HLT to A4/LG SEF
Power Source:	DC 24V, 5V (from the main frame)
Power Consumption:	Less than 45 W Less than 98 W (with M367)
Dimensions (W x D x H):	520 mm x 563 mm x 271 mm (20.5" x 22.2" x 10.7")

Weight:	23 kg (50.7 lb.) or less

1.4.3 1-BIN TRAY UNIT (M370)

Paper Size:	A6/HLT to A4/LG SEF
Paper Weight:	52 to 220 g/m^2 , 14 to 58 lb.
Tray Capacity:	100 sheets (80 g/m^2)
Power Source:	DC 24V, 5V (from the main frame)
Power Consumption:	Less than 11 W
Weight:	2.0 kg or less
Dimensions (W x D x H):	400 mm x 320 mm x 80 mm (15.7" x 12.6" x 3.1")

1.4.4 UTILITY SOFTWARE

Software	Description
Font Manager 2000	A font management utility with screen fonts for the printer
Smart Device Monitor for Admin	A printer management utility for administrator.
DeskTopBinder Lite Ver.5, Professional Ver.5	DeskTopBinder itself can be used as personal document management software and can manage both image data converted from paper documents and application files saves in each client's PC.
Remote Communication Gate S Pro	Used to control devices connected to the same network.

APPENDIX:

PREVENTIVE MAINTENANCE TABLES

2. APPENDIX: PREVENTIVE MAINTENANCE TABLES

2.1 MAINTENANCE TABLES

2.1.1 PREVENTIVE MAINTENANCE ITEMS

Chart: A4 (LT)/5%

Mode: 2 copies / original (prints/job)

Ratio 25%

Environment: Normal temperature and humidity

Yield may change depending on circumstances and print conditions.

Symbol keys: C: Clean, R: Replace, L: Lubricant, I: Inspect

Mainframe

Item	60K	120K	180K	240K	EM	Remarks
Scanner						
Reflector					C	Optics cloth
1st/2nd/3rd mirrors					C	Optics cloth
Front and Rear Rails					C	Dry cloth
Exposure Glass					C	Dry cloth; alcohol
ADF Exposure Glass					C	Dry cloth; alcohol
PCDU						
PCU – K	R					
Dev. Unit – K	R					
Transfer						
Image Transfer Belt-cleaning Unit			R			
Paper Transfer Roller Unit			R			

Item	60K	120K	180K	240K	EM	Remarks
Fusing						
Fusing Roller		R				
Fusing Belt		R				
Pressure Roller		R				
Oil Supply Roller		R				
Cleaning Roller		R				
Tension Roller		R				
Plain Shaft Bearing		R				
Paper Path						
Registration Roller					C	Damp cloth
Registration Sensor					C	Dry cloth
Inverter Sensor					C	Damp cloth
Duplex Rollers					C	Damp cloth
Fusing Exit Sensor					C	Dry cloth
Paper Dust Container					C	Vacuum
Duplex Entrance Sensor					C	Dry cloth
Vertical Transport Roller					C	Damp cloth
Duplex Exit Sensor					C	Dry cloth
Vertical Transport Sensor					C	Dry cloth
Paper Feed Sensor					C	Dry cloth
Paper Feed Roller					C	Dry cloth

Item	60K	120K	180K	240K	EM	Remarks
Separation Roller					C	Dry cloth
Pick-up Roller					C	Dry cloth
Miscellaneous						
Waste Toner Bottle	R					
Dust Filter		R				
Exhaust Filter		R				
Dust Glass					C	

2.1.2 OTHER 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, P/J, and C/O). So, these parts are categorized not as PM parts but as yield parts (EM parts).

Mainframe

Item	60K	240K	Remarks
PCDU			
PCU – C, M, Y	R		
Development Unit – C, M, Y	R		
ITB and PTR unit			
Image Transfer Belt Unit		R	
Fusing			
Fusing Roller Bearing		R	S552R
Pressure Roller Bearing		R	S552R
Heating Roller		R	

ARDF

Item	60K	EM	Remarks
Pick-up Roller	R		Damp cloth; alcohol
Feed Roller	R		Damp cloth; alcohol
Friction Pad	R		Damp cloth; alcohol
Sensors		C	Blower brush
White Plate		C	Dry or damp cloth
Transport Roller		C	Damp cloth; alcohol
Exit Roller		C	Damp cloth; alcohol
Inverter Roller		C	Damp cloth; alcohol
Idle Rollers		C	Damp cloth; alcohol

Internal Finisher

Item	EM	Remarks
Sensors	C	Blower brush
Rollers	C	Damp cloth; alcohol

One-tray Paper Feed Unit (M367)

Item	EM	Remarks
Feed Roller	C	Dry cloth
Separation Roller	C	Dry cloth
Pick-up Roller	C	Dry cloth
Relay Roller	C	Damp cloth
Bottom Plate Pad	C	Damp cloth
Sensors	C	Blower brush

Two-tray Paper Feed Unit (M368)

Item	EM	Remarks
Feed Roller	C	Dry cloth
Separation Roller	C	Dry cloth
Pick-up Roller	C	Dry cloth
Relay Roller	C	Damp cloth
Bottom Plate Pad	C	Damp cloth
Sensors	C	Blower brush

Side Tray (M369)

Items	EM	Remarks
Rollers	C	Damp cloth
Exit Tray	C	Damp cloth
Bearing	C	S552R

1 Bin Tray (M370)

Items	EM	Remarks
Rollers	C	Damp cloth
Exit Tray	C	Damp cloth
Exit Sensor	C	Blower brush
Paper Sensor	C	Blower brush
Bearing	C	S552R

APPENDIX:

SP MODE TABLES

REVISION HISTORY		
Page	**Date**	**Added/Updated/New**
423 ~ 424	4/25/2011	Bit sw1001-009 bit 4

3. APPENDIX: SP MODE TABLES

3.1 SYSTEM SP-XXX

3.1.1 SP1-XXX (FEED)

1001	**[Leading Edge Registration]** Leading Edge Registration Adjustment (Tray Location, Paper Type, Color Mode), Paper Type -> Plain, Thick 1, Thick 2 or Thick3		
	Adjusts the leading edge registration by changing the registration motor operation timing for each mode. Increasing a value: an image is moved to the trailing edge of paper. Decreasing a value: an image is moved to the leading edge of paper.		
001	Tray:Plain	*ENG	[–9 to 9 / **3.9** / 0.1 mm/step]
002	Tray:M-Thick	*ENG	[–9 to 9 / -**0.4** / 0.1 mm/step]
003	Tray:Thick1	*ENG	[–9 to 9 / -**2.5** / 0.1 mm/step]
004	Tray:Thick2	*ENG	[–9 to 9 / -**3.7** / 0.1 mm/step]
005	Tray:Thick3	*ENG	[–9 to 9 / -**3.5** / 0.1 mm/step]
006	Tray:Plain:1200dpi	*ENG	[–9 to 9 / **0.8** / 0.1 mm/step]
007	Tray:M-Thick:1200dpi	*ENG	[–9 to 9 / -**0.5** / 0.1 mm/step]
008	Tray:Thick1:1200dpi	*ENG	[–9 to 9 / -**0.5** / 0.1 mm/step]
009	By-pass:Plain	*ENG	[–9 to 9 / **3.9** / 0.1 mm/step]
010	By-pass: M-Thick	*ENG	[–9 to 9 / **0.1** / 0.1 mm/step]
011	By-pass: Thick1	*ENG	[–9 to 9 / -**1.8** / 0.1 mm/step]
012	By-pass: Thick2	*ENG	[–9 to 9 / -**2.7** / 0.1 mm/step]
013	By-pass: Thick3	*ENG	[–9 to 9 / -**2.4** / 0.1 mm/step]
014	By-pass:Plain:1200dpi	*ENG	[–9 to 9 / **0.8** / 0.1 mm/step]

015	By-pass: M-Thick:1200dpi	*ENG	[–9 to 9 / **0.1** / 0.1 mm/step]
016	By-pass:Thick1:1200dpi	*ENG	[–9 to 9 / **0.1** / 0.1 mm/step]
017	Duplex:Plain	*ENG	[–9 to 9 / **3.9** / 0.1 mm/step]
018	Duplex:M-Thick	*ENG	[–9 to 9 / -**0.1** / 0.1 mm/step]
019	Duplex:Thick1	*ENG	[–9 to 9 / -**2.1** / 0.1 mm/step]
020	Duplex: Thick2	*ENG	[–9 to 9 / -**3** / 0.1 mm/step]
021	Duplex:Plain:1200dpi	*ENG	[–9 to 9 / **0.7** / 0.1 mm/step]
022	Duplex:MThck:1200dpi	*ENG	[–9 to 9 / **0.1** / 0.1 mm/step]
023	Duplex:Thck1:1200dpi	*ENG	[–9 to 9 / **0** / 0.1 mm/step]
024	Tray:Thin	*ENG	[–9 to 9 / **1** / 0.1 mm/step]
026	By-pass:Thin	*ENG	[–9 to 9 / **1** / 0.1 mm/step]

1002	**[Side-to-Side Registration]**		
	Adjusts the side-to-side registration by changing the laser main scan start position for each mode and tray. Increasing a value: an image is moved to the rear edge of paper. Decreasing a value: an image is moved to the front edge of paper.		
001	By-pass	*ENG	[–4 to 4 / **0.0** / 0.1 mm/step]
002	Paper Tray 1	*ENG	
003	Paper Tray 2	*ENG	
004	Paper Tray 3	*ENG	
005	Paper Tray 4	*ENG	
006	Duplex	*ENG	

1003	**[Paper Buckle]** Paper Buckle Adjustment (Tray Location, Paper Type), Paper Type: N: Normal, TH: Thick		
	Adjusts the amount of paper buckle at the registration roller by changing the paper feed timing.		
001	Tray1:Plain	*ENG	[-11 to 9 / **-1** / 1 mm/step]
002	Tray1:M-Thick	*ENG	[-11 to 9 / **-1** / 1 mm/step]
003	Tray1:Thick1	*ENG	[-11 to 9 / **-3** / 1 mm/step]
004	Tray234:Plain	*ENG	[-11 to 9 / **-1** / 1 mm/step]
005	Tray234:M-Thick	*ENG	[-11 to 9 / **-1** / 1 mm/step]
006	Tray234:Thick1	*ENG	[-11 to 9 / **-3** / 1 mm/step]
007	By-pass:Plain	*ENG	[-11 to 9 / **-1** / 1 mm/step]
008	By-pass:M-Thick	*ENG	[-11 to 9 / **-1** / 1 mm/step]
009	By-pass:Thick1	*ENG	[-11 to 9 / **-3** / 1 mm/step]
010	Duplex:Plain	*ENG	[-11 to 9 / **-2** / 1 mm/step]
011	Duplex:M-Thick	*ENG	[-11 to 9 / **-2** / 1 mm/step]
012	Duplex:Thick1	*ENG	[-11 to 9 / **-3** / 1 mm/step]
013	Tray1:Plain:1200dpi	*ENG	[-11 to 9 / **-1** / 1 mm/step]
014	Tray1:M-Thick:1200dpi	*ENG	[-11 to 9 / **-1** / 1 mm/step]
015	Tray1:Thick1:1200dpi	*ENG	[-11 to 9 / **-3** / 1 mm/step]
016	Tray234:Plain:1200dpi	*ENG	[-11 to 9 / **-1** / 1 mm/step]
017	Tray234:M-Thick:1200dpi	*ENG	[-11 to 9 / **-1** / 1 mm/step]
018	Tray234:Thick1:1200dpi	*ENG	[-11 to 9 / **-3** / 1 mm/step]
019	By-pass:Plain:1200dpi	*ENG	[-11 to 9 / **-1** / 1 mm/step]
020	By-pass:M-Thick:1200dpi	*ENG	[-11 to 9 / **-1** / 1 mm/step]

021	By-pass:Thick1:1200dpi	*ENG	[-11 to 9 / **-3** / 1 mm/step]
022	Duplex:Plain:1200dpi	*ENG	[-11 to 9 / **-1** / 1 mm/step]
023	Duplex:M-Thick:1200dpi	*ENG	[-11 to 9 / **-1** / 1 mm/step]
024	Duplex:Thick1:1200dpi	*ENG	[-11 to 9 / **-3** / 1 mm/step]

1007	By-pass Size Detection LG		
	Selects the paper size detection.		
001	0: Letter A4, 1: Legal	*ENG	[0 to 1 / **0** / 1 /step]

1103	**[Fusing Idling]** Fusing Idling Adjustment		
012	Forced Idling Stop	*ENG	[0 to 1 / **0** / 1 /step]
013	Forced Idling Stop Temp.	*ENG	[100 to 180 / **100** / 1 deg/step]
014	Minimum Idling Time	*ENG	[0 to 10 / **2** / 1 sec/step]
016 to 018	Specifies how long the extra idling operation is executed for each environment. Each environment is determined with SP1112-001 and 002.		
016	Extra Idling Time (L)	*ENG	[0 to 60 / **20** / 1 sec/step]
017	Extra Idling Time (H)	*ENG	[0 to 60 / **10** / 1 sec/step]
018	Extra Idling Time (M)	*ENG	[0 to 60 / **10** / 1 sec/step]
019	Ex Idling Temp:P-Roll	*ENG	[0 to 160 / **110** / 1 deg/step]
020	Control Switch Temp	*ENG	[0 to 100 / **16** / 1 deg/step]

1104	**[Fusing Idling Before Job]**		
001	Environment Thresh	*ENG	[0 to 2 / **2** / 1 /step]
002	Idling Temp:P-Roll	*ENG	[0 to 160 / **160** / 1 deg /step]
	Specifies the threshold temperature for the pressure roller idling before a job.		
003	Idling Time: BW	*ENG	Specifies the fusing idling time for each printe mode before a job. [0 to 10 / **2** / 1 sec/step]
004	Idling Time: FC	*ENG	
005	Idling Time: M-Thick: BW	*ENG	
006	Idling Time: M-Thick: FC	*ENG	
007-009	Specifies the thereshold temperature of the paper feed before a job.		
007	Paper Feed Temp:P-Roller	*ENG	[0 to 160 / **90**/ 1 deg/step]
008	P.Feed Temp:MThick:P-Roll:BW	*ENG	[0 to 160 / **100**/ 1 deg/step]
009	P.Feed Temp:MThick:P-Roll:FC	*ENG	[0 to 160 / **100**/ 1 deg/step]
010	Upper Limit Temp	*ENG	[0 to 100 / **25**/ 1 deg/step]
011	Offset: Feed Start	*ENG	[0 to 100 / **20**/ 1 deg/step]
012	Offset: Feed Start: M-Thick	*ENG	[0 to 100 / **10**/ 1 deg/step]
013	Offset: Feed Start: 600dpi: Plain1: BW	*ENG	[0 to 100 / **25**/ 1 deg/step]
014	Offset: Feed Start: 600dpi: Plain2: BW	*ENG	[0 to 100 / **25**/ 1 deg/step]
030	Offset: Feed Start: Time	*ENG	[15 to 500 / **60** / 1 sec/step]
031	Offset:Feed Start:1200dpi	*ENG	[0 to 100 / **15** / 1 deg/step]
033	Offset: Feed Start: Glossy	*ENG	[0 to 100 / **15**/ 1 deg/step]

1105	**[Fusing Temperature]** Fusing Temperature Adjustment		
	(Printing Mode, Roller Type, [Color], Simplex/Duplex) Roller Type –> Center and Ends: Heating roller, P-Roller –> Pressure roller Paper Type -> Plain, Thin, Thick, OHP, Middle Thick, Special		
001	Fusing Ready Temp	*ENG	[100 to 180 / **160** / 1 deg/step]
	Specifies the heating roller target temperature for the ready condition.		
002	Fusing Ready: Offset	*ENG	[5 to 30 / **11** / 1 deg/step]
003	P-Roll Ready Target Temp.	*ENG	[50 to 160 / **120** / 1 deg/step]
007	P-Roll Ready Temp	*ENG	[0 to 150 / **20** / 1 deg/step]
	Sets the heating roller offset temperature at the end of the heating roller. This value is one of the thresholds to determine if the machine is at the heating roller target temperature during warm-up.		
010	Stand-By: Center	* ENG	[50 to 180 / **160** / 1 deg/step]
011	Stand-By: Ends	* ENG	[50 to 180 / **160** / 1 deg/step]
012	Stand-By:P-Roller	* ENG	[50 to 160 / **140** / 1 deg/step]
	Sets the pressure roller offset temperature. This value is one of the thresholds to determine if the machine is at the heating roller target temperature during warm-up.		
013	Panel Off Mode: Center	* ENG	[50 to 180 / **140** / 1 deg /step]
	Specifies the heating roller temperature (center) in the panel off mode.		
014	Panel Off Mode: Ends	* ENG	[50 to 180 / **140** / 1 deg /step]
	Specifies the heating roller temperature (both ends) in the panel off mode.		
015	Panel Off Mode: P-Roller	*ENG	[50 to 160 / **120** / 1 deg /step]
	Specifies the presure roller temperature in the panel off mode.		
016	Low Power: Center	*ENG	Specifies the heating roller temperature (center or ends) in
017	Low Power: Ends	*ENG	

			the low power mode. [30 to 180 / **40** / 1 deg /step]
018	Low Power: P-Roller	*ENG	[30 to 160 / **110** / 1 deg /step]
	Specifies the pressure roller temperature in the low power mode.		
019	Off Mode: Center	*ENG	Specifies the heating roller temperature (center or ends) in the sleep mode. [0 to 180 / **0** / 1 deg /step]
020	Off Mode: Ends	*ENG	
021	Off Mode:P-Roller	*ENG	[0 to 170 / **0** / 1 deg /step]
	Specifies the pressure roller temperature in the sleep mode.		
030 to 239	The target fusing temperature for each paper type and mode can be adjusted by the following SPs.		
030	Plain:FC:Simplex:Center	*ENG	[100 to 180 / **155** / 1 deg /step]
031	Plain: FC: Simplex: Ends	*ENG	
032	Plain:FC:Duplex:Center	*ENG	
033	Plain: FC: Duplex: Ends	*ENG	
034	Plain: BW: Simplex:Center	*ENG	
035	Plain: BW: Simplex: Ends	*ENG	
036	Plain: BW: Duplex:Center	*ENG	
037	Plain: BW: Duplex: Ends	*ENG	
038	Thin: FC: Simplex:Center	*ENG	[100 to 180 / **145** / 1 deg /step]
039	Thin: FC: Simplex: Ends	*ENG	
040	Thin:FC:Duplex:Center	*ENG	
041	Thin:FC:Duplex:Ends	*ENG	
042	Thin: BW: Simplex:Center	*ENG	
043	Thin: BW: Simplex: Ends	*ENG	

044	Thin: BW: Duplex:Center	*ENG	
045	Thin:BW:Duplex:Ends	*ENG	
046	Thick 1: FC: Simplex:Center	*ENG	[100 to 180 / **165** / 1 deg /step]
047	Thick 1: FC: Simplex: Ends	*ENG	
048	Thick 1: FC: Duplex:Center	*ENG	
049	Thick 1: FC: Duplex:Ends	*ENG	
050	Thick 1: BW: Simplex:Center	*ENG	
051	Thick 1: BW: Simplex: Ends	*ENG	
052	Thick 1: BW: Duplex:Center	*ENG	
053	Thick 1:BW:Duplex:Ends	*ENG	
054	Thick 2: FC: Simplex:Center	*ENG	[100 to 180 / **140** / 1 deg /step]
055	Thick 2: BW: Simplex:Center	*ENG	
056	OHP: FC	*ENG	[100 to 180 / **160** / 1 deg /step]
057	OHP: BW	*ENG	
058	SP 1:FC:Simplex:Center	*ENG	[100 to 180 / **170** / 1 deg/step]
059	SP 1:FC:Simplex:Ends	*ENG	
060	SP 1:FC:Duplex:Center	*ENG	
061	SP 1:FC:Duplex:Ends	*ENG	
062	SP 1:BW:Simplex:Center	*ENG	
063	SP 1:BW:Simplex:Ends	*ENG	
064	SP 1:BW:Duplex:Center	*ENG	
065	SP 1: BW: Duplex: Ends	*ENG	
066	SP 2:FC:Simplex:Center	*ENG	[100 to 200 / **165** / 1 deg/step]
067	SP 2: FC: Simplex: Ends	*ENG	

068	SP 2:FC:Duplex:Center	*ENG	
069	SP 2:FC:Duplex:Ends	*ENG	
070	SP 2:BW:Simplex:Center	*ENG	
071	SP 2:BW:Simplex:Ends	*ENG	
072	SP 2:BW:Duplex:Center	*ENG	
073	SP 2:BW:Duplex:Ends	*ENG	
074	SP 3:FC:Simplex:Center	*ENG	[100 to 200 / **150** / 1 deg/step]
075	SP 3:FC:Simplex:Ends	*ENG	
076	SP 3:FC:Duplex:Center	*ENG	
077	SP 3:FC:Duplex:Ends	*ENG	
078	SP 3:BW:Simplex:Center	*ENG	
079	SP 3:BW:Simplex:Ends	*ENG	
080	SP 3:BW:Duplex:Center	*ENG	
081	SP 3:BW:Duplex:Ends	*ENG	
082	Target Temp. After Ready	*ENG	[100 to 180 / **160** / 1 deg/step]
	Specifies the target temperature for the maintain mode after the machine has reached the target temperature in warm-up mode.		
083	Recovery Target Temp.	*ENG	[100 to 180 / **160** / 1 deg /step]
	Specifies the target temperature for the print mode without printing job after the machine's recovery.		
087	Thick 2: FC: Simplex: Ends	*ENG	[100 to 180 / **140** / 1 deg/step]
088	Thick 2: BW: Simplex: Ends	*ENG	
089	Thick 3: FC: Simplex: Center	*ENG	[100 to 180 / **160** / 1 deg/step]
090	Thick 3: FC: Simplex: Ends	*ENG	
091	Thick 3: BW: Simplex: Center	*ENG	

092	Thick 3: BW: Simplex: Ends	*ENG	
109	M-Thick:FC:Simplex:Center	*ENG	[100 to 180 / **175** / 1 deg/step]
110	M-Thick:FC:Duplex:Center	*ENG	
111	M-Thick: BW: Simplex:Center	*ENG	
112	M-Thick: BW: Duplex:Center	*ENG	
113	M-Thick: FC: Simplex: Ends	*ENG	
114	M-Thick: FC: Duplex: Ends	*ENG	
115	M-Thick: BW: Simplex: Ends	*ENG	
116	M-Thick: BW: Duplex: Ends	*ENG	
120	Plain2: FC: Simplex:Center	*ENG	[100 to 180 / **160** / 1 deg/step]
121	Plain2: FC: Simplex:Ends	*ENG	
122	Plain2: FC: Duplex:Center	*ENG	
123	Plain2: FC: Duplex:Ends	*ENG	
124	Plain2: BW: Simplex:Center	*ENG	
125	Plain2: BW: Simplex: Ends	*ENG	
126	Plain2: BW: Duplex:Center	*ENG	
127	Plain2: BW: Duplex: Ends	*ENG	
128	F: Plain1: FC : Simplex:Center	*ENG	[100 to 180 / **125** / 1 deg/step]
129	F: Plain1: FC : Simplex: Ends	*ENG	
130	F: Plain1: BW : Simplex:Center	*ENG	
131	F: Plain1: BW : Simplex: Ends	*ENG	
132	F: Plain2: FC: Simplex:Center	*ENG	[100 to 180 / **130** / 1 deg /step]
133	F: Plain2: FC: Simplex: Ends	*ENG	
134	F: Plain2: BW: Simplex:Center	*ENG	

135	F: Plain2: BW: Simplex: Ends	*ENG	
136	F: MThick: FC: Simplex:Center	*ENG	
137	F: MThick: FC: Simplex: Ends	*ENG	
138	F: MThick: BW: Simplex:Center	*ENG	
139	F: MThick: BW: Simplex: Ends	*ENG	
142	Glossy: Plain1:Center	*ENG	
143	Glossy: Plain1: Ends	*ENG	
144	Glossy: Plain2:Center	*ENG	[100 to 180 / **135** / 1 deg/step]
145	Glossy: Plain2: Ends	*ENG	
146	Glossy: MThick:Center	*ENG	
147	Glossy: MThick: Ends	*ENG	
160	F: Thick1:FC:Simplex:Center	*ENG	
161	F: Thick1:FC:Simplex:Ends	*ENG	
162	F: Thick1:BW:Simplex:Center	*ENG	
163	F: Thick1:BW:Simplex:Ends	*ENG	
164	F: SP 1:FC:Simplex:Center	*ENG	
165	F: SP 1:FC:Simplex:Ends	*ENG	
166	F: SP 1:BW: Simplex:Center	*ENG	
167	F: SP 1:BW: Simplex:Ends	*ENG	
168	F: SP 2:FC Simplex:Center	*ENG	[100 to 180 / **140** / 1 deg/step]
169	F: SP 2:FC Simplex:Ends	*ENG	
170	F: SP 2:BW:Simplex:Center	*ENG	
171	F: SP 2:BW:Simplex:Ends	*ENG	
201	Plain1:Simplex:Press	*ENG	[50 to 160 / **120** / 1 deg/step]

202	Thin:Simplex:Press	*ENG	[50 to 160 / **115** / 1 deg/step]
203	Thick1:Simplex:Press	*ENG	[50 to 160 / **130** / 1 deg/step]
204	Thick2:Simplex:Press	*ENG	[50 to 160 / **115** / 1 deg/step]
205	Thick3:Simplex:Press	*ENG	[50 to 160 / **115** / 1 deg/step]
206	OHP:Simplex:Press	*ENG	[50 to 160 / **80** / 1 deg/step]
207	SP 1:Simplex: Press	*ENG	[50 to 160 / **120** / 1 deg/step]
208	SP 2:Simplex: Press	*ENG	[50 to 160 / **130** / 1 deg/step]
209	SP 3:Simplex: Press	*ENG	[50 to 160 / **115** / 1 deg/step]
210	MThick:Simplex: Press	*ENG	[50 to 160 / **130** / 1 deg/step]
211	Plain2:Simplex:Press	*ENG	[50 to 160 / **125** / 1 deg/step]
212	F: Plain1:Simplex:Press	*ENG	[50 to 160 / **105** / 1 deg/step]
213	F: Plain2:Simplex:Press	*ENG	[50 to 160 / **110** / 1 deg/step]
214	F: MThick:Simplex: Press	*ENG	[50 to 160 / **115** / 1 deg/step]
215	Glossy: Plain1:Simplex: Press	*ENG	[50 to 160 / **105** / 1 deg/step]
216	Glossy: Plain2:Simplex: Press	*ENG	[50 to 160 / **110** / 1 deg/step]
217	Glossy: MThick:Simplex: Press	*ENG	[50 to 160 / **115** / 1 deg/step]
220	F: Thick1:Simplex: Press	*ENG	[50 to 160 / **115** / 1 deg/step]
221	F: SP 1:Simplex: Press	*ENG	[50 to 160 / **105** / 1 deg/step]
222	F: SP 2:Simplex: Press	*ENG	[50 to 160 / **115** / 1 deg/step]
223	Plain1:Duplex: Press	*ENG	[50 to 160 / **90** / 1 deg/step]
224	Thick1:Duplex: Press	*ENG	
225	Thick2:Duplex: Press	*ENG	
226	SP 1:Duplex: Press	*ENG	
227	SP 2:Duplex: Press	*ENG	

228	SP 3:Duplex: Press	*ENG	
229	MThick:Duplex: Press	*ENG	
230	Plain2:Duplex: Press	*ENG	
231	F: Plain1:Duplex: Press	*ENG	
232	F: Plain2:Duplex: Press	*ENG	
233	F: MThick:Duplex: Press	*ENG	
234	Glossy: Plain1: Duplex: Press	*ENG	
235	Glossy: Plain2: Duplex: Press	*ENG	
236	Glossy: MThick: Duplex: Press	*ENG	[50 to 160 / **90** / 1 deg/step]
237	F: Thick1:Duplex: Press	*ENG	
238	F: SP 1:Duplex: Press	*ENG	
239	F: SP 2:Duplex: Press	*ENG	

1106	**[Fusing Temperature Display]** Fusing Temperature Display (Heating or Pressure)		
	Displays the current temperature of the heating and pressure rollers.		
001	Fusing Roller: Center	-	[–20 to 250 / 0 / 1 deg/step]
002	Fusing Roller: Ends	-	[–10 to 250 / 0 / 1 deg/step]
	The heating roller has two lamps. One heats the center of the heating roller and the other heats both ends of the heating roller.		
003	Pressure Roller: Center	-	[–10 to 250 / 0 / 1 deg/step]
	The pressure roller has two lamps. One heats the center of the heating roller and the other heats both ends of the heating roller.		

1108	**[Ready Temp Setting]**		
	Japan use only		
007	Ready Temp Time	*ENG	[22 to 60 / **43** / 0.1 sec/step]

1109	**[Fusing Nip Band Check]**		
001	Execute	-	[0 or 1 / **0** / 1] Executes the nip band measurement between fusing belt and pressure roller. If the nip band width is not 8 mm, and fusing is not good, replace the pressure roller or install a new fusing unit.
002	Pre-Idling Time	*ENG	[0 to 120 / **0** / 1 sec/step]
	Specifies the fusing rotation time before executing SP1109-001.		
003	Stop Time	* ENG	[5 to 30 / **20** / 1 sec/step]
	Specifies the time for measuring the nip.		

1112	**[Envir. Correct: Fusing]**		
001	Temp.: Threshold: Low	*ENG	[10 to 23 / **17** / 1 deg/step]
	Specifies the threshold temperature for low temperature condition.		
002	Temp.: Threshold: High	*ENG	[24 to 40 / **30** / 1 deg/step]
	Specifies the threshold temperature for high temperature condition.		
003	Low Temp. Correction	*ENG	[0 to 15 / **5** / 1 deg/step]
	Specifies the temperature correction for the heating roller. When the low temperature condition (specified with SP1112-001) is detected, the value of this SP is added to the heating roller temperature.		
004	High Temp. Correction	*ENG	[0 to 15 / **3** / 1 deg/step]
	Specifies the temperature correction for the heating roller. When the high		

	temperature condition (specified with SP1112-002) is detected, the value of this SP is subtracted from the heating roller temperature.		
005	Offset Temp:Low	*ENG	[0 to 15 / **5** / 0.1 deg/step]
006	Offset Temp:High	*ENG	[0 to 15 / **3** / 0.1 deg/step]

1113	**[Stand-by Mode Setting]**		
001	Wait Time AF Ready	*ENG	[0 to 60 / **30** / 1 sec/step]
003	Wait Time AF Recovery	*ENG	[0 to 60 / **10** / 1 sec/step]
	Specifies the time for keeping the target temperature without any jobs after recovery (SP1105-083).		
004	Wait Time AF Job	*ENG	[0 to 60 / **10** / 1 sec/step]
	Specifies the time for keeping the target temperature without any jobs after a last job.		
005	P-Roll Thresh AF Ready	*ENG	[0 to 160 / **120** / 1 deg/step]
	Specifies the threshold temperature of the pressure roller for entering the wait time mode (SP1-113-001).		
006	P-Roll Thresh AF Job	*ENG	[0 to 160 / **100** / 1 deg/step]
	Specifies the threshold temperature of the pressure roller for entering the wait time mode (SP1-113-004).		
008	On/Off SW Timer	*ENG	[0 to 999 / **300** / 1 sec/step]
	Specifies the interval for entering the PID control from the On/Off control.		

1115	**[Stand-by Idling]**		
001	Interval	*ENG	[0 to 240 / **60** / 1 min/step]
	Specifies the interval between idling during stand-by mode. This idling during the stand-by mode prevents the roller deformation.		
002	Idling Time	*ENG	[0 to 60 / **2** / 0.1 sec/step]
	Specifies the length of each idling operation during stand-by mode.		
003	Idling Speed	*ENG	[0 to 1 / **0** / 1 mm/sec/step]

1116	**[Fusing Temp Change]** Paper Type –> MThick: Middle Thick		
010	Center Temp. 1	ENG	[-10 / 10 / **0** / 1 deg/step]
	Specifies the temperature correction for the heating roller (center) when the paper width is 226 mm or more. The start time of this SP can be adjusted with SP1116-018.		
011	Ends Temp. 1	ENG	[-10 to 10 / **0** / 1 deg/step]
	Specifies the temperature correction for the heating roller (ends) when the paper width is 226 mm or more. The start time of this SP can be adjusted with SP1116-018.		
012	Center Temp. 2	ENG	[-10 to 10 / **0** / 1 deg/step]
	Specifies the temperature correction for the heating roller (center) when the paper width is 226 mm or more. The start time of this SP can be adjusted with SP1116-019.		
013	Ends Temp. 2	ENG	[-10 to 10 / **0** / 1 deg/step]
	Specifies the temperature correction for the heating roller (ends) when the paper width is 226 mm or more. The start time of this SP can be adjusted with SP1116-019.		

018	Control Time 1	ENG	[0 to 250 / **0** / 1 sec/step]
	Specifies the start time of the temperature correction that is set with SP1116-010 and -011. The temperature correction is added when the time specified with this SP has passed after feeding the paper.		
019	Control Time 2	ENG	[0 to 250 / **0** / 1 sec/step]
	Specifies the start time of the temperature correction that is set with SP1116-012 and -013. The temperature correction is added when the time specified with this SP has passed after feeding the paper.		
022	Center Temp.1:MThick	ENG	[-10 to 10 / **0** / 1 deg/step]
023	Ends Temp.1:MThick	ENG	
024	Center Temp.2:MThick	ENG	
025	Ends Temp.2:MThick	ENG	
030	Center Temp.1:Other	ENG	
031	Ends Temp.1:Other	ENG	
032	Center Temp.2:Other	ENG	
033	Ends Temp.2:Other	ENG	

1117	**[Idling Time AF Heater OFF]**		
001	After Ready	ENG	[0 to 10 / **5** / 1 sec/step] **DFU**
	Specifies the idling time without the lamp on after reaching the ready temperature.		
002	After Job End	ENG	[0 to 10 / **5** / 1 sec/step]
	Specifies the idling time without the lamp on after job end. This idling prevents the heating roller overheating after job end.		

1118	[Curl Correction]		
001	Execute Pattern	*ENG	[0 to 4 / **0** / 1]
	Selects the curl correction mode. 0: Invalid 1: 600 dpi 2: 1200 dpi 3: 600/1200 dpi Note ▪ This SP is not effective for all curl situations. Use this SP if you see a sharp back curl after the machine recovered from "OFF mode" in a high temperature and humidity environment.		
002	Humidity Thresh 1	*ENG	[0 to 100 / **65** / 1 %]
	Specifies the first threshold humidity for executing the curl correction.		
003	Humidity Thresh 2	*ENG	[0 to 100 / **80** / 1 %]
	Specifies the second threshold humidity for executing the curl correction.		
004	Pattern 1: MM: H-Roll	*ENG	[-30 to 0 / **-3** / 1 deg]
005	Pattern 1: MM: P-Roll	*ENG	[0 to 60 / **0** / 1 deg]
006	Pattern 1: HM: H-Roll	*ENG	[-30 to 0 / **0** / 1 deg]
007	Pattern 1: HM: P-Roll	*ENG	[0 to 60 / **0** / 1 deg]
008	Pattern 2: MM: H-Roll	*ENG	[-30 to 0 / **-5** / 1 deg]
009	Pattern 2: MM: P-Roll	*ENG	[0 to 60 / **50** / 1 deg]
010	Pattern 2: HM: H-Roll	*ENG	[-30 to 0 / **-5** / 1 deg]
011	Pattern 2: HM: P-Roll	*ENG	[0 to 60 / **50** / 1 deg]

1119	[Fusing FF Control] DFU		
001 to 020	Specifies the additional duty to the heating roller fusing lamp for each paper type. These values are added to the duty decided by the PID control.		
001	Plain1: Center	*ENG	[0 to 100 / **50** / 1 %]
002	Plain1: End	*ENG	
003	Thin: Center	*ENG	[0 to 100 / **35** / 1 %]
004	Thin: End	*ENG	
005	M-Thick: Center	*ENG	[0 to 100 / **80** / 1 %]
006	M-Thick: End	*ENG	
007	Thick1: Center	*ENG	[0 to 100 / **75** / 1 %]
008	Thick1: End	*ENG	
009	Thick2: Center	*ENG	[0 to 100 / **35** / 1 %]
010	Thick2: End	*ENG	
011	Thick3: Center	*ENG	[0 to 100 / **40** / 1 %]
012	Thick3: End	*ENG	
013	OHP: Center	*ENG	
014	OHP: End	*ENG	
015	SP 1: Center	*ENG	[0 to 100 / **80** / 1 %]
016	SP 1: End	*ENG	
017	SP 2: Center	*ENG	[0 to 100 / **75** / 1 %]
018	SP 2: End	*ENG	
019	SP 3: Center	*ENG	[0 to 100 / **40** / 1 %]
020	SP 3: End	*ENG	
021	Envir. Correct:Low	*ENG	[-100 to 100 / **10** / 1 %]

022	Envir. Correct:High	*ENG	[-100 to 100 / **0** / 1 %]
023	FF. Correct: Center	*ENG	
024	FF Correct:End	*ENG	
[FF Correct Time]			
025	FF Correct Time	*ENG	[0 to 60 / **5** / 1 sec]
	Specifies the FF duty correction time after the fusing/ paper exit motor has started to rotate in each print mode.		
[FF Control thresh] Specifies the offset temperature for turning off the FF duty correction.			
026	Offset:Center	*ENG	[0 to 50 / **25** / 1 deg]
027	Offset:End	*ENG	
[FF Start Time] Specifies the start time of the FF duty correction after FGATE has been "ON".			
028	Fgate Timer:FC:Std	*ENG	[0 to 10000 / **400** / 1msec]
029	Fgate Timer:FC:Low	*ENG	[0 to 10000 / **3700** / 100msec]
030	Fgate Timer:BW:Std	*ENG	[0 to 10000 / **0** / 100msec]
031	Fgate Timer:BW:Low	*ENG	[0 to 10000 / **800** / 100msec]
[FF Correct Time] Specifies the additional time to the FF duty correction time for each lien speed. Full: Full speed, Half: Half speed			
032	Time Set:Std	*ENG	[-5000 to 5000 / **0** / 100msec]
033	Time Set:Low	*ENG	
[Fgate Timer] Specifies the additional duty to the heating roller fusing lamp for each paper type. These values are added to the duty decided by the PID control.			
034	FC:Middle	*ENG	[0 to 10000 / **1000** / 100msec]
035	BK:Middle	*ENG	[0 to 10000 / **0** / 100msec]

[Correct Time Set]			
036	Middle	*ENG	[-5000 to 5000 / **0** / 100msec]
[Fusing FF Control] Specifies the additional duty to the heating roller fusing lamp for each paper type. These values are added to the duty decided by the PID control.			
050	Plain2:Center	*ENG	[0 to 100 / **60** / 1 %]
051	Plain2: End	*ENG	
052	F:Plain1: Center	*ENG	[0 to 100 / **20** / 1 %]
053	F:Plain1: End	*ENG	
054	F:M-Thick: Center	*ENG	[0 to 100 / **30** / 1 %]
055	F:M-Thick: End	*ENG	
056	F:Thick1: Center	*ENG	
057	F:Thick1: End	*ENG	
058	F:Special1: Center	*ENG	
059	F:Special1: End	*ENG	
060	F:Special2: Center	*ENG	
061	F:Special2: End	*ENG	
062	F:Plain2: Center	*ENG	[0 to 100 / **20** / 1 %]
063	F:Plain2: End	*ENG	

1120	[Multi-Print Mode]		
001	Feed Condition	*ENG	[0 or 2 / **0** / 1]
	Selects the paper feed timing. 0: Productivity priority, 1: Fusing quality priory		
	Note: When the print paper size changes from a small to a large size, you can stop the print job in order to ensure that the fusing temperature is high enough, and then resume it when the proper temperature has been reached. This mode is used on machines in which the fusing ability is low, for example when there is one fusing lamp. And it is mainly used on A3 MFPs which change repeatedly between A3 and A4 size. However, it is not used on machines in which there are two heating lamps, such as A4 MFPs which almost never change between A4 and A5.		

1121	[Maximum Duty Switch] DFU		
001	Control Method Switch	*ENG	[0 or 1 / **1** / 1]
	Selects the power control method for the fusing unit. 0: Fixed control, 1: Power control The machine is used over the rated voltage of PSU. For example, 1700w can be used at the machine of 1500w. When the fusing ability is too low early morning, or the electrical power environment is not stable, this switch can be used. However, there is a risk of over-voltage when using this SP, since it is not used under normal conditions.		

1159	[Fusing Jam Detection]		
001	SC Display	*ENG	[0 or 1 / **0** / 1]
	Enables or disables the fusing consecutive jam (three times) SC detection. 0: No detection, 1: Detection		

1201	[CPM Down Setting] DFU		
001	Low: Down Temp.	*ENG	[-50 to 0 / **-10**/ 1 deg/step]
002	Low: Up Temp.	*ENG	[-50 to 0 / **-7**/ 1 deg/step]
003	Low: 1st CPM	*ENG	[10 to 100 / **80** / 5 %]
004	Low: 2nd CPM	*ENG	[10 to 100 / **65** / 5 %]
005	Low: 3rd CPM	*ENG	[10 to 100 / **50** / 5 %]
006	Unit Low Judge Temp.	*ENG	[0 to 100 / **65**/ 1 deg/step]
007	High: 1st CPM	*ENG	[10 to 100 / **75** / 5 %]
008	High: 2nd CPM	*ENG	[10 to 100 / **50** / 5 %]
009	High: 3rd CPM	*ENG	[10 to 100 / **25** / 5 %]
010	Hi: 1st CPM DwnTemp.	*ENG	[160 to 240 / **210**/ 1 deg/step]
011	Hi: 2nd CPM DwnTemp.	*ENG	[160 to 240 / **215**/ 1 deg/step]
012	Hi: 3rd CPM DwnTemp.	*ENG	[160 to 240 / **220**/ 1 deg/step]
021	Judging Interval	*ENG	[1 to 250 / **10**/ 1 sec/step]

1801	**[Motor Speed Adj.] FA** Low: 85 mm/s, High: 260 mm/s, Middle: 182 mm/s		
001	Regist:Plain: Low	*ENG	[-4 to 4 / **0.4** / 0.1 %]
002	Regist:Plain: High	*ENG	
003	Regist:M-Thick: Low	*ENG	
004	Regist:M-Thick: High	*ENG	
005	Regist:Thick1: Low	*ENG	[-4 to 4 / **0.7** / 0.1 %]
006	Regist:Thick1: Middle	*ENG	
008	BkOpcDevMot (ITB Unit/ Drum: K/ Development: K Motor): 260	*ENG	[-4 to 4 / **0.15** / 0.1 %]

009	BkOpcDevMot (ITB Unit/ Drum: K/ Development: K Motor): 182	*ENG	
011	BkOpcDevMot (ITB Unit/ Drum: K/ Development: K Motor): 85	*ENG	
013	ColorOpcMot (Drum Motor: CMY): 260	*ENG	[-11 to 11 / **0**/ 1 step]
014	ColorOpcMot (Drum Motor: CMY): 182	*ENG	[-15 to 15 / **0**/ 1 step]
016	ColorOpcMot (Drum Motor: CMY): 85	*ENG	[-80 to 80 / **0**/ 1 step]
019	FusingMot (Fusing/ Paper Exit Motor): 260	*ENG	[-4 to 4 / -**1.85** / 0.1 %]
020	FusingMot (Fusing/ Paper Exit Motor): 182	*ENG	
022	FusingMot (Fusing/ Paper Exit Motor): 85	*ENG	[-4 to 4 / **1.55** / 0.1 %]
029	Regist:Thick2: Low	*ENG	[-4 to 4 / **0.7** / 0.1 %]
030	Regist:Thick3: Low	*ENG	
031	Feed:Plain: Low	*ENG	[-2 to 2 / **0.4** / 0.1 %]
032	Feed:Plain: High	*ENG	
033	Feed:M-Thick: Low	*ENG	
034	Feed:M-Thick: High	*ENG	
035	Feed:Thick1: Low	*ENG	[-2 to 2 / **0.7** / 0.1 %]
036	Feed:Thick1: Middle	*ENG	
037	Feed:Thick2: Low	*ENG	
038	Feed:Thick3: Low	*ENG	
039	VerticalTransport:Plain: Low	*ENG	[-2 to 2 / **0.4** / 0.1 %]

040	VerticalTransport:Plain: High	*ENG	
041	VerticalTransport:M-Thick: Low	*ENG	
042	VerticalTransport:M-Thick: High	*ENG	
043	VerticalTransport:Thick1: Low	*ENG	[-2 to 2 / **0.7** / 0.1 %]
044	VerticalTransport:Thick1: Middle	*ENG	
045	VerticalTransport:Thick2: Low	*ENG	
046	VerticalTransport:Thick3: Low	*ENG	
047	Duplex CW:Plain: Low	*ENG	[-4 to 4 / **0.4** / 0.1 %]
048	Duplex CW:Plain: High	*ENG	
049	Duplex CW:M-Thick: Low	*ENG	
050	Duplex CW:M-Thick: High	*ENG	
051	Duplex CW:Thick1: Low	*ENG	[-4 to 4 / **0.7** / 0.1 %]
052	Duplex CW:Thick1: Middle	*ENG	
053	Duplex CW:Thick2: Low	*ENG	
054	Duplex CW:Thick3: Low	*ENG	
055	Duplex CCW:Plain: Low	*ENG	[-4 to 4 / **0.4** / 0.1 %]
056	Duplex CCW:Plain: High	*ENG	
057	Duplex CCW:M-Thick: Low	*ENG	
058	Duplex CCW:M-Thick: High	*ENG	
059	Duplex CCW:Thick1: Low	*ENG	[-4 to 4 / **0.7** / 0.1 %]
060	Duplex CCW:Thick1: Middle	*ENG	
061	Duplex CCW:Thick2: Low	*ENG	
062	Reverse CW:Plain: Low	*ENG	[-4 to 4 / -**0.4** / 0.1 %]
063	Reverse CW:Plain: High	*ENG	[-4 to 4 / -**0.7** / 0.1 %]

064	Reverse CW: M-Thick: Low	*ENG	[-4 to 4 / -**0.4** / 0.1 %]
065	Reverse CW: M-Thick: High	*ENG	[-4 to 4 / -**0.7** / 0.1 %]
066	Reverse CW: Thick1: Low	*ENG	[-4 to 4 / -**0.4** / 0.1 %]
067	Reverse CW: Thick1: Middle	*ENG	[-4 to 4 / -**0.7** / 0.1 %]
068	Reverse CW: Thick2: Low	*ENG	[-4 to 4 / -**0.4** / 0.1 %]
069	Reverse CCW:Plain: Low	*ENG	[-4 to 4 / -**0** / 0.1 %]
070	Reverse CCW:Plain: High	*ENG	
071	Reverse CCW: M-Thick: Low	*ENG	
072	Reverse CCW: M-Thick: High	*ENG	
073	Reverse CCW: Thick1: Low	*ENG	
074	Reverse CCW: Thick1: Middle	*ENG	
075	Reverse CCW: Thick2: Low	*ENG	
101	Offset: 260: Color	*ENG	[-11 to 11 / **0**/ 1 step]
102	Offset: 182: Color	*ENG	[-15 to 15 / **0**/ 1 step]
103	Offset: 85: Color	*ENG	[-80 to 80 / **0**/ 1 step]
130	OpcMot (Drum Motor) Adjust Control	*ENG	[0 to 1 / **1**/ 1 step]

1902	**[Gain Control]**		
001	Execute	*ENG	Execute drum phase adjustment.
002	Result	*ENG	[0 to 3 / **0**/ 1] Displays the result of drum phase adjustment. 0: Successfully done 2: Sampling failure 3: Insufficient detection number
003	Auto Execute	*ENG	[0 or 1 / **1**/ -]

			Turns the automatic drum phase adjustment on or off. 0: Off, 1: On

1907	**[Feed Timing Adj.] DFU**		
001	Feed-Solenoid ON: Plain	*ENG	[-10 to 40 / **0**/ 2.5 mm/step]
002	Feed-STM OFF: Plain	*ENG	[-10 to 10 / **0**/ 1 mm/step]
003	Feed-STM ON: Plain	*ENG	
004	Feed-Solenoid ON: Thick	*ENG	[-10 to 40 / **0**/ 2.5 mm/step]
005	Feed-STM OFF: Thick	*ENG	[-10 to 10 / **0**/ 1 mm/step]
006	Feed-STM ON: Thick	*ENG	
007	Feed-Start: Low	*ENG	
008	Duplex CW STM ON: Low	*ENG	
009	Duplex CW STM ON: Middle	*ENG	
010	Duplex CW STM ON: High	*ENG	
011	Duplex CW STM OFF: Low	*ENG	
012	Duplex CW STM OFF: Middle	*ENG	
013	Duplex CW STM OFF: High	*ENG	
014	By-pass Solenoid ON: Low	*ENG	[-10 to 40 / **0**/ 1 mm/step]
015	By-pass Solenoid ON: Middle	*ENG	
016	By-pass Solenoid ON: High	*ENG	
017	J-GtSOL1 (Junction Gate Solenoid): ON: Low	*ENG	[-10 to 10 / **0**/ 1 mm/step]
018	Junction Gate SOL1: ON: Middle	*ENG	
019	Junction Gate SOL1: ON: High	*ENG	

020	Junction Gate SOL1: OFF: Low	*ENG	
021	Junction Gate SOL1: OFF: Middle	*ENG	
022	Junction Gate SOL1: OFF: High	*ENG	
023	Junction Gate SOL2: ON: Low	*ENG	[-10 to 10 / **0**/ 1 mm/step]
024	Junction Gate SOL2: ON: Middle	*ENG	
025	Junction Gate SOL2: ON: High	*ENG	
026	Junction Gate SOL2: OFF: Low	*ENG	
027	Junction Gate SOL2: OFF: Middle	*ENG	
028	Junction Gate SOL2: OFF: High	*ENG	
029	Tray2,3,4: Feed-Solenoid ON: Plain	*ENG	[-10 to 10 / **0**/ 1 mm/step]
030	Tray2,3,4: Feed-Solenoid OFF: Plain	*ENG	
031	Tray2,3,4: Feed-Clutch OFF: Plain	*ENG	
032	Tray2,3,4: Feed-STM ON: Plain	*ENG	
033	Tray2,3,4: Feed-Solenoid ON: Thick	*ENG	[-10 to 10 / **0**/ 1 mm/step]
034	Tray2,3,4: Feed-Solenoid OFF: Thick	*ENG	
035	Tray2,3,4: Feed- Clutch OFF: Thick	*ENG	
036	Tray2,3,4: Feed-STM ON: Thick	*ENG	

1950	[Fan Cooling Timeset]		
	Adjust the rotation time for each fan motor after a job end.		
001	Development Fan1	*ENG	[0 to 600 / **0**/ 1 sec/step]
002	Development Fan2	*ENG	
003	Imaging Fan (Laser Unit Fan)	*ENG	
004	Fusing Fan1	*ENG	
005	Fusing Fan2	*ENG	
006	PSU Fan	*ENG	
007	Drive Unit Fan	*ENG	
008	Toner Supply Fan	*ENG	
009	Controller Fan	*ENG	

3.2 SYSTEM SP2-XXX

3.2.1 SP2-XXX (DRUM)

2005	**[Charge DC V:Fixed] DFU** (Paper Type, Process Speed, Color) Paper Type –> Plain, Thick 1, Thick 2		
	Adjusts the DC component of the charge roller bias in the various print modes. Charge bias (DC component) is automatically adjusted during process control; therefore, adjusting these settings does not effect while process control mode (SP3-041-1 Default: ON) is activated. When deactivating process control mode with SP3-041-1, the values in these SP modes are used for printing.		
001	Plain: Bk	*ENG	[0 to 1000 / **600** / 10 –V/step]
002	Plain: C	*ENG	
003	Plain: M	*ENG	
004	Plain: Y	*ENG	

2006	**[Charge AC V:Fixed] DFU** (Paper Type, Process Speed, Color) Paper Type –> Plain, Thick 1, Thick 2		
	Adjusts the AC component of the charge roller bias in the various print modes. Charge bias (AC component) is adjusted by environment correction (SP2-007-xxx to SP2-011-xxx). These SPs are activated only when SP2-012-1 is set to "1: manual control".		
001	Plain: Bk	*ENG	[0 to 3000 / **2000** / 10V/step]
002	Plain: C	*ENG	
003	Plain: M	*ENG	
004	Plain: Y	*ENG	

2007	**[Charge AC Current: LL] DFU** Charge Roller AC Current Adjustment for LL (Color)		
	Displays/sets the AC current target of the charge roller for LL environment (Low temperature and Low humidity).		
001	Environmental Target: Bk	*ENG	[0 to 3000 / **1000** / 10μ A/step]
002	Environmental Target: C	*ENG	
003	Environmental Target: M	*ENG	
004	Environmental Target: Y	*ENG	

2008	**[Charge AC Current: ML] DFU** Charge Roller AC Current Adjustment for MM (Color)		
	Displays/sets the AC current target of the charge roller for ML environment (Meddle temperature and Low humidity).		
001	Environmental Target: Bk	*ENG	[0 to 3000 / **1000** / 10μ A/step]
002	Environmental Target: C	*ENG	
003	Environmental Target: M	*ENG	
004	Environmental Target: Y	*ENG	

2009	**[Charge AC Current: MM] DFU** Charge Roller AC Current Adjustment for MM (Color)		
	Displays/sets the AC current target of the charge roller for MM environment (Middle temperature and Middle humidity).		
001	Environmental Target: Bk	*ENG	[0 to 3000 / **1000** / 10μ A/step]
002	Environmental Target: C	*ENG	
003	Environmental Target: M	*ENG	
004	Environmental Target: Y	*ENG	

2010	**[Charge AC Current: MH] DFU** Charge Roller AC Current Adjustment for MH (Color)		
	Displays/sets the AC current target of the charge roller for MH environment (Middle temperature and High humidity).		
001	Environmental Target: Bk	*ENG	[0 to 3000 / **1000** / 10μ A/step]
002	Environmental Target: C	*ENG	
003	Environmental Target: M	*ENG	
004	Environmental Target: Y	*ENG	

2011	**[Charge AC Current: HH] DFU** Charge Roller AC Current Adjustment for HH (Color)		
	Displays/sets the AC current target of the charge roller for HH environment (High temperature and High humidity).		
001	Environmental Target: Bk	*ENG	[0 to 3000 / **1000** / 10μ A/step]
002	Environmental Target: C	*ENG	
003	Environmental Target: M	*ENG	
004	Environmental Target: Y	*ENG	

2012	**[Charge Output Control] DFU**		
001	AC Voltage	*ENG	Selects the AC voltage control type. [0 or 1 / **0** / 1 /step] 0: Process control 1: Manual control (AC voltages are decided with SP2006.)

2013	[Envir. Correct:PCU]		
001	Current Environmental:Display	*ENG	Displays the environmental condition, which is measured in absolute humidity. [1 to 5 / – / 1 /step] 1: LL (LL <= 4.3 g/m^3) 2: ML (4.3 < ML <= 11.3 g/m^3) 3: MM (11.3 < MM <= 18.0 g/m^3) 4: MH (18.0 < MH <= 24.0 g/m^3) 5: HH (24.0 g/m^3 < HH)
002	Forced Setting	*ENG	Selects the environmental condition manually. **DFU** [0 to 5 / **0** / 1 /step] 0: The environmental condition is determined automatically. 1: LL, 2: ML, 3: MM, 4: MH, 5: HH
003	Absolute Humidity: Thresh 1	*ENG	Changes the humidity threshold between LL and ML. **DFU** [0 to 100 / **4.3** / 0.01 g/m^3/step]
004	Absolute Humidity: Thresh 2	*ENG	Changes the humidity threshold between ML and MM. **DFU** [0 to 100 / **11.3** / 0.01 g/m^3/step]
005	Absolute Humidity: Thresh 3	*ENG	Changes the humidity threshold between MM and MH. **DFU** [0 to 100 / **18.0** / 0.01 g/m^3/step]
006	Absolute Humidity: Thresh 4	*ENG	Changes the humidity threshold between MH and HH. **DFU** [0 to 100 / **24.0** / 0.01 g/m^3/step]
007	Current Temp.: Display	*ENG	Displays the current temperature. [0 to 100 / **0** / 1 deg/step]
008	Relative Humidity: Display	*ENG	Displays the current relative humidity. [0 to 100 / **0** / 1%RH/step]

009	Current Absolute Humidity: Display	*ENG	Displays the absolute humidity. [0 to 100 / **0** / 0.01 g/m^3/step]
010	Previous Environmental:Display	*ENG	Displays the previous environmental condition, which is measured in absolute humidity. [1 to 5 / **–** / 1 /step] 1: LL, 2: ML, 3: MM, 4: MH, 5: HH
011	Previous Temp.: Display	*ENG	Displays the previous temperature. [0 to 100 / **0** / 1 deg/step]
012	Previous Relative Humidity: Display	*ENG	Displays the previous relative humidity. [0 to 100 / **0** / 1%RH/step]
013	Previous Absolute Humidity: Display	*ENG	Displays the previous absolute humidity. [0 to 100 / **0** / 0.01 g/m^3/step]

2014	**[Charge AC Control: Setting] DFU**		
001	Practice Interval: Power ON	*ENG	[0 to 2000 / **500** / 1 page/step]
002	Practice Interval: Printing	*ENG	[0 to 2000 / **0** / 1 page/step]
003	Judge Interval	*ENG	[0 to 500 / **10** / 1 page/step]
004	Temp Condition	*ENG	[0 to 99 / **35** / 1 deg/step]
005	Relative Humidity Condition	*ENG	[0 to 99 / **50** / 1 %RH/step]
006	Absolute Humidity Condition	*ENG	[0 to 99 / **12** / 1 g/m^3/step]
007	Temp Change: Thresh M	*ENG	[0 to 99 / **10** / 1 deg/step]
008	RH Change: Thresh M	*ENG	[0 to 99 / **50** / 1 %RH/step]
009	AH Change: Thresh M	*ENG	[0 to 99 / **6** / 1 g/m^3/step]
010	Temp Change: Thresh S	*ENG	[0 to 20 / **1** / 0.1 deg/step]
011	RH Change: Thresh S	*ENG	[0 to 50 / **5** / 1 %RH/step]

012	AH Change: Thresh S	*ENG	[0 to 20 / **1** / 0.1 g/m^3/step]
013	Alone Time	*ENG	[0 to 1440 / **360** / 10 min/step]
014	Coefficient of Correction	*ENG	[0 to 2 / **0.7** / 0.01 kV/mA/step]

2015	**[Charge AC Adj: Result]**		
001	Bk	*ENG	[0 to 9 / **0** / 1 /step]
002	C	*ENG	
003	M	*ENG	
004	Y	*ENG	

2101	**[Color Regist Adust]**		
	These values are the parameters for the automatic line position adjustment and are adjusted at the factory. However, you must input a value for SP2101-001 after replacing the laser unit. For details, see "Laser Unit" in the "Replacement and Adjustment" section. The value should be provided with the new laser unit.		
001	Bk: Main Scan: Dot	*ENG	[–511 to 511 / **0** / 1 dot/step]
002	C Main Scan: Dot	*ENG	
003	M Main Scan: Dot	*ENG	
004	Y Main Scan: Dot	*ENG	
005	Bk: Sub Scan: Line	*ENG	[–800 to 800 / **0** / 1 line/step]
006	C: Sub Scan: Line	*ENG	
007	M: Sub Scan: Line	*ENG	
008	Y: Sub Scan: Line	*ENG	

2102	**[Magnification Adjust] DFU**		
	These values are the parameters for the automatic line position adjustment and are adjusted at the factory. These SPs must be input only when a new laser unit is installed.		
001	Main Mag.: Bk:Standard Spd	*ENG	[0 to 408 / **204** / 1 /step]
002	Main Mag.: Bk:Middle Spd	*ENG	
003	Main Mag.: Bk:Low Spd	*ENG	
004	Main Mag.: C: Standard Spd	*ENG	
005	Main Mag.: C: Middle Spd	*ENG	
006	Main Mag.: C:Low Spd	*ENG	
007	Main Mag.: M: Standard Spd	*ENG	
008	Main Mag.: M:Middle Spd	*ENG	
009	Main Mag.: M:Low Spd	*ENG	
010	Main Mag.: Y: Standard Spd	*ENG	
011	Main Mag.: Y:Middle Spd	*ENG	
012	Main Mag.: Y:Low Spd	*ENG	
013	Main Beam-Pitch: Bk: Dot	*ENG	[–20 to 20 / **9** / 1 dot/step]
014	Main Beam-Pitch: Bk: Subdot	*ENG	[–15 to 15 / **-3** / 1 sub-dot/step]
015	Main Beam-Pitch: C: Dot	*ENG	[–20 to 20 / **9** / 1 dot/step]
016	Main Beam-Pitch: C: Subdot	*ENG	[–15 to 15 / **-3** / 1 sub-dot/step]
017	Main Beam-Pitch: M: Dot	*ENG	[–20 to 20 / **9** / 1 dot/step]
018	Main Beam-Pitch: M: Subdot	*ENG	[–15 to 15 / **-4** / 1 sub-dot/step]
019	Main Beam-Pitch: Y: Dot	*ENG	[–20 to 20 / **9** / 1 dot/step]
020	Main Beam-Pitch: Y: Subdot	*ENG	[–15 to 15 / **-4** / 1 sub-dot/step]

2103	**[Erase Margin Adjust]** (Area, Paper Size)		
	Adjusts the erase margin by deleting image data at the margins.		
001	Lead Edge Width	*ENG	[0 to 9.9 / **4.2** / 0.1 mm/step]
002	Trailing Edge Width	*ENG	
003	Left	*ENG	[0 to 9.9 / **2** / 0.1 mm/step]
004	Right	*ENG	

2104	**[LD Initial Power Adjust]**		
	Adjusts the LD initial power. These SPs must be input only when a new laser unit is installed.		
001	LD1: K	*ENG	[60 to 140 / **100** / 0.1 %/step]
002	LD2: K	*ENG	
003	LD1: C	*ENG	
004	LD2: C	*ENG	
005	LD1: M	*ENG	
006	LD2: M	*ENG	
007	LD1: Y	*ENG	
008	LD2: Y	*ENG	

2105	**[LD Power Adjust] DFU** (Process Speed, Color)		
	Adjusts the LD power of each color for each process speed. Each LD power setting is decided by process control. Low: 85 mm/s, High: 260 mm/s, Middle: 182 mm/s		
001	Bk: Standard Speed	*ENG	[50 to 120 / **100** / 1%/step] Decreasing a value makes lines thinner on the output. Increasing a value makes lines thicker on the output.
002	C: Standard Speed	*ENG	
003	M: Standard Speed	*ENG	
004	Y: Standard Speed	*ENG	
005	Bk: Middle Speed	*ENG	
006	C: Middle Speed	*ENG	
007	M: Middle Speed	*ENG	
008	Y: Middle Speed	*ENG	
009	Bk: Low Speed	*ENG	
010	C: Low Speed	*ENG	
011	M: Low Speed	*ENG	
012	Y: Low Speed	*ENG	

2106	**[Polygon Rotation Time] DFU**		
	Adjusts the time of the polygon motor rotation.		
001	Warming-Up	*ENG	[0 to 60 / **10** / 1 sec/step]
002	Job End	*ENG	

2107	[Image Parameter] DFU		
001	Image Gamma Flag	*ENG	[0 or 1 / **1** / 1 /step]
002	Shading Correction Flag	*ENG	

2109	[Test Pattern]		
	Generates the test pattern.		
003	Pattern Selection	-	[0 to 23 / **0** / 1/step]
	0 None 1: Vertical Line (1dot) 2: Vertical Line (2dot) 3: Horizontal (1dot) 4: Horizontal (2dot) 5: Grid Vertical Line 6: Grid Horizontal Line 7: Grid pattern Small 8: Grid pattern Large 9: Argyle Pattern Small 10: Argyle Pattern Large 11. Independent Pattern (1dot)		12. Independent Pattern (2dot) 13. Independent Pattern (4dot) 14. Trimming Area 15: Hound's Tooth Check (Vertical) 16: Hound's Tooth Check (Horizontal) 17: Band (Horizontal) 18: Band (Vertical) 19: Checker Flag Pattern 20: Grayscale (Vertical Margin) 21: Grayscale (Horizontal Margin) 22: Two Beam Density Pattern 23: Full Dot Pattern
005	Color Selection	-	Specifies the color for the test pattern. [1 to 4 / **1** / 1/step] 1: All color, 2: C, 3: M, 4: Y
006	Density: Bk	-	Specifies the color density for the test pattern. [0 to 15 / **15** / 1 /step] 0: Lightest density 15: Darkest density
007	Density: C	-	
008	Density: M	-	
009	Density: Y	-	

2111	**[Line Pos. Ajust]**		
001	Execute: Mode a	-	Executes the fine line position adjustment twice. If this SP is not completed (NG is displayed), do SP2111-003 first and then try this SP again.
002	Execute:Mode b	-	Executes the fine line position adjustment once. If this SP is not completed, do SP2111-003 first and then try this SP again.
003	Execute:Mode c	-	Executes the rough line position adjustment once. After doing this SP, make sure to execute SP2111-001 or -002. Otherwise, the line position adjustment is not perfectly done.
004	Execute:Mode d	-	Rough adjustment and fine adjustment, once each.

2112	**[ID Sensor Test]** ID Sensor Check **FA**		
001	Execute		This SP is used to check the ID sensors at the factory. The results of this SP are displayed in SP2140 to SP2145.

2117	**[Skew Adjustment]**		
	Specifies a skew adjustment value for the skew motor M, C or Y.		
001	Pulse: C	*ENG	[–100 to 100 / **0** / 1 pulse/step]
002	Pulse: M	*ENG	
003	Pulse: Y	*ENG	

2118	[Skew Adjustment]		
001	Execute: C	*ENG	Changes the current skew adjustment values to the values specified with SP2117.
002	Execute: M	*ENG	
003	Execute: Y	*ENG	

2119	[Skew Adjustment Display]		
	Displays the current skew adjustment value for each skew motor.		
001	C	*ENG	[–75 to 75 / **0** / 1 pulse/step]
002	M	*ENG	
003	Y	*ENG	

2140	[ID Sensor Check Result]		
	Displays the maximum result values of the ID sensor check. Front, Center, Rear: ID sensors for the automatic line position adjustment and the process control		
001	PWM: Bk	*ENG	[0 to 1024 / **0** / 1/step]
002	PWM: C	*ENG	
003	PWM: M	*ENG	
004	PWM: Y	*ENG	
005	PWM: Front	*ENG	
006	PWM: Center	*ENG	
007	PWM: Rear	*ENG	

2141	[ID Sensor Check Result]		
	Displays the maximum result values of the ID sensor check. Front, Center, Rear: ID sensors for the automatic line position adjustment and the process control		
001	Average: Bk	*ENG	[0 to 5.5 / **0** / 0.01V/step]
002	Average: C	*ENG	
003	Average: M	*ENG	
004	Average: Y	*ENG	
005	Average: Front	*ENG	
006	Average: Center	*ENG	
007	Average: Rear	*ENG	

2142	[ID Sensor Check Result]		
	Displays the maximum result values of the ID sensor check. Front, Center, Rear: ID sensors for the automatic line position adjustment and the process control		
001	Maximum: Bk	*ENG	[0 to 5.5 / **0** / 0.01V/step]
002	Maximum: C	*ENG	
003	Maximum: M	*ENG	
004	Maximum: Y	*ENG	
005	Maximum: Front	*ENG	
006	Maximum: Center	*ENG	
007	Maximum: Rear	*ENG	

2143	**[ID Sensor Check Result]**		
	Displays the minimum result values of the ID sensor check. Front, Center, Rear: ID sensors for the automatic line position adjustment and the process control		
001	Minimum: Bk	*ENG	[0 to 5.5 / **0** / 0.01V/step]
002	Minimum: C	*ENG	
003	Minimum: M	*ENG	
004	Minimum: Y	*ENG	
005	Minimum: Front	*ENG	
006	Minimum: Center	*ENG	
007	Minimum: Rear	*ENG	

2144	**[ID Sensor Check Result]**		
	Displays the maximum result 2 values of the ID sensor check. Front, Center, Rear: ID sensors for the automatic line position adjustment and the process control		
001	Maximum 2: Bk	*ENG	[0 to 5.5 / **0** / 0.01V/step]
002	Maximum 2: C	*ENG	
003	Maximum 2: M	*ENG	
004	Maximum 2: Y	*ENG	
005	Maximum 2: Front	*ENG	
006	Maximum 2: Center	*ENG	
007	Maximum 2: Rear	*ENG	

2145	**[ID Sensor Check Result]**		
	Displays the minimum result 2 values of the ID sensor check. Front, Center, Rear: ID sensors for the automatic line position adjustment and the process control		
001	Minimum 2: Bk	*ENG	[0 to 5.5 / **0** / 0.01V/step]
002	Minimum 2: C	*ENG	
003	Minimum 2: M	*ENG	
004	Minimum 2: Y	*ENG	
005	Minimum 2: Front	*ENG	
006	Minimum 2: Center	*ENG	
007	Minimum 2: Rear	*ENG	

2150	**[Area Mag. Correction]** LD Pulse Area Correction (Color, Area) **FA**		
	Adjusts the magnification for each area. The main scan (297 mm) is divided into 13 areas. Area 1 is at the front side of the machine (left side of the image) and area 13 is at the rear side of the machine (right side of the image). Decreasing a value makes the image shift to the left side on the print. Increasing a value makes the image shift to the right side on the print. 1 pulse = 1/16 dot		
027	Area 0: Bk: LD1	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
028	Area 1: Bk: LD1	*ENG	[-255 to 255 / **-233** / 1sub-dot/step]
029	Area 2: Bk: LD1	*ENG	[-255 to 255 / **-193** / 1sub-dot/step]
030	Area 3: Bk: LD1	*ENG	[-255 to 255 / **58** / 1sub-dot/step]
031	Area 4: Bk: LD1	*ENG	
032	Area 5: Bk: LD1	*ENG	[-255 to 255 / **143** / 1sub-dot/step]
033	Area 6: Bk: LD1	*ENG	

034	Area 7: Bk: LD1	*ENG	[-255 to 255 / **47** / 1sub-dot/step]
035	Area 8: Bk: LD1	*ENG	[-255 to 255 / **-23** / 1sub-dot/step]
036	Area 9: Bk: LD1	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
037	Area 10: Bk: LD1	*ENG	
038	Area 11: Bk: LD1	*ENG	
039	Area 12: Bk: LD1	*ENG	
040	Area 0: Bk: LD2	*ENG	
041	Area 1: Bk: LD2	*ENG	[-255 to 255 / **-233** / 1sub-dot/step]
042	Area 2: Bk: LD2	*ENG	[-255 to 255 / **-193** / 1sub-dot/step]
043	Area 3: Bk: LD2	*ENG	[-255 to 255 / **58** / 1sub-dot/step]
044	Area 4: Bk: LD2	*ENG	
045	Area 5: Bk: LD2	*ENG	[-255 to 255 / **143** / 1sub-dot/step]
046	Area 6: Bk: LD2	*ENG	
047	Area 7: Bk: LD2	*ENG	[-255 to 255 / **47** / 1sub-dot/step]
048	Area 8: Bk: LD2	*ENG	[-255 to 255 / **-23** / 1sub-dot/step]
049	Area 9: Bk: LD2	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
050	Area 10: Bk: LD2	*ENG	
051	Area 11: Bk: LD2	*ENG	
052	Area 12: Bk: LD2	*ENG	
079	Area 0: C: LD1	*ENG	
080	Area 1: C: LD1	*ENG	[-255 to 255 / **-234** / 1sub-dot/step]
081	Area 2: C: LD1	*ENG	[-255 to 255 / **-195** / 1sub-dot/step]
082	Area 3: C: LD1	*ENG	[-255 to 255 / **56** / 1sub-dot/step]
083	Area 4: C: LD1	*ENG	[-255 to 255 / **57** / 1sub-dot/step]

084	Area 5: C: LD1	*ENG	[-255 to 255 / **143** / 1sub-dot/step]
085	Area 6: C: LD1	*ENG	
086	Area 7: C: LD1	*ENG	[-255 to 255 / **50** / 1sub-dot/step]
087	Area 8: C: LD1	*ENG	[-255 to 255 / **-20** / 1sub-dot/step]
088	Area 9: C: LD1	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
089	Area 10: C: LD1	*ENG	
090	Area 11: C: LD1	*ENG	
091	Area 12: C: LD1	*ENG	
092	Area 0: C: LD2	*ENG	
093	Area 1: C: LD2	*ENG	[-255 to 255 / **-234** / 1sub-dot/step]
094	Area 2: C: LD2	*ENG	[-255 to 255 / **-195** / 1sub-dot/step]
095	Area 3: C: LD2	*ENG	[-255 to 255 / **56** / 1sub-dot/step]
096	Area 4: C: LD2	*ENG	[-255 to 255 / **57** / 1sub-dot/step]
097	Area 5: C: LD2	*ENG	[-255 to 255 / **143** / 1sub-dot/step]
098	Area 6: C: LD2	*ENG	
099	Area 7: C: LD2	*ENG	[-255 to 255 / **50** / 1sub-dot/step]
100	Area 8: C: LD2	*ENG	[-255 to 255 / **-20** / 1sub-dot/step]
101	Area 9: C: LD2	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
102	Area 10: C: LD2	*ENG	
103	Area 11: C: LD2	*ENG	
104	Area 12: C: LD2	*ENG	
131	Area 0: M: LD1	*ENG	
132	Area 1: M: LD1	*ENG	[-255 to 255 / **-232** / 1sub-dot/step]
133	Area 2: M: LD1	*ENG	[-255 to 255 / **-192** / 1sub-dot/step]

134	Area 3: M: LD1	*ENG	[-255 to 255 / **60** / 1sub-dot/step]
135	Area 4: M: LD1	*ENG	
136	Area 5: M: LD1	*ENG	[-255 to 255 / **142** / 1sub-dot/step]
137	Area 6: M: LD1	*ENG	
138	Area 7: M: LD1	*ENG	[-255 to 255 / **45** / 1sub-dot/step]
139	Area 8: M: LD1	*ENG	[-255 to 255 / **-26** / 1sub-dot/step]
140	Area 9: M: LD1	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
141	Area 10: M: LD1	*ENG	
142	Area 11: M: LD1	*ENG	
143	Area 12: M: LD1	*ENG	
144	Area 0: M: LD2	*ENG	
145	Area 1: M: LD2	*ENG	[-255 to 255 / **-232** / 1sub-dot/step]
146	Area 2: M: LD2	*ENG	[-255 to 255 / **-192** / 1sub-dot/step]
147	Area 3: M: LD2	*ENG	[-255 to 255 / **60** / 1sub-dot/step]
148	Area 4: M: LD2	*ENG	
149	Area 5: M: LD2	*ENG	[-255 to 255 / **142** / 1sub-dot/step]
150	Area 6: M: LD2	*ENG	
151	Area 7: M: LD2	*ENG	[-255 to 255 / **45** / 1sub-dot/step]
152	Area 8: M: LD2	*ENG	[-255 to 255 / **-26** / 1sub-dot/step]
153	Area 9: M: LD2	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
154	Area 10: M: LD2	*ENG	
155	Area 11: M: LD2	*ENG	
156	Area 12: M: LD2	*ENG	
183	Area 0: Y: LD1	*ENG	

184	Area 1: Y: LD1	*ENG	[-255 to 255 / **-233** / 1sub-dot/step]
185	Area 2: Y: LD1	*ENG	[-255 to 255 / **-194** / 1sub-dot/step]
186	Area 3: Y: LD1	*ENG	[-255 to 255 / **60** / 1sub-dot/step]
187	Area 4: Y: LD1	*ENG	
188	Area 5: Y: LD1	*ENG	[-255 to 255 / **144** / 1sub-dot/step]
189	Area 6: Y: LD1	*ENG	
190	Area 7: Y: LD1	*ENG	[-255 to 255 / **46** / 1sub-dot/step]
191	Area 8: Y: LD1	*ENG	[-255 to 255 / **-25** / 1sub-dot/step]
192	Area 9: Y: LD1	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
193	Area 10: Y: LD1	*ENG	
194	Area 11: Y: LD1	*ENG	
195	Area 12: Y: LD1	*ENG	
196	Area 0: Y: LD2	*ENG	
197	Area 1: Y: LD2	*ENG	[-255 to 255 / **-233** / 1sub-dot/step]
198	Area 2: Y: LD2	*ENG	[-255 to 255 / **-194** / 1sub-dot/step]
199	Area 3: Y: LD2	*ENG	[-255 to 255 / **60** / 1sub-dot/step]
200	Area 4: Y: LD2	*ENG	
201	Area 5: Y: LD2	*ENG	[-255 to 255 / **144** / 1sub-dot/step]
202	Area 6: Y: LD2	*ENG	
203	Area 7: Y: LD2	*ENG	[-255 to 255 / **46** / 1sub-dot/step]
204	Area 8: Y: LD2	*ENG	[-255 to 255 / **-25** / 1sub-dot/step]
205	Area 9: Y: LD2	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
206	Area 10: Y: LD2	*ENG	
207	Area 11: Y: LD2	*ENG	

208	Area 12: Y: LD2	*ENG	

2152	**[Shading Correct Setting] FA** Adjusts the area correction value for each LD power. The main scan is divided into 16 areas. However, the image areas are limited from area 1 to area 14. For BK and Magenta, area 1 is at the rear side of the machine (left side of the image) and area 14 is at the front side of the machine (right side of the image). For Cyan and Yellow, area 1 is at the front side of the machine (right side of the image) and area 14 is at the rear side of the machine (left side of the image).		
001	Area 0: Bk: LD1	*ENG	[50 to 150 / **100** / 0.1 %/step]
002	Area 1: Bk: LD1	*ENG	[50 to 150 / **98.4** / 0.1 %/step]
003	Area 2: Bk: LD1	*ENG	[50 to 150 / **98.8** / 0.1 %/step]
004	Area 3: Bk: LD1	*ENG	[50 to 150 / **97.9** / 0.1 %/step]
005	Area 4: Bk: LD1	*ENG	[50 to 150 / **98** / 0.1 %/step]
006	Area 5: Bk: LD1	*ENG	[50 to 150 / **99** / 0.1 %/step]
007	Area 6: Bk: LD1	*ENG	[50 to 150 / **99.9** / 0.1 %/step]
008	Area 7: Bk: LD1	*ENG	[50 to 150 / **100.5** / 0.1 %/step]
009	Area 8: Bk: LD1	*ENG	[50 to 150 / **100.4** / 0.1 %/step]
010	Area 9: Bk: LD1	*ENG	[50 to 150 / **100.9** / 0.1 %/step]
011	Area 10: Bk: LD1	*ENG	[50 to 150 / **101.9** / 0.1 %/step]
012	Area 11: Bk: LD1	*ENG	[50 to 150 / **102.7** / 0.1 %/step]
013	Area 12: Bk: LD1	*ENG	[50 to 150 / **103.5** / 0.1 %/step]
014	Area 13: Bk: LD1	*ENG	[50 to 150 / **104.5** / 0.1 %/step]
015	Area 14: Bk: LD1	*ENG	[50 to 150 / **105.5** / 0.1 %/step]
016	Area 15: Bk: LD1	*ENG	[50 to 150 / **98.4** / 0.1 %/step]
017	Area 0: Bk: LD2	*ENG	[50 to 150 / **100** / 0.1 %/step]

018	Area 1: Bk: LD2	*ENG	[50 to 150 / **98.4** / 0.1 %/step]
019	Area 2: Bk: LD2	*ENG	[50 to 150 / **98.8** / 0.1 %/step]
020	Area 3: Bk: LD2	*ENG	[50 to 150 / **97.9** / 0.1 %/step]
021	Area 4: Bk: LD2	*ENG	[50 to 150 / **98** / 0.1 %/step]
022	Area 5: Bk: LD2	*ENG	[50 to 150 / **99** / 0.1 %/step]
023	Area 6: Bk: LD2	*ENG	[50 to 150 / **99.9** / 0.1 %/step]
024	Area 7: Bk: LD2	*ENG	[50 to 150 / **100.5** / 0.1 %/step]
025	Area 8: Bk: LD2	*ENG	[50 to 150 / **100.4** / 0.1 %/step]
026	Area 9: Bk: LD2	*ENG	[50 to 150 / **100.9** / 0.1 %/step]
027	Area 10: Bk: LD2	*ENG	[50 to 150 / **101.9** / 0.1 %/step]
028	Area 11: Bk: LD2	*ENG	[50 to 150 / **102.7** / 0.1 %/step]
029	Area 12: Bk: LD2	*ENG	[50 to 150 / **103.5** / 0.1 %/step]
030	Area 13: Bk: LD2	*ENG	[50 to 150 / **104.5** / 0.1 %/step]
031	Area 14: Bk: LD2	*ENG	[50 to 150 / **105.5** / 0.1 %/step]
032	Area 15: Bk: LD2	*ENG	[50 to 150 / **98.4** / 0.1 %/step]
033	Area 0: C: LD1	*ENG	[50 to 150 / **100** / 0.1 %/step]
034	Area 1: C: LD1	*ENG	[50 to 150 / **96.4** / 0.1 %/step]
035	Area 2: C: LD1	*ENG	[50 to 150 / **96.8** / 0.1 %/step]
036	Area 3: C: LD1	*ENG	[50 to 150 / **97.8** / 0.1 %/step]
037	Area 4: C: LD1	*ENG	[50 to 150 / **97.5** / 0.1 %/step]
038	Area 5: C: LD1	*ENG	[50 to 150 / **98.3** / 0.1 %/step]
039	Area 6: C: LD1	*ENG	[50 to 150 / **99.1** / 0.1 %/step]
040	Area 7: C: LD1	*ENG	[50 to 150 / **100.1** / 0.1 %/step]
041	Area 8: C: LD1	*ENG	[50 to 150 / **100.3** / 0.1 %/step]

042	Area 9: C: LD1	*ENG	[50 to 150 / **101.2** / 0.1 %/step]
043	Area 10: C: LD1	*ENG	[50 to 150 / **102.1** / 0.1 %/step]
044	Area 11: C: LD1	*ENG	[50 to 150 / **103.1** / 0.1 %/step]
045	Area 12: C: LD1	*ENG	[50 to 150 / **103.8** / 0.1 %/step]
046	Area 13: C: LD1	*ENG	[50 to 150 / **104.6** / 0.1 %/step]
047	Area 14: C: LD1	*ENG	[50 to 150 / **105.6** / 0.1 %/step]
048	Area 15: C: LD1	*ENG	[50 to 150 / **96.4** / 0.1 %/step]
049	Area 0: C: LD2	*ENG	[50 to 150 / **100** / 0.1 %/step]
050	Area 1: C: LD2	*ENG	[50 to 150 / **96.4** / 0.1 %/step]
051	Area 2: C: LD2	*ENG	[50 to 150 / **96.8** / 0.1 %/step]
052	Area 3: C: LD2	*ENG	[50 to 150 / **97.8** / 0.1 %/step]
053	Area 4: C: LD2	*ENG	[50 to 150 / **97.5** / 0.1 %/step]
054	Area 5: C: LD2	*ENG	[50 to 150 / **98.3** / 0.1 %/step]
055	Area 6: C: LD2	*ENG	[50 to 150 / **99.1** / 0.1 %/step]
056	Area 7: C: LD2	*ENG	[50 to 150 / **100.1** / 0.1 %/step]
057	Area 8: C: LD2	*ENG	[50 to 150 / **100.3** / 0.1 %/step]
058	Area 9: C: LD2	*ENG	[50 to 150 / **101.2** / 0.1 %/step]
059	Area 10: C: LD2	*ENG	[50 to 150 / **102.1** / 0.1 %/step]
060	Area 11: C: LD2	*ENG	[50 to 150 / **103.1** / 0.1 %/step]
061	Area 12: C: LD2	*ENG	[50 to 150 / **103.8** / 0.1 %/step]
062	Area 13: C: LD2	*ENG	[50 to 150 / **104.6** / 0.1 %/step]
063	Area 14: C: LD2	*ENG	[50 to 150 / **105.6** / 0.1 %/step]
064	Area 15: C: LD2	*ENG	[50 to 150 / **96.4** / 0.1 %/step]
065	Area 0: M: LD1	*ENG	[50 to 150 / **100** / 0.1 %/step]

066	Area 1: M: LD1	*ENG	[50 to 150 / **98** / 0.1 %/step]
067	Area 2: M: LD1	*ENG	[50 to 150 / **97.9** / 0.1 %/step]
068	Area 3: M: LD1	*ENG	[50 to 150 / **98.6** / 0.1 %/step]
069	Area 4: M: LD1	*ENG	[50 to 150 / **99.1** / 0.1 %/step]
070	Area 5: M: LD1	*ENG	[50 to 150 / **100.1** / 0.1 %/step]
071	Area 6: M: LD1	*ENG	[50 to 150 / **100.6** / 0.1 %/step]
072	Area 7: M: LD1	*ENG	[50 to 150 / **100.3** / 0.1 %/step]
073	Area 8: M: LD1	*ENG	[50 to 150 / **100.2** / 0.1 %/step]
074	Area 9: M: LD1	*ENG	[50 to 150 / **100.3** / 0.1 %/step]
075	Area 10: M: LD1	*ENG	[50 to 150 / **100** / 0.1 %/step]
076	Area 11: M: LD1	*ENG	
077	Area 12: M: LD1	*ENG	[50 to 150 / **99.6** / 0.1 %/step]
078	Area 13: M: LD1	*ENG	[50 to 150 / **98.6** / 0.1 %/step]
079	Area 14: M: LD1	*ENG	[50 to 150 / **97.9** / 0.1 %/step]
080	Area 15: M: LD1	*ENG	[50 to 150 / **98** / 0.1 %/step]
081	Area 0: M: LD2	*ENG	[50 to 150 / **100** / 0.1 %/step]
082	Area 1: M: LD2	*ENG	[50 to 150 / **98** / 0.1 %/step]
083	Area 2: M: LD2	*ENG	[50 to 150 / **97.9** / 0.1 %/step]
084	Area 3: M: LD2	*ENG	[50 to 150 / **98.6** / 0.1 %/step]
085	Area 4: M: LD2	*ENG	[50 to 150 / **99.1** / 0.1 %/step]
086	Area 5: M: LD2	*ENG	[50 to 150 / **100.1** / 0.1 %/step]
087	Area 6: M: LD2	*ENG	[50 to 150 / **100.6** / 0.1 %/step]
088	Area 7: M: LD2	*ENG	[50 to 150 / **100.3** / 0.1 %/step]
089	Area 8: M: LD2	*ENG	[50 to 150 / **100.2** / 0.1 %/step]

090	Area 9: M: LD2	*ENG	[50 to 150 / **100.3** / 0.1 %/step]
091	Area 10: M: LD2	*ENG	[50 to 150 / **100** / 0.1 %/step]
092	Area 11: M: LD2	*ENG	
093	Area 12: M: LD2	*ENG	[50 to 150 / **99.6** / 0.1 %/step]
094	Area 13: M: LD2	*ENG	[50 to 150 / **98.6** / 0.1 %/step]
095	Area 14: M: LD2	*ENG	[50 to 150 / **97.9** / 0.1 %/step]
096	Area 15: M: LD2	*ENG	[50 to 150 / **98** / 0.1 %/step]
097	Area 0: Y: LD1	*ENG	[50 to 150 / **100** / 0.1 %/step]
098	Area 1: Y: LD1	*ENG	[50 to 150 / **98.9** / 0.1 %/step]
099	Area 2: Y: LD1	*ENG	[50 to 150 / **98.4** / 0.1 %/step]
100	Area 3: Y: LD1	*ENG	[50 to 150 / **98.1** / 0.1 %/step]
101	Area 4: Y: LD1	*ENG	[50 to 150 / **98.4** / 0.1 %/step]
102	Area 5: Y: LD1	*ENG	[50 to 150 / **99.3** / 0.1 %/step]
103	Area 6: Y: LD1	*ENG	[50 to 150 / **100.4** / 0.1 %/step]
104	Area 7: Y: LD1	*ENG	[50 to 150 / **99.7** / 0.1 %/step]
105	Area 8: Y: LD1	*ENG	[50 to 150 / **100.7** / 0.1 %/step]
106	Area 9: Y: LD1	*ENG	[50 to 150 / **100** / 0.1 %/step]
107	Area 10: Y: LD1	*ENG	[50 to 150 / **99** / 0.1 %/step]
108	Area 11: Y: LD1	*ENG	[50 to 150 / **99.4** / 0.1 %/step]
109	Area 12: Y: LD1	*ENG	[50 to 150 / **98.9** / 0.1 %/step]
110	Area 13: Y: LD1	*ENG	[50 to 150 / **98.7** / 0.1 %/step]
111	Area 14: Y: LD1	*ENG	[50 to 150 / **97.7** / 0.1 %/step]
112	Area 15: Y: LD1	*ENG	[50 to 150 / **98.9** / 0.1 %/step]
113	Area 0: Y: LD2	*ENG	[50 to 150 / **100** / 0.1 %/step]

114	Area 1: Y: LD2	*ENG	[50 to 150 / **98.9** / 0.1 %/step]
115	Area 2: Y: LD2	*ENG	[50 to 150 / **98.4** / 0.1 %/step]
116	Area 3: Y: LD2	*ENG	[50 to 150 / **98.1** / 0.1 %/step]
117	Area 4: Y: LD2	*ENG	[50 to 150 / **98.4** / 0.1 %/step]
118	Area 5: Y: LD2	*ENG	[50 to 150 / **99.3** / 0.1 %/step]
119	Area 6: Y: LD2	*ENG	[50 to 150 / **100.4** / 0.1 %/step]
120	Area 7: Y: LD2	*ENG	[50 to 150 / **99.7** / 0.1 %/step]
121	Area 8: Y: LD2	*ENG	[50 to 150 / **100.7** / 0.1 %/step]
122	Area 9: Y: LD2	*ENG	[50 to 150 / **100** / 0.1 %/step]
123	Area 10: Y: LD2	*ENG	[50 to 150 / **99** / 0.1 %/step]
124	Area 11: Y: LD2	*ENG	[50 to 150 / **99.4** / 0.1 %/step]
125	Area 12: Y: LD2	*ENG	[50 to 150 / **98.9** / 0.1 %/step]
126	Area 13: Y: LD2	*ENG	[50 to 150 / **98.7** / 0.1 %/step]
127	Area 14: Y: LD2	*ENG	[50 to 150 / **97.7** / 0.1 %/step]
128	Area 15: Y: LD2	*ENG	[50 to 150 / **98.9** / 0.1 %/step]

2153	**[Shade: SP Clear]**		
001	SP Clear Execute	*ENG	
Clears "Shading Correct Setting" (SP2152)			

2160	[Vertical Line Width] DFU		
001	600dpi:Bk	*ENG	[10 to 15 / **15** / 1 /step]
002	600dpi:M	*ENG	
003	600dpi:C	*ENG	
004	600dpi:Y	*ENG	
005	1200dpi:Bk	*ENG	
006	1200dpi:M	*ENG	
007	1200dpi:C	*ENG	
008	1200dpi:Y	*ENG	

2180	[Line Pos. Adj. Clear]		
001	Color Regist.	-	
002	Main Scan Length Detection	-	
003	MUSIC Result	-	
004	Area Mag. Correction	-	

2181	[Line Pos. Adj. Result] DFU
	Displays the values for each correction. ▪ "Paper Int. Mag: Subdot" indicates the magnification correction value between two sheets of paper. ▪ "Mag.Cor. Subdot" indicates the magnification correction value. ▪ "M. Scan Erro." indicates the shift correction value in the main scan direction. ▪ "S. Scan Erro." Indicates the shift correction value in the sub scan direction. ▪ "M. Cor.: Dot" indicates the dot correction value in the main scan direction. ▪ "M. Cor.: Subdot" indicates the sub dot correction value in the main scan direction.

	▪ Bk: Black, M: Magenta, C: Cyan, Y: Yellow		
002	Mag.Cor. Subdot: Bk	*ENG	[–2040 to 2040 / **0** / 1 pulse/step]
003	Skew: C	*ENG	[–5000 to 5000 / **0** / 0.001 um/step]
005	M. Scan Shift: Left: C	*ENG	[–16000 to 16000 / **0** / 0.001 um/step]
006	M. Scan Shift: Center: C	*ENG	
007	M. Scan Shift: RIght: C	*ENG	
008	S. Scan Shift: Left: C	*ENG	[–21000 to 21000 / **0** / 0.001 um/step]
009	S. Scan Shift: Center: C	*ENG	
010	S. Scan Shift: RIght: C	*ENG	
011	M. Cor.: Dot: C	*ENG	[–511 to 511 / **0** / 1 dot/step]
012	M. Cor.: Subdot: C	*ENG	[–15 to 15 / **0** / 1 pulse/step]
014	Mag.Cor. Subdot: C	*ENG	[–2040 to 2040 / **0** / 1 pulse/step]
015	M. Left Mag.: Subdot: C	*ENG	[–1020 to 1020 / **0** / 1 pulse/step]
016	M. Right Mag.: Subdot: C	*ENG	
017	S. Cor.: 600 Line: C	*ENG	[–800 to 800 / **0** / 1 line/step]
018	S. Cor.: 600 Subdot: C	*ENG	[–2 to 2 / **0** / 0.001 line/step]
019	S. Cor.: 1200 Line: C	*ENG	[–1600 to 1600 / **0** / 1 line/step]
020	S. Cor.: 1200 Subdot: C	*ENG	[–2 to 2 / **0** / 0.001 line/step]
021	Skew: M	*ENG	[–5000 to 5000 / **0** / 0.001 um/step]
023	M. Scan Shift: Left: M	*ENG	[–16000 to 16000 / **0** / 0.001 um/step]
024	M. Scan Shift: Center: M	*ENG	
025	M. Scan Shift: Right: M	*ENG	
026	S. Scan Shift: Left: M	*ENG	[–21000 to 21000 / **0** / 0.001 um/step]
027	S. Scan Shift: Center: M	*ENG	

028	S. Scan Shift: Right: M	*ENG	
029	M. Cor.: Dot: M	*ENG	[–511 to 511 / **0** / 1 dot/step]
030	M. Cor.: Subdot: M	*ENG	[–15 to 15 / **0** / 1 pulse/step]
032	Mag.Cor. Subdot: M	*ENG	[–2040 to 2040 / **0** / 1 pulse/step]
033	M. Left Mag.: Subdot: M	*ENG	[–1020 to 1020 / **0** / 1 pulse/step]
034	M. Right Mag.: Subdot: M	*ENG	
035	S. Cor.: 600 Line: M	*ENG	[–800 to 800 / **0** / 1 line/step]
036	S. Cor.: 600 Subdot: M	*ENG	[–2 to 2 / **0** / 0.001 line/step]
037	S. Cor.: 1200 Line: M	*ENG	[–1600 to 1600 / **0** / 1 line/step]
038	S. Cor.: 1200 Subdot: M	*ENG	[–2 to 2 / **0** / 0.001 line/step]
039	Skew: Y	*ENG	[–5000 to 5000 / **0** / 0.001 um/step]
041	M. Scan Shift: Left: Y	*ENG	[–16000 to 16000 / **0** / 0.001 um/step]
042	M. Scan Shift: Center: Y	*ENG	
043	M. Scan Shift: Right: Y	*ENG	
044	S. Scan Shift: Left: Y	*ENG	[–21000 to 21000 / **0** / 0.001 um/step]
045	S. Scan Shift: Center: Y	*ENG	
046	S. Scan Shift: Right: Y	*ENG	
047	M. Cor.: Dot: Y	*ENG	[–511 to 511 / **0** / 1 dot/step]
048	M. Cor.: Subdot: Y	*ENG	[–15 to 15 / **0** / 1 pulse/step]
050	Mag.Cor. Subdot: Y	*ENG	[–2040 to 2040 / **0** / 1 pulse/step]
051	M. Left Mag.: Subdot: Y	*ENG	[–1020 to 1020 / **0** / 1 pulse/step]
052	M. Right Mag.: Subdot: Y	*ENG	
053	S. Cor.: 600 Line: Y	*ENG	[–800 to 800 / **0** / 1 line/step]
054	S. Cor.: 600 Subdot: Y	*ENG	[–2 to 2 / **0** / 0.001 line/step]

055	S. Cor.: 1200 Line: Y	*ENG	[–1600 to 1600 / **0** / 1 line/step]
056	S. Cor.: 1200 Subdot: Y	*ENG	[–2 to 2 / **0** / 0.001 line/step]
057	S. Cor.: 600 Subdot	*ENG	[–1 to 1 / **0** / 0.001 line/step]
059	S. Cor.:1200 Subdot	*ENG	[–1 to 1 / **0** / 0.001 line/step]

2182	**[Line Pos. Adj. Offset] DFU** (Color) M. Scan: Main scan, S. Scan: Sub-scan		
001	C Magnification	*ENG	Adjusts the line position manually. [-1 to 1 / **0** / 0.001%/step] When line shifts are not corrected by the automatic line position adjustment, do this SP. Increasing a value reduces the image in the main scan direction. Decreasing a value enlarges the image in the main scan direction.
002	M Magnification	*ENG	
003	Y Magnification	*ENG	
004	M. Scan: Std: Dot: C	*ENG	[-511 to 511 / **0** / 1 dot/step]
005	M. Scan: Std: Subdot: C	*ENG	[-15 to 15 / **0** / 1 pulse/step]
006	M. Scan: Middle: Dot: C	*ENG	[-511 to 511 / **0** / 1 dot/step]
007	M. Scan: Middle: Subdot: C	*ENG	[-15 to 15 / **0** / 1 pulse/step]
008	M. Scan: Low: Dot: C	*ENG	[-511 to 511 / **0** / 1 dot/step]
009	M. Scan: Low: Subdot: C	*ENG	[-15 to 15 / **0** / 1 pulse/step]
010	M. Scan: Std: Dot: M	*ENG	[-511 to 511 / **0** / 1 dot/step]
011	M. Scan: Std: Subdot: M	*ENG	[-15 to 15 / **0** / 1 pulse/step]
012	M. Scan: Middle: Dot: M	*ENG	[-511 to 511 / **0** / 1 dot/step]
013	M. Scan: Middle: Subdot: M	*ENG	[-15 to 15 / **0** / 1 pulse/step]
014	M. Scan: Low: Dot: M	*ENG	[-511 to 511 / **0** / 1 dot/step]
015	M. Scan: Low: Subdot: M	*ENG	[-15 to 15 / **0** / 1 pulse/step]

016	M. Scan: Std: Dot: Y	*ENG	[-511 to 511 / **0** / 1 dot/step]
017	M. Scan: Std: Subdot: Y	*ENG	[-15 to 15 / **0** / 1 pulse/step]
018	M. Scan: Middle: Dot: Y	*ENG	[-511 to 511 / **0** / 1 dot/step]
019	M. Scan: Middle: Subdot: Y	*ENG	[-15 to 15 / **0** / 1 pulse/step]
020	M. Scan: Low: Dot: Y	*ENG	[-511 to 511 / **0** / 1 dot/step]
021	M. Scan: Low: Subdot: Y	*ENG	[-15 to 15 / **0** / 1 pulse/step]
022	S. Scan: Std: Line: C	*ENG	[-800 to 800 / **0** / 1 line]
023	S. Scan: Std: SubLine: C	*ENG	[–1 to 1 / **0** / 0.001 /line]
024	S. Scan: Middle: Line: C	*ENG	[-800 to 800 / **0** / 1 line]
025	S. Scan: Middle: Sub Line: C	*ENG	[–1 to 1 / **0** / 0.001 /line]
026	S. Scan: Low: Line: C	*ENG	[-1600 to 1600 / **1** / 1 line]
027	S. Scan: Low: Sub Line: C	*ENG	[–1 to 1 / **0** / 0.001 /line]
028	S. Scan: Std: Line: M	*ENG	[-800 to 800 / **0** / 1 line]
029	S. Scan: Std: SubLine: M	*ENG	[–1 to 1 / **0** / 0.001 /line]
030	S. Scan: Middle: Line: M	*ENG	[-800 to 800 / **0** / 1 line]
031	S. Scan: Middle: Sub Line: M	*ENG	[–1 to 1 / **0** / 0.001 /line]
032	S. Scan: Low: Line: M	*ENG	[-1600 to 1600 / **3** / 1 line]
033	S. Scan: Low: Sub Line: M	*ENG	[–1 to 1 / **0** / 0.001 /line]
034	S. Scan: Std: Line: Y	*ENG	[-800 to 800 / **0** / 1 line]
035	S. Scan: Std: SubLine: Y	*ENG	[–1 to 1 / **0** / 0.001 /line]
036	S. Scan: Middle: Line: Y	*ENG	[-800 to 800 / **0** / 1 line]
037	S. Scan: Middle: SubLine: Y	*ENG	[–1 to 1 / **0** / 0.001 /line]
038	S. Scan: Low: Line: Y	*ENG	[-1600 to 1600 / **5** / 1 line]
039	S. Scan: Low: SubLine: Y	*ENG	[–1 to 1 / **0** / 0.001 /line]

2190	[Line Pos. Adj. Setting] DFU		
001	Paper Int. Mag.: Subdot: Bk	*ENG	[0 or 1 / **1** / 1 boolean/step]
002	Paper Int. Mag.: Subdot: C	*ENG	
003	Paper Int. Mag.: Subdot: M	*ENG	
004	Paper Int. Mag.: Subdot: Y	*ENG	
005	M. Scan Mag.: Subdot: C	*ENG	[0 or 1 / **1** / 1 boolean /step] 0: Disable correction 1: Enable correction
006	M. Scan Mag.: Subdot: M	*ENG	
007	M. Scan Mag.: Subdot: Y	*ENG	
008	Area Mag.: Subdot: C	*ENG	[0 or 1 / **1** / 1 boolean /step]
009	Area Mag.: Subdot: M	*ENG	
010	Area Mag.: Subdot: Y	*ENG	
011	S. Scan Cor. Setting	*ENG	[0 or 1 / **1** / 1 boolean /step] 0: Adjusted with Bk 1: Adjusted in minimum shift among four colors

2191	**[MUSIC Coeff Setting] DFU** Position Adjustment: Coefficient Setting ch 0: ID sensor at rear, ch 1: ID sensor at center, ch 2: ID sensor at front		
001	ch 0: Filter: Front: a1	*ENG	[–131071 to 131071 / **125869** / 1 bit/step]
002	ch 0: Filter: Front: a2	*ENG	[–131071 to 131071 / **–60488** / 1 bit/step]
003	ch 0: Filter: Front: b0	*ENG	[–131071 to 131071 / **39** / 1 bit/step]
004	ch 0: Filter: Front: b1	*ENG	[–131071 to 131071 / **77** / 1 bit/step]
005	ch 0: Filter: Front: b2	*ENG	[–131071 to 131071 / **39** / 1 bit/step]
006	ch 0: Filter: Rear: a1	*ENG	[–131071 to 131071 / **128596** / 1 bit/step]
007	ch 0: Filter: Rear: a2	*ENG	[–131071 to 131071 / **–63398** / 1 bit/step]

008	ch 0: Filter: Rear: b0	*ENG	[–131071 to 131071 / **84** / 1 bit/step]
009	ch 0: Filter: Rear: b1	*ENG	[–131071 to 131071 / **168** / 1 bit/step]
010	ch 0: Filter: Rear: b2	*ENG	[–131071 to 131071 / **84** / 1 bit/step]
011	ch 1: Filter: Front: a1	*ENG	[–131071 to 131071 / **125869** / 1 bit/step]
012	ch 1: Filter: Front: a2	*ENG	[–131071 to 131071 / **–60488** / 1 bit/step]
013	ch 1: Filter: Front: b0	*ENG	[–131071 to 131071 / **39** / 1 bit/step]
014	ch 1: Filter: Front: b1	*ENG	[–131071 to 131071 / **77** / 1 bit/step]
015	ch 1: Filter: Front: b2	*ENG	[–131071 to 131071 / **39** / 1 bit/step]
016	ch 1: Filter: Rear: a1	*ENG	[–131071 to 131071 / **128596** / 1 bit/step]
017	ch 1: Filter: Rear: a2	*ENG	[–131071 to 131071 / **–63398** / 1 bit/step]
018	ch 1: Filter: Rear: b0	*ENG	[–131071 to 131071 / **84** / 1 bit/step]
019	ch 1: Filter: Rear: b1	*ENG	[–131071 to 131071 / **168** / 1 bit/step]
020	ch 1: Filter: Rear: b2	*ENG	[–131071 to 131071 / **84** / 1 bit/step]
021	ch 2: Filter: Front: a1	*ENG	[–131071 to 131071 / **125869** / 1 bit/step]
022	ch 2: Filter: Front: a2	*ENG	[–131071 to 131071 / **–60488** / 1 bit/step]
023	ch 2: Filter: Front: b0	*ENG	[–131071 to 131071 / **39** / 1 bit/step]
024	ch 2: Filter: Front: b1	*ENG	[–131071 to 131071 / **77** / 1 bit/step]
025	ch 2: Filter: Front: b2	*ENG	[–131071 to 131071 / **39** / 1 bit/step]
026	ch 2: Filter: Rear: a1	*ENG	[–131071 to 131071 / **128596** / 1 bit/step]
027	ch 2: Filter: Rear: a2	*ENG	[–131071 to 131071 / **–63398** / 1 bit/step]
028	ch 2: Filter: Rear: b0	*ENG	[–131071 to 131071 / **84** / 1 bit/step]
029	ch 2: Filter: Rear: b1	*ENG	[–131071 to 131071 / **168** / 1 bit/step]
030	ch 2: Filter: Rear: b2	*ENG	[–131071 to 131071 / **84** / 1 bit/step]
031	Q Format Selection	*ENG	[0 to 3 / **3** / 1/step]

2192	**[MUSIC Thresh Setting] DFU** Line Position Adjustment: Threshold Setting ch 0: ID sensor at rear, ch 1: ID sensor at center, ch 2: ID sensor at front		
001	ch 0: 1st	*ENG	[0.5 to 3 / **1.2** / 0.1 V/step]
002	ch 0: 2nd	*ENG	
003	ch 0: 3rd	*ENG	
004	ch 0: 4th	*ENG	
005	ch 1: 1st	*ENG	
006	ch 1: 2nd	*ENG	
007	ch 1: 3rd	*ENG	
008	ch 1: 4th	*ENG	
009	ch 2: 1st	*ENG	
010	ch 2: 2nd	*ENG	
011	ch 2: 3rd	*ENG	
012	ch 2: 4th	*ENG	

2193	**[MUSIC Condition] DFU** Line Position Adjustment: Condition Setting		
001	Auto Execution	*ENG	[0 or 1 / **1** / 1] 0: OFF, 1: ON
	Enables/disables the automatic line position adjustment.		
002	Page: Job End: BW+FC	*ENG	[0 to 999 / **500** / 1 page/step]
	Adjusts the threshold of the line position adjustment for BW and color printing mode after job end.		
003	Page: Job End: FC	*ENG	[0 to 999 / **200** / 1 page/step]
	Adjusts the threshold of the line position adjustment for color printing mode after job end.		

004	Page: Interrupt: BW+FC	*ENG	[0 to 999 / **200** / 1 page/step]
	Adjusts the threshold of the line position adjustment for BW and color printing mode during job.		
005	Page: Interrupt: FC	*ENG	[0 to 999 / **200** / 1 page/step]
	Adjusts the threshold of the line position adjustment for color printing mode during jobs.		
006	Page: Standby: BW	*ENG	[0 to 999 / **100** / 1 page/step]
	Adjusts the threshold of the line position adjustment for BW printing mode in stand-by mode. The line position adjustment is done when the number of outputs in BW printing mode reaches the value specified with this SP and the condition of SP2-193-008 or SP2-193-009 is satisfied.		
007	Page: Standby: FC	*ENG	[0 to 999 / **100** / 1 page/step]
	Adjusts the threshold of the line position adjustment for BW printing mode in stand-by mode. The line position adjustment is done when the number of outputs in color printing mode reaches the value specified with this SP and the condition of SP2-193-008 or SP2-193-009 is satisfied.		
008	Temp	*ENG	[0 to 100 / **5** / 1 deg/step]
	Adjust the temperature change threshold for the line position adjustment (Mode b: adjustment once). The timing for line position adjustment depends on the combinations of several conditions.		
009	Time	*ENG	[1 to 1440 / **300** / 1 minute/step]
	Adjust the time threshold for the line position adjustment (Mode b: adjustment once). The timing for line position adjustment depends on the combinations of several conditions.		
010	Magnification	*ENG	[0 to 10 / **1** / 0.1 %/step]
	Adjusts the magnification threshold for line position adjustment. If the length of the main scan is changed by this amount since the previous MUSIC, then MUSIC is done again.		
011	Temp 2	*ENG	[0 to 100 / **10** / 1 deg/step]

	Adjust the temperature change threshold for the line position adjustment (Mode a: adjustment twice). The timing for line position adjustment depends on the combinations of several conditions.		
012	Time 2	*ENG	[1 to 9999 / **600** / 1 minute/step]
	Adjust the time threshold for the line position adjustment (Mode a: adjustment twice). The timing for line position adjustment depends on the combinations of several conditions.		
013	Time 3	*ENG	[1 to 1440 / **300** / 1 minute/step]
014	Page: Full Color Job Before: BW+FC	*ENG	[0 to 999 / **200** / 1 page/step]
015	Page: Full Color Job Before: FC	*ENG	[0 to 999 / **200** / 1 page/step]
016	Page: Power ON:BW+FC	*ENG	[0 to 999 / **200** / 1 page/step]

2194	**[MUSIC Exe Result]** Line Position Adjustment: Execution Result		
001	Year	*ENG	[0 to 99 / **0** / 1 year/step]
002	Month	*ENG	[1 to 12 / **1** / 1 month/step]
003	Day	*ENG	[1 to 31 / **1** / 1 day/step]
004	Hour	*ENG	[0 to 23 / **0** / 1 hour/step]
005	Minute	*ENG	[0 to 59 / **0** / 1 minute/step]
006	Temperature	*ENG	[0 to 100 / **0** / 1 deg/step]
007	Execution Result	*ENG	[0 or 1 / **0** / 1 /step] 0: Completed successfully, 1: Failed
008	Number of Execution	*ENG	[0 to 999999 / **0** / 1 times/step]
009	Number of Failure	*ENG	[0 to 999999 / **0** / 1 times/step]
010	Error Result: C	*ENG	[0 to 9 / **0** / 1 /step] 0: Not done
011	Error Result: M	*ENG	

012	Error Result: Y	*ENG	1: Completed successfully 2: Cannot detect patterns 3: Fewer lines on the pattern than the target 4: Out of the adjustment range 5 to 9: Not used

2197	**[MUSIC Start Time]**		
	DFU		
001	Start Time	*ENG	[10 to 40 / **20** / 10 ms/step]
002	TM Sensor Position	*ENG	[100 to 150 / **114.6** / 0.1 mm/step]

2198	**[Music A/D Interval] DFU**		
001	ADC Trigger	*ENG	[7.5 to 20 / **10** / 0.1μ s/step]

2199	**[Music Error Time Setting] DFU**		
001	Error Detection Counter	*ENG	[0.1 to 9.9 / **3** / 0.1 sec /step]

2220	**[Skew Origin Set]**		
	Resets the value of the skew adjustment motor for each color. These SPs must be executed when a new laser optics housing unit is installed.		
001	C:Skew Motor	*ENG	-
002	M:Skew Motor	*ENG	
003	Y:Skew Motor	*ENG	

2229	**[Dev. DC Bias:Fixed] DFU** Development DC Bias Adjustment		
	Adjusts the development bias. Development bias is automatically adjusted during process control; therefore, adjusting these settings has no effect while Process Control (SP3-041-001 Default: ON) is activated. After deactivating Process Control with SP3-041-001, the values in these SP modes are used for printing.		
001	Bk	*ENG	[0 to 800 / **450** / 1 –V/step]
002	C	*ENG	
003	M	*ENG	
004	Y	*ENG	

2241	**[Temperature/Humidity:Display]**		
	Displays the environment temperature and humidity.		
001	Temperature	-	[–1280 to 1270 / **0** / 0.1 deg/step]
002	Relative Humidity	-	[0 to 1000 / **0** / 0.1 %RH/step]
003	Absolute Humidity	-	[0 to 100 / **0** / 0.01 g/m^3/step]

2302	**[Env. Correct:Transfer] DFU** Environmental Correction: Image Transfer Belt Unit		
001	Current Environmental Display	*ENG	-
002	Forced Setting	*ENG	[0 to 6 / **0** / 1 /step]
	Sets the environment condition manually. 0: Automatic environment control 1: LL (Low temperature/ Low humidity) 2: ML (Middle temperature/ Low humidity) 3: MM (Middle temperature/ Middle humidity) 4: MH (Middle temperature/ High humidity) 5: HH (High temperature/ High humidity) 6: SLL (Super low temperature/ low humidity)		
003	Absolute Humidity: Threshold 1	*ENG	[0 to 100 / **4** / 0.01 g/m^3/step]
	Adjusts the threshold value between LL and ML.		
004	Absolute Humidity: Threshold 2	*ENG	[0 to 100 / **8** / 0.01 g/m^3/step]
	Adjusts the threshold value between ML and MM.		
005	Absolute Humidity: Threshold 3	*ENG	[0 to 100 / **16** / 0.01 g/m^3/step]
	Adjusts the threshold value between MM and MH.		
006	Absolute Humidity: Threshold 4	*ENG	[0 to 100 / **24** / 0.01 g/m^3/step]
	Adjusts the threshold value between MH and HH.		
007	Temperature:Threshold	*ENG	[–5 to 30 / **5** / 1 deg/step]
	Adjusts the threshold temperature for SLL. If detected temperature is less than a value specified by this SP, SLL condition is determined regardless of humidity.		

2308	**[Paper Size Correction] DFU**		
	Adjusts the threshold value for the paper size correction.		
001	Threshold 1	*ENG	[0 to 250 / **194** / 1 mm/step] Threshold 1 ≤ paper: Paper is detected as "S1" size.
002	Threshold 2	*ENG	[0 to 250 / **165** / 1 mm/step] Threshold 2 ≤ paper ≤ Threshold 1: Paper is detected as "S2" size.
003	Threshold 3	*ENG	[0 to 250 / **139** / 1 mm/step] Threshold 3 ≤ paper ≤ Threshold 2: Paper is detected as "S3" size.

2311	**[Non Image Area: Bias] DFU**		
001	Image Transfer	*ENG	Adjusts the bias of the image transfer belt between images. This value is added to the value of the image transfer belt bias. [10 to 250 / **100** / 5 %/step]
002	Paper Transfer	*ENG	Adjusts the bias of the paper transfer roller between images. [0 to 230 / **0** / 1 -μA/step]

2316	**[Power ON:Bias] DFU**		
001	Image Transfer	*ENG	[0 to 80 / **5** / 1 μA /step]
	Adjusts the bias of the image transfer roller at power-on or a closed cover.		

2326	**[Paper Transfer Roller CL: Bias] DFU** Paper Transfer Roller Cleaning: Bias Adjustment		
001	Positive:before and after JOB	*ENG	[0 to 2100 / **1000** / 10 V /step]
	Adjusts the positive voltage of the paper transfer roller for cleaning the paper transfer roller.		
002	Negative:before and after JOB	*ENG	[10 to 995 / **100** / 10 %/step]
	Adjusts the negative current of the paper transfer roller for cleaning the paper transfer roller.		
003	Positive:after JAM	*ENG	[0 to 2100 / **2000** / 10 V/step]
	Adjusts the negative current limit of the paper transfer roller for cleaning the paper transfer roller.		
004	Negative:after JAM	*ENG	[10 to 995 / **100** / 10 %/step]

2351	**[Common: BW: Bias]** Image Transfer Belt: B/W: Bias Adjustment Standard: 260 mm/sec, Middle: 182 mm/sec, Low: 85 mm/sec		
001	Image Transfer:Standard Speed	*ENG	[0 to 80 / **26** / 1 μA]
	Adjusts the current for the image transfer belt in B/W mode for plain paper.		
002	Image Transfer:Middle Speed	*ENG	[0 to 80 / **17** / 1 μA]
	Adjusts the current for the image transfer belt in B/W mode for M-Thick paper.		
003	Image Transfer:Low Speed	*ENG	[0 to 80 / **7** / 1 μA]
	Adjusts the current for the image transfer belt in B/W mode for thick 1 paper.		

2357	**[Common: FC: Bias] DFU** Image Transfer Belt: Full Color: Bias Adjustment Standard: 260 mm/sec, Middle: 182 mm/sec, Low: 85 mm/sec		
001	Image Transfer: Standard Spd:Bk	*ENG	[0 to 80 / **26** / 1 μA]
	Adjusts the current for the image transfer belt for Black in full color mode for plain paper.		
002	Image Transfer:: Standard Spd:C	*ENG	[0 to 80 / **22** / 1 μA]
	Adjusts the current for the image transfer belt for Magenta in full color mode for plain paper.		
003	Image Transfer: Standard Spd:M	*ENG	[0 to 80 / **22** / 1 μA]
	Adjusts the current for the image transfer belt for Cyan in full color mode for plain paper.		
004	Image Transfer: Standard Spd:Y	*ENG	[0 to 80 / **22** / 1 μA]
	Adjusts the current for the image transfer belt for Yellow in full color mode for plain paper.		
005	Image Transfer: Middle Spd:Bk	*ENG	[0 to 80 / **17** / 1 μA]
	Adjusts the current for the image transfer belt for Black in full color mode for M-Thick paper.		
006	Image Transfer: Middle Spd:C	*ENG	[0 to 80 / **15** / 1 μA]
	Adjusts the current for the image transfer belt for Magenta in full color mode for M-Thick paper.		
007	Image Transfer: Middle Spd:M	*ENG	[0 to 80 / **15** / 1 μA]
	Adjusts the current for the image transfer belt for Cyan in full color mode for M-Thick paper.		
008	Image Transfer: Middle Spd:Y	*ENG	[0 to 80 / **15** / 1 μA]
	Adjusts the current for the image transfer belt for Yellow in full color mode for M-Thick paper.		

009	Image Transfer: Low Speed:Bk	*ENG	[0 to 80 / **7** / 1 μA]
	Adjusts the current for the image transfer belt for Black in full color mode for thick 1 paper.		
010	Image Transfer: Low Speed:C	*ENG	[0 to 80 / **6** / 1 μA]
	Adjusts the current for the image transfer belt for Magenta in full color mode for thick 1 paper.		
011	Image Transfer: Low Speed:M	*ENG	[0 to 80 / **6** / 1 μA]
	Adjusts the current for the image transfer belt for Cyan in full color mode for thick 1 paper.		
012	Image Transfer: Low Speed:Y	*ENG	[0 to 80 / **6** / 1 μA]
	Adjusts the current for the image transfer belt for Yellow in full color mode for thick 1 paper.		

2360	**[Common: BW Env. Correction Table] DFU**		
001	Image Transfer: Standard Spd	*ENG	[1 to 100 / **30** / 1 /step]
002	Image Transfer: Middle Spd	*ENG	[1 to 100 / **53** / 1 /step]
003	Image Transfer: Low Spd	*ENG	[1 to 100 / **56** / 1 /step]
[Common: FC Env. Correction Table] DFU			
004	Image Transfer: Standard Spd:BK	*ENG	[1 to 100 / **30** / 1 /step]
005	Image Transfer: Standard Spd: C	*ENG	[1 to 100 / **51** / 1 /step]
006	Image Transfer: Standard Spd:M	*ENG	[1 to 100 / **51** / 1 /step]
007	Image Transfer:: Standard Spd:Y	*ENG	[1 to 100 / **52** / 1 /step]
008	Image Transfer: Middle Spd:BK	*ENG	[1 to 100 / **53** / 1 /step]
009	Image Transfer: Middle Spd:C	*ENG	[1 to 100 / **54** / 1 /step]
010	Image Transfer: Middle Spd:M	*ENG	[1 to 100 / **54** / 1 /step]
011	Image Transfer: Middle Spd:Y	*ENG	[1 to 100 / **55** / 1 /step]

012	Image Transfer: Low Spd:Bk	*ENG	[1 to 100 / **57** / 1 /step]
013	Image Transfer: Low Spd:C	*ENG	[1 to 100 / **58** / 1 /step]
014	Image Transfer: Low Spd:M	*ENG	[1 to 100 / **58** / 1 /step]
015	Image Transfer: Low Spd:Y	*ENG	[1 to 100 / **58** / 1 /step]

2401	**[Plain1: Bias]**		
	Adjusts the DC voltage of the discharge plate for plain 1 paper. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Separation DC: Standard-Spd: 1st	*ENG	[0 to 6000 / **2000** / 10 -V/step]
002	Separation DC: Standard-Spd: 2nd	*ENG	
003	Separation DC: Low-Spd: 1st	*ENG	
004	Separation DC: Low-Spd: 2nd	*ENG	

2403	**[Plain1: Bias: BW]**		
	Adjusts the current for the paper transfer roller for plain 1 paper in black-and-white mode. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 230 / **21** / 1 –μA /step]
002	Paper Transfer: Standard: 2nd	*ENG	[0 to 230 / **23** / 1 –μA /step]
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **15** / 1 –μA /step]
004	Paper Transfer: Low: 2nd	*ENG	

2407	**[Plain1: Bias: FC]**		
	Adjusts the current for the paper transfer roller for plain 1 paper in full color mode. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 230 / **38** / 1 –μA /step]
002	Paper Transfer: Standard: 2nd	*ENG	[0 to 230 / **40** / 1 –μA /step]
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **21** / 1 –μA /step]
004	Paper Transfer: Low: 2nd	*ENG	[0 to 230 / **18** / 1 –μA /step]

2411	**[Plain1:SizeCorrect:BW] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2403 and SP2407 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st: S1	*ENG	[100 to 995 / **100** / 5%/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Standard: 2nd: S1	*ENG	
003	Paper Transfer: Low: 1st: S1	*ENG	
004	Paper Transfer: Low: 2nd: S1	*ENG	
005	Paper Transfer: Standard: 1st: S2	*ENG	[100 to 995 / **135** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Standard: 2nd: S2	*ENG	[100 to 995 / **200** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1st: S2	*ENG	[100 to 995 / **135** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low : 2nd:S2	*ENG	[100 to 995 / **200** / 5%/step] 194 mm > S2 size ≥ 165 mm

			(Paper width)
009	Paper Transfer: Standard: 1st: S3	*ENG	[100 to 995 / **135** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Standard: 2nd: S3	*ENG	[100 to 995 / **390** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1st: S3	*ENG	[100 to 995 / **135** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low 2nd:S3	*ENG	[100 to 995 / **390** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Standard: 1st: S4	*ENG	[100 to 995 / **220** / 5%/step] 139 mm > S4 size (Paper width)
014	Paper Transfer: Standard: 2nd: S4	*ENG	[100 to 995 / **330** / 5%/step] 139 mm > S4 size (Paper width)
015	PaperTransfer: Low:1st:S4	*ENG	[100 to 995 / **220** / 5%/step] 139 mm > S4 size (Paper width)
016	Paper Transfer: Low 2nd: S4	*ENG	[100 to 995 / **330** / 5%/step] 139 mm > S4 size (Paper width)

2412	**[Plain1:SizeCorrect:FC] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2403 and SP2407 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st: S1	*ENG	[100 to 995 / **100** / 5%/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Standard: 2nd: S1	*ENG	
003	Paper Transfer: Low: 1st: S1	*ENG	

004	Paper Transfer: Low: 2nd: S1	*ENG	
005	Paper Transfer: Standard: 1st: S2	*ENG	[100 to 995 / **135** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Standard: 2nd: S2	*ENG	[100 to 995 / **200** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1st: S2	*ENG	[100 to 995 / **135** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low : 2nd:S2	*ENG	[100 to 995 / **200** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Standard: 1st: S3	*ENG	[100 to 995 / **135** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Standard: 2nd: S3	*ENG	[100 to 995 / **325** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1st: S3	*ENG	[100 to 995 / **135** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low 2nd:S3	*ENG	[100 to 995 / **325** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Standard: 1st: S4	*ENG	[100 to 995 / **220** / 5%/step] 139 mm > S4 (Paper width)
014	Paper Transfer: Standard: 2nd: S4	*ENG	[100 to 995 / **330** / 5%/step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1st: S4	*ENG	[100 to 995 / **220** / 5%/step] 139 mm > S4 (Paper width)

016	Paper Transfer: Low: 2nd: S4	*ENG	[100 to 995 / **330** / 5%/step] 139 mm > S4 (Paper width)

2413	**[Pain1:Size-Env.Correct:BW] DFU**		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size. SP2403 and SP2407 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st: S1	*ENG	[1 to 100 / **19** / 1/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Standard: 2nd: S1	*ENG	[1 to 100 / **14** / 1/step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer: Low: 1st: S1	*ENG	[1 to 100 / **38** / 1/step] S1 size ≥ 194 mm (Paper width)
004	Paper Transfer: Low: 2nd: S1	*ENG	[1 to 100 / **11** / 1/step] S1 size ≥ 194 mm (Paper width)
005	Paper Transfer: Standard: 1st: S2	*ENG	[1 to 100 / **19** / 1/step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Standard: 2nd: S2	*ENG	[1 to 100 / **14** / 1/step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1st: S2	*ENG	[1 to 100 / **38** / 1/step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low : 2nd:S2	*ENG	[1 to 100 / **11** / 1/step] 194 mm > S2 size ≥ 165 mm (Paper width)

009	Paper Transfer: Standard: 1st: S3	*ENG	[1 to 100 / **19** / 1/step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Standard: 2nd: S3	*ENG	[1 to 100 / **6** / 1/step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1st: S3	*ENG	[1 to 100 / **38** / 1/step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low 2nd:S3	*ENG	[1 to 100 / **3** / 1/step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Standard: 1st: S4	*ENG	[1 to 100 / **19** / 1/step] 139 mm > S4 (Paper width)
014	Paper Transfer: Standard: 2nd: S4	*ENG	[1 to 100 / **14** / 1/step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1st: S4	*ENG	[1 to 100 / **38** / 1/step] 139 mm > S4 (Paper width)
016	Paper Transfer: Low: 2nd: S4	*ENG	[1 to 100 / **11** / 1/step] 139 mm > S4 (Paper width)

2414	**[Pain1:Size-Env.Correct:FC] DFU**		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size. SP2403 and SP2407 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st: S1	*ENG	[1 to 100 / **22** / 1/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Standard: 2nd: S1	*ENG	[1 to 100 / **17** / 1/step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer: Low: 1st: S1	*ENG	[1 to 100 / **35** / 1/step] S1 size ≥ 194 mm (Paper width)

004	Paper Transfer: Low: 2nd: S1	*ENG	[1 to 100 / **33** / 1/step] S1 size ≥ 194 mm (Paper width)
005	Paper Transfer: Standard: 1st: S2	*ENG	[1 to 100 / **11** / 1/step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Standard: 2nd: S2	*ENG	[1 to 100 / **16** / 1/step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1st: S2	*ENG	[1 to 100 / **35** / 1/step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low : 2nd:S2	*ENG	[1 to 100 / **33** / 1/step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Standard: 1st: S3	*ENG	[1 to 100 / **11** / 1/step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Standard: 2nd: S3	*ENG	[1 to 100 / **4** / 1/step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1st: S3	*ENG	[1 to 100 / **36** / 1/step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low 2nd:S3	*ENG	[1 to 100 / **77** / 1/step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Standard: 1st: S4	*ENG	[1 to 100 / **22** / 1/step] 139 mm > S4 (Paper width)
014	Paper Transfer: Standard: 2nd: S4	*ENG	[1 to 100 / **79** / 1/step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1st: S4	*ENG	[1 to 100 / **35** / 1/step]

			139 mm > S4 (Paper width)
016	Paper Transfer: Low: 2st: S4	*ENG	[1 to 100 / **78** / 1/step] 139 mm > S4 (Paper width)

2421	**[Plain1:L-Edge Correction] DFU**		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2403 and SP2407 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85 mm/sec Note ▪ The paper leading edge area can be adjusted with SP2422.		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 995 / **100** / 5%/step]
002	Paper Transfer: Standard: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Standard: 1st	*ENG	
006	Separation DC: Standard: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2422	**[Plain1: Switch Timing: L-Edge] DFU**		
	Adjusts the bias/ voltage switch timing of the paper transfer roller/ discharge plate at the paper leading edge between the erase margin area and the image area. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Standard: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	

005	Separation DC: Standard: 1st	*ENG	
006	Separation DC: Standard: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2423	**[Plain1: T-Edge Correction] DFU** Plain Paper: Trailing Edge Correction		
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode. SP2403 and SP2407 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85 mm/sec Note ▪ The paper trailing edge area can be adjusted with SP2424.		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 995 / **100** / 5 %/step]
002	Paper Transfer: Standard: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Standard: 1st	*ENG	
006	Separation DC: Standard: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2424	**[Plain1: Switch Timing: T-Edge] DFU**		
	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 50 / **0** / 2 mm/step]

002	Paper Transfer: Standard: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Standard: 1st	*ENG	
006	Separation DC: Standard: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2425	**[HH-Small: L-Edge Correction]**		
001	Paper Transfer: Standard & Low: 1	*ENG	[0 to 995 / **100** / 5 %/step]
002	Paper Transfer: Standard & Low: 2	*ENG	

2430	**[Plain1: Env. Correct Table] DFU**		
013	Separation DC: Standard: 1st	*ENG	[1 to 100 / **30** / 1 /step]
014	Separation DC: Standard: 2nd	*ENG	
015	Separation DC: Low: 1st	*ENG	
016	Separation DC: Low: 2nd	*ENG	
[Plain: Env. Correct Edge] DFU			
017	Separation DC: Standard: 1st	*ENG	[1 to 100 / **50** / 1 /step]
018	Separation DC: Standard: 2nd	*ENG	
019	Separation DC: Low: 1st	*ENG	
020	Separation DC: Low: 2nd	*ENG	

2439	**[Plain2: Bias]**		
	Adjusts the DC voltage of the discharge plate for plain2 paper. Standard: 260 mm/sec, Low: 85mm/sec		
001	Separation DC: Standard Spd: 1st	*ENG	[0 to 6000 / **2000** / 10 -V/step]
002	Separation DC: Standard Spd: 2nd	*ENG	
003	Separation DC: Low Spd: 1st	*ENG	
004	Separation DC: Low Spd: 2nd	*ENG	

2440	**[Plain2: Bias: BW]**		
	Adjusts the current for the paper transfer roller for plain2 paper in black-and-white mode. Standard: 260 mm/sec, Low: 85mm/sec		
001	Paper Transfer: Standard Spd: 1st	*ENG	[0 to 230 / **21** / 1 -μA /step]
002	Paper Transfer: Standard Spd: 2nd	*ENG	[0 to 230 / **23** / 1 -μA /step]
003	Paper Transfer: Low Spd: 1st	*ENG	[0 to 230 / **15** / 1 -μA /step]
004	Paper Transfer: Low Spd: 2nd	*ENG	

2441	**[Plain2: Bias: FC]**		
	Adjusts the current for the paper transfer roller for plain2 paper in full color mode. Standard: 260 mm/sec, Low: 85mm/sec		
001	Paper Transfer: Standard Spd: 1st	*ENG	[0 to 230 / **38** / 1 -μA /step]
002	Paper Transfer: Standard Spd: 2nd	*ENG	[0 to 230 / **40** / 1 -μA /step]
003	Paper Transfer: Low Spd: 1st	*ENG	[0 to 230 / **21** / 1 -μA /step]
004	Paper Transfer: Low Spd: 2nd	*ENG	[0 to 230 / **18** / 1 -μA /step]

2442	**[Plain2: Size Correct: BW] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2440 and SP2441 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85mm/sec		
001	Paper Transfer: Standard: 1Side: S1	*ENG	[100 to 995 / **100** / 5 %/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Standard: 2Side: S1	*ENG	
003	Paper Transfer: Low: 1: S1	*ENG	
004	Paper Transfer: Low: 2: S1	*ENG	
005	Paper Transfer: Standard: 1Side: S2	*ENG	[100 to 995 / **135** / 5 %/step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Standard: 2Side: S2	*ENG	[100 to 995 / **200** / 5 %/step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1: S2	*ENG	[100 to 995 / **135** / 5 %/step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low: 2: S2	*ENG	[100 to 995 / **200** / 5 %/step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Standard: 1Side: S3	*ENG	[100 to 995 / **135** / 5 %/step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Standard: 2Side: S3	*ENG	[100 to 995 / **390** / 5 %/step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1: S3	*ENG	[100 to 995 / **135** / 5 %/step] 165 mm > S3 size ≥ 139 mm

			(Paper width)
012	Paper Transfer: Low: 2: S3	*ENG	[100 to 995 / **390** / 5 %/step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Standard: 1Side: S4	*ENG	[100 to 995 / **220** / 5 %/step] 139 mm > S4 (Paper width)
014	Paper Transfer: Standard: 2Side: S4	*ENG	[100 to 995 / **330** / 5 %/step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1: S4	*ENG	[100 to 995 / **220** / 5 %/step] 139 mm > S4 (Paper width)
016	Paper Transfer: Low: 2: S4	*ENG	[100 to 995 / **330** / 5 %/step] 139 mm > S4 (Paper width)

2443	**[Plain2: Size Correct: FC] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2440 and SP2441 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85mm/sec		
001	Paper Transfer: Standard: 1Side: S1	*ENG	[100 to 995 / **100** / 5 %/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Standard: 2Side: S1	*ENG	
003	Paper Transfer: Low: 1: S1	*ENG	
004	Paper Transfer: Low: 2: S1	*ENG	
005	Paper Transfer: Standard: 1Side: S2	*ENG	[100 to 995 / **135** / 5 %/step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Standard: 2Side: S2	*ENG	[100 to 995 / **200** / 5 %/step] 194 mm > S2 size ≥ 165 mm (Paper width)

007	Paper Transfer: Low: 1: S2	*ENG	[100 to 995 / **135** / 5 %/step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low: 2: S2	*ENG	[100 to 995 / **200** / 5 %/step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Standard: 1Side: S3	*ENG	[100 to 995 / **135** / 5 %/step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Standard: 2Side: S3	*ENG	[100 to 995 / **325** / 5 %/step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1: S3	*ENG	[100 to 995 / **135** / 5 %/step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low: 2: S3	*ENG	[100 to 995 / **325** / 5 %/step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Standard: 1Side: S4	*ENG	[100 to 995 / **220** / 5 %/step] 139 mm > S4 (Paper width)
014	Paper Transfer: Standard: 2Side: S4	*ENG	[100 to 995 / **330** / 5 %/step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1: S4	*ENG	[100 to 995 / **220** / 5 %/step] 139 mm > S4 (Paper width)
016	Paper Transfer: Low: 2: S4	*ENG	[100 to 995 / **330** / 5 %/step] 139 mm > S4 (Paper width)

2444	**[Plain2: Size Env Correct: BW] DFU**		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size. SP2440 and SP2441 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85mm/sec		
001	Paper Transfer: Standard: 1Side: S1	*ENG	[1 to 100 / **19** / 1 /step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Standard: 2Side: S1	*ENG	[1 to 100 / **8** / 1 /step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer: Low: 1: S1	*ENG	
004	Paper Transfer: Low: 2: S1	*ENG	
005	Paper Transfer: Standard: 1Side: S2	*ENG	[1 to 100 / **19** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Standard: 2Side: S2	*ENG	[1 to 100 / **8** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1: S2	*ENG	
008	Paper Transfer: Low: 2: S2	*ENG	
009	Paper Transfer: Standard: 1Side: S3	*ENG	[1 to 100 / **19** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Standard: 2Side: S3	*ENG	[1 to 100 / **4** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1: S3	*ENG	[1 to 100 / **8** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low: 2: S3	*ENG	[1 to 100 / **4** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)

013	Paper Transfer: Standard: 1Side: S4	*ENG	[1 to 100 / **19** / 1 /step] 139 mm > S4 (Paper width)
014	Paper Transfer: Standard: 2Side: S4	*ENG	[1 to 100 / **8** / 1 /step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1: S4	*ENG	
016	Paper Transfer: Low: 2: S4	*ENG	

2445	**[Plain2: Size Env Correct: FC] DFU**		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size. SP2440 and SP2441 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85mm/sec		
001	Paper Transfer: Standard: 1Side: S1	*ENG	[1 to 100 / **32** / 1 /step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Standard: 2Side: S1	*ENG	[1 to 100 / **39** / 1 /step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer: Low: 1: S1	*ENG	[1 to 100 / **35** / 1 /step] S1 size ≥ 194 mm (Paper width)
004	Paper Transfer: Low: 2: S1	*ENG	[1 to 100 / **31** / 1 /step] S1 size ≥ 194 mm (Paper width)
005	Paper Transfer: Standard: 1Side: S2	*ENG	[1 to 100 / **17** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Standard: 2Side: S2	*ENG	[1 to 100 / **38** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1: S2	*ENG	[1 to 100 / **35** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low: 2: S2	*ENG	[1 to 100 / **29** / 1 /step]

			194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Standard: 1Side: S3	*ENG	[1 to 100 / **17** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Standard: 2Side: S3	*ENG	[1 to 100 / **16** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1: S3	*ENG	[1 to 100 / **35** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low: 2: S3	*ENG	[1 to 100 / **28** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Standard: 1Side: S4	*ENG	[1 to 100 / **32** / 1 /step] 139 mm > S4 (Paper width)
014	Paper Transfer: Standard: 2Side: S4	*ENG	[1 to 100 / **39** / 1 /step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1: S4	*ENG	[1 to 100 / **35** / 1 /step] 139 mm > S4 (Paper width)
016	Paper Transfer: Low: 2: S4	*ENG	[1 to 100 / **31** / 1 /step] 139 mm > S4 (Paper width)

2446	**[Plain2: LE Correct] DFU**		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2440 and SP2441 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85mm/sec Note ▪ The paper leading edge area can be adjusted with SP2447.		
001	Paper Transfer: Standard: 1	*ENG	[0 to 995 / **100** / 5 %/step]
002	Paper Transfer: Standard: 2	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Standard: 1st	*ENG	
006	Separation DC: Standard: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2447	**[Plain2: SW Timing: LE] DFU**		
	Adjusts the bias/ voltage switch timing of the paper transfer roller/ discharge plate at the paper leading edge between the erase margin area and the image area. Standard: 260 mm/sec, Low: 85mm/sec		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Standard: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Standard: 1st	*ENG	
006	Separation DC: Standard: 2nd	*ENG	

007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2448	**[Plain2: TE Correct] DFU** Plain2 Paper: Trailing Edge Correction		
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode. SP2440 and SP2441 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85mm/sec Note ▪ The paper trailing edge area can be adjusted with SP2449.		
001	Paper Transfer: Standard: 1	*ENG	[0 to 995 / **100** / 5 %/step]
002	Paper Transfer: Standard: 2	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Standard: 1st	*ENG	
006	Separation DC: Standard: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2449	**[Plain2: SW Timing: TE] DFU**		
	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area. Standard: 260 mm/sec, Low: 85mm/sec		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Standard: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Standard: 1st	*ENG	
006	Separation DC: Standard: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2450	**[Plain2: Env Correct Table]**		
013	Separation DC: Standard: 1st	*ENG	[1 to 100 / **30** / 1 /step]
014	Separation DC: Standard: 2nd	*ENG	
015	Separation DC: Low: 1st	*ENG	
016	Separation DC: Low: 2nd	*ENG	
[Plain2: Env Correct Edge]			
017	Separation DC: Standard: 1st	*ENG	[1 to 100 / **50** / 1 /step]
018	Separation DC: Standard: 2nd	*ENG	
019	Separation DC: Low: 1st	*ENG	
020	Separation DC: Low: 2nd	*ENG	

2451	**[Thin: Bias]**		
	Adjusts the DC voltage of the discharge plate for thin paper. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Separation DC: Standard Spd: 1st	*ENG	[0 to 6000 / **2000** / 10 -V /step
003	Separation DC: Low Spd: 1st	*ENG	

2453	**[Thin: Bias: BW]**		
	Adjusts the current for the paper transfer roller for thin paper in black-and-white mode. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 230 / **23** / 1 –μA /step]
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **12** / 1 –μA /step]

2457	**[Thin: Bias: FC]**		
	Adjusts the current for the paper transfer roller for thin paper in full color mode. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 230 / **29** / 1 –μA /step]
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **18** / 1 –μA /step]

2461	**[Thin: Paper Size Correction] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2453 and SP2457 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85mm/sec		
001	Paper Transfer: Standard: 1Side: S1	*ENG	[100 to 995 / **100** / 5% /step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer: Low: 1: S1	*ENG	[100 to 995 / **100** / 5% /step] S1 size ≥ 194 mm (Paper width)
005	Paper Transfer: Standard: 1Side: S2	*ENG	[100 to 995 / **135** / 5% /step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1: S2	*ENG	[100 to 995 / **135** / 5% /step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Standard: 1Side: S3	*ENG	[100 to 600 / **135** / 5% /step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1: S3	*ENG	[100 to 995 / **135** / 5% /step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Standard: 1Side: S4	*ENG	[100 to 995 / **220** / 5% /step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1: S4	*ENG	[100 to 995 / **220** / 5% /step] 139 mm > S4 (Paper width)

2462	**[Thin: Size Correct: FC] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2453 and SP2457 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85mm/sec		
001	Paper Transfer: Standard: 1Side: S1	*ENG	[100 to 995 / **100** / 5% /step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer: Low: 1: S1	*ENG	
005	Paper Transfer: Standard: 1Side: S2	*ENG	[100 to 995 / **135** / 5% /step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1: S2	*ENG	
009	Paper Transfer: Standard: 1Side: S3	*ENG	[100 to 995 / **135** / 5% /step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1: S3	*ENG	
013	Paper Transfer: Standard: 1Side: S4	*ENG	[100 to 995 / **220** / 5% /step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1: S4	*ENG	

2463	**[Thin: Size Env Correct: BW] DFU**		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size. SP2453 and SP2457 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85mm/sec		
001	Paper Transfer: Standard: 1Side: S1	*ENG	[1 to 100 / **16** / 1 /step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer: Low: 1: S1	*ENG	[1 to 100 / **21** / 1 /step] S1 size ≥ 194 mm (Paper width)
005	Paper Transfer: Standard: 1Side: S2	*ENG	[1 to 100 / **8** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)

007	Paper Transfer: Low: 1: S2	*ENG	[1 to 100 / **21** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Standard: 1Side: S3	*ENG	[1 to 100 / **8** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1: S3	*ENG	[1 to 100 / **21** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Standard: 1Side: S4	*ENG	[1 to 100 / **16** / 1 /step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1: S4	*ENG	[1 to 100 / **21** / 1 /step] 139 mm > S4 (Paper width)

2464	**[Thin: Size Env Correct: FC] DFU**		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size. SP2453 and SP2457 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85mm/sec		
001	Paper Transfer: Standard: 1Side: S1	*ENG	[1 to 100 / **9** / 1 /step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer: Low: 1: S1	*ENG	[1 to 100 / **26** / 1 /step] S1 size ≥ 194 mm (Paper width)
005	Paper Transfer: Standard: 1Side: S2	*ENG	[1 to 100 / **9** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1: S2	*ENG	[1 to 100 / **26** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Standard: 1Side: S3	*ENG	[1 to 100 / **9** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)

011	Paper Transfer: Low: 1: S3	*ENG	[1 to 100 / **26** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Standard: 1Side: S4	*ENG	[1 to 100 / **9** / 1 /step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1: S4	*ENG	[1 to 100 / **26** / 1 /step] 139 mm > S4 (Paper width)

2471	**[Thin: L-Edge Correction] DFU** Thin Paper: Leading Edge Correction		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2453 and SP2457 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85 mm/sec Note ▪ The paper leading edge area can be adjusted with SP2472.		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 995 / **100** / 5%/step]
003	Paper Transfer: Low: 1st	*ENG	
005	Separation DC: Standard: 1st	*ENG	[0 to 995 / **200** / 5%/step]
007	Separation DC: Low: 1st	*ENG	

2472	**[Thin: Switch Timing: L-Edge] DFU**		
	Adjusts the bias/ voltage switch timing of the paper transfer roller/ discharge plate at the paper leading edge between the erase margin area and the image area. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 50 / **0** / 2 mm/step]
003	Paper Transfer: Low: 1st	*ENG	
005	Separation DC: Standard: 1st	*ENG	[0 to 50 / **30** / 2 mm/step]
007	Separation DC: Low: 1st	*ENG	

2473	**[Thin: T-Edge Correct] DFU** Thin Paper: Trailing Edge Correction		
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode. SP2453 and SP2457 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85 mm/sec Note ▪ The paper trailing edge area can be adjusted with SP2474.		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 995 / **100** / 5%/step]
003	Paper Transfer: Low: 1st	*ENG	
005	Separation DC: Standard: 1st	*ENG	
007	Separation DC: Low: 1st	*ENG	

2474	**[Thin: Switch Timing: T-Edge] DFU**		
	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 50 / **0** / 2 mm/step]
003	Paper Transfer: Low: 1st	*ENG	
005	Separation DC: Standard: 1st	*ENG	
007	Separation DC: Low: 1st	*ENG	

2480	**[Thin: Environment Correction] DFU** Standard: 260 mm/sec, Low: 85 mm/sec		
013	Separation DC: Standard: 1st	*ENG	[1 to 100 / **30** / 1 /step]
015	Separation DC: Low: 1st	*ENG	
[Thin: Edge Env. Correct]			

017	Separation DC: Standard: 1st	*ENG	[1 to 100 / **30** / 1 /step]
019	Separation DC: Low: 1st	*ENG	

2501	**[Thick1: Bias]**		
	Adjusts the DC voltage of the discharge plate for thick 1 paper. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Separation DC: Middle Spd: 1st	*ENG	[0 to 6000 / **2000** / 10 -V / step]
002	Separation DC: Middle Spd: 2nd	*ENG	
003	Separation DC: Low Spd: 1st	*ENG	
004	Separation DC: Low Spd: 2nd	*ENG	

2502	**[Thick 1: Bias: BW]**		
	Adjusts the current for the paper transfer roller for thick 1 paper in black-and-white mode. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Middle Spd: 1st	*ENG	[0 to 230 / **15** / 1 –μA /step]
002	Paper Transfer: Middle Spd: 2nd	*ENG	Not used
003	Paper Transfer: Low Spd: 1st	*ENG	[0 to 230 / **9** / 1 –μA /step]
004	Paper Transfer: Low Spd: 2nd	*ENG	[0 to 230 / **12** / 1 –μA /step]

2507	**[Thick 1: Bias: FC]**		
	Adjusts the current for the paper transfer roller for thick 1 paper in full color mode. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Middle Spd: 1st	*ENG	[0 to 230 / **24** / 1 –μA /step]
002	Paper Transfer: Middle Spd: 2nd	*ENG	Not used
003	Paper Transfer: Low Spd: 1st	*ENG	[0 to 230 / **12** / 1 –μA /step]
004	Paper Transfer: Low Spd: 2nd	*ENG	[0 to 230 / **18** / 1 –μA /step]

2511	**[Thick1-T:Size Correct:BW] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2502 and SP2507 are multiplied by these SP values. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Middle: 1st: S1	*ENG	[100 to 995 / **100** / 5%/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Middle: 2nd: S1	*ENG	
003	Paper Transfer: Low: 1: S1	*ENG	[100 to 995 / **100** / 5%/step] S1 size ≥ 194 mm (Paper width)
004	Paper Transfer: Low: 2: S1	*ENG	
005	Paper Transfer: Middle: 1st: S2	*ENG	[100 to 995 / **150** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Middle: 2nd: S2	*ENG	[100 to 995 / **160** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1: S2	*ENG	[100 to 995 / **150** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low: 2: S2	*ENG	[100 to 995 / **160** / 5%/step] 194 mm > S2 size ≥ 165 mm

			(Paper width)
009	Paper Transfer: Middle: 1st: S3	*ENG	[100 to 995 / **150** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Middle: 2nd: S3	*ENG	[100 to 995 / **270** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1: S3	*ENG	[100 to 995 / **150** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low: 2: S3	*ENG	[100 to 995 / **270** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Middle: 1st: S4	*ENG	[100 to 995 / **200** / 5%/step] 139 mm > S4 (Paper width)
014	Paper Transfer: Middle: 2nd: S4	*ENG	[100 to 995 / **435** / 5%/step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1: S4	*ENG	[100 to 995 / **200** / 5%/step] 139 mm > S4 (Paper width)
016	Paper Transfer: Low: 2: S4	*ENG	[100 to 995 / **435** / 5%/step] 139 mm > S4 (Paper width)

2512	**[Thick1-T:Size Correct:FC] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2502 and SP2507 are multiplied by these SP values. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Middle: 1st: S1	*ENG	[100 to 995 / **100** / 5%/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Middle: 2nd: S1	*ENG	
003	Paper Transfer: Low: 1: S1	*ENG	

004	Paper Transfer: Low: 2: S1	*ENG	
005	Paper Transfer: Middle: 1st: S2	*ENG	[100 to 995 / **150** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Middle: 2nd: S2	*ENG	[100 to 995 / **160** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1: S2	*ENG	[100 to 995 / **150** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low: 2: S2	*ENG	[100 to 995 / **160** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Middle: 1st: S3	*ENG	[100 to 995 / **150** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Middle: 2nd: S3	*ENG	[100 to 995 / **270** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1: S3	*ENG	[100 to 995 / **150** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low: 2: S3	*ENG	[100 to 995 / **270** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Middle: 1st: S4	*ENG	[100 to 995 / **200** / 5%/step] 139 mm > S4 (Paper width)
014	Paper Transfer: Middle: 2nd: S4	*ENG	[100 to 995 / **435** / 5%/step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1: S4	*ENG	[100 to 995 / **200** / 5%/step] 139 mm > S4 (Paper width)

016	Paper Transfer: Low: 2: S4	*ENG	[100 to 995 / **435** / 5%/step] 139 mm > S4 (Paper width)

2513	**[Thick1:Size-Env.Correct:BW] DFU**		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size. SP2502 and SP2507 are multiplied by these SP values. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Middle: 1st: S1	*ENG	[1 to 100 / **20** / 1/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Middle: 2nd: S1	*ENG	[1 to 100 / **19** / 1/step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer: Low: 1: S1	*ENG	[1 to 100 / **18** / 1/step] S1 size ≥ 194 mm (Paper width)
004	Paper Transfer: Low: 2: S1	*ENG	[1 to 100 / **23** / 1/step] S1 size ≥ 194 mm (Paper width)
005	Paper Transfer: Middle: 1st: S2	*ENG	[1 to 100 / **20** / 1/step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Middle: 2nd: S2	*ENG	[1 to 100 / **19** / 1/step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1: S2	*ENG	[1 to 100 / **18** / 1/step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low: 2: S2	*ENG	[1 to 100 / **23** / 1/step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Middle: 1st: S3	*ENG	[1 to 100 / **20** / 1/step] 165 mm > S3 size ≥ 139 mm (Paper width)

010	Paper Transfer: Middle: 2nd: S3	*ENG	[1 to 100 / **19** / 1/step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1: S3	*ENG	[1 to 100 / **18** / 1/step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low: 2: S3	*ENG	[1 to 100 / **23** / 1/step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Middle: 1st: S4	*ENG	[1 to 100 / **20** / 1/step] 139 mm > S4 (Paper width)
014	Paper Transfer: Middle: 2nd: S4	*ENG	[1 to 100 / **19** / 1/step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1: S4	*ENG	[1 to 100 / **18** / 1/step] 139 mm > S4 (Paper width)
016	Paper Transfer: Low: 2: S4	*ENG	[1 to 100 / **23** / 1/step] 139 mm > S4 (Paper width)

2514	**[Thick1:Size-Env.Correct:FC] DFU**		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size. SP2502 and SP2507 are multiplied by these SP values. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Middle: 1st: S1	*ENG	[1 to 100 / **2** / 1/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Middle: 2nd: S1	*ENG	[1 to 100 / **31** / 1/step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer: Low: 1: S1	*ENG	[1 to 100 / **13** / 1/step] S1 size ≥ 194 mm (Paper width)
004	Paper Transfer: Low: 2: S1	*ENG	[1 to 100 / **25** / 1/step] S1 size ≥ 194 mm (Paper width)

005	Paper Transfer: Middle: 1st: S2	*ENG	[1 to 100 / **2** / 1/step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Middle: 2nd: S2	*ENG	[1 to 100 / **31** / 1/step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1: S2	*ENG	[1 to 100 / **13** / 1/step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low: 2: S2	*ENG	[1 to 100 / **25** / 1/step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Middle: 1st: S3	*ENG	[1 to 100 / **2** / 1/step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Middle: 2nd: S3	*ENG	[1 to 100 / **31** / 1/step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1: S3	*ENG	[1 to 100 / **13** / 1/step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low: 2: S3	*ENG	[1 to 100 / **25** / 1/step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Middle: 1st: S4	*ENG	[1 to 100 / **2** / 1/step] 139 mm > S4 (Paper width)

014	Paper Transfer: Middle: 2nd: S4	*ENG	[1 to 100 / **31** / 1/step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1: S4	*ENG	[1 to 100 / **13** / 1/step] 139 mm > S4 (Paper width)
016	Paper Transfer: Low: 2: S4	*ENG	[1 to 100 / **25** / 1/step] 139 mm > S4 (Paper width)

2521	**[Thick 1:L-Edge Correct] DFU** Thick 1 Paper: Leading Edge Correction		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2502 and SP2507 are multiplied by these SP values. Middle: 182 mm/sec, Low: 85 mm/sec Note ▪ The paper leading edge area can be adjusted with SP2522.		
001	Paper Transfer: Middle: 1st	*ENG	[0 to 995 / **100** / 5%/step]
002	Paper Transfer: Middle: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Middle: 1st	*ENG	
006	Separation DC: Middle: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2522	**[Thick 1: Switch Timing: L-Edge] DFU**		
	Adjusts the bias/ voltage switch timing of the paper transfer roller/ discharge plate at the paper leading edge between the erase margin area and the image area. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: 1st	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Middle: 1st	*ENG	
006	Separation DC: Middle: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2523	**[Thick 1: T-Edge Correct] DFU** Thick 1 Paper: Trailing Edge Correction		
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode. SP2502 and SP2507 are multiplied by these SP values. Middle: 182 mm/sec, Low: 85 mm/sec Note ▪ The paper trailing edge area can be adjusted with SP2524.		
001	Paper Transfer: 1st	*ENG	[0 to 995 / **100** / 5%/step]
002	Paper Transfer: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Middle: 1st	*ENG	

006	Separation DC: Middle: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2524	**[Thick 1: Switch Timing: T-Edge] DFU**		
	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Middle: 1st	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Middle: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Middle: 1st	*ENG	
006	Separation DC: Middle: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2530	**[Thick 1: Env. Correct Table] DFU**		
013	Separation DC: Middle: 1st	*ENG	[1 to 100 / **30** / 1 /step]
014	Separation DC: Middle: 2nd	*ENG	
015	Separation DC: Low: 1st	*ENG	
016	Separation DC: Low: 2nd	*ENG	
[Thick 1: Edge-Env. Correct] DFU			
017	Separation DC: Middle: 1st	*ENG	[1 to 100 / **30** / 1 /step]
018	Separation DC: Middle: 2nd	*ENG	

019	Separation DC: Low: 1st	*ENG	
020	Separation DC: Low: 2nd	*ENG	

2551	**[Thick2: Bias]**		
	Adjusts the DC voltage of the discharge plate for thick 2 paper.		
003	Separation DC: 1st	*ENG	[0 to 6000 / **2000** / 10 -V/step]
004	Separation DC: 2nd	*ENG	

2553	**[Thick 2: Bias: BW] DFU**		
	Adjusts the current for the paper transfer roller for thick2 paper in black-and-white mode.		
001	Paper Transfer: 1st	*ENG	[0 to 230 / **9** / 1 –μA /step]
002	Paper Transfer: 2nd	*ENG	[0 to 230 / **12** / 1 –μA /step]

2558	**[Thick 2: Bias: FC] DFU**		
	Adjusts the current for the paper transfer roller for thick2 paper in full color mode.		
001	Paper Transfer: 1st	*ENG	[0 to 230 / **12** / 1 –μA /step]
002	Paper Transfer: 2nd	*ENG	[0 to 230 / **20** / 1 –μA /step]

2561	**[Thick 2: Size Correction: BW]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2553 and SP2558 are multiplied by these SP values.		
003	Paper Transfer: 1: S1	*ENG	[100 to 995 / **100** / 5% /step] S1 size ≥ 194 mm (Paper width)
004	Paper Transfer: 2: S1	*ENG	[100 to 995 / **100** / 5% /step] S1 size ≥ 194 mm (Paper width)

007	Paper Transfer: 1: S2	*ENG	[100 to 995 / **150** / 5% /step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: 2: S2	*ENG	[100 to 995 / **160** / 5% /step] 194 mm > S2 size ≥ 165 mm (Paper width)
011	Paper Transfer: 1: S3	*ENG	[100 to 995 / **150** / 5% /step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: 2: S3	*ENG	[100 to 995 / **270** / 5% /step] 165 mm > S3 size ≥ 139 mm (Paper width)
015	Paper Transfer: 1: S4	*ENG	[100 to 995 / **200** / 5% /step] 139 mm > S4 (Paper width)
016	Paper Transfer: 2: S4	*ENG	[100 to 995 / **435** / 5% /step] 139 mm > S4 (Paper width)

2562	**[Thick 2: Size Correction: FC]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2553 and SP2558 are multiplied by these SP values.		
003	Paper Transfer: 1: S1	*ENG	[100 to 995 / **100** / 5% /step] S1 size ≥ 194 mm (Paper width)
004	Paper Transfer: 2: S1	*ENG	
007	Paper Transfer: 1: S2	*ENG	[100 to 995 / **150** / 5% /step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: 2: S2	*ENG	[100 to 995 / **160** / 5% /step] 194 mm > S2 size ≥ 165 mm (Paper width)
011	Paper Transfer: 1: S3	*ENG	[100 to 995 / **150** / 5% /step] 165 mm > S3 size ≥ 139 mm (Paper width)

012	Paper Transfer: 2: S3	*ENG	[100 to 995 / **270** / 5% /step] 165 mm > S3 size ≥ 139 mm (Paper width)
015	Paper Transfer: 1: S4	*ENG	[100 to 995 / **200** / 5% /step] 139 mm > S4 (Paper width)
016	Paper Transfer: 2: S4	*ENG	[100 to 995 / **435** / 5% /step] 139 mm > S4 (Paper width)

2563	**[Thick 2: Size Env. Correction: BW] DFU**		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size. SP2553 and SP2558 are multiplied by these SP values.		
003	Paper Transfer: 1: S1	*ENG	[1 to 100 / **18** / 1 /step] S1 size ≥ 194 mm (Paper width)
004	Paper Transfer: 2: S1	*ENG	[1 to 100 / **22** / 1 /step] S1 size ≥ 194 mm (Paper width)
007	Paper Transfer: 1: S2	*ENG	[1 to 100 / **18** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: 2: S2	*ENG	[1 to 100 / **22** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
011	Paper Transfer: 1: S3	*ENG	[1 to 100 / **18** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: 2: S3	*ENG	[1 to 100 / **22** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
015	Paper Transfer: 1: S4	*ENG	[1 to 100 / **18** / 1 /step] 139 mm > S4 (Paper width)
016	Paper Transfer: 2: S4	*ENG	[1 to 100 / **22** / 1 /step] 139 mm > S4 (Paper width)

2564	**[Thick 2: Size Env. Correction: FC] DFU**		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size. SP2553 and SP2558 are multiplied by these SP values.		
003	Paper Transfer: 1: S1	*ENG	[1 to 100 / **13** / 1 /step] S1 size ≥ 194 mm (Paper width)
004	Paper Transfer: 2: S1	*ENG	[1 to 100 / **38** / 1 /step] S1 size ≥ 194 mm (Paper width)
007	Paper Transfer: 1: S2	*ENG	[1 to 100 / **13** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: 2: S2	*ENG	[1 to 100 / **38** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
011	Paper Transfer: 1: S3	*ENG	[1 to 100 / **13** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: 2: S3	*ENG	[1 to 100 / **38** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
015	Paper Transfer: 1: S4	*ENG	[1 to 100 / **13** / 1 /step] 139 mm > S4 (Paper width)
016	Paper Transfer: 2: S4	*ENG	[1 to 100 / **38** / 1 /step] 139 mm > S4 (Paper width)

2571	**[Thick 2: L-Edge Correct] DFU** Thick 2 Paper: Leading Edge Correction
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2553 and SP2558 are multiplied by these SP values. Note ▪ The paper leading edge area can be adjusted with SP2572.

001	Paper Transfer: 1st	*ENG	[0 to 995 / **100** / 5%/step]
002	Paper Transfer: 2nd	*ENG	
003	Separation DC: 1st	*ENG	
004	Separation DC: 2nd	*ENG	

2572	**[Thick 2: Switch Timing: L-Edge] DFU**		
	Adjusts the bias/ voltage switch timing of the paper transfer roller/ discharge plate at the paper leading edge between the erase margin area and the image area.		
001	Paper Transfer: 1st	*ENG	[0 to 50 / **0** / 2mm/step]
002	Paper Transfer: 2nd	*ENG	
003	Separation DC: 1st	*ENG	
004	Separation DC: 2nd	*ENG	

2573	**[Thick 2: T-Edge Correction] DFU** Thick 2 Paper: Trailing Edge Correction		
	Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2553 and SP2558 are multiplied by these SP values. Note ▪ The paper trailing edge area can be adjusted with SP2574.		
001	Paper Transfer: 1st	*ENG	[0 to 995 / **100** / 5%/step]
002	Paper Transfer: 2nd	*ENG	
003	Separation DC: 1st	*ENG	
004	Separation DC: 2nd	*ENG	

2574	**[Thick2:Switch Timing T-Edge] DFU**		
	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area.		
001	Paper Transfer: 1st	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: 2nd	*ENG	
003	Separation DC: 1st	*ENG	
004	Separation DC: 2nd	*ENG	

2580	**[Thick 2 Env. Correct Table] DFU**		
015	Separation DC: 1st	*ENG	[1 to 100 / **30** / 1 /step]
016	Separation DC: 2nd	*ENG	
[Thick 2 Edge-Env. Correct] DFU			
019	Separation DC: 1st	*ENG	[1 to 100 / **30** / 1 /step]
020	Separation DC: 2nd	*ENG	

2601	**[OHP: Bias]**		
	Adjusts the DC voltage of the discharge plate for OHP.		
001	Separation DC	*ENG	[0 to 6000 / **2000** / 10 -V /step]

2603	**[OHP: Bias: BW]**		
	Adjusts the current for the paper transfer roller for OHP in black-and-white mode.		
001	Paper Transfer	*ENG	[0 to 230 / **8** / 1 –μA /step]

2608	**[OHP: Bias: FC]**		
	Adjusts the current for the paper transfer roller for OHP in full color mode.		
001	Paper Transfer	*ENG	[0 to 230 / **21** / 1 –μA /step]

2611	**[OHP: Size Correction: BW]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2603 and SP2608 are multiplied by these SP values.		
003	Paper Transfer: S1	*ENG	[100 to 995 / **100** / 5% /step] S1 size ≥ 194 mm (Paper width)
007	Paper Transfer: S2	*ENG	[100 to 995 / **150** / 5% /step] 194 mm > S2 size ≥ 165 mm (Paper width)
011	Paper Transfer: S3	*ENG	[100 to 995 / **150** / 5% /step] 165 mm > S3 size ≥ 139 mm (Paper width)
015	Paper Transfer: S4	*ENG	[100 to 995 / **200** / 5% /step] 139 mm > S4 (Paper width)

2612	**[OHP: Size Correct: FC]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2603 and SP2608 are multiplied by these SP values.		
003	Paper Transfer: S1	*ENG	[100 to 995 / **100** / 5% /step] S1 size ≥ 194 mm (Paper width)
007	Paper Transfer: S2	*ENG	[100 to 995 / **150** / 5% /step] 194 mm > S2 size ≥ 165 mm (Paper width)
011	Paper Transfer: S3	*ENG	[100 to 995 / **150** / 5% /step] 165 mm > S3 size ≥ 139 mm (Paper width)

015	Paper Transfer: S4	*ENG	[100 to 995 / **200** / 5% /step] 139 mm > S4 (Paper width)

2613	**[OHP: Size-Env. Correct: BW] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2603 and SP2608 are multiplied by these SP values.		
003	Paper Transfer: S1	*ENG	[1 to 100 / **15** / 1 /step] S1 size ≥ 194 mm (Paper width)
007	Paper Transfer: S2	*ENG	[100 to 995 / **15** / 5% /step] 194 mm > S2 size ≥ 165 mm (Paper width)
011	Paper Transfer: S3	*ENG	[100 to 995 / **15** / 5% /step] 165 mm > S3 size ≥ 139 mm (Paper width)
015	Paper Transfer: S4	*ENG	[100 to 995 / **15** / 5% /step] 139 mm > S4 (Paper width)

2614	**[OHP: Size-Env. Correct: FC] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2603 and SP2608 are multiplied by these SP values.		
003	Paper Transfer: S1	*ENG	[1 to 100 / **12** / 1 /step] S1 size ≥ 194 mm (Paper width)
007	Paper Transfer: S2	*ENG	[1 to 100 / **12** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
011	Paper Transfer: S3	*ENG	[1 to 100 / **12** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
015	Paper Transfer: S4	*ENG	[1 to 100 / **12** / 1 /step] 139 mm > S4 (Paper width)

2621	**[OHP: L-Edge Correct] DFU** OHP: Leading Edge Correction		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2603 and SP2608 are multiplied by these SP values. Note ▪ The paper leading edge area can be adjusted with SP2622.		
001	Paper Transfer	*ENG	[0 to 995 / **100** / 5%/step]
002	Separation DC	*ENG	

2622	**[OHP: Switch Timing: L-Edge] DFU**		
	Adjusts the bias/ voltage switch timing of the paper transfer roller/ discharge plate at the paper leading edge between the erase margin area and the image area.		
001	Paper Transfer	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Separation DC	*ENG	

2623	**[OHP: T-Edge Correct] DFU** OHP: Trailing Edge Correction		
	Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2603 and SP2608 are multiplied by these SP values. Note ▪ The paper trailing edge area can be adjusted with SP2624.		
001	Paper Transfer	*ENG	[0 to 995 / **100** / 5%/step]
002	Separation DC	*ENG	

2624	**[OHP: Switch Timing T-Edge] DFU**		
	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area.		
001	Paper Transfer	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Separation DC	*ENG	

2630	**[OHP: Env. Correct Table] DFU**		
015	Separation DC	*ENG	[1 to 100 / **30** / 1 /step]
019	Separation DC	*ENG	

2647	**[Thick3: Bias]**		
	Adjusts the DC voltage of the discharge plate for thick paper 3.		
001	Separation DC: 1st	*ENG	[0 to 6000 / **2000** / 10 -V /step]
002	Separation DC: 2nd	*ENG	

2648	**[Thick3: Bias: BW]**		
	Adjusts the current for the paper transfer roller for thick paper 3 in black-and-white mode.		
001	Paper Transfer: 1st	*ENG	[0 to 230 / **9** / 1 –μA /step]
002	Paper Transfer: 2nd	*ENG	[0 to 230 / **12** / 1 –μA /step]

2649	**[Thick3: Bias: FC]**		
	Adjusts the current for the paper transfer roller for thick paper 3 in full color mode.		
001	Paper Transfer: 1st	*ENG	[0 to 230 / **12** / 1 –μA /step]

002	Paper Transfer: 2nd	*ENG	[0 to 230 / **18** / 1 –μA /step]

2650	**[Thick3: Size Correct: BW]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2648 and SP2649 are multiplied by these SP values.		
001	Paper Transfer: 1: S1	*ENG	[100 to 995 / **100** / 5%/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: 2: S1	*ENG	
003	Paper Transfer: 1: S2	*ENG	[100 to 995 / **150** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
004	Paper Transfer: 2: S2	*ENG	[100 to 995 / **160** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
005	Paper Transfer: 1: S3	*ENG	[100 to 995 / **150** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
006	Paper Transfer: 2: S3	*ENG	[100 to 995 / **270** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
007	Paper Transfer: 1: S4	*ENG	[100 to 995 / **200** / 5%/step] 139 mm > S4 (Paper width)
008	Paper Transfer: 2: S4	*ENG	[100 to 995 / **435** / 5%/step] 139 mm > S4 (Paper width)

2651	**[Thick 3: Size Correct: FC]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2648 and SP2649 are multiplied by these SP values.		
001	Paper Transfer: 1: S1	*ENG	[100 to 995 / **100** / 5%/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: 2: S1	*ENG	

003	Paper Transfer: 1: S2	*ENG	[100 to 995 / **150** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
004	Paper Transfer: 2: S2	*ENG	[100 to 995 / **160** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
005	Paper Transfer: 1: S3	*ENG	[100 to 995 / **150** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
006	Paper Transfer: 2: S3	*ENG	[100 to 995 / **270** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
007	Paper Transfer: 1: S4	*ENG	[100 to 995 / **200** / 5%/step] 139 mm > S4 (Paper width)
008	Paper Transfer: 2: S4	*ENG	[100 to 995 / **435** / 5%/step] 139 mm > S4 (Paper width)

2652	**[Thick 3: Size Env. Correct: BW] DFU**		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size. SP2648 and SP2649 are multiplied by these SP values.		
001	Paper Transfer: 1: S1	*ENG	[1 to 100 / **24** / 1 /step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: 2: S1	*ENG	[1 to 100 / **22** / 1 /step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer: 1: S2	*ENG	[1 to 100 / **24** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
004	Paper Transfer: 2: S2	*ENG	[1 to 100 / **22** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)

005	Paper Transfer: 1: S3	*ENG	[1 to 100 / **24** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
006	Paper Transfer: 2: S3	*ENG	[1 to 100 / **22** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
007	Paper Transfer: 1: S4	*ENG	[1 to 100 / **24** / 1 /step] 139 mm > S4 (Paper width)
008	Paper Transfer: 2: S4	*ENG	[1 to 100 / **22** / 1 /step] 139 mm > S4 (Paper width)

2653	**[Thick 3: Size Env. Correct: FC] DFU**		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size. SP2648 and SP2649 are multiplied by these SP values.		
001	Paper Transfer: 1: S1	*ENG	[1 to 100 / **24** / 1 /step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: 2: S1	*ENG	[1 to 100 / **27** / 1 /step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer: 1: S2	*ENG	[1 to 100 / **24** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
004	Paper Transfer: 2: S2	*ENG	[1 to 100 / **27** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
005	Paper Transfer: 1: S3	*ENG	[1 to 100 / **24** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)

006	Paper Transfer: 2: S3	*ENG	[1 to 100 / **27** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
007	Paper Transfer: 1: S4	*ENG	[1 to 100 / **24** / 1 /step] 139 mm > S4 (Paper width)
008	Paper Transfer: 2: S4	*ENG	[1 to 100 / **27** / 1 /step] 139 mm > S4 (Paper width)

2654	**[Thick 3: L-Edge Correct] DFU** Thick 3 Paper: Leading Edge Correction		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2648 and SP2649 are multiplied by these SP values. Note ▪ The paper leading edge area can be adjusted with SP2655.		
001	Paper Transfer: 1st	*ENG	[0 to 995 / **100** / 5%/step]
002	Paper Transfer: 2nd	*ENG	
003	Separation DC: 1st	*ENG	
004	Separation DC: 2nd	*ENG	

2655	**[Thick 3: Switch Timing: L-Edge] DFU**		
	Adjusts the bias/ voltage switch timing of the paper transfer roller/ discharge plate at the paper leading edge between the erase margin area and the image area.		
001	Paper Transfer: 1st	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: 2nd	*ENG	
003	Separation DC: 1st	*ENG	
004	Separation DC: 2nd	*ENG	

2656	**[Thick 3: T-Edge Correct] DFU** Thick 3 Paper: Trailing Edge Correction		
	Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2648 and SP2649 are multiplied by these SP values. Note ▪ The paper trailing edge area can be adjusted with SP2657.		
001	Paper Transfer: 1st	*ENG	[0 to 995 / **100** / 5%/step]
002	Paper Transfer: 2nd	*ENG	
003	Separation DC: 1st	*ENG	
004	Separation DC: 2nd	*ENG	

2657	**[Thick 3: Switch Timing: T-Edge] DFU**		
	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area.		
001	Paper Transfer: 1st	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: 2nd	*ENG	
003	Separation DC: 1st	*ENG	
004	Separation DC: 2nd	*ENG	

2660	**[Thick 3: Env. Correct Table] DFU** Thick 3 Paper: MM Environment Coefficient Adjustment		
015	Separation DC: 1st	*ENG	[1 to 100 / **30** / 1 /step]
016	Separation DC: 2nd	*ENG	
[Thick 3: Edge-Env. Correct] DFU			
019	Separation DC: 1st	*ENG	[1 to 100 / **30** / 1 /step]
020	Separation DC: 2nd	*ENG	

2701	**[M-Thick: Bias]**		
	Adjusts the DC voltage of the discharge plate for middle thick paper.		
001	Separation DC: Standard Spd: 1st	*ENG	[0 to 6000 / **2000** / 10 -V /step]
002	Separation DC: Standard Spd: 2nd	*ENG	
003	Separation DC: Low Spd: 1st	*ENG	
004	Separation DC: Low Spd: 2nd	*ENG	

2703	**[M-Thick:Bias:BW]** Standard: 260mm/sec, Low: 85mm/sec		
	Adjusts the current for the paper transfer roller for middle thick in black-and-white mode.		
001	Paper Transfer:Standard:1st	*ENG	[0 to 230 / **20** / 1-µA /step]
002	Paper Transfer: Standard:2nd	*ENG	[0 to 230 / **18** / 1-µA /step]
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **10** / 1-µA /step]
004	Paper Transfer: Low: 2nd	*ENG	[0 to 230 / **12** / 1-µA /step]

2707	**[M-Thick:Bias:FC]** Standard: 260mm/sec, Low: 85mm/sec		
	Adjusts the current for the paper transfer roller for middle thick in full color mode.		
001	Paper Transfer: Standard:1st	*ENG	[0 to 230 / **35** / 1-µA /step]
002	Paper Transfer: Standard:2nd	*ENG	[0 to 230 / **25** / 1-µA /step]
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **12**/ 1-µA /step]
004	Paper Transfer: Low: 2nd	*ENG	[0 to 230 / **14** / 1-µA /step]

2713	**[M-Thick: Size Correct: BW] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2703 and SP2707 are multiplied by these SP values. Standard: 260mm/sec, Low: 85mm/sec		
001	Paper Transfer: Standard: 1Side: S1	*ENG	[100 to 995 / **100** / 5%/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Standard: 2Side: S1	*ENG	
003	Paper Transfer: Low: 1: S1	*ENG	
004	Paper Transfer: Low: 2: S1	*ENG	
005	Paper Transfer: Standard: 1Side: S2	*ENG	[100 to 995 / **135** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Standard: 2Side: S2	*ENG	[100 to 995 / **200** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1: S2	*ENG	[100 to 995 / **135** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low: 2: S2	*ENG	[100 to 995 / **200** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Standard: 1Side: S3	*ENG	[100 to 995 / **135** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)

010	Paper Transfer: Standard: 2Side: S3	*ENG	[100 to 995 / **390** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1: S3	*ENG	[100 to 995 / **135** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low: 2: S3	*ENG	[100 to 995 / **390** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Standard: 1Side: S4	*ENG	[100 to 995 / **220** / 5%/step] 139 mm > S4 (Paper width)
014	Paper Transfer: Standard: 2Side: S4	*ENG	[100 to 995 / **330** / 5%/step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1: S4	*ENG	[100 to 995 / **220** / 5%/step] 139 mm > S4 (Paper width)
016	Paper Transfer: Low: 2: S4	*ENG	[100 to 995 / **330** / 5%/step] 139 mm > S4 (Paper width)

2714	**[M-Thick: Size Correct: FC] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2703 and SP2707 are multiplied by these SP values. Standard: 260mm/sec, Low: 85mm/sec		
001	Paper Transfer: Standard: 1Side: S1	*ENG	[100 to 995 / **100** / 5%/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Standard: 2Side: S1	*ENG	
003	Paper Transfer: Low: 1: S1	*ENG	
004	Paper Transfer: Low: 2: S1	*ENG	
005	Paper Transfer: Standard: 1Side:	*ENG	[100 to 995 / **135** / 5%/step]

	S2		194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Standard: 2Side: S2	*ENG	[100 to 995 / **200** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1: S2	*ENG	[100 to 995 / **135** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low: 2: S2	*ENG	[100 to 995 / **200** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Standard: 1Side: S3	*ENG	[100 to 995 / **135** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Standard: 2Side: S3	*ENG	[100 to 995 / **325** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1: S3	*ENG	[100 to 995 / **135** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low: 2: S3	*ENG	[100 to 995 / **325** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Standard: 1Side: S4	*ENG	[100 to 995 / **220** / 5%/step] 139 mm > S4 (Paper width)
014	Paper Transfer: Standard: 2Side: S4	*ENG	[100 to 995 / **330** / 5%/step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1: S4	*ENG	[100 to 995 / **220** / 5%/step] 139 mm > S4 (Paper width)
016	Paper Transfer: Low: 2: S4	*ENG	[100 to 995 / **330** / 5%/step] 139 mm > S4 (Paper width)

2715	**[M-Thick: Size Env. Correct: BW] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2703 and SP2707 are multiplied by these SP values. Standard: 260mm/sec, Low: 85mm/sec		
001	Paper Transfer: Standard: 1Side: S1	*ENG	[1 to 100 / **14** / 1 /step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Standard: 2Side: S1	*ENG	[1 to 100 / **13** / 1 /step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer: Low: 1: S1	*ENG	[1 to 100 / **10** / 1 /step] S1 size ≥ 194 mm (Paper width)
004	Paper Transfer: Low: 2: S1	*ENG	[1 to 100 / **12** / 1 /step] S1 size ≥ 194 mm (Paper width)
005	Paper Transfer: Standard: 1Side: S2	*ENG	[1 to 100 / **14** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Standard: 2Side: S2	*ENG	[1 to 100 / **13** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1: S2	*ENG	[1 to 100 / **10** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low: 2: S2	*ENG	[1 to 100 / **12** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Standard: 1Side: S3	*ENG	[1 to 100 / **14** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)

010	Paper Transfer: Standard: 2Side: S3	*ENG	[1 to 100 / **5** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1: S3	*ENG	[1 to 100 / **10** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low: 2: S3	*ENG	[1 to 100 / **5** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Standard: 1Side: S4	*ENG	[1 to 100 / **14** / 1 /step] 139 mm > S4 (Paper width)
014	Paper Transfer: Standard: 2Side: S4	*ENG	[1 to 100 / **13** / 1 /step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1: S4	*ENG	[1 to 100 / **10** / 1 /step] 139 mm > S4 (Paper width)
016	Paper Transfer: Low: 2: S4	*ENG	[1 to 100 / **12** / 1 /step] 139 mm > S4 (Paper width)

2716	**[M-Thick: Size Env. Correct: FC] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2703 and SP2707 are multiplied by these SP values. Standard: 260mm/sec, Low: 85mm/sec		
001	Paper Transfer: Standard: 1Side: S1	*ENG	[1 to 100 / **7** / 1 /step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Standard: 2Side: S1	*ENG	[1 to 100 / **43** / 1 /step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer: Low: 1: S1	*ENG	[1 to 100 / **37** / 1 /step] S1 size ≥ 194 mm (Paper width)

004	Paper Transfer: Low: 2: S1	*ENG	[1 to 100 / **41** / 1 /step] S1 size ≥ 194 mm (Paper width)
005	Paper Transfer: Standard: 1Side: S2	*ENG	[1 to 100 / **1** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Standard: 2Side: S2	*ENG	[1 to 100 / **42** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1: S2	*ENG	[1 to 100 / **10** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low: 2: S2	*ENG	[1 to 100 / **12** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Standard: 1Side: S3	*ENG	[1 to 100 / **1** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Standard: 2Side: S3	*ENG	[1 to 100 / **23** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1: S3	*ENG	[1 to 100 / **37** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low: 2: S3	*ENG	[1 to 100 / **39** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Standard: 1Side: S4	*ENG	[1 to 100 / **7** / 1 /step] 139 mm > S4 (Paper width)
014	Paper Transfer: Standard: 2Side: S4	*ENG	[1 to 100 / **43** / 1 /step] 139 mm > S4 (Paper width)

015	Paper Transfer: Low: 1: S4	*ENG	[1 to 100 / **37** / 1 /step] 139 mm > S4 (Paper width)
016	Paper Transfer: Low: 2: S4	*ENG	[1 to 100 / **41** / 1 /step] 139 mm > S4 (Paper width)

2721	**[M-Thick:L-Edge Correct] DFU** Standard: 260 mm/sec, Low: 85 mm/sec		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2703 and SP2707 are multiplied by these SP values. Note ▪ The paper leading edge area can be adjusted with SP2722.		
001	Paper Transfer: Standard:1st	*ENG	[0 to 995 / **100** / 5% /step]
002	Paper Transfer: Standard:2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Standard: 1st	*ENG	
006	Separation DC: Standard: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2722	**[M-Thick:Switch Timing:L-Edge] DFU** Standard: 260 mm/sec, Low: 85 mm/sec		
	Adjusts the bias/ voltage switch timing of the paper transfer roller/ discharge plate at the paper leading edge between the erase margin area and the image area.		
001	Paper Transfer: Standard:1st	*ENG	[0 to 50 / **0** / 2mm /step]
002	Paper Transfer: Standard:2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	

004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Standard: 1st	*ENG	
006	Separation DC: Standard: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2723	**[M-Thick:T-Edge Correct] DFU** Standard: 260 mm/sec, Low: 85 mm/sec		
	Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2703 and SP2707 are multiplied by these SP values. Note ▪ The paper trailing edge area can be adjusted with SP2724		
001	Paper Transfer: Standard:1st	*ENG	[0 to 995 / **100** / 5% /step]
002	Paper Transfer: Standard:2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Standard: 1st	*ENG	
006	Separation DC: Standard: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2724	**[M-Thick:SwTiming:T-Edge] DFU** Standard: 260 mm/sec, Low: 85 mm/sec		
	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area.		
001	Paper Transfer: Standard:1st	*ENG	[0 to 50 / **0** / 2mm /step]

002	Paper Transfer: Standard:2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Standard: 1st	*ENG	
006	Separation DC: Standard: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2730	**[M-Thick:Env.Correct Table] DFU** Standard: 260 mm/sec, Low: 85 mm/sec		
013	Separation DC: Standard: 1st	*ENG	[1 to 100 / **30** / 1 /step]
014	Separation DC: Standard: 2nd	*ENG	
015	Separation DC: Low: 1st	*ENG	
016	Separation DC: Low: 2nd	*ENG	
[M-Thick:Edge-Env.Correct] DFU			
017	Separation DC: Standard: 1st	*ENG	[1 to 100 / **50** / 1 /step]
018	Separation DC: Standard: 2nd	*ENG	
019	Separation DC: Low: 1st	*ENG	
020	Separation DC: Low: 2nd	*ENG	

2751	**[SP 1: Bias]**		
	Adjusts the DC voltage of the discharge plate for special paper 1. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Separation DC: Standard Spd: 1st	*ENG	[0 to 6000 / **2000** / 10 -V /step]
002	Separation DC: Standard Spd: 2nd	*ENG	
003	Separation DC: Low Spd: 1st	*ENG	
004	Separation DC: Low Spd: 2nd	*ENG	

2753	**[SP 1: Bias: BW]**		
	Adjusts the current for the paper transfer roller for special paper 1 in black-and-white mode. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 230 / **20** / 1 –µA /step]
002	Paper Transfer: Standard: 2nd	*ENG	[0 to 230 / **18** / 1 –µA /step]
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **10** / 1 –µA /step]
004	Paper Transfer: Low: 2nd	*ENG	[0 to 230 / **12** / 1 –µA /step]

2757	**[SP 1: Bias: FC]**		
	Adjusts the current for the paper transfer roller for special paper 1 in full color mode. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 230 / **35** / 1 –µA /step]
002	Paper Transfer: Standard: 2nd	*ENG	[0 to 230 / **25** / 1 –µA /step]
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **12** / 1 –µA /step]
004	Paper Transfer: Low: 2nd	*ENG	[0 to 230 / **14** / 1 –µA /step]

2761	**[SP1:Size Correct:BW] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2753 and SP2757 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st: S1	*ENG	[100 to 995 / **100** / 5%/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Standard: 2nd: S1	*ENG	
003	Paper Transfer:Low:1st:S1	*ENG	
004	Paper Transfer:Low:2nd:S1	*ENG	
005	Paper Transfer: Standard: 1st: S2	*ENG	[100 to 995 / **135** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Standard: 2nd: S2	*ENG	[100 to 995 / **200** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer:Low:1st:S2	*ENG	[100 to 995 / **135** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer:Low:2nd:S2	*ENG	[100 to 995 / **200** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Standard: 1st: S3	*ENG	[100 to 995 / **135** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Standard: 2nd: S3	*ENG	[100 to 995 / **390** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	PaperTransfer:Low:1st:S3	*ENG	[100 to 995 / **135** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)

012	PaperTransfer:Low:2nd:S3	*ENG	[100 to 995 / **390** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Standard: 1st: S4	*ENG	[100 to 995 / **220** / 5%/step] 139 mm > S4 (Paper width)
014	Paper Transfer: Standard: 2nd: S4	*ENG	[100 to 995 / **330** / 5%/step] 139 mm > S4 (Paper width)
015	PaperTransfer:Low:1st:S4	*ENG	[100 to 995 / **220** / 5%/step] 139 mm > S4 (Paper width)
016	PaperTransfer:Low:2nd:S4	*ENG	[100 to 995 / **330** / 5%/step] 139 mm > S4 (Paper width)

2762	**[SP1:Size Correct:FC] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2753 and SP2757 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st: S1	*ENG	[100 to 995 / **100** / 5%/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Standard: 2nd: S1	*ENG	
003	Paper Transfer:Low:1st:S1	*ENG	
004	Paper Transfer:Low:2nd:S1	*ENG	
005	Paper Transfer: Standard: 1st: S2	*ENG	[100 to 995 / **135** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Standard: 2nd: S2	*ENG	[100 to 995 / **200** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer:Low:1st:S2	*ENG	[100 to 995 / **135** / 5%/step] 194 mm > S2 size ≥ 165 mm

			(Paper width)
008	Paper Transfer:Low:2nd:S2	*ENG	[100 to 995 / **200** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Standard: 1st: S3	*ENG	[100 to 995 / **135** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Standard: 2nd: S3	*ENG	[100 to 995 / **325** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	PaperTransfer:Low:1st:S3	*ENG	[100 to 995 / **135** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	PaperTransfer:Low:2nd:S3	*ENG	[100 to 995 / **325** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Standard: 1st: S4	*ENG	[100 to 995 / **220** / 5%/step] 139 mm > S4 (Paper width)
014	Paper Transfer: Standard: 2nd: S4	*ENG	[100 to 995 / **330** / 5%/step] 139 mm > S4 (Paper width)
015	PaperTransfer:Low:1st:S4	*ENG	[100 to 995 / **220** / 5%/step] 139 mm > S4 (Paper width)
016	PaperTransfer:Low:2nd:S4	*ENG	[100 to 995 / **330** / 5%/step] 139 mm > S4 (Paper width)

2763	**[SP1:Size Env.Correct:BW] DFU**		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size. SP2753 and SP2757 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st: S1	*ENG	[1 to 100 / **14** / 1 /step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Standard: 2nd: S1	*ENG	[1 to 100 / **13** / 1 /step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer:Low:1st:S1	*ENG	[1 to 100 / **10** / 1 /step] S1 size ≥ 194 mm (Paper width)
004	Paper Transfer:Low:2nd:S1	*ENG	[1 to 100 / **12** / 1 /step] S1 size ≥ 194 mm (Paper width)
005	Paper Transfer: Standard: 1st: S2	*ENG	[1 to 100 / **14** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Standard: 2nd: S2	*ENG	[1 to 100 / **13** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer:Low:1st:S2	*ENG	[1 to 100 / **10** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer:Low:2nd:S2	*ENG	[1 to 100 / **12** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Standard: 1st: S3	*ENG	[1 to 100 / **14** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Standard: 2nd: S3	*ENG	[1 to 100 / **5** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)

011	PaperTransfer:Low:1st:S3	*ENG	[1 to 100 / **10** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	PaperTransfer:Low:2nd:S3	*ENG	[1 to 100 / **5** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Standard: 1st: S4	*ENG	[1 to 100 / **14** / 1 /step] 139 mm > S4 (Paper width)
014	Paper Transfer: Standard: 2nd: S4	*ENG	[1 to 100 / **13** / 1 /step] 139 mm > S4 (Paper width)
015	PaperTransfer:Low:1st:S4	*ENG	[1 to 100 / **10** / 1 /step] 139 mm > S4 (Paper width)
016	PaperTransfer:Low:2nd:S4	*ENG	[1 to 100 / **12** / 1 /step] 139 mm > S4 (Paper width)

2764	**[SP1:Size Env.Correct:FC] DFU**		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size. SP2753 and SP2757 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st: S1	*ENG	[1 to 100 / **7** / 1 /step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Standard: 2nd: S1	*ENG	[1 to 100 / **43** / 1 /step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer:Low:1st:S1	*ENG	[1 to 100 / **37** / 1 /step] S1 size ≥ 194 mm (Paper width)
004	Paper Transfer:Low:2nd:S1	*ENG	[1 to 100 / **41** / 1 /step] S1 size ≥ 194 mm (Paper width)
005	Paper Transfer: Standard: 1st: S2	*ENG	[1 to 100 / **1** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)

006	Paper Transfer: Standard: 2nd: S2	*ENG	[1 to 100 / **42** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer:Low:1st:S2	*ENG	[1 to 100 / **37** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer:Low:2nd:S2	*ENG	[1 to 100 / **40** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Standard: 1st: S3	*ENG	[1 to 100 / **1** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Standard: 2nd: S3	*ENG	[1 to 100 / **23** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	PaperTransfer:Low:1st:S3	*ENG	[1 to 100 / **37** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	PaperTransfer:Low:2nd:S3	*ENG	[1 to 100 / **39** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Standard: 1st: S4	*ENG	[1 to 100 / **7** / 1 /step] 139 mm > S4 (Paper width)
014	Paper Transfer: Standard: 2nd: S4	*ENG	[1 to 100 / **43** / 1 /step] 139 mm > S4 (Paper width)
015	PaperTransfer:Low:1st:S4	*ENG	[1 to 100 / **37** / 1 /step] 139 mm > S4 (Paper width)
016	PaperTransfer:Low:2nd:S4	*ENG	[1 to 100 / **41** / 1 /step] 139 mm > S4 (Paper width)

2771	**[SP1: L-Edge Correct] DFU** Special 1 Paper: Leading Edge Correction		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2753 and SP2757 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85 mm/sec Note ▪ The paper leading edge area can be adjusted with SP2772.		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 995 / **100** / 5%/step]
002	Paper Transfer: Standard: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Standard: 1st	*ENG	
006	Separation DC: Standard: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2772	**[SP 1:Switch Timing:L-Edge] DFU**		
	Adjusts the bias/ voltage switch timing of the paper transfer roller/ discharge plate at the paper leading edge between the erase margin area and the image area. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Standard: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Standard: 1st	*ENG	
006	Separation DC: Standard: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2773	**[SP1: T-Edge Correct] DFU** Special 1 Paper: Trailing Edge Correction		
	Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2753 and SP2757 are multiplied by these SP values. Standard: 260 mm/sec, Low: 85 mm/sec Note ▪ The paper trailing edge area can be adjusted with SP2774.		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 995 / **100** / 5%/step]
002	Paper Transfer: Standard: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Standard: 1st	*ENG	
006	Separation DC: Standard: 2nd	*ENG	

007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2774	**[SP 1: Switch Timing:T-Edge] DFU** Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area. Standard: 260 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Standard: 1st	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Standard: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Standard: 1st	*ENG	
006	Separation DC: Standard: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2780	**[SP 1: Env. Correct Table] DFU** Standard: 260 mm/sec, Low: 85 mm/sec		
013	Separation DC: Standard: 1st	*ENG	[1 to 100 / **30** / 1 /step]
014	Separation DC: Standard: 2nd	*ENG	
015	Separation DC: Low: 1st	*ENG	
016	Separation DC: Low: 2nd	*ENG	
[SP 1: Edge-Env. Correct] DFU			
017	Separation DC: Standard: 1st	*ENG	[1 to 100 / **50** / 1 /step]
018	Separation DC: Standard: 2nd	*ENG	

019	Separation DC: Low: 1st	*ENG	
020	Separation DC: Low: 2nd	*ENG	

2801	**[Special 2: Bias]**		
	Adjusts the DC voltage of the discharge plate for special paper 2. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Separation DC: Middle Spd: 1st	*ENG	[0 to 6000 / **2000** / 10 -V /step]
002	Separation DC: Middle Spd: 2nd	*ENG	
003	Separation DC: Low Spd: 1st	*ENG	
004	Separation DC: Low Spd: 2nd	*ENG	

2803	**[SP 2: Bias: BW]**		
	Adjusts the current for the paper transfer roller for special paper 2 in black-and-white mode. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Middle: 1st	*ENG	[0 to 230 / **15** / 1 –μA /step]
002	Paper Transfer: Middle: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **9** / 1 –μA /step]
004	Paper Transfer: Low: 2nd	*ENG	[0 to 230 / **12** / 1 –μA /step]

2807	**[SP2: Bias: FC]**		
	Adjusts the current for the paper transfer roller for special paper 2 in full color mode. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Middle: 1st	*ENG	[0 to 230 / **24** / 1 –μA /step]
002	Paper Transfer: Middle: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **12** / 1 –μA /step]

004	Paper Transfer: Low: 2nd	*ENG	[0 to 230 / **18** / 1 –μA /step]

2811	**[SP 2: Size Correct: BW] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2803 and SP2807 are multiplied by these SP values. Middle: 182 mm/sec, Low: 85mm/sec		
001	Paper Transfer: Middle: 1Side: S1	*ENG	[100 to 995 / **100** / 5%/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Middle: 2Side: S1	*ENG	
003	Paper Transfer: Low: 1: S1	*ENG	
004	Paper Transfer: Low: 2: S1	*ENG	
005	Paper Transfer: Middle: 1Side: S2	*ENG	[100 to 995 / **150** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Middle: 2Side: S2	*ENG	[100 to 995 / **160** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1: S2	*ENG	[100 to 995 / **150** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low: 2: S2	*ENG	[100 to 995 / **160** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Middle: 1Side: S3	*ENG	[100 to 995 / **150** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Middle: 2Side: S3	*ENG	[100 to 995 / **270** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)

011	Paper Transfer: Low: 1: S3	*ENG	[100 to 995 / **150** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low: 2: S3	*ENG	[100 to 995 / **270** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Middle: 1Side: S4	*ENG	[100 to 995 / **200** / 5%/step] 139 mm > S4 (Paper width)
014	Paper Transfer: Middle: 2Side: S4	*ENG	[100 to 995 / **435** / 5%/step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1: S4	*ENG	[100 to 995 / **200** / 5%/step] 139 mm > S4 (Paper width)
016	Paper Transfer: Low: 2: S4	*ENG	[100 to 995 / **435** / 5%/step] 139 mm > S4 (Paper width)

2812	**[SP 2: Size Correct: FC] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2803 and SP2807 are multiplied by these SP values. Middle: 182 mm/sec, Low: 85mm/sec		
001	Paper Transfer: Middle: 1Side: S1	*ENG	[100 to 995 / **100** / 5%/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Middle: 2Side: S1	*ENG	
003	Paper Transfer: Low: 1: S1	*ENG	
004	Paper Transfer: Low: 2: S1	*ENG	
005	Paper Transfer: Middle: 1Side: S2	*ENG	[100 to 995 / **150** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Middle: 2Side: S2	*ENG	[100 to 995 / **160** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)

007	Paper Transfer: Low: 1: S2	*ENG	[100 to 995 / **150** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low: 2: S2	*ENG	[100 to 995 / **160** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Middle: 1Side: S3	*ENG	[100 to 995 / **150** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Middle: 2Side: S3	*ENG	[100 to 995 / **270** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1: S3	*ENG	[100 to 995 / **150** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low: 2: S3	*ENG	[100 to 995 / **270** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Middle: 1Side: S4	*ENG	[100 to 995 / **200** / 5%/step] 139 mm > S4 (Paper width)
014	Paper Transfer: Middle: 2Side: S4	*ENG	[100 to 995 / **435** / 5%/step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1: S4	*ENG	[100 to 995 / **200** / 5%/step] 139 mm > S4 (Paper width)
016	Paper Transfer: Low: 2: S4	*ENG	[100 to 995 / **435** / 5%/step] 139 mm > S4 (Paper width)

2813	**[SP 2: Size Env. Correct: BW] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2803 and SP2807 are multiplied by these SP values. Middle: 182 mm/sec, Low: 85mm/sec		
001	Paper Transfer: Middle: 1Side: S1	*ENG	[1 to 100 / **20** / 1 /step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Middle: 2Side: S1	*ENG	[1 to 100 / **19** / 1 /step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer: Low: 1: S1	*ENG	[1 to 100 / **18** / 1 /step] S1 size ≥ 194 mm (Paper width)
004	Paper Transfer: Low: 2: S1	*ENG	[1 to 100 / **23** / 1 /step] S1 size ≥ 194 mm (Paper width)
005	Paper Transfer: Middle: 1Side: S2	*ENG	[1 to 100 / **20** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Middle: 2Side: S2	*ENG	[1 to 100 / **19** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1: S2	*ENG	[1 to 100 / **18** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low: 2: S2	*ENG	[1 to 100 / **23** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Middle: 1Side: S3	*ENG	[1 to 100 / **20** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)

010	Paper Transfer: Middle: 2Side: S3	*ENG	[1 to 100 / **19** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1: S3	*ENG	[1 to 100 / **18** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low: 2: S3	*ENG	[1 to 100 / **23** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Middle: 1Side: S4	*ENG	[1 to 100 / **20** / 1 /step] 139 mm > S4 (Paper width)
014	Paper Transfer: Middle: 2Side: S4	*ENG	[1 to 100 / **19** / 1 /step] 139 mm > S4 (Paper width)
015	Paper Transfer: Low: 1: S4	*ENG	[1 to 100 / **18** / 1 /step] 139 mm > S4 (Paper width)
016	Paper Transfer: Low: 2: S4	*ENG	[1 to 100 / **23** / 1 /step] 139 mm > S4 (Paper width)

2814	**[SP 2: Size Env. Correct: FC] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2803 and SP2807 are multiplied by these SP values. Middle: 182 mm/sec, Low: 85mm/sec		
001	Paper Transfer: Middle: 1Side: S1	*ENG	[1 to 100 / **2** / 1 /step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Middle: 2Side: S1	*ENG	[1 to 100 / **31** / 1 /step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer: Low: 1: S1	*ENG	[1 to 100 / **13** / 1 /step] S1 size ≥ 194 mm (Paper width)

004	Paper Transfer: Low: 2: S1	*ENG	[1 to 100 / **25** / 1 /step] S1 size ≥ 194 mm (Paper width)
005	Paper Transfer: Middle: 1Side: S2	*ENG	[1 to 100 / **2** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
006	Paper Transfer: Middle: 2Side: S2	*ENG	[1 to 100 / **31** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
007	Paper Transfer: Low: 1: S2	*ENG	[1 to 100 / **13** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
008	Paper Transfer: Low: 2: S2	*ENG	[1 to 100 / **25** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
009	Paper Transfer: Middle: 1Side: S3	*ENG	[1 to 100 / **2** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
010	Paper Transfer: Middle: 2Side: S3	*ENG	[1 to 100 / **31** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
011	Paper Transfer: Low: 1: S3	*ENG	[1 to 100 / **13** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
012	Paper Transfer: Low: 2: S3	*ENG	[1 to 100 / **25** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
013	Paper Transfer: Middle: 1Side: S4	*ENG	[1 to 100 / **2** / 1 /step] 139 mm > S4 (Paper width)
014	Paper Transfer: Middle: 2Side: S4	*ENG	[1 to 100 / **31** / 1 /step] 139 mm > S4 (Paper width)

015	Paper Transfer: Low: 1: S4	*ENG	[1 to 100 / **13** / 1 /step] 139 mm > S4 (Paper width)
016	Paper Transfer: Low: 2: S4	*ENG	[1 to 100 / **25** / 1 /step] 139 mm > S4 (Paper width)

2821	**[SP 2: L-Edge Correct] DFU** Special 2 Paper: Leading Edge Correction		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2803 and SP2807 are multiplied by these SP values. Middle: 182 mm/sec, Low: 85 mm/sec Note ▪ The paper leading edge area can be adjusted with SP2822.		
001	Paper Transfer: Middle: 1st	*ENG	[0 to 995 / **100** / 5%/step]
002	Paper Transfer: Middle: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Middle: 1st	*ENG	
006	Separation DC: Middle: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2822	**[SP 2: Switch Timing: L-Edge] DFU**		
	Adjusts the bias/ voltage switch timing of the paper transfer roller/ discharge plate at the paper leading edge between the erase margin area and the image area. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Middle: 1st	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Middle: 2nd	*ENG	

003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Middle: 1st	*ENG	
006	Separation DC: Middle: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2823	**[SP 2: T-Edge Correct] DFU** Special 2 Paper: Trailing Edge Correction		
	Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2803 and SP2807 are multiplied by these SP values. Middle: 182 mm/sec, Low: 85 mm/sec Note ▪ The paper trailing edge area can be adjusted with SP2824.		
001	Paper Transfer: Middle: 1st	*ENG	[0 to 995 / **100** / 5%/step]
002	Paper Transfer: Middle: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Middle: 1st	*ENG	
006	Separation DC: Middle: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2824	**[SP 2: Switch Timing: T-Edge] DFU**		
	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Paper Transfer: Middle: 1st	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Middle: 2nd	*ENG	
003	Paper Transfer: Low: 1st	*ENG	
004	Paper Transfer: Low: 2nd	*ENG	
005	Separation DC: Middle: 1st	*ENG	
006	Separation DC: Middle: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2830	**[SP 2: Env. Correct Table] DFU** Middle: 182 mm/sec, Low: 85 mm/sec		
013	Separation DC: Middle: 1st	*ENG	[1 to 100 / **30** / 1 /step]
014	Separation DC: Middle: 2nd	*ENG	
015	Separation DC: Low: 1st	*ENG	
016	Separation DC: Low: 2nd	*ENG	
[SP 2: Edge-Env. Correct] DFU			
017	Separation DC: Middle: 1st	*ENG	[1 to 100 / **30** / 1 /step]
018	Separation DC: Middle: 2nd	*ENG	
019	Separation DC: Low: 1st	*ENG	
020	Separation DC: Low: 2nd	*ENG	

2851	**[SP 3: Bias]**		
	Adjusts the DC voltage of the discharge plate for special paper 3. Low: 85 mm/sec		
003	Separation DC: Low Spd: 1st	*ENG	[0 to 6000 / **2000** / 10 -V/step]
004	Separation DC: Low Spd: 2nd	*ENG	

2852	**[SP3: Bias: BW]**		
	Adjusts the current for the paper transfer roller for special paper 3 in black-and-white mode. Low: 85 mm/sec		
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **9** / 1 –μA /step]
004	Paper Transfer: Low: 2nd	*ENG	[0 to 230 / **12** / 1 –μA /step]

2857	**[SP 3: Bias: FC]**		
	Adjusts the current for the paper transfer roller for special paper 3 in full color mode. Low: 85 mm/sec		
003	Paper Transfer: Low: 1st	*ENG	[0 to 230 / **12** / 1 –μA /step]
004	Paper Transfer: Low: 2nd	*ENG	[0 to 230 / **18** / 1 –μA /step]

2861	**[SP 3: Size Correct: BW] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2852 and SP2857 are multiplied by these SP values. Low: 85mm/sec		
001	Paper Transfer: Low: 1: S1	*ENG	[100 to 995 / **100** / 5%/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Low: 2: S1	*ENG	
003	Paper Transfer: Low: 1: S2	*ENG	[100 to 995 / **150** / 5%/step] 194 mm > S2 size ≥ 165 mm

			(Paper width)
004	Paper Transfer: Low: 2: S2	*ENG	[100 to 995 / **160** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
005	Paper Transfer: Low: 1: S3	*ENG	[100 to 995 / **150** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
006	Paper Transfer: Low: 2: S3	*ENG	[100 to 995 / **270** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
007	Paper Transfer: Low: 1: S4	*ENG	[100 to 995 / **200** / 5%/step] 139 mm > S4 (Paper width)
008	Paper Transfer: Low: 2: S4	*ENG	[100 to 995 / **435** / 5%/step] 139 mm > S4 (Paper width)

2862	**[SP 3: Size Correct: FC] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2852 and SP2857 are multiplied by these SP values. Low: 85mm/sec		
001	Paper Transfer: Low: 1: S1	*ENG	[100 to 995 / **100** / 5%/step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Low: 2: S1	*ENG	
003	Paper Transfer: Low: 1: S2	*ENG	[100 to 995 / **150** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
004	Paper Transfer: Low: 2: S2	*ENG	[100 to 995 / **160** / 5%/step] 194 mm > S2 size ≥ 165 mm (Paper width)
005	Paper Transfer: Low: 1: S3	*ENG	[100 to 995 / **150** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)

006	Paper Transfer: Low: 2: S3	*ENG	[100 to 995 / **270** / 5%/step] 165 mm > S3 size ≥ 139 mm (Paper width)
007	Paper Transfer: Low: 1: S4	*ENG	[100 to 995 / **200** / 5%/step] 139 mm > S4 (Paper width)
008	Paper Transfer: Low: 2: S4	*ENG	[100 to 995 / **435** / 5%/step] 139 mm > S4 (Paper width)

2863	**[SP 3: Size Env. Correct: BW] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2852 and SP2857 are multiplied by these SP values. Low: 85mm/sec		
001	Paper Transfer: Low: 1: S1	*ENG	[1 to 100 / **24** / 1 /step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Low: 2: S1	*ENG	[1 to 100 / **22** / 1 /step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer: Low: 1: S2	*ENG	[1 to 100 / **24** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
004	Paper Transfer: Low: 2: S2	*ENG	[1 to 100 / **22** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
005	Paper Transfer: Low: 1: S3	*ENG	[1 to 100 / **24** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
006	Paper Transfer: Low: 2: S3	*ENG	[1 to 100 / **22** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)

007	Paper Transfer: Low: 1: S4	*ENG	[1 to 100 / **24** / 1 /step] 139 mm > S4 (Paper width)
008	Paper Transfer: Low: 2: S4	*ENG	[1 to 100 / **22** / 1 /step] 139 mm > S4 (Paper width)

2864	**[SP 3: Size Env. Correct: FC] DFU**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2852 and SP2857 are multiplied by these SP values. Low: 85mm/sec		
001	Paper Transfer: Low: 1: S1	*ENG	[1 to 100 / **24** / 1 /step] S1 size ≥ 194 mm (Paper width)
002	Paper Transfer: Low: 2: S1	*ENG	[1 to 100 / **27** / 1 /step] S1 size ≥ 194 mm (Paper width)
003	Paper Transfer: Low: 1: S2	*ENG	[1 to 100 / **24** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
004	Paper Transfer: Low: 2: S2	*ENG	[1 to 100 / **27** / 1 /step] 194 mm > S2 size ≥ 165 mm (Paper width)
005	Paper Transfer: Low: 1: S3	*ENG	[1 to 100 / **24** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
006	Paper Transfer: Low: 2: S3	*ENG	[1 to 100 / **27** / 1 /step] 165 mm > S3 size ≥ 139 mm (Paper width)
007	Paper Transfer: Low: 1: S4	*ENG	[1 to 100 / **24** / 1 /step] 139 mm > S4 (Paper width)
008	Paper Transfer: Low: 2: S4	*ENG	[1 to 100 / **27** / 1 /step] 139 mm > S4 (Paper width)

2871	**[SP 3: L-Edge Correct] DFU** Special 3 Paper: Leading Edge Correction		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2852 and SP2857 are multiplied by these SP values. Low: 85 mm/sec Note ▪ The paper leading edge area can be adjusted with SP2872.		
003	Paper Transfer: Low: 1st	*ENG	[0 to 995 / **100** / 5%/step]
004	Paper Transfer: Low: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2872	**[SP 3: Switch Timing: L-Edge] DFU**		
	Adjusts the bias/ voltage switch timing of the paper transfer roller/ discharge plate at the paper leading edge between the erase margin area and the image area. Low: 85 mm/sec		
003	Paper Transfer: Low: 1st	*ENG	[0 to 50 / **0** / 2 mm/step]
004	Paper Transfer: Low: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2873	**[SP 3: T-Edge Correct] DFU** Special 3 Paper: Trailing Edge Correction
	Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2852 and SP2857 are multiplied by these SP values. Low: 85 mm/sec Note ▪ The paper trailing edge area can be adjusted with SP2874.

003	Paper Transfer: Low: 1st	*ENG	[0 to 995 / **100** / 5%/step]
004	Paper Transfer: Low: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2874	**[SP 3: Switch Timing: T-Edge] DFU** Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area. Low: 85 mm/sec		
003	Paper Transfer: Low: 1st	*ENG	[0 to 50 / **0** / 2 mm/step]
004	Paper Transfer: Low: 2nd	*ENG	
007	Separation DC: Low: 1st	*ENG	
008	Separation DC: Low: 2nd	*ENG	

2880	**[SP 3: Env. Correct Table] DFU** Low: 85 mm/sec		
015	Separation DC: Low: 1st	*ENG	[1 to 100 / **30** / 1 /step]
016	Separation DC: Low: 2nd	*ENG	
[SP 3: Edge-Env. Correct] DFU			
019	Separation DC: Low: 1st	*ENG	[1 to 100 / **30** / 1 /step]
020	Separation DC: Low: 2nd	*ENG	

2902	**[Reverse Time] DFU**		
	Adjusts the time for how long the drum motor reverses after job end.		
002	Drum All: FC	*ENG	[0 to 800 / **70** / 10 msec/step]
003	Dev All: FC	*ENG	
004	Dev All: Bk	*ENG	

2904	**[Reverse Time] DFU**		
	Adjusts the time for how long the image transfer belt motor reverses after job end.		
003	Transfer All	*ENG	[0 to 800 / **70** / 10 msec/step]

2906	**[Drum Phase Angle] DFU**		
001	Y	*ENG	[0 to 359 / **0** / 1 deg/step]
002	M	*ENG	
003	C	*ENG	
004	K	*ENG	
005	Color	*ENG	
[Drum Amplitude Setting] DFU			
006	Y	*ENG	[0 to 100 / **0** / 0.1 μm/step]
007	M	*ENG	
008	C	*ENG	
009	K	*ENG	
010	Color	*ENG	
[Drum Stop Position] DFU			
011	K	*ENG	[0 to 359 / **0** / 1 deg/step]

012	Color	*ENG	

2907	**[FC: ACS] DFU**		
	Adjusts the threshold for moving away the image transfer belt from the color PCUs. This SP moves the image transfer belt away from the color PCUs when the number of B/W image printouts reaches the number of sheets specified with this SP after consecutive full color image printouts in the full color mode. If this SP is set to "0", the image transfer belt does not move away.		
001	Bk Image Count	*ENG	[0 to 10 / **0** / 1 sheet/step]

2911	**[Offset Phase] DFU**		
001	Y Drum	*ENG	[0 to 359 / **0** / 1 deg/step]
002	M Drum	*ENG	
003	C Drum	*ENG	
004	K Drum	*ENG	

2912	**[Offset Gain] DFU**		
001	Y Drum	*ENG	[0 to 100 / **0** / 0.1 μm/step]
002	M Drum	*ENG	
003	C Drum	*ENG	
004	K Drum	*ENG	

2915	[GainAdj:BkOpcDevM] DFU		
002	260 mm/sec	*ENG	[0 or 1 / **0** / 1/step] 0: High speed 1: Low speed
003	182 mm/sec	*ENG	[0 or 1 / **1** / 1/step] 0: High speed 1: Low speed
005	85 mm/sec	*ENG	

2916	[GainAdj:ColorOpcM] DFU		
002	260 mm/sec	*ENG	[0 or 1 / **0** / 1/step] 0: High speed 1: Low speed
003	182 mm/sec	*ENG	
005	85 mm/sec	*ENG	[0 or 1 / **1** / 1/step] 0: High speed 1: Low speed

2920	[Transfer Motor Ctrl]		
001	TransferMotorCtrl	*ENG	**DFU** [0 or 1 / **1** / 1 /step] 0: FG Control 1: ENC Control
002	SC443 Count	*ENG	[0 to 3 / **0** / 1 /step]
	Displays the detection times of SC443.		
003	BkTransferMotorCtrl 85	*ENG	**DFU** [0 or 1 / **0** / 1 /step] 0: FG Control 1: ENC Control

2930	**[Transfer:Bias Limit] DFU** Paper Transfer Roller Feed-back: Threshold Adjustment		
	Adjusts the threshold between high resistance (division 1) and low resistance (division 2) at the paper transfer roller.		
001	Bias	*ENG	[0 to 7000 / **6000** / 10 –V/step]

2941	**[Dev. Bias Down Mode] DFU**		
001	T5: Bk: Standard	*ENG	[-140 to 140 / **0** / 10 msec /step]
002	T7: FC: Standard	*ENG	
003	T5: Bk: Low	*ENG	[-210 to 210 / **0** / 10 msec /step]
004	T7: FC: Low	*ENG	
005	T5: Bk: Middle	*ENG	
006	T7: FC: Middle	*ENG	

2960	**[Process Interval] DFU**		
001	Additional Time	*ENG	[0 to 10 / **1** / 1 sec/step]

2971	**[BW Non-Image:Bias ON] DFU**		
001	T1 BW:Bias On:Standard	*ENG	[-360 to 80 / **0** / 10 msec/step]
002	T1 BW:Bias On:Middle	*ENG	[-780 to 210 / **0** / 10 msec/step]
003	T1 BW:Bias On:Low	*ENG	

3.3 SYSTEM SP3-XXX

3.3.1 SP3-XXX (PROCESS)

3011	[Process Cont. Manual Execution]		
001	Normal	-	[0 or 1 / **0** / 1 /step] Executes the normal process control manually (potential control). Check the result with SP3-325-001 after executing this SP.
002	Density Adjstment	-	[0 or 1 / **0** / 1 /step] Executes the toner density adjustment manually. Check the result with SP3-325-001 after executing this SP.
003	Pre-ACC	-	[0 or 1 / **0** / 1 /step] Executes the process control that is normally done before ACC. The type of process control is selected with SP3-041-004.
004	Full MUSIC	-	[0 or 1 / **0** / 1 /step] Executes the process control that is normally done at the same time as MUSIC. This SP does the MUSIC (line position adjustment) twice.
005	Normal MUSIC	-	[0 or 1 / **0** / 1 /step] Executes the process control that is normally done at the same time as MUSIC. This SP does the MUSIC (line position adjustment) once.

3012	**[Process Cont. Check Result]** Process Control Self-check Result		
	Displays the result of the latest process control self-check. All colors are displayed. The results are displayed in the order "Y C M K" e.g., 11 (Y) 99 (C) 11 (M) 11 (K): The self-check for Cyan failed but the others were successful. See the "Error Condition Tables" in the Process Control Error section for details.		
001	History: Latest	*ENG	[1111 to 99999999 / **-** / 1/step]
002	Result: Latest 1	*ENG	
003	Result: Latest 2	*ENG	
004	Result: Latest 3	*ENG	
005	Result: Latest 4	*ENG	
006	Result: Latest 5	*ENG	
007	Result: Latest 6	*ENG	
008	Result: Latest 7	*ENG	
009	Result: Latest 8	*ENG	
010	Result: Latest 9	*ENG	

3013	**[T Sensor Initial Set: Exe]** Developer Initialization Setting		
001	Execution: ALL	-	Executes the developer initialization for each color.
002	Execution: COL	-	
003	Execution: Bk	-	
004	Execution: C	-	
005	Execution: M	-	
006	Execution: Y	-	

3014	**[T Sensor Initial Set: Result]** Developer Initialization Result: Display		
	Display: latest YMCK	*ENG	[0 to 9999 / **-** / 1 /step] 1: Success 2 to 9: Failure
001	Displays the developer initialization result. See the "Error Condition Tables" in the Process Control Error section for details on the meaning of each code. All colors are displayed. Values are displayed in the order Y M C Bk. e.g., 1 (Y) 1 (M) 2 (C) 1 (Bk): Initialization of Cyan failed but the others succeeded.		

3015	**[Forced Toner Supply: Execute]** Forced Toner Supply ([Color])		
001	Execution: ALL	-	[0 or 1 / **0** / 1 /step] Executes the manual toner supply to the development unit.
002	Execution: COL	-	
003	Execution: Bk	-	
004	Execution: C	-	
005	Execution: M	-	
006	Execution: Y	-	

3016	**[Forced Toner Supply: Setting]** Forced Toner Supply Setting ([Color])		
	Specifies the manual toner supply time for each color.		
001	Supply Time: Bk	*ENG	[0 to 30 / **4** / 1 sec/step]
002	Supply Time: C	*ENG	
003	Supply Time: M	*ENG	
004	Supply Time: Y	*ENG	

3020	**[Vt Limit Error]**		
	DFU		
001	Delta Vt Threshold	*ENG	[0 to 5 / **5** / 0.01 V/step]
002	Upper Threshold	*ENG	[0 to 5 / **4.7** / 0.01 V/step]
003	Thresh Num of Upper Counter	*ENG	[0 to 99 / **20** / 1 time/step]
004	Lower Threshold	*ENG	[0 to 5 / **0.5** / 0.01 V/step]
005	Thresh Num of Lower Counter	*ENG	[0 to 99 / **10** / 1 times/step]
006	Upper Counter: Bk	*ENG	Displays the total times of the Vt upper or lower limit error. [0 to 99 / **0** / 1 times/step]
007	Upper Counter: C	*ENG	
008	Upper Counter: M	*ENG	
009	Upper Counter: Y	*ENG	
010	Lower Counter: Bk	*ENG	
011	Lower Counter: C	*ENG	
012	Lower Counter: M	*ENG	
013	Lower Counter: Y	*ENG	

3021	**[TD Sensor Initial Set]** Developer Initialization Setting		
	Specifies the developer agitation time for each color at the developer initialization.		
001	Agitation Time: Bk	*ENG	[0 to 200 / **65** / 1 sec/step]
002	Agitation Time: C	*ENG	
003	Agitation Time: M	*ENG	
004	Agitation Time: Y	*ENG	

005-008	Sets the execution flag of the developer initialization for each color.		
005	Execution Flag: Bk	*ENG	[0 or 1 / **0** / 1/step] 0: Flag OFF, 1: Flag ON This flag is cleared after executing TD sensor initialization.
006	Execution Flag: C	*ENG	
007	Execution Flag: M	*ENG	
008	Execution Flag: Y	*ENG	
009	Prohibition	*ENG	Enables or disables developer initialization. **DFU** [0 or 1 / **0** / 1/step] 0: Enable, 1: Disable

3022	**[Toner Replenishment Mode]**		
	Sets the toner supply flag of each color.		
005	Execution Flag: Bk	*ENG	[0 or 1 / **0** / 1/step] 0: Flag OFF, 1: Flag ON This flag is cleared after executing TD sensor initialization.
006	Execution Flag: C	*ENG	
007	Execution Flag: M	*ENG	
008	Execution Flag: Y	*ENG	

3041	**[Process Control Type]**		
001	Voltage Control	*ENG	[0 or 1 / **1** / 1/step] Alphanumeric 0: FIXED (Use the fixed values for the charge DC bias and development DC bias set with SP2-005 and SP2-229.) 1: CONTROL
	Enables or disables the process control.		

002	LD Power Control	*ENG	[0 or 1 / **1** / 1/step] Alphanumeric 0: FIXED (at the value in SP2221-xxx) 1: CONTROL (adjusted by process control)
	Selects the LD power control mode.		
003	Auto Control Prohibition Set	*ENG	[0 or 1 / **0** / 1/step] 0: Permit, 1: Forbid
	-		
004	Pre-ACC Process Control	*ENG	[0 to 2 / **2** / 1/step] 0: Not Execute 1: Process Control 2: TC Control
	Selects the process control mode that is done before ACC.		
005	Pattern Caluculation Method	*ENG	[0 to 2 / **0** / 1/step] 0: FIXED 1: INITIALIZED 2: CALCULATED

3043	**[TD Adjustment Mode]**		
001	Repeat Number: Power ON	*ENG	[0 to 9 / **4** / 1 time/step]
	Specifies the maximum number of repeats of the toner density adjustment at power on. 0: Disabled, 1 to 3: Repeat number, 4: Repeat three times (No consumption mode) 5: Repeat three times (Toner is supplied only when the toner density is too low, and toner is consumed only when the toner density is too dark.) 6 to 9: Disabled		
002	Repeat Number: Initialization	*ENG	[0 to 9 / **3** / 1 time/step]
	Specifies the maximum number of repeats of the toner density adjustment at the developer initialization. 0: Disabled, 1 to 3: Repeat number,		

	4: Repeat three times (No consumption mode) 5: Repeat three times (Toner is supplied only when the toner density is too low, and toner is consumed only when the toner density is too dark.) 6 to 9: Disabled		
003	Repeat Number: Non-use	*ENG	[0 to 9 / **0** / 1 time/step]
	Specifies the maximum number of repeats of the toner density adjustment in stand by mode. 0: Disabled, 1 to 3: Repeat number, 4: Repeat three times (No consumption mode) 5: Repeat three times (Toner is supplied only when the toner density is too low, and toner is consumed only when the toner density is too dark.) 6 to 9: Disabled		
004	Repeat Number: ACC	*ENG	[0 to 9 / **3** / 1 time/step]
	Specifies the maximum number of repeats of the toner density adjustment at ACC. 0: Disabled, 1 to 3: Repeat number, 4: Repeat three times (No consumption mode) 5: Repeat three times (Toner is supplied only when the toner density is too low, and toner is consumed only when the toner density is too dark.) 6 to 9: Disabled		
005	Repeat Number: Recovery	*ENG	[0 to 9 / **3** / 1 time/step]
	Not used		
006	Repeat Number: Job End	*ENG	[0 to 9 / **4** / 1 time/step]
	Specifies the maximum number of repeats of the toner density adjustment at job end. 0: Disabled, 1 to 3: Repeat number, 4: Repeat three times (No consumption mode) 5: Repeat three times (Toner is supplied only when the toner density is too low, and toner is consumed only when the toner density is too dark.) 6 to 9: Disabled		
007	Repeat Number:Interrupt	*ENG	[0 to 9 / **0** / 1 time/step]
	-		

008	Toner Supply Coefficient	*ENG	[0 to 25.5 / **10** / 0.1 sec/step]
	Adjusts the time for the toner supply mode when a toner density is detected to be low.		
009	Consumption pattern: Bk	*ENG	[0 to 255 / **5** / 1 time/step]
	Specifies the belt mark generating time for checking the black toner density when toner density is detected to be low at the toner density adjustment.		
010	Consumption pattern: C	*ENG	[0 to 255 / **5** / 1 time/step]
	Specifies the belt mark generating time for checking the magenta toner density when toner density is detected to be low at the toner density adjustment.		
011	Consumption pattern: M	*ENG	[0 to 255 / **5** / 1 time/step]
	Specifies the belt mark generating time for checking the cyan toner density when toner density is detected to be low at the toner density adjustment.		
012	Consumption pattern: Y	*ENG	[0 to 255 / **5** / 1 time/step]
	Specifies the belt mark generating time for checking the yellow toner density when toner density is detected to be low at the toner density adjustment.		
013	T1 Bias: Bk	*ENG	[0 to 80 / **26** / 1 μA/step]
	Adjusts the image transfer belt bias for Black.		
014	T1 Bias: C	*ENG	[0 to 80 / **22** / 1 μA/step]
	Adjusts the image transfer belt bias for Magenta.		
015	T1 Bias: M	*ENG	[0 to 80 / **22** / 1 μA/step]
	Adjusts the image transfer belt bias for Cyan.		
016	T1 Bias: Y	*ENG	[0 to 80 / **22** / 1 μA/step]
	Adjusts the image transfer belt bias for Yellow.		
017	Developer Mixing Time	*ENG	[0 to 255 / **10** / 1 sec/step]
	Specifies the developer mixing time at the toner density adjustment.		
018	Consumption Pattern: LD: DUTY:	*ENG	[0 to 15 / **15** / 1 /step]

	Bk		
	Adjusts the LD duty for the toner consumption mode at the toner density adjustment. In toner consumption mode, toner is discharged when the detected development gamma values (SP3611-001) exceed the target values (SP3611-005) by more than the specified thresholds (SP3239-009).		
019	Consumption Pattern: LD: DUTY: C	*ENG	[0 to 15 / **15** / 1 /step]
	Adjusts the LD duty for the toner consumption mode at the toner density adjustment. In toner consumption mode, toner is discharged when the detected development gamma values (SP3611-002) exceed the target values (SP3611-006) by more than the specified thresholds (SP3239-009).		
020	Consumption Pattern: LD: DUTY: M	*ENG	[0 to 15 / **15** / 1 /step]
	Adjusts the LD duty for the toner consumption mode at the toner density adjustment. In toner consumption mode, toner is discharged when the detected development gamma values (SP3611-003) exceed the target values (SP3611-007) by more than the specified thresholds (SP3239-009).		
021	Consumption Pattern: LD: DUTY: Y	*ENG	[0 to 15 / **15** / 1 /step]
	Adjusts the LD duty for the toner consumption mode at the toner density adjustment. In toner consumption mode, toner is discharged when the detected development gamma values (SP3611-004) exceed the target values (SP3611-008) by more than the specified thresholds (SP3239-009).		

3044	**[Toner Supply Type]** Toner Supply Type ([Color])		
	Selects the toner supply method type.		
001	Bk	*ENG	[0 to 4 / **4** / 1/step] Alphanumeric 0: FIXED (with the supply rates stored with SP 3401) 1: PID (Vtref_Fixed) 2: PID (Vtref_Control) 3: MBD (Vtref_Fixed) 4: MBD (Vtref_Control)
002	C	*ENG	
003	M	*ENG	
004	Y	*ENG	

3045	**[Toner End Detection: Set] DFU**		
	Enables/disables the toner alert display on the LCD.		
001	ON/OFF	*ENG	[0 or 1 / **0** / 1/step] 0: Detect, 1: Not Detect

3101	**[Toner End/Near End] DFU**		
	Displays the amount of each color toner.		
001	Toner Replenishment: Bk	*ENG	[1 to 600 / **240** / 1 g/step]
002	Toner Replenishment: C	*ENG	
003	Toner Replenishment: M	*ENG	
004	Toner Replenishment: Y	*ENG	
005-008	Displays the consumed amount of each color toner.		
005	Toner Consumption: Bk	*ENG	[0 to 3000 / **0** / 0.001 g/step]
006	Toner Consumption: C	*ENG	
007	Toner Consumption: M	*ENG	
008	Toner Consumption: Y	*ENG	
009-012	Displays the remaining amount of each color toner. These are calculated by		

	the operating times of the toner supply pumps.		
009	Toner Remaining: Bk	*ENG	[–50000 to 600 / **0** / 0.001 g/step]
010	Toner Remaining: C	*ENG	
011	Toner Remaining: M	*ENG	
012	Toner Remaining: Y	*ENG	
013-016	Adjusts the threshold of toner near end for each color. The toner near end message appears on the LCD when the remaining toner amount reaches this threshold. When one of these SPs (SP3-101-009 to 012 or -032 to -035) reaches this threshold, toner near end is detected.		
013	Near End Thresh: Bk	*ENG	[0 to 600 / **45** / 1 g/step]
014	Near End Thresh: C	*ENG	
015	Near End Thresh: M	*ENG	
016	Near End Thresh: Y	*ENG	
021	Delta Vt Threshold	*ENG	[0 to 5 / **5** / 0.01 V/step]
	This SP is the threshold for toner end. Delta Vt: Vt-Vtref When both this SP and SP3-101-026 occur at same time, toner end is determined.		
022-025	Displays the total delta Vt (Vt-Vtref) value for each color.These are calculated by pixel counting.		
022	Delta Vt Sum: Bk	*ENG	[0 to 655 / **0** / 0.01 V/step]
023	Delta Vt Sum: C	*ENG	
024	Delta Vt Sum: M	*ENG	
025	Delta Vt Sum: Y	*ENG	
026	Delta Vt Sum Threshold	*ENG	[0 to 255 / **10** / 1 V/step]
028-031	Displays the consumed toner amount calculated with the pixel count for each color.		
028	Pixel: Consumption: Bk	*ENG	[0 to 3000 / **0** / 0.001 g/step]

029	Pixel: Consumption: C	*ENG	
030	Pixel: Consumption: M	*ENG	
031	Pixel: Consumption: Y	*ENG	
032-035	Displays the remaining toner amount for each color, using pixel count.		
032	Pixel: Remaining : Bk	*ENG	[-50000 to 600 / **0** / 0.001 g/step]
033	Pixel: Remaining : C	*ENG	
034	Pixel: Remaining : M	*ENG	
035	Pixel: Remaining : Y	*ENG	
040-043	Displays the pixel M/A for each color.		
040	Pixel M/A: Bk	*ENG	[0 to 1 / **0.679** / 0.001 mg/cm^2/step]
041	Pixel M/A: C	*ENG	[0 to 1 / **0.638** / 0.001 mg/cm^2/step]
042	Pixel M/A: M	*ENG	
043	Pixel M/A: Y	*ENG	
044	Delta Vt Thresh Before Near End	*ENG	Adjusts the delta Vt (Vt – Vtref) of toner end before toner near end is detected. [0 to 5 / **5** / 0.01 V/step]
045	Delta Vt Sum Thresh Before Near End	*ENG	Adjusts the total delta Vt (Vt – Vtref) of toner end before toner near end is detected. [0 to 255 / **10** / 1 V/step]
050-053	Adjusts the threshold of the remaining toner for the toner near-end detection.		
050	Toner Consumption:Bk	*ENG	[0 to 3000 / **999** / 0.001 g/step]
051	Toner Consumption:C	*ENG	
052	Toner Consumption:M	*ENG	
053	Toner Consumption:Y	*ENG	

3102	**[Toner End Recovery] DFU**		
	Adjusts the number of times toner supply is attempted for each color when the TD sensor continues to detect toner end during toner recovery.		
001	Repeat: Bk	*ENG	[1 to 20 / **5** / 1 time/step]
002	Repeat: C	*ENG	
003	Repeat: M	*ENG	
004	Repeat: Y	*ENG	

3131	**[TE Count: Display]**		
	Display the number of toner end detections for each color.		
001	Bk	*ENG	[0 to 99 / **0** / 1 time/step]
002	C	*ENG	
003	M	*ENG	
004	Y	*ENG	

3201	**[TD Sensor: Vt Display]**		
	Display the current voltage of the TD sensor for each color.		
001	Current: Bk	*ENG	[0 to 5.5 / **0.01** / 0.01 V/step]
002	Current: C	*ENG	
003	Current: M	*ENG	
004	Current: Y	*ENG	

3211	**[Vt Shift: Display/Set]**		
	Adjusts the Vt correction value for each line speed. Middle: 182 mm/sec, Low: 85 mm/sec		
001	Med Speed Shift:Bk	*ENG	[0 to 5 / **0.46** / 0.01 V/step]
002	Med Speed Shift:C	*ENG	[0 to 5 / **0.48** / 0.01 V/step]
003	Med Speed Shift:M	*ENG	[0 to 5 / **0.5** / 0.01 V/step]
004	Med Speed Shift:Y	*ENG	[0 to 5 / **0.45** / 0.01 V/step]
005	Low Speed Shift:Bk	*ENG	[0 to 5 / **0.84** / 0.01 V/step]
006	Low Speed Shift:C	*ENG	[0 to 5 / **0.87** / 0.01 V/step]
007	Low Speed Shift:M	*ENG	
008	Low Speed Shift:Y	*ENG	[0 to 5 / **0.84** / 0.01 V/step]
009	Mid TC Shift: Bk	*ENG	[-0.5 to 0.5 / **0** / 0.01 V/step]
010	Mid TC Shift: C	*ENG	
011	Mid TC Shift: M	*ENG	
012	Mid TC Shift: Y	*ENG	
013	Low TC Shift: Bk	*ENG	
014	Low TC Shift: C	*ENG	
015	Low TC Shift: M	*ENG	
016	Low TC Shift: Y	*ENG	

3221	**[Vtcnt: Display/Set]**		
	Displays or adjusts the current Vtcnt value for each color.		
001	260 Current: Bk	*ENG	[2.45 to 5 / **3.7** / 0.01 V/step]
002	260 Current: C	*ENG	

003	260 Current: M	*ENG	
004	260 Current: Y	*ENG	
005-008	Displays or adjusts the Vtcnt value for each color at developer initialization. **DFU**		
005	260 Initial: Bk	*ENG	[2.45 to 5 / **3.7** / 0.01 V/step]
006	260 Initial: C	*ENG	
007	260 Initial: M	*ENG	
008	260 Initial: Y	*ENG	
009	182 Current: Bk	*ENG	[2.45 to 5 / **3.5** / 0.01 V/step]
010	182 Current: C	*ENG	
011	182 Current: M	*ENG	
012	182 Current: Y	*ENG	
013	182 Initial: Bk	*ENG	
014	182 Initial: C	*ENG	
015	182 Initial: M	*ENG	
016	182 Initial: Y	*ENG	

3222	**[Vtref: Display/Set]**		
	Displays or adjusts the current Vtref value for each color.		
001	Current: Bk	*ENG	[0 to 5.5 / **3** / 0.01 V/step]
002	Current: C	*ENG	
003	Current: M	*ENG	
004	Current: Y	*ENG	
005	Initial: Bk	*ENG	[0 to 5.5 / **3** / 0.01 V/step]
006	Initial: C	*ENG	

007	Initial: M	*ENG	
008	Initial: Y	*ENG	
009	Pixel Correction: Bk	*ENG	[-5 to 5.5 / **0** / 0.01 V/step]
010	Pixel Correction: C	*ENG	
011	Pixel Correction: M	*ENG	[-5 to 5 / **0** / 0.01 V/step]
012	Pixel Correction: Y	*ENG	

3223	**[Vtref Upper Lower: Limit Set] DFU**		
	Adjusts the lower or upper limit value of Vtref for each color.		
001	Lower: Bk	*ENG	[0 to 5 / **2** / 0.01 V/step]
002	Lower: C	*ENG	
003	Lower: M	*ENG	
004	Lower: Y	*ENG	
005	Upper: Bk	*ENG	[0 to 5 / **4** / 0.01 V/step]
006	Upper: C	*ENG	
007	Upper: M	*ENG	
008	Upper: Y	*ENG	
009	Initial TC	*ENG	Adjusts the initial toner concentration. [1 to 15 / **8** / 0.1 wt%/step]
010	Upper: TC	*ENG	Adjusts the upper limit of the toner concentration. [1 to 15 / **10.5** / 0.1 wt%/step]
011	Lower: TC	*ENG	Adjusts the lower limit of the toner concentration. [1 to 15 / **4** / 0.1 wt%/step]
012	Upper Sensitivity	*ENG	Adjusts the upper limit of the TD sensor sensitivity.

			[0.2 to 0.5 / **0.44** / 0.001 V/wt% /step]
013	Lower Sensitivity	*ENG	Adjusts the lower limit of the TD sensor sensitivity. [0.2 to 0.5 / **0.209** / 0.001 V/wt% /step]
014	Toner Density Between H and M	*ENG	[1 to 10 / **4** / 0.1 wt%/step]
015	Toner Density Between M and L	*ENG	

3224	**[Vtref Correct: Pixel] DFU**		
	Adjusts the coefficient of Vtref correction for each coverage and color.		
001	Low Coverage Coeff. Bk	*ENG	[0 to 5 / **0.7** / 0.1 /step]
002	Low Coverage Coeff.C	*ENG	
003	Low Coverage Coeff.M	*ENG	
004	Low Coverage Coeff. Y	*ENG	
005	High Coverage Coeff. Bk	*ENG	[0 to 5 / **1.8** / 0.01 V/step]
006	High Coverage Coeff. C	*ENG	
007	High Coverage Coeff. M	*ENG	
008	High Coverage Coeff. Y	*ENG	
009	Low Coverage: Thresh	*ENG	Adjusts the threshold of the low coverage. [0 to 20 / **3** / 0.1 %/step]
010	High Coverage: Thresh:M	*ENG	Adjusts the threshold of the high coverage. [0 to 100 / **30** / 1 %/step]
011	TC Upper Limit Correction	*ENG	[0 to 5 / **0.5** / 0.1 wt%/step]
012	TC Upper Limit:Display: Bk	*ENG	[1 to 15 / **10** / 0.1 wt% /step]

013	TC Upper Limit:Display: C	*ENG	
014	TC Upper Limit:Display: M	*ENG	
015	TC Upper Limit:Display: Y	*ENG	
016	Process Control Thresh	*ENG	[0 to 255 / **15** / 1 time/step]

3230	**[Toner Supply MBD] DFU**		
001	ADD:Time	*ENG	[0 to 1000 / **200** / 10 msec/step]
002	ADD:K	*ENG	[0 to 2 / **1** / 0.01 /step]
003	ADD:C	*ENG	
004	ADD:M	*ENG	
005	ADD:Y	*ENG	
006	ADD:MiddleSpd	*ENG	[0 to 5 / **1** / 0.01 /step]
007	ADD:LowSpd	*ENG	
009	N:Delay	*ENG	[0 to 200 / **5** / 1 /step]
030	PID:I:K	*ENG	[0 to 100 / **0.4** / 0.01 /step]
031	PID:I:C	*ENG	
032	PID:I:M	*ENG	
033	PID:I:Y	*ENG	
034	PID:P:K	*ENG	[0 to 100 / **8** / 0.01 /step]
035	PID:P:C	*ENG	
036	PID:P:M	*ENG	
037	PID:P:Y	*ENG	
038	PID:I: MidSpd	*ENG	[0 to 5 / **0.7** / 0.01 /step]
039	PID:I: LowSpd	*ENG	[0 to 5 / **0.33** / 0.01 /step]
040	PID:P: MidSpd	*ENG	[0 to 5 / **0.7** / 0.01 /step]

041	PID:P: LowSpd	*ENG	[0 to 5 / **0.33** / 0.01 /step]
060	AWILOW:K	*ENG	[-1 to 1 / **0.125** / 0.0001 /step]
061	AWILOW:C	*ENG	
062	AWILOW:M	*ENG	
063	AWILOW:Y	*ENG	
064	AWPUP:K	*ENG	[-1 to 1 / **1** / 0.0001 /step]
065	AWPUP:C	*ENG	
066	AWPUP:M	*ENG	
067	AWPUP:Y	*ENG	
068	AWILOW:MidSpd	*ENG	[0 to 100 / **0.18** / 0.01 /step]
069	AWPUP:MidSpd	*ENG	[0 to 100 / **1** / 0.01 /step]
070	AWILOW:LowSpd	*ENG	[0 to 100 / **0.38** / 0.01 /step]
071	AWPUP: LowSpd	*ENG	[0 to 100 / **1** / 0.01 /step]
090	SMITH:K	*ENG	[0 to 2 / **1** / 0.01 /step]
091	SMITH:C	*ENG	
092	SMITH:M	*ENG	
093	SMITH:Y	*ENG	
094	SMITH: MidSpd	*ENG	[0 to 5 / **1** / 0.01 /step]
095	SMITH: LowSpd	*ENG	
100	Int:Conserve:I:K	*ENG	[-1000 to 1000 / **0** / 0.0001 /step]
101	Int:Conserve:I:C	*ENG	
102	Int:Conserve:I:M	*ENG	
103	Int:Conserve:I:Y	*ENG	
110	ANCrefCons:K	*ENG	

111	ANCrefCons:C	*ENG	
112	ANCrefCons:M	*ENG	
113	ANCrefCons:Y	*ENG	
120	ANCY:K	*ENG	[0 to 10 / **0.69** / 0.01 /step]
121	ANCY:C	*ENG	[0 to 10 / **0.8** / 0.01 /step]
122	ANCY:M	*ENG	[0 to 10 / **0.84** / 0.01 /step]
123	ANCY:Y	*ENG	[0 to 10 / **0.88** / 0.01 /step]
124	ANCT:K	*ENG	[0 to 10 / **0.6** / 0.01 /step]
125	ANCT:C	*ENG	[0 to 10 / **0.7** / 0.01 /step]
126	ANCT:M	*ENG	[0 to 10 / **0.73** / 0.01 /step]
127	ANCT:Y	*ENG	[0 to 10 / **0.77** / 0.01 /step]
128	ANCY:MidSpd	*ENG	[0 to 10 / **1.07** / 0.01 /step]
129	ANCT:MidSpd	*ENG	[0 to 10 / **1.1** / 0.01 /step]
130	ANCY:LowSpd	*ENG	[0 to 10 / **1.02** / 0.01 /step]
131	ANCT:LowSpd	*ENG	[0 to 10 / **1.16** / 0.01 /step]
150	AWPNI:K	*ENG	[0 to 10 / **0.2** / 0.001 /step]
151	AWPNI:C	*ENG	
152	AWPNI:M	*ENG	
153	AWPNI:Y	*ENG	
154	PID	*ENG	[0 to 5 / **1** / 0.01 /step]
180	ANCLA:K	*ENG	[0 to 10 / **0.49** / 0.01 /step]
181	ANCLA: C	*ENG	[0 to 10 / **0.57** / 0.01 /step]
182	ANCLA: M	*ENG	[0 to 10 / **0.6** / 0.01 /step]
183	ANCLA: Y	*ENG	[0 to 10 / **0.63** / 0.01 /step]

184	ANCLB:K	*ENG	[0 to 10 / **0.41** / 0.01 /step]
185	ANCLB: C	*ENG	[0 to 10 / **0.48** / 0.01 /step]
186	ANCLB: M	*ENG	[0 to 10 / **0.5** / 0.01 /step]
187	ANCLB: Y	*ENG	[0 to 10 / **0.52** / 0.01 /step]
188	ANCLA: Midspd	*ENG	[0 to 5 / **0.86** / 0.01 /step]
189	ANCLB: Midspd	*ENG	[0 to 5 / **0.7** / 0.01 /step]
190	ANCLA: Lowspd	*ENG	[0 to 5 / **0.55** / 0.01 /step]
191	ANCLB: Lowspd	*ENG	[0 to 5 / **0.31** / 0.01 /step]
210	PIX:TBL:1	*ENG	[0 to 5 / **1** / 0.01 /step]
211	PIX:TBL:2	*ENG	
212	PIX:TBL:3	*ENG	
213	PIX:TBL:4	*ENG	
214	PIX:TBL:5	*ENG	
215	PIX:TBL:6	*ENG	
216	PIX:TBL:7	*ENG	
217	PIX:TBL:8	*ENG	
218	PIX:TBL:9	*ENG	
219	PIX:TBL:10	*ENG	
220	PIX:TBL:11	*ENG	
221	PIX:TBL:12	*ENG	
222	PIX:COR:K	*ENG	
223	PIX:COR:C	*ENG	
224	PIX:COR:M	*ENG	
225	PIX:COR:Y	*ENG	

226	SEL:PIX:AVE	*ENG	[1 to 5 / **2** / 1 /step]
240	PID:I:LIM:Std	*ENG	[0 to 1 / **0.154** / 0.001 /step]
241	PID:I:LIM:LowSpd	*ENG	[0 to 1 / **0.05** / 0.001 /step]
242	PID:I:STD to Low	*ENG	[0 to 5 / **0.33** / 0.01 /step]
243	PID:I:Low to STD	*ENG	[0 to 5 / **3.06** / 0.01 /step]
244	PID:I:LIM:MidSpd	*ENG	[0 to 1 / **0.108** / 0.001 /step]
245	PID:I:STD to MID	*ENG	[0 to 5 / **0.7** / 0.01 /step]
246	PID:I:MID to STD	*ENG	[0 to 5 / **1.43** / 0.01 /step]
247	PID:I:MID to Low	*ENG	[0 to 5 / **0.47** / 0.01 /step]
248	PID:I:Low to MID	*ENG	[0 to 5 / **2.14** / 0.01 /step]

3231	**[Toner Supply: Setting] DFU**		
	Adjusts the coefficient of the toner supply time for each color.		
001	Conversion Coeff.:Bk	*ENG	[0.5 to 9.99 / **2.11** / 0.01 /step]
002	Conversion Coeff.:C	*ENG	[0.5 to 9.99 / **1.97** / 0.01 /step]
003	Conversion Coeff.:M	*ENG	[0.5 to 9.99 / **1.90** / 0.01 /step]
004	Conversion Coeff.:Y	*ENG	[0.5 to 9.99 / **2.17** / 0.01 /step]

3232	**[Toner Supply Coeff.: Setting] DFU**		
001	Vt Proportion: Bk	*ENG	[0 to 2550 / **50** / 1 /step]
002	Vt Proportion: C	*ENG	
003	Vt Proportion: M	*ENG	
004	Vt Proportion: Y	*ENG	
005	Pixel Proportion: Bk	*ENG	[0 to 2.55 / **0.58** / 0.01 /step]
006	Pixel Proportion: C	*ENG	[0 to 2.55 / **0.51** / 0.01 /step]

007	Pixel Proportion: M	*ENG	[0 to 2.55 / **0.52** / 0.01 /step]
008	Pixel Proportion: Y	*ENG	[0 to 2.55 / **0.54** / 0.01 /step]
009	Vt Integral Control: Bk	*ENG	[0 to 2550 / **500** / 1 /step]
010	Vt Integral Control: C	*ENG	
011	Vt Integral Control: M	*ENG	
012	Vt Integral Control: Y	*ENG	
013	Vt Sum Times: Bk	*ENG	[1 to 255 / **20** / 1 time/step]
014	Vt Sum Times: C	*ENG	
015	Vt Sum Times: M	*ENG	
016	Vt Sum Times: Y	*ENG	

3233	**[Pixel Proportion Coeff.2:Set] DFU**		
001	Correction Coeff.:1	*ENG	[0 to 2.55 / **1** / 0.01 /step]
002	Correction Coeff.:2	*ENG	[0 to 2.55 / **0.5** / 0.01 /step]
003	Correction Coeff.:3	*ENG	[0 to 2.55 / **0** / 0.01 /step]
004	Correction Coeff.:4	*ENG	[0 to 2.55 / **0.25** / 0.01 /step]
005	Correction Coeff.:5	*ENG	[0 to 2.55 / **0.5** / 0.01 /step]

3234	**[Pixel Proportion Coeff.3:Set] DFU**		
001	Correction Value 1	*ENG	[-0.1 to 0 / -**0.01** / 0.01 /step]
002	Correction Value 2	*ENG	[0 to 0.1 / **0.01** / 0.01 /step]

3235	[Toner Supply Coeff.: Display] DFU		
001	Pixel Proportion 2: Bk	*ENG	[0 to 2.55 / **1** / 0.01 /step]
002	Pixel Proportion 2: C	*ENG	
003	Pixel Proportion 2: M	*ENG	
004	Pixel Proportion 2: Y	*ENG	
005	Pixel Proportion 3: Bk	*ENG	[0.7 to 1.3 / **1** / 0.01 /step]
006	Pixel Proportion 3: C	*ENG	
007	Pixel Proportion 3: M	*ENG	
008	Pixel Proportion 3: Y	*ENG	
009	Vt Integral Value: Bk	*ENG	[-255 to 255 / **0** / 0.01 /step]
010	Vt Integral Value: C	*ENG	
011	Vt Integral Value: M	*ENG	
012	Vt Integral Value: Y	*ENG	

3236	[Toner Supply Consumption: Display] DFU		
	Displays the toner amount of the latest toner supply for each color.		
001	Latest: Bk	*ENG	[0 to 40000 / **0** / 0.1 mg/step]
002	Latest: C	*ENG	
003	Latest: M	*ENG	
004	Latest: Y	*ENG	

3237	[Developer Mixing Setting] DFU		
	Displays the toner amount of the latest toner supply for each color.		
001	Mixing Time	*ENG	[0 to 200 / **5** / 1 sec/step]

3238	**[Vt Target: Setting] DFU**		
	Displays the Vt target value at developer initialization.		
001	Bk	*ENG	[0 to 5 / **2.7** / 0.01 V/step]
002	C	*ENG	
003	M	*ENG	
004	Y	*ENG	

3239	**[Vtref Correction: Setting]**		
	Adjusts the parameter for Vtref correction at the process control.		
001	(+)Consumption: Bk	*ENG	[0 to 1 / **0.08** / 0.01 V/step]
002	(+)Consumption: C	*ENG	
003	(+)Consumption: M	*ENG	
004	(+)Consumption: Y	*ENG	
005	(-)Consumption: Bk	*ENG	
006	(-)Consumption: C	*ENG	
007	(-)Consumption: M	*ENG	
008	(-)Consumption: Y	*ENG	
009-012	Threshold for development gamma rank.		
009	P Rank 1 Threshold	*ENG	[0 to 2 / **0.5** / 0.01 /step]
010	P Rank 2 Threshold	*ENG	[0 to 2 / **0.25** / 0.01 /step]
011	P Rank 3 Threshold	*ENG	[-2 to 0 / **-0.25** / 0.01 /step]
012	P Rank 4 Threshold	*ENG	[-2 to 0 / **-0.5** / 0.01 /step]
013-014	Threshold for image density rank on the image transfer belt.		
013	T Rank 1 Threshold	*ENG	[-1 to 0 / **-0.16** / 0.01 V/step]
014	T Rank 2 Threshold	*ENG	[0 to 1 / **0.16** / 0.01 V/step]

015	Correct Value Coef	*ENG	[1 to 2.5 / **2.5** / 0.01 /step]

3241	**[Background Potential Setting]**		
001	Coefficient: Bk	*ENG	These are parameters for calculating the charge bias referring to the development bias at process control. [-1000 to 1000 / **0** / 1 /step] DC charge bias = Development bias x (1 + 0.001 x these vales) + SP3-241-005 to -008
002	Coefficient: C	*ENG	
003	Coefficient: M	*ENG	
004	Coefficient: Y	*ENG	
005	Offset: Bk	*ENG	These are additional values for calculating the charge bias referring to the development bias at process control. [0 to 255 / **158** / 1 V/step] DC charge bias = Development bias x (1 + 0.001 x SP3-241-001 to -004) + these values
006	Offset: C	*ENG	
007	Offset: M	*ENG	
008	Offset: Y	*ENG	

3242	**[LD Power Setting]**		
	Adjusts the coefficient for LD power control value at the process control.		
001	Standard Speed: Coefficient: Bk	*ENG	[-1000 to 1000 / **152** / 1 /step]
002	Standard Speed: Coefficient: C	*ENG	
003	Standard Speed: Coefficient: M	*ENG	
004	Standard Speed: Coefficient: Y	*ENG	
005	Standard Speed: Offset: Bk	*ENG	[-1000 to 1000 / **7** / 1 /step]
006	Standard Speed: Offset: C	*ENG	
007	Standard Speed: Offset: M	*ENG	
008	Standard Speed: Offset: Y	*ENG	
009	Middle Speed: Coef: Bk	*ENG	[-1000 to 1000 / **141** / 1 /step]

010	Middle Speed: Coef: C	*ENG	
011	Middle Speed: Coef: M	*ENG	
012	Middle Speed: Coef: Y	*ENG	
013	Middle Speed: Offset: Bk	*ENG	[-1000 to 1000 / **13** / 1 /step]
014	Middle Speed: Offset: C	*ENG	
015	Middle Speed: Offset: M	*ENG	
016	Middle Speed: Offset: Y	*ENG	
017	Low Speed Coeff.:Bk	*ENG	[-1000 to 1000 / **123** / 1 /step]
018	Low Speed Coeff.:C	*ENG	
019	Low Speed Coeff.:M	*ENG	
020	Low Speed Coeff.:Y	*ENG	
021	Low Speed Offset:Bk	*ENG	[-1000 to 1000 / **16** / 1 /step]
022	Low Speed Offset:C	*ENG	
023	Low Speed Offset:M	*ENG	
024	Low Speed Offset:Y	*ENG	

3243	**[Development Bias: Speed Correct Setting] DFU**		
001	Middle Speed: Coef: Bk	*ENG	[0.5 to 1 / **1** / 0.01 /step]
002	Middle Speed: Coef: C	*ENG	
003	Middle Speed: Coef: M	*ENG	
004	Middle Speed: Coef: Y	*ENG	
005	Middle Speed: Offset: Bk	*ENG	[0 to 200 / **0** / 1 V/step]
006	Middle Speed: Offset: C	*ENG	
007	Middle Speed: Offset: M	*ENG	
008	Middle Speed: Offset: Y	*ENG	

009	Low Speed: Coef: Bk	*ENG	[0.5 to 1.5 / **0.92** / 0.01 /step]
010	Low Speed: Coef: C	*ENG	
011	Low Speed: Coef: M	*ENG	
012	Low Speed: Coef: Y	*ENG	
013	Low Speed: Offset: Bk	*ENG	[0 to 200 / **0** / 1 V/step]
014	Low Speed: Offset: C	*ENG	
015	Low Speed: Offset: M	*ENG	
016	Low Speed: Offset: Y	*ENG	

3251	**[Coverage]**		
	These (-001 to -016) are coefficients for SP3-222-009 to -012.		
001	Latest: Pixcel Bk	*ENG	Displays the latest coverage for each color. [0 to 9999 / **0** / 1 cm^2/step]
002	Latest: Pixcel C	*ENG	
003	Latest: Pixcel M	*ENG	
004	Latest: Pixcel Y	*ENG	
005-008	Displays the average coverage of each color for the Vtref correction. "Average S" is defined when the number of developed pages does not reach the number specified with SP3251-017.		
005	Average S: Bk	*ENG	[0 to 100 / **5** / 0.01 %/step]
006	Average S: C	*ENG	
007	Average S: M	*ENG	
008	Average S: Y	*ENG	
009-012	Displays the average coverage of each color for the Vtref correction. "Average M" is defined when the number of developed pages does not reach the number specified with SP3251-018.		
009	Average M: Bk	*ENG	[0 to 100 / **5** / 0.01 %/step]

010	Average M: C	*ENG	
011	Average M: M	*ENG	
012	Average M: Y	*ENG	
013-016	Displays the average coverage of each color for the Vtref correction. "Average L" is defined when the number of developed pages does not reach the number specified with SP3-251-019.		
013	Average L: Bk	*ENG	[0 to 100 / **5** / 0.01 %/step]
014	Average L: C	*ENG	
015	Average L: M	*ENG	
016	Average L: Y	*ENG	
017-019	Adjusts the threshold for SP3-251-005 to -016.		
017	Total Page Setting: S	*ENG	[1 to 100 / **50** / 1 sheet/step]
018	Total Page Setting: M	*ENG	[1 to 500 / **10** / 1 sheet/step]
019	Total Page Setting: L	*ENG	[1 to 999 / **50** / 1 sheet/step]
020-022	Adjusts the threshold for SP3-251-024 to -027.		
020	Total Page Setting: S2	*ENG	[1 to 100 / **20** / 1 sheet/step]
021	Total Page Setting: M2	*ENG	[1 to 500 / **10** / 1 sheet/step]
022	Total Page Setting: L2	*ENG	[1 to 999 / **50** / 1 sheet/step]
024-027	Displays the latest coverage ratio for each color.		
024	Latest Coverage: Bk	*ENG	[0 to 100 / - / 0.01 %/step]
025	Latest Coverage: C	*ENG	
026	Latest Coverage: M	*ENG	
027	Latest Coverage: Y	*ENG	
028	Displays the threshold of whether to perform developer churning or not.		
	DevMix Theresh	*ENG	[0 to 100 / **20** / 1 %/step]

3311	**[ID Sensor Detection Value]**		
	Displays the ID sensor (regular) offset voltage for Vsg adjustments.		
001	Voffset reg: Bk	*ENG	[0 to 5 / **0** / 0.01 V/step]
002	Voffset reg: C	*ENG	[0 to 5.5 / **0** / 0.01 V/step]
003	Voffset reg: M	*ENG	
004	Voffset reg: Y	*ENG	
005-007	Displays the ID sensor (diffusion) offset voltage for Vsg adjustments.		
005	Voffset dif: C	*ENG	[0 to 5.5 / **0** / 0.01 V/step]
006	Voffset dif: M	*ENG	
007	Voffset dif: Y	*ENG	
008-010	Displays the ID sensor offset voltage for Vsg adjustments.		
008	Voffset TM (Front)	*ENG	[0 to 5.5 / **0** / 0.01 V/step]
009	Voffset TM (Center)	*ENG	
010	Voffset TM (Rear)	*ENG	

3321	**[Vsg Adjust: Exe.]**		
010	P/TM Sensor All	-	Execute the ID sensor initialization setting for all sensors

3322	**[Vsg Adjust. Result: Vsg]**		
	Displays the result value of the Vsg adjustment for each sensor.		
001	Vsg reg: Bk	*ENG	[0 to 5.5 / **0** / 0.01 V/step]
002	Vsg reg: C	*ENG	
003	Vsg reg: M	*ENG	
004	Vsg reg: Y	*ENG	

005	Vsg dif: C	*ENG	
006	Vsg dif: M	*ENG	
007	Vsg dif: Y	*ENG	
008	Vsg TM (Front)	*ENG	
009	Vsg TM (Center)	*ENG	
010	Vsg TM (Rear)	*ENG	

3323	**[Vsg Adjust. Result: Ifsg] DFU**		
001	Ifsg: Bk	*ENG	[0 to 50 / **0** / 0.1 mA/step]
002	Ifsg: C	*ENG	
003	Ifsg: M	*ENG	
004	Ifsg: Y	*ENG	
005	Ifsg TM (Front)	*ENG	
006	Ifsg TM (Center)	*ENG	
007	Ifsg TM (Rear)	*ENG	

3324	**[Vsg Adjustment: Set] DFU**		
003	Vsg Error Counter	*ENG	[0 to 99 / **0** / 0.1 time/step]
004	Vofset Threshold	*ENG	[0 to 5 / **1** / 0.01 V/step]
005	Vsg Upper Threshold	*ENG	[0 to 5 / **4.5** / 0.01 V/step]
006	Vsg Lower Threshold	*ENG	[0 to 5 / **3.5** / 0.01 V/step]

3325	**[Vsg Adjustment Result]**		
	Displays the result of the Vsg adjustment. The displayed numbers mean the result of each sensor (sensor for Front, sensor for Bk, sensor for Cyan, sensor for Center, sensor for Magenta, sensor for Yellow and sensor for Rear).		
001	Latest	*ENG	[111 to 9999 / **9999** / 1 /step] 9: Unexpected error 3: Offset voltage error 2: Vsg adjustment value error 1: O.K
002	Latest 1	*ENG	
003	Latest 2	*ENG	
004	Latest 3	*ENG	
005	Latest 4	*ENG	
006	Latest 5	*ENG	
007	Latest 6	*ENG	
008	Latest 7	*ENG	
009	Latest 8	*ENG	
010	Latest 9	*ENG	

3361	**[ID Sensor Sensitivity: Display] DFU**		
003	K2C (Latest)	*ENG	[0 to 5 / **0** / 0.0001 /step]
004	K5C (Latest)	*ENG	
005	K2M (Latest)	*ENG	
006	K5M (Latest)	*ENG	
007	K2Y (Latest)	*ENG	
008	K5Y (Latest)	*ENG	

3362	**[ID Sensor Sensitivity: Setting] DFU**		
001	K2: Upper	*ENG	[0 to 1 / **0.32** / 0.01 /step]
002	K2: Lower	*ENG	[0 to 1 / **0.22** / 0.01 /step]
003	K5: Upper	*ENG	[0 to 10 / **6.5** / 0.01 /step]
004	K5: Lower	*ENG	[0 to 1 / **0.5** / 0.01 /step]
005	Kn: Upper	*ENG	[0 to 1 / **0.05** / 0.01 /step]
006	Kn: Lower	*ENG	[0 to 1 / **0.7** / 0.01 /step]
007	K5 Edit Point	*ENG	[0 to 1 / **0.15** / 0.01 /step]
008	K5 Target Voltage	*ENG	[0 to 5 / **2.2** / 0.01 V/step]
009	K5 Approximate Method	*ENG	[0 to 1 / **1** / 1 /step] 0:Linear, 1: Curve
010	K2: Upper/Lower Limit Coeff. 1	*ENG	[0 to 1 / **0** / 0.01 /step]
011	K2: Upper Limit Correction	*ENG	[–0.2 to 0.4 / **0.03** / 0.01 /step]
012	K2: Lower Limit Correction	*ENG	[–0.4 to 0.2 / **–0.03** / 0.01 /step]
013	Diffusion Correction: C	*ENG	[0.75 to 1.35 / **1** / 0.01 /step]
014	Diffusion Correction: M	*ENG	
015	Diffusion Correction: Y	*ENG	
016	K2: Check: C	*ENG	[0 to 1 / **0.25** / 0.001 /step]
017	K2: Check: M	*ENG	
018	K2: Check: Y	*ENG	

3363	[ID Pattern Timing Setting] DFU		
001	Scan YCMBk	*ENG	Adjusts the detection timing for the process control pattern. [-500 to 500 / **0** / 1 mm/step]
002	Detection Delay Time	*ENG	Adjusts the timing when the paper transfer unit is kept away from the image transfer belt. [0 to 2500 / **1400** / 1 msec/step]
003	Delay Time	*ENG	Adjusts the processing timing for the process control pattern. [0 to 2500 / **930** / 1 msec/step]
004	MUSIC Delay Time	*ENG	Adjusts the processing timing for the pattern that is used for the line position adjustment. [-2500 to 2500 / **300** / 1 msec/step]

3371	[M/A Calculation] DFU		
001	Correction Coeff.: Bk	*ENG	[0.5 to 2 / **1** / 0.01 /step]
002	Correction Coeff.: C	*ENG	
003	Correction Coeff.: M	*ENG	
004	Correction Coeff.: Y	*ENG	
005	Color Correct Coeff.:Bk	*ENG	
006	Color Correct Coeff.:C	*ENG	
007	Color Correct Coeff.:M	*ENG	
008	Color Correct Coeff.:Y	*ENG	

3401	[Fixed Toner Supply Mode]		
	Adjusts the toner supply rate in the fixed toner supply mode.		
001	Fixed Rate: Bk	*ENG	[0 to 100 / **5** / 1 %/step] These SPs are used only when SP3-044 is set to "0".
002	Fixed Rate: C	*ENG	
003	Fixed Rate: M	*ENG	
004	Fixed Rate: Y	*ENG	

3411	[Toner Supply Rate: Display]		
	Displays the current toner supply rate.		
001	Latest: Bk	*ENG	[0 to 100 / **-** / 1 %/step]
002	Latest: C	*ENG	
003	Latest: M	*ENG	
004	Latest: Y	*ENG	

3421	[Toner Supply Range]		
001	Upper Limit: Bk	*ENG	Adjusts the toner supply rate during printing. [0 to 100 / **100** / 1%/step]
002	Upper Limit: C	*ENG	
003	Upper Limit: M	*ENG	
004	Upper Limit: Y	*ENG	
005	Minimum Supply Time: Bk	*ENG	Adjusts the minimum toner supply time. [0 to 1000 / **200** / 1 msec/step]
006	Minimum Supply Time: C	*ENG	
007	Minimum Supply Time: M	*ENG	
008	Minimum Supply Time: Y	*ENG	

3451	[Toner Supply Carry Over: Display]		
001	Bk	*ENG	Displays the toner supply time carried over from a previous toner supply mode for each color. [0 to 10000 / **0** / 1 msec/step]
002	C	*ENG	
003	M	*ENG	
004	Y	*ENG	

3452	[Toner Supply Carry Over: Setting] DFU		
001	Maximum: Bk	*ENG	Adjusts the maximum time carried over from a previous toner supply mode. [0 to 10000 / **1000** / 1 msec/step]
002	Maximum: C	*ENG	
003	Maximum: M	*ENG	
004	Maximum: Y	*ENG	

3453	[Toner Supply: Setting]		
	Adjusts the toner supply time.		
001	Motor Control Max Drive Time	*ENG	[0 to 10000 / **800** / 1 msec/step]
002	Motor Break Time	*ENG	[0 to 10000 / **200** / 1 msec/step]

3501	[Process Control Target M/A]		
	Adjusts the target M/A of the full coverage in single color printer mode.		
001	Maximum M/A: Bk	*ENG	[0 to 1 / **0.482** / 0.001 mg/cm^2/step]
002	Maximum M/A: C	*ENG	[0 to 1 / **0.5** / 0.001 mg/cm^2/step]
003	Maximum M/A: M	*ENG	
004	Maximum M/A: Y	*ENG	

3510	[Image Adj. Counter:Display]		
	Displays the total page counter for each adjustment mode.		
001	Process Control: BW	*ENG	[0 to 2000 / **0** / 1 page/step]
002	Process Control: FC	*ENG	
003	Power ON: BW	*ENG	
004	Power ON: FC	*ENG	
005	MUSIC: BW	*ENG	
006	MUSIC: FC	*ENG	
007	Vsg Adj.	*ENG	
008	Charge AC Control	*ENG	
009	MUSIC: Power ON: BW	*ENG	
010	MUSIC: Power ON: FC	*ENG	

3511	[Execution Interval: Setting]		
	Adjusts the threshold for each adjustment mode.		
001	Job End: Process Control: BW	*ENG	[0 to 2000 / **250** / 1 page/step]
002	Job End: Process Control: FC	*ENG	[0 to 2000 / **85** / 1 page/step]
003	Interrupt: Process Control: BW	*ENG	[0 to 2000 / **500** / 1 page/step]
004	Interrupt: Process Control: FC	*ENG	[0 to 2000 / **200** / 1 page/step]
005	Initial: Potential Control: BW	*ENG	[0 to 2000 / **250** / 1 page/step]
006	Initial: Potential Control: FC	*ENG	[0 to 2000 / **100** / 1 page/step]
007	Vsg Adj. Counter	*ENG	[0 to 2000 / **0** / 1 page/step]
008	Charge AC Control Counter	*ENG	[0 to 2000 / **500** / 1 page/step]
019	Envir.Correction	*ENG	[0 or 1 / **1** / 1 /step] 0: Not Correct (OFF),
020	Gamma Correction	*ENG	

021	Non-use Time Correct	*ENG	1: Correct (ON)
022	Correction Coeff. 1: JE: BW	*ENG	[0 to 1 / **0.2** / 0.01 /step]
023	Correction Coeff. 2: JE: BW	*ENG	[0 to 1 / **1** / 0.01/step]
024	Correction Coeff. 1: JE: FC	*ENG	[0 to 1 / **0.59** / 0.01/step]
025	Correction Coeff. 2: JE: FC	*ENG	[0 to 1 / **1** / 0.01/step]
026	Correction Coeff. 1: Interrupt: BW	*ENG	[0 to 1 / **0.1** / 0.01/step]
027	Correction Coeff. 2: Interrupt: BW	*ENG	[0 to 1 / **1** / 0.01/step]
028	Correction Coeff. 1: Interrupt: FC	*ENG	[0 to 1 / **0.25** / 0.01/step]
029	Correction Coeff. 2: Interrupt: FC	*ENG	[0 to 1 / **1** / 0.01/step]
030	Max. Number Correction Threshold	*ENG	[0 to 99 / **5** / 1/step]
031	Max. Number Correction Counter	*ENG	[0 to 255 / **0** / 1/step]

3512	**[Image Adj.: Interval]**		
	Adjusts the timing for execution of process control and line position adjustment during printing.		
001	During Job	*ENG	[0 to 100 / **10** / 1 page/step]
002	During Stand-by	*ENG	[0 to 100 / **10** / 1 minute/step]

3513	**[PCU Motor Stop Time: Bk]**		
	Displays the last time that the PCU motors stopped. These are used for process control execution timing.		
001	Year	*ENG	[0 to 99 / **0** / 1/step]

002	Month	*ENG	[1 to 12 / **1** / 1/step]
003	Day	*ENG	[1 to 31 / **1** / 1/step]
004	Hour	*ENG	[0 to 23 / **0** / 1/step]
005	Minute	*ENG	[0 to 59 / **0** / 1/step]

3514	**[Environmental Displ: Job End]**		
	Displays the environmental conditions at the last job. These are used for process control execution timing.		
001	Temperature	*ENG	[-1280 to 1270 / **0** / 0.1°C/step]
002	Relative Humidity	*ENG	[0 to 1000 / **-** / 0.1%RH/step]
003	Absolute Humidity	*ENG	[0 to 1000 / **-** / 0.1 g/cm^3/step]

3515	**[Execution Interval: Display]**		
	Displays the current interval for process control execution. When the machine calculates the timing for process control, it uses a number of conditions. These are the results after considering all the conditions.		
001	Job End: Process Control: BW	*ENG	[0 to 2000 / **500** / 1 page/step]
002	Job End: Process Control: FC	*ENG	[0 to 2000 / **200** / 1 page/step]
003	Interrupt: Process Control: BW	*ENG	[0 to 2000 / **500** / 1 page/step]
004	Interrupt: Process Control: FC	*ENG	[0 to 2000 / **200** / 1 page/step]

3516	**[Refresh Mode] DFU**		
	While making prints with low coverage, the developer is agitated with less toner consumption and the toner carrier attraction tends to increase. This may cause low image density or poor transfer (white dots). To prevent this, the coagulated toner or overcharged toner has to be consumed by performing the refresh mode.		
001	Dev. Motor Rotation: Display: Bk	*ENG	[0 to 1000 / **0** / 0.1 m/step]

002	Dev. Motor Rotation: Display: C	*ENG	
003	Dev. Motor Rotation: Display: M	*ENG	
004	Dev. Motor Rotation: Display: Y	*ENG	
005	Rotation Threshold	*ENG	[0 to 1000 / **0.1** / 1 m/step]
006	Pixel Coverage Sum: Bk	*ENG	[0 to 65535 / **0** / 1 cm^2/step]
007	Pixel Coverage Sum: C	*ENG	
008	Pixel Coverage Sum: M	*ENG	
009	Pixel Coverage Sum: Y	*ENG	
010	Required Area: Bk	*ENG	
011	Required Area: C	*ENG	
012	Required Area: M	*ENG	
013	Required Area: Y	*ENG	
014	Refresh Threshold: Bk	*ENG	[0 to 255 / **35** / 1 cm^2/m/step]
015	Refresh Threshold: C	*ENG	[0 to 255 / **18** / 1 cm^2/m/step]
016	Refresh Threshold: M	*ENG	
017	Refresh Threshold: Y	*ENG	
018	Pattern Number: Bk	*ENG	[0 to 255 / **0** / 1 time/step]
019	Pattern Number: C	*ENG	
020	Pattern Number: M	*ENG	
021	Pattern Number: Y	*ENG	
022	Pattern Number: Upper limit	*ENG	[0 to 255 / **16** / 1 time/step]
023	Toner Consumption Pattern Area	*ENG	[10 to 2550 / **130** / 10 cm^2/step]
024	Supply Coefficient	*ENG	[0 to 2.55 / **0.8** / 0.01/step]
025	Job End Area Coefficient	*ENG	[0.1 to 25.5 / **1** / 0.1/step]

026	Job End Vb Coefficient	*ENG	[0 to 100 / **40** / 1%/step]
027	Job End Length	*ENG	[0 to 56 / **28** / 1mm/step]
028	Job End Supply	*ENG	[0 to 1 / **0.45** / 0.001 mg/cm^2/step]
029	TnCnsmp: Internal Thresh	*ENG	[0 to 1000 / **0** / 1 page/step]
030	TnCnsmp: Counter:Bk	*ENG	
031	TnCnsmp: Counter:FC	*ENG	
032	TnCnsmp: Internal Thresh 2	*ENG	[0 to 255 / **4** / 1 page/step]

3517	**[Blade Damage Prevention]**		
	Adjusts the threshold temperature for preventing the cleaning blade in the transfer belt cleaning unit from being damaged. If the temperature is above this value, toner is applied to the transfer belt at set intervals during the job to prevent the blade from flipping over.		
001	Execution Temp. Thresh	*ENG	[0 to 50 / **0** / 1 deg/step]

3518	**[Image Adj. Execution Flag] DFU**		
001	Toner End Recovery: Bk	*ENG	[0 or 1 / **0** / 1/step] 0: OFF. 1: ON
002	Toner End Recovery: C	*ENG	
003	Toner End Recovery: M	*ENG	
004	Toner End Recovery: Y	*ENG	
005	Vsg Adjustment	*ENG	
006	Developer Mixing	*ENG	
007	Process Control	*ENG	[0 to 2 / **0** / 1/step] 0: OFF. 1: ON (once), 2: ON (twice)
008	MUSIC	*ENG	
009	Drum Phase Adj.	*ENG	[0 or 1 / **0** / 1/step]

010	Charge AC Control	*ENG	0: OFF. 1: ON
011	Blade Damage Prevention	*ENG	
012	Vsg Average Error	*ENG	[0 or 1 / **0** / 1/step] Sets "1", when the following values shows. Vsg_reg_ave: 3.5 ≤ Vsg_reg_ave ≤ 4.5 or Vsg_dif_ave: 0.0 ≤ Vsg_dif_ave ≤ 0.5

3519	**[Toner End Prohibition Setting]**		
	Enables or disables each adjustment at toner end.		
001	Process Control	*ENG	[0 or 1 / **1** / 1/step] 0: Permit (adjustment is done even toner end condition) 1: Forbid (adjustment is not done at toner end condition)
002	MUSIC	*ENG	
003	TC Adjustment	*ENG	

3520	**[ITB Idle Time] DFU**		
001	Temperature: H	*ENG	Specifies the idle rotation times of the ITB after the process control. [0 or 3 / **1.9** / 1 revolution/step]
002	Temperature: M	*ENG	
003	Temperature: L	*ENG	
004	Temp.: L: ON	*ENG	
005 to 006	Adjusts the threshold temperature for entering the ITB idle rotation after the process control.		
005	Temp. Thresh:T2	*ENG	[20 or 30 / **25** / 1 deg/step]
006	Temp. Thresh:T1	*ENG	[0 or 15 / **15** / 1 deg/step]

3522	**[Initial Process Control Setting]**		
	Adjusts the threshold for the process control at power on. When the current condition has changed by more than the values of these SPs when compared with the conditions at the previous operation, the process control at power on is executed.		
002	Non-use Time Setting	*ENG	[0 to 1440 / **360** / 1 minute/step]
003	Temp. Range	*ENG	[0 to 99 / **10** / 1 deg/step]
004	Relative Humidity Change	*ENG	[0 to 99 / **50** / 1 %RH/step]
005	Absolute Humidity Change	*ENG	[0 to 99 / **6** / 1 g/m^3/step]
100	**[Rapi Timer Setting]**		
	Time Setting	*ENG	[0 to 255 / **30** / 1 sec/step]
	Adjusts the time-out time to get the Rapi timer.		

3531	**[Non-use Time Process Control Setting]**		
	Adjusts the threshold for the process control at stand-by. When the current condition has changed by more than the values of these SPs when compared with the conditions at the previous operation, the process control at stand-by is executed.		
001	Non-use Time Setting	*ENG	[0 to 1440 / **360** / 1 minute/step]
002	Temp. Range	*ENG	[0 to 99 / **10** / 1 deg/step]
003	Relative Humidity Rhange	*ENG	[0 to 99 / **50** / 1 %RH/step]
004	Absolute Humidity Rhange	*ENG	[0 to 99 / **6** / 1 g/m^3/step]
005	Maximum Execution Number	*ENG	Adjusts the maximum execution time for the process control at stand-by. [0 to 99 / **10** / 1 time/step]

3611	[Dev. Gamma: Display/Set]		
001	Bk (Current)	*ENG	Displays the current development gamma for Bk [0 to 5 / **0** / 0.01 mg/cm^2/kV /step]
002	C (Current)	*ENG	Displays the current development gamma for C/M/Y. [0 to 5 / **0** / 0.01 mg/cm^2/kV /step]
003	M (Current)	*ENG	
004	Y (Current)	*ENG	
005	Bk (Target Display)	*ENG	Displays the target development gamma for Bk. [0 to 5 / **0.85** / 0.01 mg/cm^2/kV /step]
006	C (Target Display)	*ENG	Displays the target development gamma for C/M/Y. [0 to 5 / **0.85** / 0.01 mg/cm^2/kV /step]
007	M (Target Display)	*ENG	[0 to 5 / **0.8** / 0.01 mg/cm^2/kV /step]
008	Y (Target Display)	*ENG	[0 to 5 / **0.77** / 0.01 mg/cm^2/kV /step]
009	Bk (Standard Target Set)	*ENG	Displays the standard target development gamma for each color. [0 to 5 / **1.37** / 0.01 mg/cm^2/kV /step]
010	C (Standard Target Set)	*ENG	[0 to 5 / **1.32** / 0.01 mg/cm^2/kV /step]
011	M (Standard Target Set)	*ENG	
012	Y (Standard Target Set)	*ENG	
013	Environmental Correction	*ENG	Turns on or off the environmental correction for target development gamma. [0 or 1 / **1** / -] 0: Not Correct, 1: Correct
014	Bk (Max Correction)	*ENG	[0 to 5 / **0.23** / 0.01 mg/cm2/kv/step]
015	C (Max Correction)	*ENG	

016	M (Max Correction)	*ENG	
017	Y (Max Correction)	*ENG	
018	Bk (Max Abs Hum)	*ENG	[1 to 99 / **10** / 1 g/m3/step]
019	C (Max Abs Hum)	*ENG	
020	M (Max Abs Hum)	*ENG	
021	Y (Max Abs Hum)	*ENG	

3612	**[Vk Display]**		
	Displays Vk for each color.		
001	Bk	*ENG	[-300 to 300 / **0** / 1 V/step]
002	C	*ENG	
003	M	*ENG	
004	Y	*ENG	

3621	**[Development DC Control:Display]** Standard: 260 mm/sec, Middle: 182 mm/sec, Low: 85 mm/sec		
	Displays the development DC bias adjusted with the process control for each line speed and color.		
001	Standard Speed:Bk	*ENG	[0 to 800 / **550** / 1 -V/step]
002	Standard Speed:C	*ENG	
003	Standard Speed:M	*ENG	
004	Standard Speed:Y	*ENG	
005	Middle Speed:Bk	*ENG	
006	Middle Speed:C	*ENG	
007	Middle Speed:M	*ENG	
008	Middle Speed:Y	*ENG	

009	Low Speed:Bk	*ENG	
010	Low Speed:C	*ENG	
011	Low Speed:M	*ENG	
012	Low Speed:Y	*ENG	

3631	**[Charge DC Control: Display]** Standard: 260 mm/sec, Middle: 182 mm/sec, Low: 85 mm/sec		
	Displays the charge DC voltage adjusted with the process control for each line speed and color.		
001	Standard Speed:Bk	*ENG	[0 to 2000 / **690** / 1 -V/step]
002	Standard Speed:C	*ENG	
003	Standard Speed:M	*ENG	
004	Standard Speed:Y	*ENG	
005	Middle Speed:Bk	*ENG	
006	Middle Speed:C	*ENG	
007	Middle Speed:M	*ENG	
008	Middle Speed:Y	*ENG	
009	Low Speed:Bk	*ENG	
010	Low Speed:C	*ENG	
011	Low Speed:M	*ENG	
012	Low Speed:Y	*ENG	

3641	**[Charge AC Control: Display]** Standard: 260 mm/sec		
	Displays the charge AC voltage adjusted with the process control for each color.		
001	Standard Speed:Bk	*ENG	[0 to 3 / **1.75** / 0.01 kV/step]
002	Standard Speed:C	*ENG	
003	Standard Speed:M	*ENG	
004	Standard Speed:Y	*ENG	

3651	**[LD Power Control: Display]** Standard: 260 mm/sec, Middle: 182 mm/sec, Low: 85 mm/sec		
	Displays the LD power adjusted for each environment.		
001	Standard Speed:Bk	*ENG	[0 to 200 / **100** / 1 %/step]
002	Standard Speed:C	*ENG	
003	Standard Speed:M	*ENG	
004	Standard Speed:Y	*ENG	
005	Middle Speed:Bk	*ENG	
006	Middle Speed:C	*ENG	
007	Middle Speed:M	*ENG	
008	Middle Speed:Y	*ENG	
009	Low Speed:Bk	*ENG	
010	Low Speed:C	*ENG	
011	Low Speed:M	*ENG	
012	Low Speed:Y	*ENG	

3710	**[HST Concentration Controll Setting]** TD Sensor: Toner Concentration Control Setting		
	Selects the toner concentration control method by HST memory, which is in the TD sensor.		
001	Control Method Selection	*ENG	[0 or 1 / **1** / -] 0: Not Use, 1: Use

3711	**[HST Concentration Control: Bk]**		
	Displays the factory settings of the black PCU.		
001	Vcnt	*ENG	[0 to 5 / **4** / 0.1 V/step]
002	Vt	*ENG	[0 to 5 / **2.5** / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / **2.5** / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0 to 2.55 / **1.3** / 0.01 V/step]
005	Sensitivity: ML	*ENG	[0 to 2.55 / **1.2** / 0.01 V/step]
006	Set Detection	*ENG	[0 to 5 / **1** / 0.1 V/step]
007	Without Developer	*ENG	[0 to 5 / **1.2** / 0.1 V/step]
008	With Developer	*ENG	[0 to 5 / **1.3** / 0.1 V/step]
009	Serial Number 1	*ENG	[0 to 255 / **-** / 1 V/step]
010	Serial Number 2	*ENG	
011	Adjustment: Vt	*ENG	[0 to 5 / **3** / 0.1 V/step]
012	Adjustment: Vtref	*ENG	
013	260 Adjustment: Vtcnt	*ENG	[0 to 5 / **4** / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0 to 2.55 / **0** / 0.01 mg/cm^2/kV /step]
015	Vcnt latest Result	*ENG	[0 to 9 / **9** / 1 /step]
016	182 Adjustment: Vtcnt	*ENG	[0 to 5 / **4** / 0.01 V/step]

3712	**[HST Concentration Control: C]**		
	Displays the factory settings of the magenta PCU.		
001	Vcnt	*ENG	[0 to 5 / **4** / 0.1 V/step]
002	Vt	*ENG	[0 to 5 / **2.5** / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / **2.5** / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0 to 2.55 / **1.3** / 0.01 V/step]
005	Sensitivity: ML	*ENG	[0 to 2.55 / **1.2** / 0.01 V/step]
006	Set Detection	*ENG	[0 to 5 / **1** / 0.1 V/step]
007	Without Developer	*ENG	[0 to 5 / **1.2** / 0.1 V/step]
008	With Developer	*ENG	[0 to 5 / **1.3** / 0.1 V/step]
009	Serial Number 1	*ENG	[0 to 255 / **-** / 1 V/step]
010	Serial Number 2	*ENG	
011	Adjustment: Vt	*ENG	[0 to 5 / **3** / 0.1 V/step]
012	Adjustment: Vtref	*ENG	
013	260 Adjustment: Vtcnt	*ENG	[0 to 5 / **4** / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0 to 2.55 / **0** / 0.01 mg/cm^2/kV /step]
015	Vcnt latest Result	*ENG	[0 to 9 / **9** / 1 /step]
016	182 Adjustment: Vtcnt	*ENG	[0 to 5 / **4** / 0.01 V/step]

3713	**[HST Concentration Control: M]**		
	Displays the factory settings of the cyan PCU.		
001	Vcnt	*ENG	[0 to 5 / **4** / 0.1 V/step]
002	Vt	*ENG	[0 to 5 / **2.5** / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / **2.5** / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0 to 2.55 / **1.3** / 0.01 V/step]

005	Sensitivity: ML	*ENG	[0 to 2.55 / **1.2** / 0.01 V/step]
006	Set Detection	*ENG	[0 to 5 / **1** / 0.1 V/step]
007	Without Developer	*ENG	[0 to 5 / **1.2** / 0.1 V/step]
008	With Developer	*ENG	[0 to 5 / **1.3** / 0.1 V/step]
009	Serial Number 1	*ENG	[0 to 255 / **-** / 1 V/step]
010	Serial Number 2	*ENG	
011	Adjustment: Vt	*ENG	[0 to 5 / **3** / 0.1 V/step]
012	Adjustment: Vtref	*ENG	
013	260 Adjustment: Vtcnt	*ENG	[0 to 5 / **4** / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0 to 2.55 / **0** / 0.01 mg/cm^2/kV /step]
015	Vcnt latest Result	*ENG	[0 to 9 / **9** / 1 /step]
016	182 Adjustment: Vtcnt	*ENG	[0 to 5 / **4** / 0.01 V/step]

3714	**[HST Control:Y]**		
	Displays the factory settings of the yellow PCU.		
001	Vcnt	*ENG	[0 to 5 / **4** / 0.1 V/step]
002	Vt	*ENG	[0 to 5 / **2.5** / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / **2.5** / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0 to 2.55 / **1.3** / 0.01 V/step]
005	Sensitivity: ML	*ENG	[0 to 2.55 / **1.2** / 0.01 V/step]
006	Set Detection	*ENG	[0 to 5 / **1** / 0.1 V/step]
007	Without Developer	*ENG	[0 to 5 / **1.2** / 0.1 V/step]
008	With Developer	*ENG	[0 to 5 / **1.3** / 0.1 V/step]
009	Serial Number 1	*ENG	[0 to 255 / **-** / 1 V/step]
010	Serial Number 2	*ENG	

011	Adjustment: Vt	*ENG	[0 to 5 / **3** / 0.1 V/step]
012	Adjustment: Vtref	*ENG	
013	260 Adjustment: Vtcnt	*ENG	[0 to 5 / **4** / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0 to 2.55 / **0** / 0.01 mg/cm^2/kV /step]
015	Vcnt latest Result	*ENG	[0 to 9 / **9** / 1 /step]
016	182 Adjustment: Vtcnt	*ENG	[0 to 5 / **4** / 0.01 V/step]

3800	**[Collection Bottle Full Detect]**		
	Displays/ adjusts the PCDU toner collection bottle detection settings.		
001	Condition	*ENG	[0 to 4 / **0** / 1 /step]
	Displays the current condition of the PCDU toner collection bottle. 0: Factory default, 1: Before near full, 2; Near full, 3: Full, 4: Reserved		
002	Print Page AF Near Full	*ENG	Not used [0 to 10000000 / **0** / 1 /step]
003	Pixel Count AF Near Full	*ENG	Not used [0 to 100000 / **0** / 1 sheet /step]
004	Print Page AF Near Full 2		Not used [0 to 10000000 / **0** / 1 /step]
005	Pixel Count AF Near Full 2	*ENG	Not used [0 to 100000 / **0** / 1 sheet /step]
006	Print Page AF Replacement	*ENG	[0 to 100000 / **0** / 1 sheet /step]
007	Pixel Count AF Replacement	*ENG	[0 to 100000000 / **0** / 1 /step]
008	Print Page Threshold	*ENG	[0 to 10000 / **3000** / 1 sheet /step]

009	Pixel Count Threshold	*ENG	[0 to 100000 / **25000** / 1 /step]
011	Pixel Count Threshold 2	*ENG	[0 to 1000000 / **120000** / 1 /step]
014	Full Detection Date	*ENG	Displays the date of the near full detection for the PCDU toner collection bottle.

3810	**[P-Inter Exit:HlfSpd] DFU**		
001	Formula: Slope	*ENG	[0 to 100 / **10** / 1 /step]
002	Formula: Intercept	*ENG	[-2000 to 2000 / **0** / 1 %/step]
003	Formula: Up-Limit	*ENG	[100 to 2000 / **100** / 1 %/step]

3901	**[New Unit Detection]**		
	Turns new PCU detection on or off.		
001	ON/OFF Setting	*ENG	[0 or 1 / **1** / -] 0: OFF, 1: ON

3902	**[Manual New Unit Set]**		
	Turns the new unit detection flag for each PM unit on or off.		
001	Development Unit: Bk	*ENG	[0 or 1 / **0** / -] 0: OFF, 1: ON
002	Development Unit: C	*ENG	
003	Development Unit: M	*ENG	
004	Development Unit: Y	*ENG	
009	PCU: Bk	*ENG	[0 or 1 / **0** / -] 0: OFF, 1: ON
010	PCU: C	*ENG	
011	PCU: M	*ENG	
012	PCU: Y	*ENG	
013	ITB Unit	*ENG	[0 or 1 / **0** / -] 0: OFF, 1: ON Do not use 3902-013 if you only change the cleaning unit. 3902-015: This is for the image transfer belt cleaning unit.
014	Fusing Unit	*ENG	
015	Fusing Roller	*ENG	
016	Fusing Belt	*ENG	
017	Image Transfer Cleaning Unit	*ENG	
018	Paper Transfer Unit	*ENG	[0 or 1 / **0** / -] 0: OFF, 1: ON
020	Image Transfer Toner Collection Bottle	*ENG	

3.4 SYSTEM SP4-XXX

3.4.1 SP4-XXX (SCANNER)

4008	[Sub Scan Mag. Adjustment]		
	Adjusts the sub-scan magnification by changing the scanner motor speed.		
001	-	*ENG	[-1.0 to 1.0 / **0** / 0.1%/step] **FA**

4010	[L-Edge Regist Adjustment]		
	Adjusts the leading edge registration by changing the scanning start timing in the sub-scan direction.		
001	-	*ENG	[-2.0 to 2.0 / **0** / 0.1 mm/step] **FA**

4011	[Main Scan Regist]		
	Adjusts the side-to-side registration by changing the scanning start timing in the main scan direction.		
001	-	*ENG	[-2.5 to 2.5 / **0** / 0.1 mm/step] **FA**

4012	[Set Scale Mask]		
	Sets the blank margin at each side for erasing the original shadow caused by the gap between the original and the scale.		
001	Book: Sub Leading Edge	*ENG	[0 to 3.0 / **0** / 0.1 mm/step] **FA**
002	Book: Sub Trailing Edge		
003	Book: Main Leading Edge		
004	Book: Main Trailing Edge		

4013	[Scanner Free Run]

	Performs the scanner free run with the exposure lamp on or off in the following mode. Full color mode / Full Size / A4 or LT		
001	Lamp: OFF	*ENG	OFF or ON
002	Lamp: ON		

4014	[Scan]		
	Execute the scanner free fun with each mode.		
001	HP Detection Enable	-	Scanner free run with HP sensor check.
002	HP Detection Disable	-	Scanner free run without HP sensor check.

4020	[DF Dust Check]		
001	Dust Detect: ON/OFF	*ENG	Turns the ADF scan glass dust check on/ off. [0 or 1 / **0** / 1 /step] 0: OFF, 1: ON
002	Dust Detect: Level	*ENG	Selects the detect level. [0 to 8 / **4** / 1 /step] 0: lowest detection level 8: highest detection level
003	Dust Reject: Level	*ENG	Selects the level of the sub scan line correction when using the ARDF. [0 to 4 / **0** / 1 /step] 0: Off 1: Weakest 2: Weak 3: Strong 4: Strongest

4400	[Org Edge Mask]	*ENG	

	Set the Mask for Original. These SPs set the area to be masked during platen (book) mode scanning.	
001	Book: Sub Leading Edge	[0 to 3.0 / **0** / 0.1 mm/step]
002	Book: Sub Trailing Edge	
003	Book: Main Leading Edge	
004	Book: Main Trailing Edge	
005	ADF: Sub Leading Edge	
007	ADF: Main Leading Edge	
008	ADF: Main Trailing Edge	

4417	[IPU Test Pattern]	
	Selects the IPU test pattern.	
001	Test Pattern	[0 to 24 / **0** / 1/step]
	0: Scanned image 1: Gradation main scan A 2: Gradation main scan B 3: Gradation main scan C 4: Gradation main scan D 5: Gradation sub scan (1) 6: Grid pattern 7: Slant grid pattern 8: Gradation RGBCMYK 9: UCR pattern 10: Color patch 16 (1) 11: Color patch 16 (2) 12: Color patch 64	13: Grid pattern CMYK 14: Color patch CMYK 15: Gray pattern (1) 16: Gray pattern (2) 17: Gray Pattern (3) 18: Shading pattern 19: Thin line pattern 20: Scanned + Grid pattern 21: Scanned + Gray scale 22: Scanned + Color patch 23: Scanned + Slant Grid C 24: Scanned + Slant Grid D

4429	[Select Copy Data Security]		
001	Copying	*ENG	[0 to 3 / **3** / 1 /step]
002	Scanning		
003	Fax Operation		

4450	[Scan Image Path Selection]	
001	Black Subtraction ON/OFF	[0 or 1 / **1** / -] 0: OFF, 1: ON
	Uses or does not use the black reduction image path.	
002	SH ON/OFF	[0 or 1 / **0** / 1 /step] 0: ON, 1: OFF
	Uses or does not use the shading image path.	

4460	[Degital AE]		
	Adjust the background level.		
001	Low Limit Value	*ENG	[0 to 1023 / **364** / 1 /step]
002	Background Level		[512 to 1535 / **932** / 1 /step]

4501	[ACC Target Density]		
	Selects the ACC result.		
001	Copy: K: Text	*ENG	[0 to 10 / **5** / 1 /step] 10: Darkest density
002	Copy: C: Text	*ENG	
003	Copy: M: Text	*ENG	
004	Copy: Y: Text	*ENG	
005	Copy: K: Photo	*ENG	
006	Copy: C: Photo	*ENG	
007	Copy: M: Photo	*ENG	
008	Copy: Y: Photo	*ENG	

4505	[ACC Cor:Bright]		
	Adjusts the offset correction for light areas of the ACC pattern.		
001	Text:K	*ENG	[-128 to 127 / **0** / 1 /step]
002	Text:C	*ENG	
003	Text:M	*ENG	
004	Text:Y	*ENG	
005	Photo:K	*ENG	[-128 to 127 / **0** / 1 /step]
006	Photo:C	*ENG	
007	Photo:M	*ENG	
008	Photo:Y	*ENG	

4506	[ACC Cor:Dark]		
	Adjusts the offset correction for dark areas of the ACC pattern.		
001	Text:K	*ENG	[-128 to 127 / **0** / 1 /step]
002	Text:C	*ENG	
003	Text:M	*ENG	
004	Text:Y	*ENG	
005	Photo:K	*ENG	[-128 to 127 / **0** / 1 /step]
006	Photo:C	*ENG	
007	Photo:M	*ENG	
008	Photo:Y	*ENG	

4540	[Print Coverage]		
	This SP corrects the printer coverage of 12 hues (RY, YR, YG, etc. x 4 Colors [R, G, B, Option]) for a total of 48 parameters.		
001-004	RY Phase: Option/R/G/B	*ENG	Specifies the printer vector correction value. [0 to 255 / **0** / 1 /step]
005-008	YR Phase: Option/R/G/B	*ENG	
009-012	YG Phase: Option/R/G/B	*ENG	
013-016	GY Phase: Option/R/G/B	*ENG	
017-020	GC Phase: Option/R/G/B	*ENG	
021-024	CG Phase: Option/R/G/B	*ENG	
025-028	CB Phase: Option/R/G/B	*ENG	
029-032	BC Phase: Option/R/G/B	*ENG	
033-036	BM Phase: Option/R/G/B	*ENG	
037-040	MB Phase: Option/R/G/B	*ENG	

041-044	MR Phase: Option/R/G/B	*ENG	
045-048	RM Phase: Option/R/G/B	*ENG	
049-052	WHITE: Option/R/G/B	*ENG	
053-056	BLACK: Option/R/G/B	*ENG	

4550	[Scanner Appl.:Text/Print] DFU

4551	[Scanner Appl.: Text] DFU

4552	[Scanner Appl.:Txt Dropout] DFU

4553	[Scanner Appl.:Text/Photo] DFU

4554	[Scanner Appl.: Photo] DFU

4565	[Scanner Appl.: GrayScale] DFU

4570	[Scan Appl.: Color: Text/Photo] DFU

4571	[Scan Appl.: Color: Glossy Photo] DFU

4572	[Scan Appl.: AutoColor] DFU

4580	[FAX Appl.: Text/Chart] DFU

4581	[FAX Appl.: Text] DFU

4582	[FAX Appl.: Text/Photo] DFU

4583	[FAX Appl.: Photo] DFU

4584	[FAX Appl.: Original 1] DFU

4585	[FAX Appl.: Original 2] DFU

4600	[SBU Version Display]		
001	SBU ID	-	Displays the ID of the SBU.
002	GASBU-N ID	-	Displays the ID of the GASBU.
003	VSP5100 ID	-	Displays t he ID of the VSP5100.

4602	[Scanner Memory Access]		
001	Scanner Memory Access	-	Enables the read and write check for the SBU registers.

4603	[AGC Execution]		
001	HP Detection Enable	-	Executes the AGC.
002	HP Detection Disable	-	**DFU**

4604	[FGATE Open/Close] DFU

4609	[Gray Balance Set: R]		
001	Book Read	-	[-512 to 511 / **-80** / 1 digit/step]
002	DF Read	-	[-512 to 511 / **-80** / 1 digit/step]

4610	[Gray Balance Set: G]		
001	Book Read	-	[-512 to 511 / **-85** / 1 digit/step]
002	DF Read		

4611	[Gray Balance Set: B]		
001	Book Read	-	[-512 to 511 / **-80** / 1 digit/step]
002	DF Read		

4623	[Black Level Adj. Display] RE: Red Even signal, RO: Red Odd signal		
001	Latest: RE Color	-	Displays the black offset value (rough adjustment) for the even red signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]
002	Latest: RO Color	-	Displays the black offset value (rough adjustment) for the odd red signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]

4624	[Black Level Adj. Display] GE: Green Even signal, GO: Green Odd signal		
001	Latest: GE Color	-	Displays the black offset value (rough adjustment) for the even green signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]
002	Latest: GO Color	-	Displays the black offset value (rough adjustment) for the odd green signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]

4625	[Black Level Adj. Display] BE: Blue Even signal, BO: Blue Odd signal		
001	Latest: BE Color	-	Displays the black offset value (rough adjustment) for the even blue signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]
002	Latest: BO Color	-	Displays the black offset value (rough adjustment) for the odd blue signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]

4628	[Analog Gain Adj. Display]		
	Displays the gain value of the amplifiers on the controller for Red.		
001	Latest: RE Color	-	[0 to 7 / **0** / 1 digit/step]

4629	[Analog Gain Adj. Display]		
	Displays the gain value of the amplifiers on the controller for Green.		
001	Latest: GE Color	-	[0 to 7 / **0** / 1 digit/step]

4630	[Analog Gain Adj. Display]		
	Displays the gain value of the amplifiers on the controller for Blue.		
001	Latest: BE Color	-	[0 to 7 / **0** / 1 digit/step]

4631	[Digital Gain Adj. Display]		
	Displays the gain value of the amplifiers on the controller for Red.		
001	Latest: RE Color	-	[0 to 1023 / **0** / 1 digit/step]
002	Latest: RO Color	-	

4632	[Digital Gain Adj. Display]		
	Displays the gain value of the amplifiers on the controller for Green.		
001	Latest: GE Color	-	[0 to 1023 / **0** / 1 digit/step]
002	Latest: GO Color	-	

4633	[Digital Gain Adj. Display]		
	Displays the gain value of the amplifiers on the controller for Blue.		
001	Latest: BE Color	-	[0 to 1023 / **0** / 1 digit/step]
002	Latest: BO Color	-	

4645	[Scan Adjust Error]		
001	White level	-	[0 to 65535 / **0** / 1 digit/step]
002	Black level	-	

4647	[Scanner Hard Error]		
	Displays the result of the SBU connection check.		
001	Power-ON	-	[0 to 35535 / **0** / 1digit /step] 0: OK, Other: SBU connection check failure If the SBU connection check fails, SC144 occurs.

4654	[Black Level Adj. Display] RE: Red Even signal, RO: Red Odd signal		
001	Last Correct Value: RE Color	*ENG	Displays the black offset value for the even red signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]
002	Last Correct Value: RO Color	*ENG	Displays the black offset value for the odd red signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]

4655	[Black Level Adj. Display] GE: Green Even signal, GO: Green Odd signal		
001	Last Correct Value: GE Color	*ENG	Displays the black offset value for the even green signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]
002	Last Correct Value: GO Color	*ENG	Displays the black offset value for the odd green signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]

4656	[Black Level Adj. Display] BE: Blue Even signal, BO: Blue Odd signal		
001	Last Correct Value: BE Color	*ENG	Displays the black offset value for the even blue signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]
002	Last Correct Value: BO Color	*ENG	Displays the black offset value for the odd blue signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]

4658	[Analog Gain Adj. Display]		
	Displays the previous gain value of the amplifiers on the controller for Red.		
001	Last Correct Value: RE Color	*ENG	[0 to 7 / **0** / 1 digit/step]

4659	[Analog Gain Adj. Display]		
	Displays the previous gain value of the amplifiers on the controller for Green.		
001	Last Correct Value: GE Color	*ENG	[0 to 7 / **0** / 1 digit/step]

4660	[Analog Gain Adj. Display]		
	Displays the previous gain value of the amplifiers on the controller for Blue.		
001	Last Correct Value: BE Color	*ENG	[0 to 7 / **0** / 1 digit/step]

4661	[Digital Gain Adj. Display] RE: Red Even signal, RO: Red Odd signal		
001	Last Correct Value: RE Color	*ENG	[0 to 1023 / **0** / 1 digit/step]
002	Last Correct Value: RO Color	*ENG	

4662	[Digital Gain Adj. Display] GE: Green Even signal, GO: Green Odd signal		
001	Last Correct Value: GE Color	*ENG	[0 to 1023 / **0** / 1 digit/step]
002	Last Correct Value: GO Color	*ENG	

4663	[Digital Gain Adj. Display] BE: Blue Even signal, BO: Blue Odd signal		
001	Last Correct Value: BE Color	*ENG	[0 to 1023 / **0** / 1 digit/step]
002	Last Correct Value: BO Color	*ENG	

4673	[Black Level Adj. Display] RE: Red Even signal, RO: Red Odd signal		
001	Factory Setting: RE Color	*ENG	Displays the factory setting values of the black level adjustment for the even red signal in the CCD circuit board (color printing speed).. [0 to 16383 / **0** / 1 digit/step]
002	Factory Setting: RO Color	*ENG	Displays the factory setting values of the black level adjustment for the odd red signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]

4674	[Black Level Adj. Display] GE: Green Even signal, GO: Green Odd signal		
001	Factory Setting: GE Color	*ENG	Displays the factory setting values of the black level adjustment for the even green signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]
002	Factory Setting: GO Color	*ENG	Displays the factory setting values of the black level adjustment for the odd green signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]

4675	[Black Level Adj. Display] BE: Blue Even signal, BO: Blue Odd signal		
001	Factory Setting: BE Color	*ENG	Displays the factory setting values of the black level adjustment for the even blue signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]
002	Factory Setting: BO Color	*ENG	Displays the factory setting values of the black level adjustment for the odd blue signal in the CCD circuit board (color printing speed). [0 to 16383 / **0** / 1 digit/step]

4677	[Analog Gain Adj. Display]		
	Displays the factory setting values of the gain adjustment for Red.		
001	Factory Setting: RE Color	*ENG	[0 to 7 / **0** / 1 digit/step]

4678	[Analog Gain Adj. Display]		
	Displays the factory setting values of the gain adjustment for Green.		
001	Factory Setting: GE Color	*ENG	[0 to 7 / **0** / 1 digit/step]

4679	[Analog Gain Adj. Display]		
	Displays the factory setting values of the gain adjustment for Blue.		
001	Factory Setting: BE Color	*ENG	[0 to 7 / **0** / 1 digit/step]

4680	[Digital Gain Adj. Display]		
	Displays the gain value of the amplifiers on the controller for Red.		
001	Latest: RE Color	*ENG	[0 to 1023 / **0** / 1 digit/step]
002	Latest: RO Color	*ENG	

4681	[Digital Gain Adj. Display]		
	Displays the gain value of the amplifiers on the controller for Green.		
001	Latest: GE Color	*ENG	[0 to 1023 / **0** / 1 digit/step]
002	Latest: GO Color	*ENG	

4682	[Digital Gain Adj. Display]		
	Displays the gain value of the amplifiers on the controller for Blue.		
001	Latest: BE Color	*ENG	[0 to 1023 / **0** / 1 digit/step]
002	Latest: BO Color	*ENG	

4688	[DF Density Adjustment]		
	Adjusts the white shading parameter when scanning an image with the ARDF. Adjusts the density level if the ID of outputs made in the DF and Platen mode is different.		
001	-	*ENG	[50 to 150 / **100** / 1%/ step]

4690	[White Level Peak Read]		
	Displays the peak level of the white level scanning.		
001	RE	-	[0 to 1023 / **0** / 1 digit/step]
002	RO	-	

4691	[White Level Peak Read]		
	Displays the peak level of the white level scanning.		
001	GE	-	[0 to 1023 / **0** / 1 digit/step]
002	GO	-	

4692	[White Level Peak Read]		
	Displays the peak level of the white level scanning.		
001	BE	-	[0 to 1023 / **0** / 1 digit/step]
002	BO	-	

4693	[Black Level Peak Read]		
	Displays the peak level of the black level scanning.		
001	RE	-	[0 to 1023 / **0** / 1 digit/step]
002	RO	-	

4694	[Black Level Peak Read]		
	Displays the peak level of the black level scanning.		
001	GE	-	[0 to 1023 / **0** / 1 digit/step]
002	GO	-	

4695	[Black Level Peak Read]		
	Displays the peak level of the black level scanning.		
001	BE	-	[0 to 1023 / **0** / 1 digit/step]
002	BO	-	

4802	[DF Shading FreeRun]		
001	Lamp OFF	-	Executes the scanner free run of shading movement with exposure lamp on or off. Press "OFF" to stop this free run. Otherwise, the free run lasts.
002	Lamp ON		

4804	[Home Position Operation]		
001	-	-	Executes the scanner HP detection.

4806	[Carriage Move]		
001	-	-	Moves the carriage from the scanner home position. Dust may fall through the DF exposure glass. Therefore, do this SP when you transport the machine a long distance.

4807	[SBU Test Pattern Change]		
001	-	-	[0 to 250 / **0** / 1 /step] 1: Grid pattern 2: Gradation main scan 3: Gradation sub scan 4 to 250: Default (Scanning Image)

4808	[Factory Setting Input] DFU		
002	Execution Flag	-	[0 or 1 / **0** / 1 /step]

4810	[PWM] DFU

4811	[LED White Level Peak Read] DFU

4812	[LED White Level Peak Read] DFU

4902	[ACC Data Display]		
	This SP outputs the final data read at the end of ACC execution. A zero is returned if there was an error reading the data. [0 to 255 / **0** / 1 /step]		
001	R DATA1	*ENG	Photo C Patch Level 1 (8-bit)
002	G DATA1	*ENG	Photo M Patch Level 1 (8-bit)
003	B DATA1	*ENG	Photo Y Patch Level 1 (8-bit)
004	R DATA2	*ENG	Photo C Patch Level 17 (8-bit)
005	G DATA2	*ENG	Photo M Patch Level 17(8-bit)
006	B DATA2	*ENG	Photo Y Patch Level 17 (8-bit)

4905	[Select Gradation Level] DFU		
	Changes the parameters for error diffusion.		
001	-	*ENG	[0 to 255 / 0 / 1 /step]

4918	[Manual Gamma Adj]		
	Adjusts the offset data of the printer gamma for yellow in Photo mode. See “Printer Gamma Correction" in the Replacement and Adjustment for how to use.		
009	-	-	Enter the manual gamma adjustment screen (-001 to 008). For details, see the "Printer Gamma Correction" in the section "Replace and Adjustment".

4991	[IPU Image Path Selection]		
	Selects the image path. Enter the number to be selected using the 10-key pad.		
001	RGB Frame Memory	*ENG	[0 to 11 / **2** / 1 /step]
	0: Scanner input RGB images 1: Scanner I/F RGB images 2: RGB images done by Shading correction (Shading ON, Black offset ON) 3: Shading data 4 to 11: Not used		

4993	[High Light Correction]		
001	Sensitivity Selection	*ENG	Selects the Highlight correction level. [0 to 9 / **4** / 1 /step] 0: weakest sensitivity 9: strongest sensitivity
002	Range Selection	*ENG	Selects the range level of Highlight correction. [0 to 9 / **4** / 1 /step] 0: weakest skew correction, 9: strongest skew correction

4994	[Text/Photo Detection Level Adj.]		
	Selects the definition level between Text and Photo for high compression PDF.		
001	High Compression PDF	*ENG	[0 to 2 / **1** / 1 /step] 0: Text priority 1: Normal 2: Photo priority

4996	[White Paper Detect Level]		
	Adjusts the white paper detect level for fax.		
001	-	*ENG	[0 to 6 / **3** / 1 /step]

3.5 SYSTEM SP5-XXX

3.5.1 SP5-XXX (MODE)

5024	**[mm/inch Display Selection]**		
	Display units (mm or inch) for custom paper sizes.		
001	-	*CTL	[0 or 1 / **0** / -] 0: mm (Europe/Asia) 1: inch (USA)

5045	**[Accounting Counter]**		
	Selects the counting method. **NOTE:** The counting method can be changed only once, regardless of whether the counter value is negative or positive.		
001	Counter Method	*CTL	[0 or 1 / **0** / -] 0: Developments 1: Prints

5051	**[Toner Refill Detection Display]**		
	Enables or disables the toner refill detection display.		
001	-	*CTL	[0 or 1 / **0** / -] Alphanumeric 0: ON 1: OFF

5055	**[Display IP Address]**		
	Display or does not display the IP address on the operation panel.		
001	-	*CTL	[0 or 1 / **0** / -] 0: OFF 1: ON

5056	**[Coverage Counter Display]**		
	Display or does not display the coverage counter on the operation panel.		
001	-	*CTL	[0 or 1 / **0** / -] 0: Not display, 1: Display

5061	[Toner Remaining Icon Display Change]		
	Display or does not display the remaining toner display icon on the LCD.		
001	-	*CTL	[0 or 1 / **0** / -] 0: Not display, 1: Display

5062	[Parts Replacement Alert Display]		
	Display or does not display the PM part yield on the LCD.		
001	PCU: Bk	*CTL	[0 or 1 / **0** / -] 0: No display, 1: Display
002	PCU: M	*CTL	
003	PCU: C	*CTL	
004	PCU: Y	*CTL	
005	Development Unit: Bk	*CTL	[0 or 1 / **0** / -] 0: No display, 1: Display
006	Development Unit: M	*CTL	
007	Development Unit: C	*CTL	
008	Development Unit: Y	*CTL	
013	Image Transfer Belt	*CTL	[0 or 1 / **0** / -] 0: No display, 1: Display
014	Image Transfer Cleaning Unit	*CTL	
015	Fusing Unit	*CTL	
016	PTR Unit	*CTL	
017	Waster Toner Bottle	*CTL	

018	Fusing Roller	*CTL	
019	Fusing Belt	*CTL	

5066	[PM Parts Display] Display or does not display the "PM parts" button on the LCD.		
001	-	*CTL	[0 or 1 / **0** / -] 0: No display, 1: Display

5067	[Parts Replacement Operation Type]		
	Selects the service maintenance or user maintenance for each PM parts. If the user service is selected, PM alart is displayed on the LCD.		
001	PCU:Bk	*CTL	**[0: Service]** or [1: User]
002	PCU:M	*CTL	
003	PCU:C	*CTL	
004	PCU:Y	*CTL	
005	Dev Unit:Bk	*CTL	**[0: Service]** or [1: User]
006	Dev Unit:M	*CTL	
007	Dev Unit:C	*CTL	
008	Dev Unit:Y	*CTL	
013	Image Transfer Belt	*CTL	**[0: Service]** or [1: User]
014	Image Transfer Cleaning	*CTL	**[0: Service]** or [1: User]
015	Fusing Unit	*CTL	**[0: Service]** or [1: User]
016	PTR Unit	*CTL	**[0: Service]** or [1: User]
017	WasteToner Bottle	*CTL	**[0: Service]** or [1: User]
018	Fusing Roller	*CTL	**[0: Service]** or [1: User]
019	Fusing Belt	*CTL	**[0: Service]** or [1: User]

5071	[Set Bypass Paper Size Display] Display or does not display the by-pass paper size on the LCD.		
001	-	*CTL	[0 or 1 / **0** / -] 0: No display, 1: Display

5073	[Supply Part Replacement Operation Type] This SP makes it possible for users to replace the bottle.		
001	Waste Toner Bottle	*CTL	[0 or 1 / **0** / -] 0: Service, 1: User

5113	[Optional Counter Type]		
001	Default Optional Counter Type	*CTL	This program specifies the counter type. **0**: **None**, 1: Key card (RK 3, 4) 2: Key card (down), 3: Prepaid card 4: Coin rack, 5: MF key card 8: Key counter + Vendor 9: Bar-code Printer
002	External Optional Counter Type	*CTL	This program specifies the external counter type. **0**: **None** 1: Expansion Device 1 2: Expansion Device 2 3: Expansion Device 3

5114	[Optional Counter I/F]		
001	MF Key Card Extension	*CTL	[**0: Not installed/** 1: Installed (scanning accounting)]

5118	[Disable Copying]	*CTL	[**0**: Not disabled/ 1: Disabled]
001	This program disables copying.		

5120	[Mode Clear Opt. Counter Removal]	*CTL	[**0**: **Yes (removed)**/ 1: Standby (installed but not used)/ 2: No (not removed)]
001	This program updates the information on the optional counter. When you install or remove an optional counter, check the settings.		

5121	[Counter Up Timing]	*CTL	[**0: Feed**/ 1: Exit]
001	This program specifies when the counter goes up. The settings refer to "paper feed" and "paper exit" respectively.		

5127	[APS Mode]	*CTL	[**0**: Not disabled/ 1: Disabled]
001	This program disables the APS.		

5128	[Code Mode With Key/Card Option]	*CTL	[**0**: Not disabled/ 1: Disabled]
001	This program disables the code mode with key/card option.		

5131	**[Paper Size Type Selection]**		
001	1.NA 2.EU ASIA	*ENG	[0 to 2 / **1: NA, 2: EU** / 1] 0: Japan, 1: NA, 2: EU
	Selects the paper size type (for originals and paper). After changing the value, turn the main power switch off and on.		

5150	[Bypass Length Setting]	*CTL	[**0**: OFF/ 1: ON]
001	Determines whether the transfer sheet from the by-pass tray is used or not. Normally the paper length for sub scanning paper from the by-pass tray is limited to 600 mm, but this can be extended with this SP to 1260 mm.		

5162	[App. Switch Method]	*CTL	[**0**: Soft Key Set/ 1: Hard Key Set]
001	This program specifies the switch that selects an application program.		

5167	[Fax Printing Mode at Optional]		
	Enables or disables the automatic print out without an accounting device. This SP is used when the receiving fax is accounted by an external accounting device.		
001	Fax Printing Mode at Optional Counter Off	*CTL	[0 or 1 / **0** / -] 0: Automatic printing 1: No automatic printing

5169	**[CE Login]**		
	If you will change the printer bit switches, you must 'log in' to service mode with this SP before you go into the printer SP mode.		
001	-	*CTL	[0 or 1 / **0** / -] 0: Disabled 1: Enabled

5186	[RK4]		
	Enables or disables the prevention for RK4 (accounting device) disconnection. If the RK4 is disconnected for 10 seconds when this SP is set to "1 (Enable)", the machine automatically jams a sheet of paper and stops.		
001	-	*ENG	[0 or 1 / **0** / 1 /step] 0: Disable 1: Enable

5188	[Copy Nv Version]		
	Displays the version number of the NVRAM on the controller board.		
001	-	-	-

5191	[Mode Set] DFU		
001	-	*CTL	[0 or 1 / **1** / -] 0: Off, 1: On
	Enables or disables the STR (Suspend to RAM) mode.		

5195	**[Limitless SW] DFU**		
001	-	*CTL	[0 or 1 / **1** / -] 0: Productivity priority 1: Tray priority
	Selects the paper feed mode. **Productivity priority:** This changes the feeding tray as soon as the machine detects the priority tray even the paper still remains in the feeding tray. **Tray priority:** This changes the feeding tray after the paper in the tray where the machine has been feeding paper has been run out of. This SP is activated only when a customer selects the "Auto Paper Selsct".		

5199	[Paper Exit After Staple End.]		
001	-	*CTL	[0 or 1 / **0** / -] 0: OFF, 1: ON
	Enables or disables the paper feeding out from the finisher without stapling. ▪ If this setting is "1: ON", paper is fed out without stapling at the maximum number of the finisher stapling when the machine gets a multiple printing job (over maximum number). ▪ If this setting is "0: OFF", paper is fed out with stapling at the maximum number of the finisher stapling when the machine gets a multiple printing job (over maximum number).		

5212	[Page Numbering]	*CTL	
	This program adjusts the position of the second side page numbers. A "– value" moves the page number positions to the left edge. A "+ value" moves the page number positions to the right edge.		
003	Duplex Printout Right/Left Position	[–10 to 10 / **0** / 1 mm/step]	
004	Duplex Printout High/Low Position	[–10 to 10 / **0** / 1 mm/step]	

5302	**[Set Time]**		
	Adjusts the RTC (real time clock) time setting for the local time zone. Examples: For Japan (+9 GMT), enter 540 (9 hours x 60 min.) DOM: +540 (Tokyo) NA: -300 (New York) EU: + 60 (Paris) CH: +480 (Peking) TW: +480 (Taipei) AS: +480 (Hong Kong) KO: +540 (Korea)		
002	Time Difference	*CTL#	[-1440 to 1440 / **Area** / 1 min./step]

5307	**[Summer Time]**		
001	Setting	-	[0 to 1 / **NA, EU, ASIA** / 1 /step] 0: Disabled 1: Enabled NA and EUR: 1, ASIA: 0
	Enables or disables the summer time mode. Note ▪ Make sure that both SP5-307-3 and -4 are correctly set. Otherwise, this SP is not activated even if this SP is set to "1".		
003	Rule Set (Start)	-	

<table>
<tr><td></td><td colspan="3">Specifies the start setting for the summer time mode.
There are 8 digits in this SP. For months 1 to 9, the "0" cannot be input in the first digit, so the eight-digit setting for -2 or -3 becomes a seven-digit setting.
1st and 2nd digits: The month. [1 to 12]
3rd digit: The week of the month. [1 to 5]
4th digit: The day of the week. [0 to 6 = Sunday to Saturday]
5th and 6th digits: The hour. [00 to 23]
7th digit: The length of the advanced time. [0 to 9 / 1 hour /step]
8th digit: The length of the advanced time. [0 to 5 / 10 minutes /step]
For example: 3500010 (EU default)
The timer is advanced by 1 hour at am 0:00 on the 5th Sunday in March
▪ The digits are counted from the left.
▪ Make sure that SP5-307-1 is set to "1".</td></tr>
<tr><td rowspan="2">004</td><td>Rule Set (End)</td><td>-</td><td>-</td></tr>
<tr><td colspan="3">Specifies the end setting for the summer time mode.
There are 8 digits in this SP.
1st and 2nd digits: The month. [1 to 12]
3rd digit: The week of the month. [0 to 5]
4th digit: The day of the week. [0 to 7 = Sunday to Saturday]
5th and 6th digits: The hour. [00 to 23]
The 7th and 8 digits must be set to "00".
▪ The digits are counted from the left.
▪ Make sure that SP5-307-1 is set to "1".</td></tr>
</table>

5401	**[Access Control] DFU**		
	When installing the SDK application, SAS (VAS) adjusts the following settings.		
103	Default Document ACL	*CTL	-
	Whenever a new login user is added to the address book in external certification mode (for Windows, LDAP, RDH), the default document ACL is updated according to this SP setting. [0 to 3 / **0** / 1] 0: View 1: Edit 2: Edit/Delete 3: Full control **Note:** This SP setting is ignored on a machine that is not using document server.		
104	Authentication Time	*CTL	[0 to 255 / 0 / 1 second]
	Specifies the time for the authentication timeout. 0 = 60 seconds, 1 to 255 = displayed time (seconds)		
162	Extend Certification Detail	*CTL	Selects the log out type for the extend authentication device. Bit 0: Log-out without an IC card 0: Not allowed (default) 1: Allowed
200	SDK1 Unique ID	*CTL	"SDK" is the "Software Development Kit". This data can be converted from SAS (VAS) when installed or uninstalled.
201	SDK1 Certification Method	*CTL	
210	SDK2 Unique ID	*CTL	
211	SDK2 Certification Method	*CTL	
220	SDK3 Unique ID	*CTL	
221	SDK3 Certification	*CTL	

	Method		
230	SDK certification device	*CTL	-
	▪ Bit 0: SDK authentication 0: Off (Default), 1: On (SDK authentication enabled) Selects the SDK authentication setting. ▪ Bit 2: Administrator log in setting 0: Off (Default), 1: On		
240	Detail Option	*CTL	-
	Enalbes or disables the log out confirmation option. ▪ Bit 0: Log out confirmation option 0: Enable (default), 1: Disable Selects the automatic log out time. ▪ Bit 1 and 2: Automatic log out timer reduction 00: 60 seconds (default), 01: 10 seconds, 10: 20 seconds, 11: 30 seconds		

5404	**[User Code Counter Clear]**		
001	-	*CTL	Clears all counters for users.

5411	**[LDAP Certification]**		
004	Easy Certification	*CTL	Determines whether easy LDAP certification is done. [0 to 1 / **1** / 1] 1: On, 0: Off
005	Password Null Not Permit	*CTL	This SP is referenced only when SP5411-4 is set to "1" (On). [0 to 1 / **1** / 1] 0: Password NULL not permitted. 1: Password NULL permitted.
006	Detail Option	*CTL	-

5413	[Lockout Setting]		
001	Lockout On/Off	*CTL	Switches on/off the lock on the local address book account. [0 to 1 / **0** / 1] 0: Off, 1: On
002	Lockout Threshold	*CTL	Sets a limit on the frequency of lockouts for account lockouts. [1 to 10 / **5** / 1]
003	Cancellation On/Off	*CTL	Determines whether the system waits the prescribed time for input of a correct user ID and password after an account lockout has occurred. [0 to 1 / **0** / 1] 0: Off (no wait time, lockout not cancelled) 1: On (system waits, cancels lockout if correct user ID and password are entered.
004	Cancellation Time	*CTL	Determines the length of time that the system waits for correct input of the user ID and password after a lockout has occurred. This setting is used only if SP5413-3 is set to "1" (on). [1 to 9999 / **60** / 1 min.]

5414	[Access Mitigation]		
001	Mitigation On/Off	*CTL	Switches on/off masking of continuously used IDs and passwords that are identical. [0 to 1 / **0** /1] 0: Off 1: On

002	Mitigation Time	*CTL	Sets the length of time for excluding continuous access for identical user IDs and passwords. [0 to 60 / **15** / 1 min.]

5415	**[Password Attack]**		
001	Permissible Number	*CTL	Sets the number of attempts to attack the system with random passwords to gain illegal access to the system. [0 to 100 / **30** / 1 attempt]
002	Detect Time	*CTL	Sets the time limit to stop a password attack once such an attack has been detected. [1 to 10 / **5** / 1 sec.]

5416	**[Access Information]**		
001	Access User Max Num	*CTL	Limits the number of users used by the access exclusion and password attack detection functions. [50 to 200 / **200** / 1 users]
002	Access Password Max Num	*CTL	Limits the number of passwords used by the access exclusion and password attack detection functions. [50 to 200 / **200** / 1 passwords]
003	Monitor Interval	*CTL	Sets the processing time interval for referencing user ID and password information. [1 to 10 / **3** / 1 sec.]

5417	**[Access Attack]**		
001	Access Permissible Number	*CTL	Sets a limit on access attempts when an excessive number of attempts are detected for MFP features. [0 to 500 / **100** / 1]
002	Attack Detect Time	*CTL	Sets the length of time for monitoring the frequency of access to MFP features. [10 to 30 / **10** / 1 sec.]
003	Productivity Fall Wait	*CTL	Sets the wait time to slow down the speed of certification when an excessive number of access attempts have been detected. [0 to 9 / **3** / 1 sec.]
004	Attack Max Num	*CTL	Sets a limit on the number of requests received for certification in order to slow down the certification speed when an excessive number of access attempts have been detected. [50 to 200 / **200** /1 attempt]

5420	**[User Authentication]**		
	These settings should be done with the System Administrator. **Note**: These functions are enabled only after the user access feature has been enabled.		
001	Copy	*CTL	Determines whether certification is required before a user can use the copy applications. [0 to 1 / **0** /1] 0: On, 1: Off
002	Color Security Setting	*CTL	-
	Enables or disables the color copy limitation for each copy mode when the		

	user authentication is "ON". **0: Enable (default)**, 1: Disable Bit0: B/W mode Bit1: Mono color mode Bit2: Two colors mode Bit3: Full color mode Bit4: Automatic color mode Bit5 to 7: Reserved		
011	DocumentServer	*CTL	Determines whether certification is required before a user can use the document server. [0 or 1/ **0** /1] 0: On, 1: Off
021	Fax	*CTL	Determines whether certification is required before a user can use the fax application. [0 or 1/ **0** /1] 0: On, 1: Off
031	Scanner	*CTL	Determines whether certification is required before a user can use the scan applications. [0 or 1/ **0** /1] 0: On, 1: Off
041	Printer	*CTL	Determines whether certification is required before a user can use the printer applications. [0 or 1/ **0** /1] 0: On, 1: Off
051	SDK1	*CTL	[0 or 1 / **0** / 1] 0: ON. 1: OFF Determines whether certification is required before a user can use the SDK application.
061	SDK2		
071	SDK3		

5430	Auth Dialog Message Change		
001	Message Change On/Off	*CTL	[0 or 1 / **0** / 1]
002	Message Text Download		
003	Message Text ID		

5431	External Auth User Preset		
010	Tag	*CTL	-
011	Entry		
012	Group		
020	Mail		
030	Fax		
031	Fax Sub		
032	Folder		
033	Protect Code		
034	SMTP Auth		
035	LDAP Auth		
036	SMB FTP Folder Auth		
037	Acnt Acl		
038	Document Acl		
040	Cert Crypt		
050	User Limit Count		

5481	**[Authentication Error Code]**		
	These SP codes determine how the authentication failures are displayed.		
001	System Log Disp	*CTL	Determines whether an error code appears in the system log after a user authentication failure occurs. [0 or 1/ **0** /1] 0: Off, 1: On
002	Panel Disp	*CTL	Determines whether an error code appears on the operation panel after a user authentication failure occurs. [0 or 1/ **1** /1] 1: On, 0: Off

5490	**[MF KeyCard (Japan only)]**		
001	Job Permit Setting	*CTL	Sets up operation of the machine with a keycard. [0 to 1 / **0** / 1] 0: Disabled. Cancels operation without a user code. 1: Enabled. Allows operation without a user code.
002	Count Mode Setting	*CTL	-

5501	**[PM Alarm]**	*CTL	-
001	PM Alarm Level	[0 to 9999 / **0** / 1 /step] 0: Alarm off 1 to 9999: Alarm goes off when **Value (1 to 9999) x 1000 > PM counter**	
002	Original Count Alarm	[0 or 1 / **0** / –] 0: No alarm sounds 1: Alarm sounds after the number of originals passing through the ARDF > 10,000	

5504	**[Jam Alarm]**	*CTL	-
001	Sets the alarm to sound for the specified jam level (document misfeeds are not included). [0 to 3 / **3** / 1 /step] 0: Zero (Off) 1: Low (2.5K jams) 2: Medium (3K jams) 3: High (6K jams)		

5505	**[Error Alarm]**		
	Sets the error alarm level. The error alarm counter counts "1" when any SC is detected. However, the error alarm counter decreases by "1" when an SC is not detected during a set number of copied sheets (for example, default 1500 sheets). The error alarm occurs when the SC error alarm counter reaches "5".		
001	-	*CTL	[0 to 255 / **32** / 100 copies /step]

5507	**[Supply Alarm]**	*CTL	-
	Enables or disables the notifying a supply call via the @Remote.		
001	Paper Supply Alarm	**0**: Off, 1: On	
002	Staple Supply Alarm	0: Off, **1: On**	
003	Toner Supply Alarm	0: Off, **1**: On	
006	Waste Toner Bottle Supply Alarm	0: Off, **1**: On	
080	Toner Call Timing	Changes the timing of the "Toner Supply Call" via the @Remote, when the following conditions occur. 0: At replacement 1: At near end	
128	Interval :Others	[250 to 10000 / **1000** / 1 /step]	
133	Interval :A4		
134	Interval :A5		
142	Interval :B5		
164	Interval :LG		
166	Interval :LT		
172	Interval :HLT		

5508*	**[CC Call]**	*CTL	-
001*	Jam Remains	0: Disable, **1**: Enable	
	Enables/disables initiating a call for an unattended paper jam.		
002*	Continuous Jams	0: Disable, **1**: Enable	
	Enables/disables initiating a call for consecutive paper jams.		
003*	Continuous Door Open	0: Disable, **1**: Enable	
	Enables/disables initiating a call when the front door remains open.		
011*	Jam Detection: Time Length	[3 to 30 / **10** / 1 minute /step]	
	Sets the time a jam must remain before it becomes an “unattended paper jam”. This setting is enabled only when SP5508-004 is set to "1".		
012*	Jam Detection: Continuous Count	[2 to 10 / **5** / 1 /step]	
	Sets the number of consecutive paper jams required to initiate a call. This setting is enabled only when SP5508-004 is set to "1".		
013*	Door Open: Time Length	[3 to 30 / **10** / 1 /step]	
	Sets the length of time the door remains open before the machine initiates a call. This setting is enabled only when SP5-508-004 is set to "1".		

5515	**[SC/Alarm Setting]**	
	With @Remote in use, these SP codes can be set to issue an SC call when an SC error occurs. If this SP is switched off, the SC call is not issued when an SC error occurs.	
001	SC Call	[0 or 1 / **1** / -] 0: Off, 1: On
002	Service Parts Near End Call	[0 or 1 / **0** / -] 0: Off, 1: On
003	Service Parts End Call	

004	User Call	[0 or 1 / **1** / -] 0: Off, 1: On
006	Communication Test Call	
007	Machine Information Notice	
008	Alarm Notice	[0 or 1 / **1** / -] 0: Off, 1: On
009	Non Genuin Tonner Alarm	[0 or 1 / **1** / -] 0: Off, 1: On
010	Supply Automatic Ordering Call	
011	Supply Manegement Report Call	
012	Jam/Door Open Call	

Note

- Memory Clear (SP5-801)
- The following tables list the items that are cleared. The serial number information, meter charge setting and meter charge counters are not cleared.

5516	[Individual PM Part Alarm Call]		
001	Disable/ Enable Setting		[0 or 1 / **1** / -] 0: Not Send, 1: Send

5610	[Base Gamma Control Point: Execute]		
004	Get Factory Default	-	-
	Recalls the factory settings.		
005	Set Factory Default	-	-
	Overwrites the current values onto the factory settings.		
006	Restore Original Value	-	-
	Recalls the previous settings.		

5611	[Toner Color in 2C]		
001	B-C	*ENG	[0 to 128 / **100** / 1 /step] 128: Darkest density
	Adjusts the Cyan correction value of the blue signal in two-color mode.		
002	B-M	*ENG	[0 to 128 / **100** / 1 /step] 128: Darkest density
	Adjusts the Magenta correction value of the blue signal in two-color mode.		
003	G-C	*ENG	[0 to 128 / **100** / 1 /step] 128: Darkest density
	Adjusts the Cyan correction value of the blue signal in two-color mode.		
004	G-Y	*ENG	[0 to 128 / **100** / 1 /step] 128: Darkest density
	Adjusts the Yellow correction value of the blue signal in two-color mode.		
005	R-M	*ENG	[0 to 128 / **100** / 1 /step] 128: Darkest density
	Adjusts the Magenta correction value of the blue signal in two-color mode.		
006	R-Y	*ENG	[0 to 128 / **100** / 1 /step] 128: Darkest density
	Adjusts the Yellow correction value of the blue signal in two-color mode.		

5618	**[Color Mode Display Selection]**		
001	-	*CTL	[0 or 1 / **1** / -] 0: ACS, Colour, Black & White, Two Colour, Single colour 1: ACD, Full Colour, Black & White
	Selects the color selection display on the LCD.		

Note

- Memory Clear (SP5-801)
- The following tables list the items that are cleared. The serial number information, meter charge setting and meter charge counters (SP8-581, 582, 583, 584, and 586) are not cleared.

5801	**[Memory Clear]**	
001	All Clear	Resets all correction data for process control and all software counters, and returns all modes and adjustments to their default values.
002	Engine	Clears the engine settings.
003	SCS	Initializes default system settings, SCS (System Control Service) settings, operation display coordinates, and ROM update information.
004	IMH Memory Clr	Initializes the IMH settings.
005	Mcs	Initializes the Mcs settings.
006	Copier Application	Initializes all copier application settings.
007	Fax Application	Initializes the fax reset time, job login ID, all TX/RX settings, local storage file numbers, and off-hook timer.
008	Printer Application	The following service settings: ▪ Bit switches ▪ Gamma settings (User & Service) ▪ Toner Limit The following user settings: ▪ Tray Priority ▪ Menu Protect ▪ System Setting except for setting of Energy Saver ▪ I/F Setup (I/O Buffer and I/O Timeout) ▪ PCL Menu

009	Scanner Application	Initializes the scanner defaults for the scanner and all the scanner SP modes.
010	Web Service	Deletes the network file application management files and thumbnails, and initializes the job login ID.
011	NCS	All setting of Network Setup (User Menu) (NCS: Network Control Service)
012	R-Fax	Initializes the job login ID, SmartDeviceMonitor for Admin, job history, and local storage file numbers.
014	Clear DCS Setting	Initializes the DCS (Delivery Control Service) settings.
015	Clear UCS Setting	Initializes the UCS (User Information Control Service) settings.
016	MIRS Setting	Initializes the MIRS (Machine Information Report Service) settings.
017	CCS	Initializes the CCS (Certification and Charge-control Service) settings.
018	SRM Memory Clr	Initializes the SRM (System Resource Manager) settings.
019	LCS	Initializes the LCS settings.
020	Web Uapli	Initializes the web user application settings.
021	ECS	Initializes the ECS settings.

5803	**[Input Check]**	See "Input Check Table" in this section.
5804	**[Output Check]**	See "Output Check Table" in this section.

5805	**[Anti-Condensation Heater]**		
	0: Default setting. The heater is on when the main switch is off or when the machine is in energy saver mode. 1: The heater is always on.		
001	0:OFF/ 1:ON	*ENG	[0 or 1/ **0** / -]

5806	**[RFID Cont. Reading] DFU**		
001	Times	*ENG	[0 to 65535 / **0** / 1 time/step]
002	NOT 0	*ENG	
003	RET.	*ENG	
004	EXE.ALL	*ENG	OFF or ON
005	EXE.K	*ENG	
006	EXE.M	*ENG	
007	EXE.C	*ENG	
008	EXE.Y	*ENG	

5810	**[SC Reset]**		
	Resets a type A service call condition. Note ▪ Turn the main switch off and on after resetting the SC code.		
001	Fusing SC Reset	-	-

5811	**[Machine Serial]** Machine Serial Number Display		
002	Display	*ENG	Displays the machine serial number.
004	BCU	*ENG	Inputs the serial number.

5812	**[Service Tel. No. Setting]**		
001	Service	*CTL	-
	Sets the telephone number for a service representative. This number is printed on the Counter List, which can be printed with the user's "Counter" menu. This can be up to 20 characters (both numbers and alphabetic characters can be input).		
002	Facsimile	*CTL	-
	Sets the fax or telephone number for a service representative. This number is printed on the Counter List. This can be up to 20 characters (both numbers and alphabetic characters can be input).		
003	Supply	*CTL	-
	Use this to input the telephone number of your supplier for consumables. Enter the number and press #.		
004	Operation	*CTL	-
	Use this to input the telephone number of your sales agency. Enter the number and press #.		

5816	**[Remote Service]**	*CTL	**-**
001	I/F Setting		
	Selects the remote service setting. [0 to 2 / **2** / 1 /step] 0: Remote service off 1: CSS remote service on 2: @Remote service on		
002	CE Call		
	Performs the CE Call at the start or end of the service. [0 or 1 / **0** / 1 /step]		

	0: Start of the service 1: End of the service **NOTE:** This SP is activated only when SP 5816-001 is set to "2".
003	Function Flag
	Enables or disables the remote service function. [0 to 1 / **0** / 1 /step] 0: Disabled, 1: Enabled **NOTE:** This SP setting is changed to "1" after @Remote registor has been completed.
007	SSL Disable
	Uses or does not use the RCG certification by SSL when calling the RCG. [0 to 1 / **0** / 1 /step] 0: Uses the RCG certification 1: Does no use the RCG certification
008	RCG Connect Timeout
	Specifies the connect timeout interval when calling the RCG. [1 to 90 / **30** / 1 second /step]
009	RCG Write Timeout
	Specifies the write timeout interval when calling the RCG. [1 to 100 / **60** / 1 second /step]
010	RCG Read Timeout
	Specifies the read timeout interval when calling the RCG. [1 to 100 / **60** / 1 second /step]
011	Port 80 Enable
	Enables/disables access via port 80 to the SOAP method. [0 or 1 / **0** / –] 0: Disabled, 1: Enabled

013	RFU (Remote Frimware Update) Timing
	Selects the RFU timing. [0 or 1 / **1** / –] 0: RFU is executed whenever update request is received. 1: RFU is executed only when the machine is in the sleep mode.
021	RCG-C Registed
	This SP displays the Embedded RC Gate installation end flag. 0: Installation not completed 1: Installation completed
023	Connect Type (N/M)
	This SP displays and selects the Embedded RC Gate connection method. [0 or 1 / **0** / 1 /step 0: Internet connection 1: Dial-up connection
061	Cert. Expire Timing **DFU**
	Proximity of the expiration of the certification.
062	Use Proxy
	This SP setting determines if the proxy server is used when the machine communicates with the service center.
063	Proxy Host
	This SP sets the address of the proxy server used for communication between Embedded RC Gate-N and the gateway. Use this SP to set up or display the customer proxy server address. The address is necessary to set up Embedded RC Gate-N. Note ▪ The address display is limited to 128 characters. Characters beyond the 128 character are ignored. ▪ This address is customer information and is not printed in the SMC report.
064	Proxy Port Number

<table>
<tr><td></td><td>This SP sets the port number of the proxy server used for communication between Embedded RC Gate-N and the gateway. This setting is necessary to set up Embedded RC Gate-N.
Note
▪ This port number is customer information and is not printed in the SMC report.</td></tr>
<tr><td rowspan="2">065</td><td>Proxy User Name</td></tr>
<tr><td>This SP sets the HTTP proxy certification user name.
Note
▪ The length of the name is limited to 31 characters. Any character beyond the 31st character is ignored.
▪ This name is customer information and is not printed in the SMC report.</td></tr>
<tr><td rowspan="2">066</td><td>Proxy Password</td></tr>
<tr><td>This SP sets the HTTP proxy certification password.
Note
▪ The length of the password is limited to 31 characters. Any character beyond the 31st character is ignored.
▪ This name is customer information and is not printed in the SMC report.</td></tr>
<tr><td rowspan="6">067</td><td colspan="2">CERT: Up State</td></tr>
<tr><td colspan="2">Displays the status of the certification update.</td></tr>
<tr><td>0</td><td>The certification used by Embedded RC Gate is set correctly.</td></tr>
<tr><td>1</td><td>The certification request (setAuthKey) for update has been received from the GW URL and certification is presently being updated.</td></tr>
<tr><td>2</td><td>The certification update is completed and the GW URL is being notified of the successful update.</td></tr>
<tr><td>3</td><td>The certification update failed, and the GW URL is being notified of the failed update.</td></tr>
<tr><td>4</td><td>The period of the certification has expired and new request for an update is being sent to the GW URL.</td></tr>
</table>

	11	A rescue update for certification has been issued and a rescue certification setting is in progress for the rescue GW connection.
	12	The rescue certification setting is completed and the GW URL is being notified of the certification update request.
	13	The notification of the request for certification update has completed successfully, and the system is waiting for the certification update request from the rescue GW URL.
	14	The notification of the certification request has been received from the rescue GW controller, and the certification is being stored.
	15	The certification has been stored, and the GW URL is being notified of the successful completion of this event.
	16	The storing of the certification has failed, and the GW URL is being notified of the failure of this event.
	17	The certification update request has been received from the GW URL, the GW URL was notified of the results of the update after it was completed, but a certification error has been received, and the rescue certification is being recorded.
	18	The rescue certification of No. 17 has been recorded, and the GW URL is being notified of the failure of the certification update.
068	CERT: Error	
	Displays a number code that describes the reason for the request for update of the certification.	
	0	Normal. There is no request for certification update in progress.
	1	Request for certification update in progress. The current certification has expired.
	2	An SSL error notification has been issued. Issued after the certification has expired.
	3	Notification of shift from a common authentication to an individual certification.
	4	Notification of a common certification without ID2.

	5	Notification that no certification was issued.
	6	Notification that GW URL does not exist.
069	CERT: Up ID	The ID of the request for certification.
083	Firmware Up Status	Displays the status of the firmware update.
085	Firm Up User Check	This SP setting determines if the operator can confirm the previous version of the firmware before the firmware update execution. If the option to confirm the previous version is selected, a notification is sent to the system manager and the firmware update is done with the firmware files from the URL.
086	Firmware Size	Allows the service technician to confirm the size of the firmware data files during the firmware update execution.
087	CERT: Macro Version	Displays the macro version of the @Remote certification.
088	CERT: PAC Version	Displays the PAC version of the @Remote certification.
089	CERT: ID2 Code	Displays ID2 for the @Remote certification. Spaces are displayed as underscores (_). Asteriskes (****) indicate that no @Remote certification exists.
090	CERT: Subject	Displays the common name of the NRS certification subject. CN = the following 17 bytes. Spaces are displayed as underscores (_). Asterisks (****) indicate that no DESS exists.
091	CERT: Serial Number	Displays serial number for the @Remote certification. Asterisks (****) indicate that no DESS exists.

092	CERT: Issuer	Displays the common name of the issuer of the @Remote certification. CN = the following 30 bytes. Asteriskes (****) indicate that no DESS exists.
093	CERT: Valid Start	Displays the start time of the period for which the current @Remote certification is enabled.
094	CERT: Valid End	Displays the end time of the period for which the current @Remote certification is enabled.
150	Selection Country	
	Select the country where embedded RCG-M is installed in the machine. After selecting the country, you must also set the following SP codes for embedded RCG-M: ▪ SP5816-153 ▪ SP5816-154 ▪ SP5816-161 0: Japan, 1: USA, 2: Canada, 3: UK, 4: Germany, 5: France, 6: Italy, 7: Netherlands, 8: Belgium, 9: Luxembourg, 10: Spain	
151	Line Type Authentication Judgment	
	Press [Execute]. Setting this SP classifies the telephone line where embedded RCG-M is connected as either dial-up (pulse dial) or push (DTMF tone) type, so embedded RCG-M can automatically distinguish the number that connects to the outside line. ▪ The current progress, success, or failure of this execution can be displayed with SP5816-152. ▪ If the execution succeeded, SP5816-153 will display the result for confirmation and SP5816-154 will display the telephone number for the connection to the outside line.	
152	Line Type Judgment Result	
	Displays a number to show the result of the execution of SP5816 151. Here is a list of what the numbers mean. 0: Success	

	1: In progress (no result yet). Please wait. 2: Line abnormal 3: Cannot detect dial tone automatically 4: Line is disconnected 5: Insufficient electrical power supply 6: Line classification not supported 7: Error because fax transmission in progress – ioctl() occurred. 8: Other error occurred 9: Line classification still in progress. Please wait.
153	Selection Dial/Push
	This SP displays the classification (tone or pulse) of the telephone line to the access point for embedded RCG-M. The number displayed (0 or 1) is the result of the execution of SP5816-151. However, this setting can also be changed manually. [0 or 1 / **0** / 1 /step] 0: Tone Dialing Phone 1: Pulse Dialing Phone Inside Japan "2" may also be displayed: 0: Tone Dialing Phone 1: Pulse Dialing Phone 10PPS 2: Pulse Dialing Phone 20PPS
154	Outside Line/Outgoing Number
	The SP sets the number that switches to PSTN for the outside connection for embedded RCG-M in a system that employs a PBX (internal line). ▪ If the execution of SP5816-151 has succeeded and embedded RCG-M has connected to the **external** line, this SP display is completely blank. ▪ If embedded RCG-M has connected to an **internal** line, then the number of the connection to the external line is displayed. ▪ If embedded RCG-M has connected to an external line, a comma is displayed with the number. The comma is inserted for a 2 sec. pause. ▪ The number setting for the external line can be entered manually (including commas).

156	Dial Up User Name
	Use this SP to set a user name for access to remote dial up. Follow these rules when setting a user name: ▪ Name length: Up to 32 characters ▪ Spaces and # allowed but the entire entry must be enclosed by double quotation marks (").
157	Dial Up Password
	Use this SP to set a password for access to remote dial up. Follow these rules when setting a user name: ▪ Name length: Up to 32 characters Spaces and # allowed but the entire entry must be enclosed by double quotation marks (").
161	Local Phone Number
	Use this SP to set the telephone number of the line where embedded RCG-M is connected. This number is transmitted to and used by the Call Center to return calls. Limit: 24 numbers (numbers only)
162	Connection Timing Adjustment: Incoming
	When the Call Center calls out to an embedded RCG-M modem, it sends a repeating ID tone (*#1#). This SP sets the time the line remains open to send these ID tones after the number of the embedded RCG-M modem is dialed up and connected. [0 to 24 / **1** / 1 /step] The actual amount of time is this setting x 2 sec. For example, if you set "2" the line will remain open for 4 sec.

163	Access Point	
	This is the number of the dial-up access point for RCG-M. If no setting is done for this SP code, then a preset value (determined by the country selected) is used. Default: 0 Allowed: Up to 16 alphanumeric characters	
164	Line Connecting	
	This SP sets the connection conditions for the customer. This setting dedicates the line to RCG-M only, or sets the line for sharing between RCG-M and a fax unit. [0 to 1 / **0** / 1 /step] 0: Sharing Fax 1: No Sharing Fax Note ▪ If this setting is changed, the copier must be cycled off and on. ▪ SP5816 187 determines whether the off-hook button can be used to interrupt a RCG-M transmission in progress to open the line for fax transaction.	
173	Modem Serial Number	This SP displays the serial number registered for the RCG -M.
174	Retransmission Limit	
	Normally, it is best to allow unlimited time for certification and ID2 update requests, and for the notification that the certification has been completed. However, RCG -M generates charges based on transmission time for the customer, so a limit is placed upon the time allowed for these transactions. If these transactions cannot be completed within the allowed time, do this SP to cancel the time restriction.	

187	FAX TX Priority	-	
	This SP determines whether pushing the off-hook button will interrupt a RCG-M transmission in progress to open the line for fax transaction. This SP can be used only if SP5816 164 is set to "0". [0 or 1/ **0** / -] 0: Disable, 1: Enable		
200	Manual Polling	-	Executes the manual polling.
201	Regist: Status		
	Displays a number that indicates the status of the @Remote service device. 0: Neither the registered device by the external nor embedded RCG device is set. 1: The embedded RCG device is being set. Only Box registration is completed. In this status, this unit cannot answer a polling request from the external RCG. 2. The embedded RCG device is set. In this status, the external RCG unit cannot answer a polling request. 3. The registered device by the external RCG is being set. In this status the embedded RCG device cannot be set. 4 The registered module by the external RCG has not started.		
202	Letter Number	Allows entry of the number of the request needed for the embedded RCG.	
203	Confirm Execute	Executes the inquiry request to the @Remote GW URL.	
204	Confirm Result		
	Displays a number that indicates the result of the inquiry executed with SP5816 203. 0: Succeeded 1: Inquiry number error 2: Registration in progress 3: Proxy error (proxy enabled) 4: Proxy error (proxy disabled) 5: Proxy error (Illegal user name or password)		

	6: Communication error 7: Certification update error 8: Other error 9: Inquiry executing		
205	Confirm Place		
	Displays the result of the notification sent to the device from the GW URL in answer to the inquiry request. Displayed only when the result is registered at the GW URL.		
206	Register Execute	Executes "Embedded RCG Registration".	
207	Register Result		
	Displays a number that indicates the registration result. 0: Succeeded 2: Registration in progress 3: Proxy error (proxy enabled) 4: Proxy error (proxy disabled) 5: Proxy error (Illegal user name or password) 6: Communication error 7: Certification update error 8: Other error 9: Registration executing		
208	Error Code		
	Displays a number that describes the error code that was issued when either SP5816-204 or SP5816-207 was executed.		
	Cause	**Code**	**Meaning**
	Illegal Modem Parameter	-11001	Chat parameter error
		-11002	Chat execution error
		-11003	Unexpected error
	Operation Error, Incorrect Setting	-12002	Inquiry, registration attempted without acquiring device status.
		-12003	Attempted registration without

			execution of an inquiry and no previous registration.
		-12004	Attempted setting with illegal entries for certification and ID2.
	Error Caused by Response from GW URL	-2385	Attempted dial up overseas without the correct international prefix for the telephone number.
		-2387	Not supported at the Service Center
		-2389	Database out of service
		-2390	Program out of service
		-2391	Two registrations for same device
		-2392	Parameter error
		-2393	Basil not managed
		-2394	Device not managed
		-2395	Box ID for Basil is illegal
		-2396	Device ID for Basil is illegal
		-2397	Incorrect ID2 format
		-2398	Incorrect request number format
209	@Remote Setting Clear	Releases the machine from its embedded RCG setup.	
250	CommLog Print	Prints the communication log.	

5821	**[Remote Service Address]**		
002	RCG IP Address	*CTL	Sets the IP address of the RCG (Remote Communication Gate) destination for call processing at the remote service center.

5824	**[NV-RAM Data Upload]**		
	Uploads the UP and SP mode data (except for counters and the serial number) from the NVRAM to an SD card. For details, see the "NVRAM Data Upload/Download" in the "System Maintenance Reference" of the Field Service Manual.		
001	-	#	-

5825	**[NV-RAM Data Download]**		
	Downloads the UP and SP mode data from an SD card to the NVRAM. For details, see the "NVRAM Data Upload/Download" in the "System Maintenance Reference" of the Field Service Manual.		
001	-	#	-

5828	[Network Setting]	*CTL	-
050	1284 Compatibility (Centro)	Enables or disables 1284 Compatibility. 0 or 1 / 1 / 1 / step] 0: Disabled, 1: Enabled	
052	ECP (Centro)	Enables or disables ECP Compatibility. [0 or 1 / 1 / 1 / step] 0: Disabled, 1: Enabled Note ▪ This SP is activated only when SP5-828-50 is set to "1".	
065	Job Spooling	Enables/disables Job Spooling. [0 or 1 / **0** / 1 / step] 0: Disabled, 1: Enabled	
066	Job Spooling Clear: Start Time	Treatment of the job when a spooled job exists at power on. 0: ON (Data is cleared) **1**: OFF (Automatically printed)	
069	Job Spooling (Protocol)	Validates or invalidates the job spooling function for each protocol. **0**: Validates 1: Invalidates bit0: LPR bit1: FTP bit2: IPP bit3: SMB bit4: BMLinkS bit5: DIPRINT bit6: sftp bit7: (Reserved)	
090	TELNET (0: OFF 1: ON)	Enables or disables the Telnet protocol. [0 or 1 / **1** / –] 0: Disable, 1: Enable	

091	Web (0: OFF 1: ON)	Enables or disables the Web operation. [0 or 1 / **1** / –] 0: Disable, 1: Enable
145	Active IPv6 Link Local Address	This is the IPv6 local address link referenced on the Ethernet or wireless LAN (802.11b) in the format: "Link Local Address" + "Prefix Length" The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
147	Active IPv6 Stateless Address 1	These SPs are the IPv6 status addresses (1 to 5) referenced on the Ethernet or wireless LAN (802.11b) in the format: "Status Address" + "Prefix Length" The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
149	Active IPv6 Stateless Address 2	
151	Active IPv6 Stateless Address 3	
153	Active IPv6 Stateless Address 4	
155	Active IPv6 Stateless Address 5	
156	IPv6 Manual Address	This SP is the IPv6 manually set address referenced on the Ethernet or wireless LAN (802.11b) in the format: "Manual Set Address" + "Prefix Length" The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
158	IPv6 Gateway Address	This SP is the IPv6 gateway address referenced on the Ethernet or wireless LAN (802.11b). The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
161	IPv6 Stateless Auto Setting	Enables or disables the automatic setting for IPv6 stateless. [0 or 1 / 1 / 1 /step] 0: Disable, 1: Enable

236	Web Item visible	Displays or does not display the Web system items. [0 x 0000 to 0 x ffff / **0 x ffff**] 0: Not displayed, 1: Displayed bit0: Net RICOH bit1: Consumable Supplier bit2-15: Reserved (all)
237	Web shopping link visible	Displays or does not display the link to Net RICOH on the top page and link page of the web system. [0 to 1 / **1** / 1] 0: Not display, 1:Display
238	Web supplies Link visible	Displays or does not display the link to Consumable Supplier on the top page and link page of the web system. [0 to 1 / **1** / 1] 0: Not display, 1:Display
239	Web Link1 Name	This SP confirms or changes the URL1 name on the link page of the web system. The maximum characters for the URL name are 31 characters.
240	Web Link1 URL	This SP confirms or changes the link to URL1 on the link page of the web system. The maximum characters for the URL are 127 characters.
241	Web Link1 visible	Displays or does not display the link to URL1 on the top page of the web system. [0 to 1 / **1** / 1] 0: Not display, 1:Display
242	Web Link2 Name	Same as "-239"
243	Web Link2 URL	Same as "-240"
244	Web Link2 visible	Same as "-241"

5832	**[HDD]**	*CTL	**-**
001	HDD Formatting (ALL)	Initializes the hard disk. Use this SP mode only if there is a hard disk error.	
002	HDD Formatting (IMH)		
003	HDD Formatting (Thumbnail)		
004	HDD Formatting (Job Log)		
005	HDD Formatting (Printer Fonts)		
006	HDD Formatting (User Info)		
007	Mail RX Data		
008	Mail TX Data		
009	HDD Formatting (Data for a Design)		
010	HDD Formatting (Log)		
011	HDD Formatting (Ridoc I/F)		

5836	**[Capture Settings]**	*CTL	-
001	Capture Function (0:Off 1:On)		**0**: Disable, 1: Enable
	With this function disabled, the settings related to the capture feature cannot be initialized, displayed, or selected.		
002	Panel Setting		**0**: Displayed, 1: Not displayed
	Displays or does not display the capture function buttons.		
	5836-71 to 5836-78, Copier and Printer Document Reduction The following 6 SP modes set the default reduction for stored documents sent to the document management server via the MLB. Enabled only when optional MLB (Media Link Board) is installed.		
071	Reduction for Copy Color		0: 1, 1: 1/2, **2: 1/3**, 3: 1/4
072	Reduction for Copy B&W Text		**0: 1**, 1: 1/2, 2: 1/3, 3: 1/4, 6: 2/3
073	Reduction for Copy B&W Other		**0: 1**, 1: 1/2, 2: 1/3, 3: 1/4, 6: 2/3
074	Reduction for Printer Color		0: 1, 1: 1/2, **2: 1/3**, 3: 1/4
075	Reduction for Printer B&W		**0: 1**, 1: 1/2, 2: 1/3, 3: 1/4, 6: 2/3
076	Reduction for Printer B&W HQ		**0: 1**, 1: 1/2, 2: 1/3, 3: 1/4
077	Reduction for Printer Color 1200		1: 1/2, 3: 1/4, **4: 1/6**, 5: 1/8 (2: skipped)
078	Reduction for Printer B&W 1200		**1: 1/2**, 3: 1/4, 4: 1/6, 5: 1/8 (2: skipped)
	5836-81 to 5836-86, Stored document format The following 6 SP modes set Sets the default format for stored documents sent to the document management server via the MLB. Enabled only when optional MLB (Media Link Board) is installed.		
081	Format for Copy Color		**0: JFIF/JPEG**, 1: TIFF/MMR, 2: TIFF/MH, 3: TIFF/MR Note ▪ This SP is not used in this

		model.
082	Format for Copy B&W Text	0: JFIF/JPEG, **1: TIFF/MMR**, 2: TIFF/MH, 3: TIFF/MR
083	Format Copy B&W Other	0: JFIF/JPEG, **1: TIFF/MMR**, 2: TIFF/MH, 3: TIFF/MR
084	Format for Printer Color	**0: JFIF/JPEG**, 1: TIFF/MMR, 2: TIFF/MH, 3: TIFF/MR Note ▪ This SP is not used in this model.
085	Format for Printer B&W	0: JFIF/JPEG, **1: TIFF/MMR**, 2: TIFF/MH, 3: TIFF/MR
086	Format for Printer B&W HQ	0: JFIF/JPEG, 1: TIFF/MMR, **2: TIFF/MH**, 3: TIFF/MR
091	Default for JPEG	[5 to 95 / **50** / 1 /step]
	Sets the JPEG format default for documents sent to the document management server via the MLB with JPEG selected as the format. Enabled only when optional MLB (Media Link Board) is installed.	
101	Primary srv IP address	Sets the IP address for the primary capture server. This is basically adjusted by the remote system.
102	Primary srv scheme	This is basically adjusted by the remote system.
103	Primary srv port number	This is basically adjusted by the remote system.
104	Primary srv URL path	This is basically adjusted by the remote system.
111	Secondary srv IP address	Sets the IP address for the secondary capture server. This is basically adjusted by the remote system.
112	Secondary srv scheme	This is basically adjusted by the remote system.
113	Secondary srv port number	This is basically adjusted by the remote system.

114	Secondary srv URL path	This is basically adjusted by the remote system.
120	Default Reso Rate Switch	This is basically adjusted by the remote system.
121	Reso: Copy (Color)	[0 to 3 / **2** / 1/step]
	Selects the resolution for color copy mode. This is basically adjusted by the remote system. 0: 600dpi/ 1: 300dpi/ 2: 150dpi/ 3: 75dpi	
122	Reso: Copy (Mono)	[0 to 5 / **3** / 1/step]
	Selects the resolution for BW copy mode. This is basically adjusted by the remote system. 0: 600dpi/ 1: 400dpi/ 2: 300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi	
123	Reso: Print (Color)	This is basically adjusted by the remote system. [0 to 3 / **2** / 1/step]
	Selects the resolution for color print mode. This is basically adjusted by the remote system. 0: 600dpi/ 1: 300dpi/ 2: 150dpi/ 3: 75dpi	
124	Reso: Print (Mono)	This is basically adjusted by the remote system. [0 to 5 / **3** / 1/step]
	Selects the resolution for BW print mode. This is basically adjusted by the remote system. 0: 600dpi/ 1: 400dpi/ 2: 300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi	
125	Reso: Fax (Color)	This is basically adjusted by the remote system. [0 to 6 / **4** / 1/step]
	Selects the resolution for color fax mode. This is basically adjusted by the remote system. 0: 600dpi/ 1: 400dpi/ 2: 300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi/ 6: 75dpi	

126	Reso: Fax (Mono)	This is basically adjusted by the remote system. [0 to 6 / **3** / 1/step]
	Selects the resolution for BW fax mode. This is basically adjusted by the remote system. 0: 600dpi/ 1: 400dpi/ 2: 300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi/ 6: 75dpi	
127	Reso: Scan (Color)	This is basically adjusted by the remote system. [0 to 6 / **4** / 1/step]
	Selects the resolution for color scanning mode. This is basically adjusted by the remote system. 0: 600dpi/ 1: 400dpi/ 2: 300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi/ 6: 75dpi	
128	Reso: Scan (Mono)	This is basically adjusted by the remote system. [0 to 6 / **3** / 1/step]
	Selects the resolution for BW scanning mode. This is basically adjusted by the remote system. 0: 600dpi/ 1: 400dpi/ 2: 300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi/ 6: 75dpi	
141	All Addr Info Switch	[0 to 1 / **1** /1]
	Switch this SP off if the system is performing slowly due to a large number of resources in use. If this SP is switched off, only 2000 documents can be queued for sending to the Capture Server. (See SP5836-142 below.) 0: Off, 1: On	
142	Stand-by Doc Max Number	[10 to 10000 / **2000** / 1]
	This SP sets the maximum number of documents to be held on stand-by before they are sent to the Capture Server. However, the maximum number (10,000) cannot be set unless SP5386-141 has been disabled (switched off).	

5840	**[IEEE 802.11]**		
006	Channel MAX	*CTL	Sets the maximum number of channels available for data transmission via the wireless LAN. The number of channels available varies according to location. The default settings are set for the maximum end of the range for each area. Adjust the upper 4 bits to set the maximum number of channels. EU: [1 to 13 / **13** / 1/step] NA: [1 to 11 / **11** / 1/step] AS: [1 to 14 / **14** / 1/step]
007	Channel MIN	*CTL	Sets the minimum number of channels available for data transmission via the wireless LAN. The number of channels available varies according to location. The default settings are set for the minimum end of the range for each area. Adjust the lower 4 bits to set the minimum number of channels. EU: [1 to 13 / **1** / 1/step] NA/ AS: [1 to 11 / **1** / 1/step] AS: [1 to 14 / **14** / 1/step]
008	Transmission Speed	*CTL	[0 x 00 to 0 x FF / **0 x FF to Auto** / -] **0 x FF to Auto** [Default] 0 x 11 - 55M Fix 0 x 10 - 48M Fix 0 x 0F - 36M Fix 0 x 0E - 18M Fix 0 x 0D - 12M Fix 0 x 0B - 9M Fix 0 x 0A - 6M Fix 0 x 07 - 11M Fix 0 x 05 - 5.5M Fix

			0 x 08 - 1M Fix 0 x 13 - 0 x FE (reserved) 0 x 12 - 72M (reserved) 0 x 09 - 22M (reserved)
011	WEP Key Select	*CTL	Selects the WEP key. [00 to 11 / **00** / 1 binary] 00: Key #1 01: Key #2 (Reserved) 10: Key #3 (Reserved) 11: Key #4 (Reserved)
042	Fragment Thresh	*CTL	Adjusts the fragment threshold for the IEEE802.11 card. [256 to 2346 / **2346** / 1] This SP is displayed only when the IEEE802.11 card is installed.
043	11g CTS to Self	*CTL	Determines whether the CTS self function is turned on or off. [0 to 1 / **1** / 1] 0: Off, 1: On This SP is displayed only when the IEEE802.11 card is installed.
044	11g Slot Time	*CTL	Selects the slot time for IEEE802.11. [0 to 1 / **0** / 1] 0: 20 μm, 1: 9 μm This SP is displayed only when the IEEE802.11 card is installed.
045	WPA Debug Lvl	*CTL	Selects the debug level for WPA authentication application. [1 to 3 / **3** / 1] 1: Info, 2: warning, 3: error This SP is displayed only when the IEEE802.11 card is installed.

5841	[Supply Name Setting]		
001	Toner Name Setting: Black	*CTL	Specifies supply names. These appear on the screen when the user presses the Inquiry button in the user tools screen.
002	Toner Name Setting: Cyan		
003	Toner Name Setting: Yellow		
004	Toner Name Setting: Magenta		
011	Staple Std1		
012	Staple Std2		
013	Staple Std3		
014	Staple Std4		

5842	[GWWS Analysis] DFU		
001	Setting 1	*CTL	Default: **00000000** – do not change Netfiles: Jobs to be printed from the document server using a PC and the DeskTopBinder software
002	Setting 2	*CTL	Adjusts the debug program modesetting. Bit7: 5682 mmseg-log setting 0: Date/Hour/Minute/Second 1: Minute/Second/Msec. 0 to 6: Not used

5844	**[USB]**		
001	Transfer Rate	*CTL	Adjusts the USB transfer rate. [0001 or 0004 / **0004** / -] 0001: Full speed, 0004: Auto Change
002	Vendor ID	*CTL	Displays the vendor ID.
003	Product ID	*CTL	Displays the product ID.
004	Dev Release Number	*CTL	Displays the device release version number.
005	Fixed USB Port	*CTL	Displays the fixed USB Port.
006	PnP Model Name	*CTL	Displays the PnP Model Name.
007	PnP Serial Number	*CTL	Displays the PnP Serial Number.
100	Notify Unsupport	*CTL	Displays a message of the unspported USB device for the USB host slot. [0 or 1 / **1** / -] 0: Not displayed, 1: Displayed

5845	**[Delivery Server Setting]**	*CTL	-
	Provides items for delivery server settings.		
001	FTP Port No.	[0 to 65535 / **3670** / 1 /step]	
	Sets the FTP port number used when image files to the Scan Router Server.		
002	IP Address (Primary)	Range: **000.000.000.000** to 255.255.255.255	
	Use this SP to set the Scan Router Server address. The IP address under the transfer tab can be referenced by the initial system setting.		

006	Delivery Error Display Time	[0 to 999 / **300** / 1 second /step]
	Use this setting to determine the length of time the prompt message is displayed when a test error occurs during document transfer with the NetFile application and an external device.	
008	IP Address (Secondary)	Range: **000.000.000.000** to 255.255.255.255
	Specifies the IP address assigned to the computer designated to function as the secondary delivery server of Scan Router. This SP allows only the setting of the IP address without reference to the DNS setting.	
009	Delivery Server Model	[0 to 4/ **0** / 1 /step]
	Allows changing the model of the delivery server registered by the I/O device. 0: Unknown 1: SG1 Provided 2: SG1 Package 3: SG2 Provided 4: SG2 Package	
010	Delivery Svr. Capability	[0 to 255 / **0** / 1 /step]
	Bit7 = 1 Comment information exits	Changes the capability of the registered that the I/O device registered.
	Bit6 = 1 Direct specification of mail address possible	
	Bit5 = 1 Mail RX confirmation setting possible	
	Bit4 = 1 Address book automatic update function exists	
	Bit3 = 1 Fax RX delivery function exists	
	Bit2 = 1 Sender password function exists	
	Bit1 = 1 Function to link MK-1 user and Sender exists	
	Bit0 = 1 Sender specification required (if set to 1, Bit6 is set to “0”)	

011	Delivery Svr Capability (Ext)	[0 to 255 / **0** / 1 /step]
	Changes the capability of the registered that the I/O device registered.	
	Bit7 = 1 Address book usage limitation (Limitation for each authorized user) Bit6 = 1 RDH authorization link Bit5 to 0: Not used	
013	Server Scheme (Primary) **DFU**	
	This is used for the scan router program.	
014	Server Port Number (Primary) **DFU**	
	This is used for the scan router program.	
015	Server URL Path (Primary) **DFU**	
	This is used for the scan router program.	
016	Server Scheme (Secondary) **DFU**	
	This is used for the scan router program.	
017	Server Port Number (Secondary) **DFU**	
	This is used for the scan router program.	
018	Server URL Path (Secondary) **DFU**	
	This is used for the scan router program.	
022	Rapid Sending Control	
	Enables or disables the prevention function for the continuous data sending error. [0 to 1 / **0** / -] 0: Disable, 1: Enable	

5846	**[UCS Settings]**	*CTL	-
001	Machine ID (For Delivery Server)		Displays ID
	Displays the unique device ID in use by the delivery server directory. The value is only displayed and cannot be changed. This ID is created from the NIC MAC or IEEE 1394 EUI. The ID is displayed as either 6-byle or 8-byte binary.		
002	Machine ID Clear (For Delivery Server)		Clears ID
	Clears the unique ID of the device used as the name in the file transfer directory. Execute this SP if the connection of the device to the delivery server is unstable. After clearing the ID, the ID will be established again automatically by cycling the machine off and on.		
003	Maximum Entries		[2000 to 20000/ **2000** /1 /step]
	Changes the maximum number of entries that UCS can handle. If a value smaller than the present value is set, the UCS managed data is cleared, and the data (excluding user code information) is displayed.		
006	Delivery Server Retry Timer		[0 to 255 / **0** / 1 /step]
	Sets the interval for retry attempts when the delivery server fails to acquire the delivery server address book.		
007	Delivery Server Retry Times		[0 to 255 / **0** / 1 /step]
	Sets the number of retry attempts when the delivery server fails to acquire the delivery server address book.		
008	Delivery Server Maximum Entries		[2000 to 50000 / 2000 / 1 /step]
	Sets the maximum number account entries of the delivery server user information managed by UCS.		
010	LDAP Search Timeout		[1 to 255 / **60** / 1 /step]
	Sets the length of the timeout for the search of the LDAP server.		
020	WSD Maximum Entries		[5 to 250 / 250 / 1 /step]

	Sets the maximum entries for the address book of the WSD (WS-scanner).	
021	Floder Auth Change	[0 to 1 / **0** / 1]
	This SP determines whether the user login information (Login User name and Password) or address (destination setting in the address book for Scan-to-SMB) is used to permit folder access. The machine must be cycled off/on for this setting to take effect if it is changed. 0: Uses operator login information (initial value of main machine) 1: Uses address authorization information	
022	Initial Value of Upper Limit Count	[0 to 999 / **500** / 1]
	Sets the initial value of upper limit count.	
040	Addr Book Migration (USB to HDD)	
	Not used in this machine.	
041	Fill Addr Acl Info.	
	This SP must be executed immediately after installation of an HDD unit in a basic machine that previously had no HDD. The first time the machine is powered on with the new HDD installed, the system automatically takes the address book from the NVRAM and writes it onto the new HDD. However, the new address book on the HDD can be accessed only by the system administrator at this stage. Executing this SP by the service technician immediately after power on grants full address book access to all users. Procedure 1. Turn the machine off. 2. Install a new HDD. 3. Turn the machine on. 4. The address book and its initial data are created on the HDD automatically. 5. However, at this point the address book can be accessed by only the system administrator or key operator. 6. Enter the SP mode and do SP5846-041. After this SP executes successfully, any user can access the address book.	

043	Addr Book Media	Displays the slot number where an address book data is in. [0 to 30 / **-** /1] 0: Unconfirmed 1: SD Slot 1 2: SD Slot 2 4: USB Flash ROM 20: HDD 30: Nothing
047	Initialize Local Addr Book	Clears the local address book information, including the user code.
048	Initialize Delivery Addr Book	Clears the distribution address book information, except the user code.
049	Initialize LDAP Addr Book	Clears the LDAP address book information, except the user code.
050	Initialize All Addr Book	Clears all directory information managed by UCS, including all user codes.
051	Backup All Addr Book	Uploads all directory information to the SD card.
052	Restore All Addr Book	Downloads all directory information from the SD card.
053	Clear Backup Info	Deletes the address book data from the SD card in the service slot. Deletes only the files that were uploaded from this machine. This feature does not work if the card is write-protected. Note ▪ After you do this SP, go out of the SP mode, and then turn the power off. ▪ Do not remove the SD card until the Power LED stops flashing.

060	Search Option	
	This SP uses bit switches to set up the fuzzy search options for the UCS local address book. Bit: Meaning 0: Checks both upper/lower case characters 1: Japan Only 2: Japan Only 3: Japan Only 4 to 7: Not Used	
062	Complexity Option 1	
	Use this SP to set the conditions for password entry to access the local address book. Specifically, this SP limits the password entry to **upper case** and sets the length of the password. [0 to 32 / **0** / 1 /step] Note ▪ This SP does not normally require adjustment. ▪ This SP is enabled only after the system administrator has set up a group password policy to control access to the address book.	
063	Complexity Option 2 **DFU**	
064	Complexity Option 3 **DFU**	
065	Complexity Option 4 **DFU**	
091	FTP Auth Port Setting	Specifies the FTP port for getting a distribution server address book that is used in the identification mode. [0 to 65535 / **3671** / 1 /step]
094	Encryption Stat	Shows the status of the encryption function for the address book data.

5847	**[Rep Resolution Reduction]**	*CTL	-
	SP5847-1 through SP5847-8 changes the default settings of image data transferred externally by the Net File page reference function. [0 to 5 / **2** / 1 /step] SP5847-21 sets the default for JPEG image quality of image files handled by NetFile. “Net files” are jobs to be printed from the document server using a PC and the DeskTopBinder software.		
001	Rate for Copy Color		0: 1x 1: 1/2x **2: 1/3x** 3: 1/4x 4: 1/6x 5: 1/8x
002	Rate for Copy B&W Text		
003	Rate for Copy B&W Other		
004	Rate for Printer Color		
005	Rate for Printer B&W		
006	Rate for Printer Color 1200dpi		0: 1x 1: 1/2x 2: 1/3x 3: 1/4x **4: 1/6x** 5: 1/8x
007	Rate for Printer B&W 1200dpi		0: 1x **1: 1/2x** 2: 1/3x 3: 1/4x 4: 1/6x 5: 1/8x
021	Network Quality Default for JPEG		
	Sets the default value for the quality of JPEG images sent as NetFile pages. This function is available only with the MLB (Media Link Board) option installed. [5 to 95 / **50** / 1 /step]		

5848	**[Web Service]**	*CTL	-
	SP5848-2 sets the 4-bit switch assignment for the access control setting. Setting of 0001 has no effect on access and delivery from Scan Router. 5848 100 sets the maximum size allowed for downloaded images. The default is equal to 1 gigabyte.		
002	Access Ctrl: Repository (only Lower 4 bits)	0000: No access control 0001: Denies access to DeskTop Binder. 0010: No writing control	
003	Access Control: Doc. Svr. Print (Lower 4 bits)	Switches access control on and off. **0000**: No access control 0001: Denies access to DeskTop Binder.	
004	Access Ctrl: user Directory (only Lower 4 bits)		
007	Access Ctrl: Comm. Log Fax (Lower 4 bits)		
009	Access Ctrl: Job Ctrl (Lower 4 bits)		
011	Access Ctrl: Device management (Lower 4 bits)		
021	Access Ctrl: Delivery (Lower 4 bits)		
022	Access Ctrl: uadministration (Lower 4bits)		
099	Repository: Download Image Setting	**DFU**	

100	Repository: Download Image Max. Size	Specifies the max size of the image data that the machine can download. [1 to 1024 / **1024** / 1 MB /step]
210	Setting: LogType: Job1	**DFU**
211	Setting: LogType: Job2	
212	Setting: LogType: Access	
213	Setting: Primary Srv	
214	Setting: Secondary Srv	
215	Setting: Start Time	
216	Setting: Interval Time	
217	Setting: Timing	

5849	**[Installation Date]**	*CTL	-
001	Display	The "Counter Clear Day" has been changed to "Installation Date" or "Inst. Date".	
002	Switch to Print	Determines whether the installation date is printed on the printout for the total counter. [0 or 1 / **1** / -] 0: OFF (No Print) 1: ON (Print)	
003	Total Counter	-	

5850	**[Address Book Function]**	*CTL	-
003	Replacement of Circuit Classification **Japan Only**		
	The machine is sold ready to use with a G3 line. This SP allows you to switch all at once to convert to G4 after you add a G4 line. Conversely, if for some reason the G4 line becomes unusable, you can easily switch back to G3.		

5851	[Bluetooth Mode]
	Sets the operation mode for the Bluetooth Unit. Press either key. [0:Public] [1: Private]

5853	**[Stamp Data Download]**
	Use this SP to download the fixed stamp data stored in the firmware of the ROM and copy it to the HDD. This SP can be executed as many times as required. This SP must be executed after replacing or formatting the hard disks. Note ▪ This SP can be executed only with the hard disks installed.

5856	**[Remote ROM Update]**		
	Allows the technician to upgrade the firmware using a local port (IEEE1284) when updating the remote ROM.		
002	Local Port	*CTL	[0 to 1 / **0** / 1/step] 0: Disable 1: Enable

5857	**[Save Debug Log]**	*CTL	-
001	On/Off (1:ON 0:OFF)	**0**: OFF, 1: ON	
	Switches the debug log feature on and off. The debug log cannot be captured until this feature is switched on.		
002	Target (2: HDD 3: SD)	**2**: HDD, 3: SD Card	
	Selects the storage device to save debug logs information when the conditions set with SP5-858 are satisfied. [2 to 3 / **2** / 1 /step]		

005	Save to HDD		
	Saves the debug log of the input SC number in memory to the HDD. A unique file name is generated to avoid overwriting existing file names on the SD Card. Up to 4MB can be copied to an SD Card. 4 MB segments can be copied one by one to each SD Card.		
006	Save to SD Card		
	Saves the debug log of the input SC number in memory to the SD card.		
009	Copy HDD to SD Card (Latest 4 MB)		
010	Copy HDD to SD Card (Latest 4 MB Any Key)		
011	Erase HDD Debug Data		
012	Erase SD Card Debug Data		
013	Free Space on SD Card		
014	Copy SD to SD (Latest 4 MB)		
015	Copy SD to SD (Latest 4 MB Any Key)		
016	Make HDD Debug		
017	Make SD Debug		

5858	**[Debug Save When]**	*CTL	-
	These SPs select the content of the debugging information to be saved to the destination selected by SP5857-002. SP5858-3 stores one SC specified by number. Refer to Section 4 for a list of SC error codes.		
001	Engine SC Error	Turns on/off the debug save for SC codes generated by printer engine errors. [0 or 1 / **0** / 1/ step] 0: OFF, 1: ON	
002	Controller SC Error	Turns on/off the debug save for SC codes	

		generated by GW controller errors. [0 or 1 / **0** / 1/ step] 0: OFF, 1: ON
003	Any SC Error	[0 to 65535 / **0** / 1 /step]
004	Jam	Turns on/off the debug save for jam errors. [0 or 1 / **0** / 1/ step] 0: OFF, 1: ON

5859	**[Debug Save Key No.]**	*CTL	**-**
001	Key 1	These SPs allow you to set up to 10 keys for log files for functions that use common memory on the controller board. [–9999999 to 9999999 / **0** / –]	
002	Key 2		
003	Key 3		
004	Key 4		
005	Key 5		
006	Key 6		
007	Key 7		
008	Key 8		
009	Key 9		
010	Key 10		

5860	**[SMTP/POP3/IMAP4]**	*CTL	**-**
020	Partial Mail Receive Timeout		[1 to 168 / **72** / –]
	Sets the amount of time to wait before saving a mail that breaks up during reception. The received mail is discarded if the remaining portion of the mail is not received during this prescribed time.		
021	MDN Response RFC2298 Compliance		[0 to 1 / **1** / –]
	Determines whether RFC2298 compliance is switched on for MDN reply mail. 0: No **1**: Yes		
022	SMTP Auth. From Field Replacement		[0 to 1 / **0** / –]
	Determines whether the FROM item of the mail header is switched to the validated account after the SMTP server is validated. **0**: No. "From" item not switched. 1: Yes. "From" item switched.		
025	SMTP Auth. Direct Setting		[0 or 1 / **0** / –]
	Selects the authentication method for SMPT. **Bit switch:** ▪ Bit 0: LOGIN ▪ Bit 1: PLAIN ▪ Bit 2: CRAM MD5 ▪ Bit 3: DIGEST MD5 ▪ Bit 4 to 7: Not used Note ▪ This SP is activated only when SMTP authorization is enabled by UP mode.		
026	S/MIME: MIME Header Setting	-	Selects the MIME header type of an E-mail sent by S/MIME. [0 to 2 / **0** / 1] 0: Microsoft Outlook Express standard 1: Internet Draft standard 2: RFC standard

5866	[E-mail Report] DFU		
001	Report Validity	*CTL	Enables or disables the e-mail alert. [0 or 1 / **0** / –] 0: Enable, 1: Disable
005	Add Date Field	*CTL	Adds or does not add the date field to the header of the alert mail. [0 or 1 / **0** / –] 0: Not added, 1: Added

5870	[Common Key Info Writing]		
001	Writing	*CTL	Rewrites the common certification used for the @Remote.
003	Initialize	*CTL	-
	Initializes the set certification. When the GW controller board is replaced with a new one for repair, you must execute the "Initiralize (-003)" and "Writing (-001)" just after the new board replacement. **NOTE:** Turn off and on the main power switch after the "Initiralize (-003)" and "Writing (-001)" have been done.		

5873	[SD Card Appli Move]	
001	Move Exec	This SP copies the application programs from the original SD card in SD card slot 2 to an SD card in SD card slot 1.
002	Undo Exec	This SP copies back the application programs from an SD card in SD Card Slot 2 to the original SD card in SD card slot 1. Use this menu when you have mistakenly copied some programs by using "Move Exec" (SP5873-1).

5875	[SC Auto Reboot]		
001	Reboot Setting	*CTL	Enables or disables the automatic reboot function when an SC error occurs. [0 or 1/ **0** / –] 0: The machine reboots automatically when the machine issues an SC error and logs the SC error code. If the same SC occurs again, the machine does not reboot. 1: The machine does not reboot when an SC error occurs. The reboot is not executed for Type A or C SC codes.
002	Reboot Type	*CTL	Selects the reboot method for SC. [0 or 1 / **0** / -] 0: Manual reboot, 1: Automatic reboot

5878	[Option Setup]		
001	Data Overwrite Security	-	Enables the Data Overwrite Security unit. Press "EXECUTE" on the operation panel. Then turn the machine off and on.
002	HDD Encryption	-	Installs the HDD Encryption unit.

5881	[Fixed Phrase Block Erasing]		
001	-	-	Deletes the fixed phrase.

5885	[WIM Settings] Web Image Monitor Settings		
	Close or disclose the functions of web image monitor.		
020	Document Server ACC Ctrl	*CTL	0: OFF, 1: ON Bit Meaning 0: Forbid all document server access (1) 1: Forbid user mode access (1) 2: Forbid print function (1) 3: Forbid fax TX (1) 4: Forbid scan sending (1) 5: Forbid downloading (1) 6: Forbid delete (1) 7: Reserved
050	Document Server List Def. Style	*CTL	Selects the display type for the document box list. [0 to 2 / **0** / 1] 0: Thumbnail, 1: Icon, 2: Details
051	Document Server List Def. Lines	*CTL	Sets the number of documents to be displayed in the document box list. [5 to 20 / **10** / 1]
100	Signature Setting	*CTL	Selects whether the signature is added to the scanned documents with the WIM when they are transmitted by an e-mail. [0 to 2 / 0 / 1/step] 0: Setting for each e-mail 1: Signature for all 2: No signature

101	Set Encryption	*CTL	Determines whether the scanned documents with the WIM are encrypted when they are transmitted by an e-mail. [0 to 1 / 0 / 1] 0: Not encrypted, 1:Encryption
200	Detect Mem Leak	*CTL	This SP determines how Web Image Monitor memory leaks are handled. A "1" setting enables the function. Bit 0: Displays memory status at session timeouts. Bit 1: Displays memory status at the start/end of PF handler only. Bit 2-7: Not used
201	DocSvr Timeout	*CTL	This SP sets the length of time for session timeout. The default is 30 min. The time can be reduced to shorten the time between memory leak detections. [1 to 255 / **30** / 1 min.]

5887	**[SD Get Counter]**		
	This SP determines whether the ROM can be updated.		
001	-	*CTL	This SP sends a text file to an SD card inserted in SD card Slot 2 (lower slot). The operation stores. The file is stored in a folder created in the root directory of the SD card called SD_COUNTER. The file is saved as a text file (*.txt) prefixed with the number of the machine. 1. Insert the SD card in SD card Slot 2 (lower slot). 2. Select SP5887 then touch [EXECUTE]. 3. Touch [Execute] in the message

			when you are prompted.

5888	[Personal Information Protect]		
001	-	*CTL	Selects the protection level for logs. [0 to 1 / **0** / 1} 0: No authentication, No protection for logs 1: No authentication, Protected logs (only an administrator can see the logs)

5893	[SDK Application Counter]		
	Displays the counter name of each SDK application.		
001	SDK-1	*CTL	-
002	SDK-2	*CTL	-
003	SDK-3	*CTL	-
004	SDK-4	*CTL	-
005	SDK-5	*CTL	-
006	SDK-6	*CTL	-

5894	[External Counter Setting] DFU		
001	Switch Charge Mode	*ENG	[0 to 2 / **0** / 1/step]

5907	[Plug & Play Maker/Model Name]
001	Selects the brand name and the production name for Windows Plug & Play. This information is stored in the NVRAM. If the NVRAM is defective, these names should be registered again. After selecting, press the "Original Type" key and "#" key at the same time. When the setting is completed, the beeper sounds five times.

5913	[Switchover Permission Time]		
002	Print Application Timer	*CTL	[3 to 30 / **3** / 1 second /step]
	Sets the amount of time to elapse while the machine is in standby mode (and the operation panel keys have not been used) before another application can gain control of the display.		

5967	[Copy Server Set Function]	*CTL	**0**: ON, 1: OFF
	Enables and disables the document server. This is a security measure that prevents image data from being left in the temporary area of the HDD. After changing this setting, you must switch the main switch off and on to enable the new setting.		

5974	[Cherry Server]		
	Specifies which version of ScanRouter, “Lite” or “Full”, is installed.		
001	Cherry Server	*CTL	[0 or 1 / **0** / –] 0: Lite, 1: Full

5985	[Device Setting]	
	The NIC and USB support features are built into the GW controller. Use this SP to enable and disable these features. In order to use the NIC and USB functions built into the controller board, these SP codes must be set to "1".	
001	On Board NIC	[0 to 2 / 0 / 1 /step] 0: Disable, 1: Enable, 2: Function limitation

		When the "Function limitation" is set, "On board NIC" is limited only for the NRS or LDAP/NT authentication. Note ▪ Other network applications than NRS or LDAP/NT authentication are not available when this SP is set to "2". Even though you can change the initial settings of those network applications, the settings do not work.
002	On Board USB	[0 or 1 / 0 / 1/step] 0: Disable, 1: Enable

5987	**[Mech. Counter]**	
001	0: OFF / 1: ON	This SP detects that a mechanical counter device is removed. If it is detected, SC610 occurs.

5990	**[SP print mode]**	
	Prints out the SMC sheets.	
001	All (Data List)	-
002	SP (Mode Data List)	-
003	User Program	-
004	Logging Data	-
005	Diagnostic Report	-
006	Non-Default	-
007	NIB Summary	-
008	Capture Log	-
021	Copier User Program	-
022	Scanner SP	-
023	Scanner User Program	-
024	SDK/J Summary	-
025	SDK/J Application Info	-

3.6 SYSTEM SP6-XXX

3.6.1 SP6-XXX (PERIPHERALS)

6006	[ADF Adjustment]		
	Adjusts the side-to-side and leading registration of originals with the ARDF.		
001	S to S Registration: 1st	*ENG	[-3.0 to 3.0 / **0** / 0.1 mm/step]
002	S to S Registration: 2nd		
003	Leading Edge Registration	*ENG	[-5.0 to 5.0 / **0** / 0.1 mm/step]
	Adjusts the amount of paper buckle to correct original skew for the front and rear sides.		
006	Buckle: Duplex: 2nd	*ENG	[-2.5 to 2.5 / **0** / 0.1 mm/step]
	Adjusts the erase margin at the original trailing edge.		
007	Trailing Edge Erase	*ENG	[-10 to 10 / **0** / 0.1 mm/step]

6007	[ADF INPUT Check]
	Displays the signals received from the sensors and switches of the ARDF. Only Bit 0 is used for ADF input check (see "Input Check" in this section).

6008	[ADF OUTPUT Check]
	Activates the electrical components for functional check. It is not possible to activate more than one component at the same time (see "Output Check" in this section).

6009	[ADF Free Run]		
	Performs a DF free run in simplex, duplex mode or stamp mode.		
001	Free Run: Simplex Mode	-	OFF or ON
002	Free Run: Duplex Mode	-	

6017	[DF Magnification Adj.]		
	Adjusts the magnification in the sub-scan direction for the ARDF.		
001	DF Magnification Adj.	*CTL	[-5.0 to 5.0 / **0** / 0.1 %/step]

6132	[Jogger Fence Fine Adj]		
	This SP adjusts the distance between the jogger fences and the sides of the stack on the finisher stapling tray in the (Booklet) Finisher B804/B805. The adjustment is done perpendicular to the direction of paper feed.		
003	A4T	*ENG	[-1.5 to 1.5 / **0** / 0.5 mm/step] + Value: Increases distance between jogger fences and the sides of the stack. - Value: Decreases the distance between the jogger fences and the sides of the stack.
005	B5T	*ENG	
008	LG-T	*ENG	
009	LT-T	*ENG	
012	Other	*ENG	

6137	[Finisher Free Run]		
	Execute the finisher free run.		
001	Free Run 1	*ENG	[0 to 1 / **0** / 1 /step]
002	Free Run 2		
003	Free Run 3		
004	Free Run 4		

6145	[FIN (BLO) INPUT Check] Finisher Input Check
	Displays the signals received from sensors and switches of the finisher (see "Input Check" in this section).

6146	[FIN (BLO) OUPUT Check] Finisher Output Check
	Displays the signals received from sensors and switches of the finisher (see "Output Check" in this section).

3.7 SYSTEM SP7-XXX

3.7.1 SP7-XXX (DATA LOG)

7401	**[Total SC Counter]**		
	Displays the number of SC codes detected.		
001	-	*CTL	[0 to 9999 / **0** / 1/step]

7403	**[SC History]**		
	Logs the SC codes detected. The 10 most recently detected SC Codes are not displayed on the screen, but can be seen on the SMC (logging) outputs.		
001	Latest	*CTL	-
002	Latest 1		
003	Latest 2		
004	Latest 3		
005	Latest 4		
006	Latest 5		
007	Latest 6		
008	Latest 7		
009	Latest 8		
010	Latest 9		

7404	**[SC991 History]**		
	Logs the SC Code 991 detected. The 10 most recently detected SC Code 991 are not displayed on the screen, but can be seen on the SMC (logging) outputs.		
001	Latest	*CTL	-
002	Latest 1		
003	Latest 2		
004	Latest 3		
005	Latest 4		
006	Latest 5		
007	Latest 6		
008	Latest 7		
009	Latest 8		
010	Latest 9		

7502	**[Total Paper Jam Counter]**		
	Displays the total number of jams detected.		
001	-	* CTL	[0 to 9999 / **0** / 1 sheet/step]

7503	**[Total Original Jam Counter]**		
	Displays the total number of original jams.		
001	Original Jam Counter	* CTL	[0 to 9999 / **0** / 1 original/step]

7504	**[Paper Jam Location]** ON: On check, OFF: Off Check		
	Displays the number of jams according to the location where jams were detected.		
001	At Power On	*CTL	For details, "Jam Detection" in main chapter.
003	Tray 1: ON	*CTL	
004	Tray 2: ON	*CTL	
005	Tray 3: ON	*CTL	
006	Tray 4: ON	*CTL	
008	Bypass Tray: ON	*CTL	
009	Duplex: ON	*CTL	
011	Vertical Transport Sn1: ON	*CTL	
012	Vertical Transport Sn2: ON	*CTL	
013	Vertical Transport Sn3: ON	*CTL	
014	Vertical Transport Sn4: ON	*CTL	
017	Registration Sensor: ON	*CTL	
018	Fusing Entrance: ON	*CTL	
019	Fusing Exit: ON	*CTL	
020	Paper Exit: ON	*CTL	
021	1bin: Exit Sensor: ON	*CTL	
025	Duplex Exit: ON	*CTL	
026	Duplex Entrance: ON (In)	*CTL	
027	Duplex Entrance: ON (Out)	*CTL	
028	Inverter Sensor: ON (In)	*CTL	For details, "Jam Detection" in

029	Inverter Sensor: ON (Out)	*CTL	main chapter.
047	Paper Feed Sensor 1: OFF	*CTL	
048	Paper Feed Sensor 2: OFF	*CTL	
049	Paper Feed Sensor 3: OFF	*CTL	
050	Paper Feed Sensor 4: OFF	*CTL	
051	Vertical Transport Sn1: OFF	*CTL	
052	Vertical Transport Sn2: OFF	*CTL	
053	Vertical Transport Sn3: OFF	*CTL	
054	Vertical Transport Sn4: OFF	*CTL	
057	Registration Sensor: OFF	*CTL	
060	Paper Exit: OFF	*CTL	
061	1bin: Exit Sensor: OFF	*CTL	
065	Duplex Exit: OFF	*CTL	
066	Duplex Entrance: OFF (In)	*CTL	
067	Duplex Entrance: OFF (Out)	*CTL	
068	Inverter Sensor: OFF (In)	*CTL	
069	Inverter Sensor: OFF (Out)	*CTL	
230	Finisher Entrance	*CTL	For details, "Jam Detection" in main chapter.
240	Finisher Entrance	*CTL	
241	Finisher Entrance	*CTL	
242	Finisher Exit	*CTL	
243	Finisher Jogger Motor	*CTL	
244	Finisher Shift Roller Motor	*CTL	
245	Finisher Gathering Roller Motor	*CTL	

246	Finisher Exit Guide Plate Motor	*CTL	
247	Finisher Tray Lift Motor	*CTL	
248	Finisher Stapler Motor	*CTL	
249	Finisher Pick-up Solenoid	*CTL	
250	Data Error	*CTL	

7505	**[ARDF Paper Jam Location]** ON: On check, OFF: Off Check		
	Displays the number of jams according to the location where jams were detected.		
001	At Power On	*CTL	For details, "Jam Detection" in main chapter.
004	Registration Sensor: ON	*CTL	
008	Registration Sensor: OFF	*CTL	
054	Inverter Sensor: ON	*CTL	
058	Inverter Sensor: OFF	*CTL	

7506	**[Jam Count by Paper Size]**		
	Displays the number of jams according to the paper size.		
006	A5 LEF	*CTL	[0 to 9999 / **0** / 1 sheet/step]
044	HLT LEF		
133	A4 SEF		
134	A5 SEF		
142	B5 SEF		
164	LG SEF		
166	LT SEF		
172	HLT SEF		

255	Others		

7507	**[Plotter Jam History]**		
	Displays the 10 most recently detected paper jams.		
001	Latest	*CTL	-
002	Latest 1		
003	Latest 2		
004	Latest 3		
005	Latest 4		
006	Latest 5		
007	Latest 6		
008	Latest 7		
009	Latest 8		
010	Latest 9		

7508	**[Original Jam History]**		
	Displays the 10 most recently detected original jams.		
001	Latest	*CTL	-
002	Latest 1		
003	Latest 2		
004	Latest 3		
005	Latest 4		
006	Latest 5		

007	Latest 6		
008	Latest 7		
009	Latest 8		
010	Latest 9		

7624	**[Part Replacement Operation ON/OFF]**		
	Selects the PM maintenance for each part.		
001	K Drum Unit	*CTL	[0 or 1 / **1** / -] 0: Not PM maintenance 1: PM maintenance
002	M Drum Unit		
003	C Drum Unit		
004	Y Drum Unit		
005	K Dev Unit		
006	M Dev Unit		
007	C Dev Unit		
008	Y Dev Unit		
013	ITB Unit		
014	Belt Cleaning Unit		
015	Fusing Unit		
016	PTR Unit		
017	Waste Toner Bottle		
018	Fusing Roller		
019	Fusing Belt		

7801	**[ROM No./Firmware Version]**	
	Displays the ROM version numbers of the main machine and connected peripheral devices.	
255	-	Displays all versions and ROM numbers in the machine.

7803	**[PM Counter Display]**
	(Page, Unit, [Color])
-001 to -020	Displays the number of sheets printed for each current maintenance unit. PM counters click up based on the number of A4 (LT) LEF size sheets printed. Therefore, the A3 (DLT) Double Count is activated. The Double Count cannot be deactivated. When a unit is replaced, the machine automatically detects that the new unit is installed. Then, the current PM counter value is automatically moved to the PM Counter - Previous (SP7-906-1 to 21) and is reset to "0". The total number of sheets printed with the last unit replaced can be checked with SP7-906-1 to 19.
001	Paper
002	Page: PCU: Bk
003	Page: PCU: C
004	Page: PCU: M
005	Page: PCU: Y
006	Page: Development Unit: Bk
007	Page: Development Unit: C

008	Page: Development Unit: M
009	Page: Development Unit: Y
014	Page: Image Transfer
015	Page: Image Transfer Cleaning
016	Page: Fusing Unit
017	Page: Fusing Roller
018	Page: Fusing Belt
019	Page:PTR Unit
020	Measurment Toner Collection Bottle
-031 to -048	Displays the number of revolutions of motors or clutches for each current maintenance unit. [0 to 9999999 / **0** / 1 revolution/step] When a unit is replaced, the machine automatically detects that the new unit is installed. Then, the current PM counter value is automatically moved to the PM Counter - Previous (SP7-906-31 to 49) and is reset to "0". The total number of revolutions made with the last unit replaced can be checked with SP7-906-31 to 49.
031	Rotation: PCU: Bk
032	Rotation: PCU: C
033	Rotation: PCU: M
034	Rotation: PCU: Y
035	Rotation: Development Unit: Bk
036	Rotation: Development Unit: C
037	Rotation: Development Unit: M
038	Rotation: Development Unit: Y
043	Rotation: Image Transfer

044	Rotation: Image Transfer Cleaning
045	Rotation: Fusing Unit
046	Rotation: Fusing Roller
047	Rotation: Fusing Belt
048	Rotation: PTR Unit
049	Measurment Toner Collection Bottle
	[0 to 999999999 / - / 1 mg/step] Displays the total amount of each waste toner bottle.
-061 to -078	[0 to 255 / - / 1 %/step] Displays the value given by the following formula: (Target revolution/ Current revolution) × 100. This shows how much of the unit's expected lifetime has been used up. The Rotation% counter is based on rotations, not prints. If the number of rotations reaches the limit, the machine enters the end condition for that unit. If the print count lifetime is reached first, the machine also enters the end condition, even though the R% counter is still less than 100%.
061	Rotation (%): PCU: Bk
062	Rotation (%): PCU: C
063	Rotation (%): PCU: M
064	Rotation (%): PCU: Y
065	Rotation (%): Development Unit: Bk
066	Rotation (%): Development Unit: C
067	Rotation (%): Development Unit:M
068	Rotation (%): Development Unit: Y
073	Rotation (%): Image Transfer
074	Rotation (%): Image Transfer Cleaning
075	Rotation (%): Fusing Unit

076	Rotation (%): Fusing Roller		
077	Rotation (%): Fusing Belt		
078	Rotation (%): PTR Unit		
079	Measurment (%): Toner Collection Bottle [0 to 255 / - / 1 %/step] Displays how much of the unit's expected lifetime has been used up.		
-091 to -108	Displays the value given by the following formula: (Target printouts/ Current printouts) X 100. This shows how much of the unit's expected lifetime has been used up. The Page% counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page% counter is still less than 100%.		
091	Page (%): PCU: Bk	*ENG	[0 to 255 / - / 1 %/step]
092	Page (%): PCU: C		
093	Page (%): PCU: M		
094	Page (%): PCU: Y		
095	Page (%): Development Unit: Bk		
096	Page (%): Development Unit: C		
097	Page (%): Development Unit: M		
098	Page (%): Development Unit: Y		
103	Page (%): Image Transfer	*ENG	[0 to 255 / - / 1 %/step]
104	Page (%): Image Transfer Cleaning		
105	Page (%): Fusing Unit		
106	Page (%): Fusing Roller		
107	Page (%): Fusing Belt		
108	Page (%): PTR Unit		

7804	**[PM Counter Reset]**
	(Unit, [Color])
	Clears the PM counter. Press the Enter key after the machine asks "Execute?", which will store the PM counter value in SP7-906 (PM Counter - Previous) and reset the value of the current PM counter (SP7-803) to "0".
001	Paper
002	PCU: Bk
003	PCU: C
004	PCU: M
005	PCU: Y
006	PCU: All
007	Development Unit: Bk
008	Development Unit: C
009	Development Unit: M
010	Development Unit: Y
011	Development Unit: All
016	Developer: All
017	Image Transfer Belt
018	Image Transfer Cleaning Unit
019	Fusing Unit
020	Fusing Roller
021	Fusing Belt
022	PTR Unit
023	Toner Collection Bottle

100	All

7807	**[SC/Jam Counter Reset]**		
	Clears the counters related to SC codes and paper jams.		
001	-	*CTL	-

7826	**[MF Error Counter] Japan Only**
001	Error Total
002	Error Staple

7827	**[MF Error Counter Clear] Japan Only**

7832	**[Self-Diagnose Result Display]**		
	Displays the result of the diagnostics.		
001	-	*CTL	-

7835	**[ACC Counter]**		
	Displays the ACC execution times for each mode.		
001	Copy ACC	*CTL	-
002	Printer ACC		

7836	**Total Memory Size**		
	Displays the memory capacity of the controller system.		
001	-	*CTL	-

7852	[DF Scan Glass Dust Check Counter]		
	Counts the number of occurrences (0 to 65,535) when dust was detected on the scanning glass of the ARDF or resets the dust detection counter. Counting is done only if SP4-020-1 (ARDF Scan Glass Dust Check) is switched on.		
001	Dust Detection Counter	*CTL	[0 to 9999 / - / 1 /step]
002	Dust Detection Clear Counter	*CTL	[0 to 9999 / - / 1 /step]

7853	**[Replacement Counter]**
	Displays the PM parts replacement number.
001	PCU: Bk
002	PCU: C
003	PCU: M
004	PCU: Y
005	Development Unit: Bk
006	Development Unit: C
007	Development Unit: M
008	Development Unit: Y
013	Image Transfer
014	Image Transfer Belt Cleaning
015	Fusing Unit
016	Fusing Roller
017	Fusing Belt
018	PTR Unit
019	Toner Collection Bottle

7855	**[Coverage Range]** Sets the color coverage threshold. Coverage rate = Coverage per page / A4 full coverage (dots) × 100 There are three coverage counters: Color 1, Color 2, and Color 3 ▪ [A] 5% (default) is adjustable with SP7855-001. ▪ [B] 20% (default) is adjustable with SP7855-002.  Note ▪ The setting value [B] must be set larger than [A]. The total numbers of printouts (BW printing plus color printing) for each coverage range are displayed with the following SPs. ▪ Color1 counter: SP8601-021 ▪ Color2 counter: SP8601-022 ▪ Color3 counter: SP8601-023		
001	Coverage Range 1	*CTL	[1 to 200 / **5** /1]
002	Coverage Range 2	*CTL	[1 to 200 / **20** /1]

7901	**[Assert Info]** Records the location where a problem is detected in the program. The data stored in this SP is used for problem analysis. **DFU**		
001	File Name	*CTL	-
002	Number of Lines		
003	Location		

7906	**[Prev. Unit PM Counter]**	
	(Page or Rotations, Unit, [Color]), Dev.: Development Unit	*ENG
-001 to -019	Displays the number of sheets printed with the previous maintenance units. [0 to 9999999 / **0** / 1 page/step]	
001	Page: PCU: Bk	
002	Page: PCU: C	
003	Page: PCU: M	
004	Page: PCU: Y	
005	Page: Development Unit: Bk	
006	Page: Development Unit: C	
007	Page: Development Unit: M	
008	Page: Development Unit: Y	
013	Page: Image Transfer	
014	Page: Image Transfer Cleaning	
015	Page: Fusing Unit	
016	Page: Fusing Roller	
017	Page: Fusing Belt	
018	Page: PTR Unit	
019	Page: Toner Collection Bottle	
-031 to -049	Displays the number of revolutions for motors or clutches in the previous maintenance units. [0 to 9999999 / **0** / 1 mm/step]	
031	Rotation: PCU: Bk	
032	Rotation: PCU: C	
033	Rotation: PCU: M	

034	Rotation: PCU: Y
035	Rotation: Development Unit: Bk
036	Rotation: Development Unit: C
037	Rotation: Development Unit: M
038	Rotation: Development Unit: Y
043	Rotation: Image Transfer
044	Rotation: Image Transfer Cleaning
045	Rotation: Fusing Unit
046	Rotation: Fusing Roller
047	Rotation: Fusing Belt
048	Rotation: PTR Unit
049	Measurement Toner Collection Bottle
-061 to -079	Displays the number of sheets printed with the previous maintenance unit or toner cartridge. [0 to 255 / **0** / 1 %/step]
061	Rotation %: PCU: Bk
062	Rotation %: PCU: C
063	Rotation %: PCU: M
064	Rotation %: PCU: Y
065	Rotation %: Development Unit: Bk
066	Rotation %: Development Unit: C
067	Rotation %: Development Unit: M
068	Rotation %: Development Unit: Y
073	Rotation %: Image Transfer
074	Rotation %: Image Transfer Cleaning

075	Rotation %: Fusing Unit
076	Rotation %: Fusing Roller
077	Rotation %: Fusing Belt
078	Rotation %: PTR Unit
079	Measurement %: Toner Collection Bottle
-091 to -108	Displays the value given by the following formula: (Yield count/ Current count) × 100, where "Current count" is the current values in the counter for the part, and "Yield count" is the recommended yield. [0 to 255 / **0** / 1 %/step]
091	Page (%): PCU: Bk
092	Page (%): PCU: C
093	Page (%): PCU: M
094	Page (%): PCU: Y
095	Page (%): Development Unit: Bk
096	Page (%): Development Unit: C
097	Page (%): Development Unit: M
098	Page (%): Development Unit: Y
103	Page (%):Image Transfer
104	Page (%):Image Transfer Cleaning
105	Page (%): Fusing Unit
106	Page (%): Fusing Roller
107	Page (%): Fusing Belt
108	Page (%): PTR Unit

7931	**[Toner Bottle Bk]**		
	Displays the toner bottle information for Bk.		
001	Machine Serial ID	*ENG	Displays the number information for each category.
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Product Information	*ENG	
009	Recycle Counter	*ENG	
010	Date	*ENG	
011	Serial No.	*ENG	
012	Toner Remaining	*ENG	Displays the remaining toner rate. [0 to 100 / 100 / 1%/step]
013	EDP Code	*ENG	Displays the EDP CODE.
014	End History	*ENG	Displays the toner end.
015	Refill Information	*ENG	Displays the refilling record.
016	Attachment: Total Counter	*ENG	Displays the total number of sheets when replacing the new toner bottle for the b/w mode or the full color mode. [0 to 9999999 / 0 / 1/step]
017	Attachment: Color Counter	*ENG	
018	End: Total Counter	*ENG	Displays the total number of sheets when detecting the toner end for the b/w mode or the full color mode. [0 to 9999999 / 0 / 1/step]
019	End: Color Counter	*ENG	
020	Attachment Date	*ENG	Displays the date of the toner bottle attacement.
021	End Date	*ENG	Displays the date of the toner end.

7932	**[Toner Bottle C]**		
	Displays the toner bottle information for C.		
001	Machine Serial ID	*ENG	Displays the number information for each category.
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Product Information	*ENG	
009	Recycle Counter	*ENG	
010	Date	*ENG	
011	Serial No.	*ENG	
012	Toner Remaining	*ENG	Displays the remaining toner rate. [0 to 100 / 100 / 1%/step]
013	EDP Code	*ENG	Displays the EDP CODE.
014	End History	*ENG	Displays the toner end.
015	Refill Information	*ENG	Displays the refilling record.
016	Attachment: Total Counter	*ENG	Displays the total number of sheets when replacing the new toner bottle for the b/w mode or the full color mode. [0 to 9999999 / 0 / 1/step]
017	Attachment: Color Counter	*ENG	
018	End: Total Counter	*ENG	Displays the total number of sheets when detecting the toner end for the b/w mode or the full color mode. [0 to 9999999 / 0 / 1/step]
019	End: Color Counter	*ENG	
020	Attachment Date	*ENG	Displays the date of the toner bottle attacement.
021	End Date	*ENG	Displays the date of the toner end.

7933	**[Toner Bottle M]**		
	Displays the toner bottle information for M.		
001	Machine Serial ID	*ENG	Displays the number information for each category.
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Product Information	*ENG	
009	Recycle Counter	*ENG	
010	Date	*ENG	
011	Serial No.	*ENG	
012	Toner Remaining	*ENG	Displays the remaining toner rate. [0 to 100 / 100 / 1%/step]
013	EDP Code	*ENG	Displays the EDP CODE.
014	End History	*ENG	Displays the toner end.
015	Refill Information	*ENG	Displays the refilling record.
016	Attachment: Total Counter	*ENG	Displays the total number of sheets when replacing the new toner bottle for the b/w mode or the full color mode. [0 to 9999999 / 0 / 1/step]
017	Attachment: Color Counter	*ENG	
018	End: Total Counter	*ENG	Displays the total number of sheets when detecting the toner end for the b/w mode or the full color mode. [0 to 9999999 / 0 / 1/step]
019	End: Color Counter	*ENG	
020	Attachment Date	*ENG	Displays the date of the toner bottle attacement.
021	End Date	*ENG	Displays the date of the toner end.

7934	**[Toner Bottle Y]**		
	Displays the toner bottle information for Y.		
001	Machine Serial ID	*ENG	Displays the number information for each category.
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Product Information	*ENG	
009	Recycle Counter	*ENG	
010	Date	*ENG	
011	Serial No.	*ENG	
012	Toner Remaining	*ENG	Displays the remaining toner rate. [0 to 100 / 100 / 1%/step]
013	EDP Code	*ENG	Displays the EDP CODE.
014	End History	*ENG	Displays the toner end.
015	Refill Information	*ENG	Displays the refilling record.
016	Attachment: Total Counter	*ENG	Displays the total number of sheets when replacing the new toner bottle for the b/w mode or the full color mode. [0 to 9999999 / 0 / 1/step]
017	Attachment: Color Counter	*ENG	
018	End: Total Counter	*ENG	Displays the total number of sheets when detecting the toner end for the b/w mode or the full color mode. [0 to 9999999 / 0 / 1/step]
019	End: Color Counter	*ENG	
020	Attachment Date	*ENG	Displays the date of the toner bottle attacement.
021	End Date	*ENG	Displays the date of the toner end.

7935	[Toner Bottle Log 1: Bk]		
001	Serial No.	*ENG	Displays the toner bottle information log 1 for Bk.
002	Attachment Date		
003	Attachment: Total Counter		
004	Refill Information		
005	Serial No.	*ENG	Displays the toner bottle information log 2 for Bk.
006	Attachment Date		
007	Attachment: Total Counter		
008	Refill Information		
009	Serial No.	*ENG	Displays the toner bottle information log 3 for Bk.
010	Attachment Date		
011	Attachment: Total Counter		
012	Refill Information		
013	Serial No.	*ENG	Displays the toner bottle information log 4 for Bk.
014	Attachment Date		
015	Attachment: Total Counter		
016	Refill Information		
017	Serial No.	*ENG	Displays the toner bottle information log 5 for Bk.
018	Attachment Date		
019	Attachment: Total Counter		
020	Refill Information		

7936	[Toner Bottle Log 1: C]		
001	Serial No.	*ENG	Displays the toner bottle information log 1 for M.
002	Attachment Date		
003	Attachment: Total Counter		
004	Refill Information		
005	Serial No.	*ENG	Displays the toner bottle information log 2 for M.
006	Attachment Date		
007	Attachment: Total Counter		
008	Refill Information		
009	Serial No.	*ENG	Displays the toner bottle information log 3 for M.
010	Attachment Date		
011	Attachment: Total Counter		
012	Refill Information		
013	Serial No.	*ENG	Displays the toner bottle information log 4 for M.
014	Attachment Date		
015	Attachment: Total Counter		
016	Refill Information		
017	Serial No.	*ENG	Displays the toner bottle information log 5 for M.
018	Attachment Date		
019	Attachment: Total Counter		
020	Refill Information		

7937	[Toner Bottle Log 1: M]		
001	Serial No.	*ENG	Displays the toner bottle information log 1 for C.
002	Attachment Date		
003	Attachment: Total Counter		
004	Refill Information		
005	Serial No.	*ENG	Displays the toner bottle information log 2 for C.
006	Attachment Date		
007	Attachment: Total Counter		
008	Refill Information		
009	Serial No.	*ENG	Displays the toner bottle information log 3 for C.
010	Attachment Date		
011	Attachment: Total Counter		
012	Refill Information		
013	Serial No.	*ENG	Displays the toner bottle information log 4 for C.
014	Attachment Date		
015	Attachment: Total Counter		
016	Refill Information		
017	Serial No.	*ENG	Displays the toner bottle information log 5 for C.
018	Attachment Date		
019	Attachment: Total Counter		
020	Refill Information		

7938	[Toner Bottle Log 1: Y]		
001	Serial No.	*ENG	Displays the toner bottle information log 1 for Y.
002	Attachment Date		
003	Attachment: Total Counter		
004	Refill Information		
005	Serial No.	*ENG	Displays the toner bottle information log 2 for Y.
006	Attachment Date		
007	Attachment: Total Counter		
008	Refill Information		
009	Serial No.	*ENG	Displays the toner bottle information log 3 for Y.
010	Attachment Date		
011	Attachment: Total Counter		
012	Refill Information		
013	Serial No.	*ENG	Displays the toner bottle information log 4 for Y.
014	Attachment Date		
015	Attachment: Total Counter		
016	Refill Information		
017	Serial No.	*ENG	Displays the toner bottle information log 5 for Y.
018	Attachment Date		
019	Attachment: Total Counter		
020	Refill Information		

7950	**[Unit Replacement Date]**		
	Displays the replacement date of each PM unit.		
001	Image Transfer Belt	*ENG	
002	Image Transfer Cleaning	*ENG	
003	PTR Unit	*ENG	
004	Fusing Unit	*ENG	
005	Fusing Roller	*ENG	
006	Fusing Belt	*ENG	
013	PCU: Bk	*ENG	
014	PCU: C	*ENG	
015	PCU: M	*ENG	
016	PCU: Y	*ENG	
017	Development Unit:Bk	*ENG	
018	Development Unit:C	*ENG	
019	Development Unit:M	*ENG	
020	Development Unit:Y	*ENG	

7951	**[Remaining Day Counter]**	*ENG	
	Displays the remaining unit life of each PM unit. [0 to 255 / **255** / 1 day/step]		
001	Page: PCU: Bk		
002	Page: PCU: C		
003	Page: PCU: M		
004	Page: PCU: Y		

005	Page: Development Unit: Bk
006	Page: Development Unit: C
007	Page: Development Unit: M
008	Page: Development Unit: Y
013	Page: Image Transfer Belt
014	Page: Image Transfer Cleaning
015	Page: Fusing Unit
016	Page: Fusing Roller
017	Page: Fusing Belt
018	Page: PTR Unit
031	Rotation: PCU: Bk
032	Rotation: PCU: C
033	Rotation: PCU: M
034	Rotation: PCU: Y
035	Rotation: Development Unit: Bk
036	Rotation: Development Unit: C
037	Rotation: Development Unit: M
038	Rotation: Development Unit: Y
043	Rotation: Image Transfer Belt
044	Rotation: Image Transfer Cleaning
045	Rotation: Fusing Unit
046	Rotation: Fusing Roller
047	Rotation: Fusing Belt
048	Rotation: PTR Unit

049	Measurement: Toner Collection Bottle

7952	**[PM Yield Setting]**		
	Adjusts the unit yield of each PM unit.		
001	Rotation: Image Transfer Belt	*ENG	[0 to 999999999 / **200696000** / 1000 mm/step]
002	Rotation: Image Transfer Cleaning	*ENG	[0 to 999999999 / **150522000** / 1000 mm/step]
003	Rotation: Fusing Unit	*ENG	[0 to 999999999 / **253311000** / 1000 mm/step]
004	Rotation: Fusing Roller	*ENG	
005	Rotation: Fusing Belt	*ENG	
006	Rotation: Paper Transfer Unit	*ENG	[0 to 999999999 / **150522000** / 1000 mm/step]
007	Measurement:Tone Collection Bottle	*ENG	[0 to 999999999 / **300000** / 1000 mg/step]
011	Page: Image Transfer Belt	*ENG	[0 to 999999 / **240000** / 1000 sheet/step]
012	Page: Image Transfer Cleaning	*ENG	[0 to 999999 / **180000** / 1000 sheet/step]
013	Page: Fusing Unit	*ENG	[0 to 999999 / **120000** / 1 sheet/step]
014	Page: Fusing Roller	*ENG	
015	Page: Fusing Belt	*ENG	
016	Page: Paper Transfer Unit	*ENG	[0 to 999999 / **180000** / 1000 sheet/step]
021	Day Threshold: PCU: Bk	*ENG	Adjusts the threshold day of the near end for each PM unit. [1 to 30 / **15** / 1 day/step] These threshold days are used for
022	Day Threshold: PCU: C	*ENG	
023	Day Threshold: PCU: M	*ENG	

024	Day Threshold: PCU: Y	*ENG	@Remote alarms.
025	Day Threshold: Development Unit: Bk	*ENG	Adjusts the threshold day of the near end for each PM unit. [1 to 30 / **15** / 1 day/step] These threshold days are used for @Remote alarms.
026	Day Threshold: Development Unit: C	*ENG	
027	Day Threshold: Development Unit: M	*ENG	
028	Day Threshold: Development Unit: Y	*ENG	
033	Day Threshold: Image Transfer Belt	*ENG	
034	Day Threshold: Image Transfer Cleaning	*ENG	
035	Day Threshold: Fusing Unit	*ENG	
036	Day Threshold: Fusing Roller	*ENG	
037	Day Threshold: Fusing Belt	*ENG	
038	Rotation: PCU: Bk	*ENG	[0 to 999999999 / **0** / 1 mm/step]
039	Rotation: PCU: C	*ENG	
040	Rotation: PCU: M	*ENG	
041	Rotation: PCU: Y	*ENG	
042	Rotation: Development Unit: Bk	*ENG	
043	Rotation: Development Unit: C	*ENG	
044	Rotation: Development	*ENG	

	Unit: M		
045	Rotation: Development Unit: Y	*ENG	
050	Page: PCU: Bk	*ENG	[0 to 999999 / **0** / 1 sheet/step]
051	Page: PCU: C		
052	Page: PCU: M		
053	Page: PCU: Y		
054	Page: Development Unit: Bk	*ENG	
055	Page: Development Unit: C	*ENG	
056	Page: Development Unit: M	*ENG	
057	Page: Development Unit: Y	*ENG	
062	Day Threshold:PTR Unit	*ENG	Adjusts the threshold day of the near end for each PM unit. [1 to 30 / **15** / 1 day/step] These threshold days are used for @Remote alarms.
063	Day Thresh: Toner Collection Bottle		

7953	**[Operation Env. Log: PCU: Bk]**		
	Displays the PCU rotation distance in each specified operation environment. T: Temperature (°C), H: Relative Humidity (%)		
001	T<=0	*ENG	[0 to 99999999 / - / 1 mm/step]
002	0<T<=5:0<=H<30		
003	0<T<=5:30<=H<70		
004	T<=5: 70<=H<=100		

005	5<T<15: 0<=H<30		
006	5<T<15: 30<=H<55		
007	5<T<15: 55<=H<80		
008	5<T<15: 80<=H<=100		
009	15<=T<25: 0<=H<30		
010	15<=T<25: 30<=H<55		
011	15<=T<25: 55<=H<80	*ENG	[0 to 99999999 / - / 1 mm/step]
012	15<=T<25: 80<=H<=100		
013	25<=T<30: 0<=H<30		
014	25<=T<30: 30<=H<55		
015	25<=T<30: 55<=H<80		
016	25<=T<30: 80<=H<=100		
017	30<=T: 0<=H<30		
018	30<=T: 30<=H<55		
019	30<=T: 55<=H<80		
020	30<=T: 80<=H<=100		

7954	**[Operation Env. Log Clear]**
	Clears the operation environment log.
001	-

3.8 SYSTEM SP8-XXX

3.8.1 SP8-XXX: DATA LOG2

Many of these counters are provided for features that are currently not available, such as sending color faxes, and so on. However, here are some Group 8 codes that when used in combination with others, can provide useful information.

SP Numbers	What They Do
SP8211 to SP8216	The number of pages scanned to the document server.
SP8401 to SP8406	The number of pages printed from the document server
SP8691 to SP8696	The number of pages sent from the document server

Specifically, the following questions can be answered:

- How is the document server actually being used?
- What application is using the document server most frequently?
- What data in the document server is being reused?

Most of the SPs in this group are prefixed with a letter that indicates the mode of operation (the mode of operation is referred to as an "application"). Before reading the Group 8 Service Table, make sure that you understand what these prefixes mean.

Prefixes	What it means	
T:	Total: (Grand Total).	Grand total of the items counted for all applications (C, F, P, etc.).
C:	Copy application.	Totals (pages, jobs, etc.) executed for each application when the job was not stored on the document server.
F:	Fax application.	
P:	Print application.	
S:	Scan application.	
L:	Local storage (document server)	Totals (jobs, pages, etc.) for the document server. The L: counters work differently case by case. Sometimes, they count jobs/pages stored on the

		document server; this can be in document server mode (from the document server window), or from another mode, such as from a printer driver or by pressing the Store File button in the Copy mode window. Sometimes, they include occasions when the user uses a file that is already on the document server. Each counter will be discussed case by case.
O:	Other applications (external network applications, for example)	Refers to network applications such as Web Image Monitor. Utilities developed with the SDK (Software Development Kit) will also be counted with this group in the future.

The Group 8 SP codes are limited to 17 characters, forced by the necessity of displaying them on the small LCDs of printers and faxes that also use these SPs. Read over the list of abbreviations below and refer to it again if you see the name of an SP that you do not understand.

Key for Abbreviations

Abbreviation	What it means
/	"By", e.g. "T:Jobs/Apl" = Total Jobs "by" Application
>	More (2> "2 or more", 4> "4 or more"
AddBook	Address Book
Apl	Application
B/W	Black & White
Bk	Black
C	Cyan
ColCr	Color Create
ColMode	Color Mode
Comb	Combine
Comp	Compression

Abbreviation	What it means
Deliv	Delivery
DesApl	Designated Application. The application (Copy, Fax, Scan, Print) used to store the job on the document server, for example.
Dev Counter	Development Count, no. of pages developed.
Dup, Duplex	Duplex, printing on both sides
Emul	Emulation
FC	Full Color
FIN	Post-print processing, i.e. finishing (punching, stapling, etc.)
Full Bleed	No Margins
GenCopy	Generation Copy Mode
GPC	Get Print Counter. For jobs 10 pages or less, this counter does not count up. For jobs larger than 10 pages, this counter counts up by the number that is in excess of 10 (e.g., for an 11-page job, the counter counts up 11-10 =1)
IFax	Internet Fax
ImgEdt	Image Edit performed on the original with the copier GUI, e.g. border removal, adding stamps, page numbers, etc.
K	Black (YMCK)
LS	Local Storage. Refers to the document server.
LSize	Large (paper) Size
Mag	Magnification
MC	One color (monochrome)
NRS	New Remote Service, which allows a service center to monitor machines remotely. "NRS" is used overseas, "CSS" is used in Japan.

Abbreviation	What it means
Org	Original for scanning
OrgJam	Original Jam
Palm 2	Print Job Manager/Desk Top Editor: A pair of utilities that allows print jobs to be distributed evenly among the printers on the network, and allows files to moved around, combined, and converted to different formats.
PC	Personal Computer
PGS	Pages. A page is the total scanned surface of the original. Duplex pages count as two pages, and A3 simplex count as two pages if the A3/DLT counter SP is switched ON.
PJob	Print Jobs
Ppr	Paper
PrtJam	Printer (plotter) Jam
PrtPGS	Print Pages
R	Red (Toner Remaining). Applies to the wide format model A2 only. This machine is under development and currently not available.
Rez	Resolution
SC	Service Code (Error SC code displayed)
Scn	Scan
Sim, Simplex	Simplex, printing on 1 side.
S-to-Email	Scan-to-E-mail
SMC	SMC report printed with SP5990. All of the Group 8 counters are recorded in the SMC report.
Svr	Server
TonEnd	Toner End

Abbreviation	What it means
TonSave	Toner Save
TXJob	Send, Transmission
YMC	Yellow, Magenta, Cyan
YMCK	Yellow, Magenta, Cyan, Black

Note

- All of the Group 8 SPs are reset with SP5 801 1 Memory All Clear.

8 001	T:Total Jobs	*CTL	These SPs count the number of times each application is used to do a job. [0 to 9999999/ **0** / 1] **Note**: The L: counter is the total number of times the other applications are used to send a job to the document server, plus the number of times a file already on the document server is used.
8 002	C:Total Jobs	*CTL	
8 003	F:Total Jobs	*CTL	
8 004	P:Total Jobs	*CTL	
8 005	S:Total Jobs	*CTL	
8 006	L:Total Jobs	*CTL	

- These SPs reveal the number of times an application is used, not the number of pages processed.
- When an application is opened for image input or output, this counts as one job.
- Interrupted jobs (paper jams, etc.) are counted, even though they do not finish.
- Only jobs executed by the customer are counted. Jobs executed by the customer engineer using the SP modes are not counted.
- When using secure printing (when a password is required to start the print job), the job is counted at the time when either "Delete Data" or "Specify Output" is specified.
- A job is counted as a fax job when the job is stored for sending.
- When a fax is received to fax memory, the F: counter increments but the L: counter does not (the document server is not used).
- A fax broadcast counts as one job for the F: counter (the fax destinations in the broadcast are not counted separately).
- A fax broadcast is counted only after all the faxes have been sent to their destinations. If one transmission generates an error, then the broadcast will not be counted until the transmission

has been completed.

- A printed fax report counts as one job for the F: counter.
- The F: counter does not distinguish between fax sending or receiving.
- When a copy job on the document server is printed, SP8022 also increments, and when a print job stored on the document server is printed, SP8024 also increments.
- When an original is both copied and stored on the document server, the C: and L: counters both increment.
- When a print job is stored on the document server, only the L: counter increments.
- When the user presses the Document Server button to store the job on the document server, only the L: counter increments.
- When the user enters document server mode and prints data stored on the document server, only the L: counter increments.
- When an image received from Palm 2 is received and stored, the L: counter increments.
- When the customer prints a report (user code list, for example), the O: counter increments. However, for fax reports and reports executed from the fax application, the F: counter increments.

8 011	T:Jobs/LS	*CTL	These SPs count the number of jobs stored to the document server by each application, to reveal how local storage is being used for input. [0 to 9999999/ **0** / 1] The L: counter counts the number of jobs stored from within the document server mode screen at the operation panel.
8 012	C:Jobs/LS	*CTL	
8 013	F:Jobs/LS	*CTL	
8 014	P:Jobs/LS	*CTL	
8 015	S:Jobs/LS	*CTL	
8 016	L:Jobs/LS	*CTL	
8 017	O:Jobs/LS	*CTL	

- When a scan job is sent to the document server, the S: counter increments. When you enter document server mode and then scan an original, the L: counter increments.
- When a print job is sent to the document server, the P: counter increments.
- When a network application sends data to the document server, the O: counter increments.
- When an image from Palm 2 is stored on the document server, the O: counter increments.
- When a fax is sent to the document server, the F: counter increments.

8 021	T:Pjob/LS	*CTL	These SPs reveal how files printed from the document server were stored on the document server originally. [0 to 9999999/ **0** / 1] The L: counter counts the number of jobs stored from within the document server mode screen at the operation panel.
8 022	C:Pjob/LS	*CTL	
8 023	F:Pjob/LS	*CTL	
8 024	P:Pjob/LS	*CTL	
8 025	S:Pjob/LS	*CTL	
8 026	L:Pjob/LS	*CTL	
8 027	O:Pjob/LS	*CTL	

- When a copy job stored on the document server is printed with another application, the C: counter increments.
- When an application like DeskTopBinder merges a copy job that was stored on the document server with a print job that was stored on the document server, the C: and P: counters both increment.
- When a job already on the document server is printed with another application, the L: counter increments.
- When a scanner job stored on the document server is printed with another application, the S: counter increments. If the original was scanned from within document server mode, then the L: counter increments.
- When images stored on the document server by a network application (including Palm 2), are printed with another application, the O: counter increments.
- When a copy job stored on the document server is printed with a network application (Web Image Monitor, for example), the C: counter increments.
- When a fax on the document server is printed, the F: counter increments.

8 031	T:Pjob/DesApl	*CTL	These SPs reveal what applications were used to output documents from the document server. [0 to 9999999/ **0** / 1] The L: counter counts the number of jobs printed from within the document server mode screen at the operation panel.
8 032	C:Pjob/DesApl	*CTL	
8 033	F:Pjob/DesApl	*CTL	
8 034	P:Pjob/DesApl	*CTL	
8 035	S:Pjob/DesApl	*CTL	
8 036	L:Pjob/DesApl	*CTL	
8 037	O:Pjob/DesApl	*CTL	

- When documents already stored on the document server are printed, the count for the application that started the print job is incremented.
- When the print job is started from a network application (Desk Top Binder, Web Image Monitor, etc.) the L: counter increments.

8 041	T:TX Jobs/LS	*CTL	These SPs count the applications that stored files on the document server that were later accessed for transmission over the telephone line or over a network (attached to an e-mail, or as a fax image by I-Fax). [0 to 9999999/ **0** / 1] **Note**: Jobs merged for sending are counted separately. The L: counter counts the number of jobs scanned from within the document server mode screen at the operation panel.
8 042	C:TX Jobs/LS	*CTL	
8 043	F:TX Jobs/LS	*CTL	
8 044	P:TX Jobs/LS	*CTL	
8 045	S:TX Jobs/LS	*CTL	
8 046	L:TX Jobs/LS	*CTL	
8 047	O:TX Jobs/LS	*CTL	

- When a stored copy job is sent from the document server, the C: counter increments.
- When images stored on the document server by a network application or Palm2 are sent as an e-mail, the O: counter increments.

8 051	T:TX Jobs/DesApl	*CTL	These SPs count the applications used to send files from the document server over the telephone line or over a network (attached to an e-mail, or as a fax image by I-Fax). Jobs merged for sending are counted separately. [0 to 9999999/ **0** / 1] The L: counter counts the number of jobs sent from within the document server mode screen at the operation panel.
8 052	C:TX Jobs/DesApl	*CTL	
8 053	F:TX Jobs/DesApl	*CTL	
8 054	P:TX Jobs/DesApl	*CTL	
8 055	S:TX Jobs/DesApl	*CTL	
8 056	L:TX Jobs/DesApl	*CTL	
8 057	O:TX Jobs/DesApl	*CTL	

- If the send is started from Desk Top Binder or Web Image Monitor, for example, then the O: counter increments.

8 061	T:FIN Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs total the finishing methods. The finishing method is specified by the application.		
8 062	C:FIN Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs total finishing methods for copy jobs only. The finishing method is specified by the application.		
8 063	F:FIN Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs total finishing methods for fax jobs only. The finishing method is specified by the application. **Note**: Finishing features for fax jobs are not available at this time.		
8 064	P:FIN Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs total finishing methods for print jobs only. The finishing method is specified by the application.		
8 065	S:FIN Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs total finishing methods for scan jobs only. The finishing method is specified by the application.		

	Note: Finishing features for scan jobs are not available at this time.		
8 066	L:FIN Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs total finishing methods for jobs output from within the document server mode screen at the operation panel. The finishing method is specified from the print window within document server mode.		
8 067	O:FIN Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs total finishing methods for jobs executed by an external application, over the network. The finishing method is specified by the application.		
8 06x 1	Sort	Number of jobs started in Sort mode. When a stored copy job is set for Sort and then stored on the document server, the L: counter increments. (See SP8 066 1)	
8 06x 2	Stack	Number of jobs started out of Sort mode.	
8 06x 3	Staple	Number of jobs started in Staple mode.	
8 06x 4	Booklet	Number of jobs started in Booklet mode. If the machine is in staple mode, the Staple counter also increments.	
8 06x 5	Z-Fold	Number of jobs started In any mode other than the Booklet mode and set for folding (Z-fold).	
8 06x 6	Punch	Number of jobs started in Punch mode. When Punch is set for a print job, the P: counter increments. (See SP8 064 6.)	
8 06x 7	Other	Reserved. Not used.	
8 06x 8	Inside-Fold	Not used	
8 06x 9	Three-IN-Fold	Not used	
8 06x 10	Three-OUT-Fold	Not used	
8 06x 11	Four-Fold	Not used	

8 06x 12	KANNON-Fold	Not used
8 06x 13	Perfect-Bind	Not used
8 06x 14	Ring-Bind	Not used

8 071	T:Jobs/PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of jobs broken down by the number of pages in the job, regardless of which application was used.		
8 072	C:Jobs/PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count and calculate the number of copy jobs by size based on the number of pages in the job.		
8 073	F:Jobs/PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count and calculate the number of fax jobs by size based on the number of pages in the job.		
8 074	P:Jobs/PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count and calculate the number of print jobs by size based on the number of pages in the job.		
8 075	S:Jobs/PGS		[0 to 9999999/ **0** / 1]
	These SPs count and calculate the number of scan jobs by size based on the number of pages in the job.		
8 076	L:Jobs/PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count and calculate the number of jobs printed from within the document server mode window at the operation panel, by the number of pages in the job.		
8 077	O:Jobs/PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count and calculate the number of "Other" application jobs (Web Image Monitor, Palm 2, etc.) by size based on the number of pages in the job.		
8 07x 1	1 Page	8 07x 8	21 to 50 Pages

8 07x 2	2 Pages	8 07x 9	51 to 100 Pages
8 07x 3	3 Pages	8 07x 10	101 to 300 Pages
8 07x 4	4 Pages	8 07x 11	301 to 500 Pages
8 07x 5	5 Pages	8 07x 12	501 to 700 Pages
8 07x 6	6 to 10 Pages	8 07x 13	701 to 1000 Pages
8 07x 7	11 to 20 Pages	8 07x 14	1001 to Pages

- For example: When a copy job stored on the document server is printed in document server mode, the appropriate L: counter (SP8076 0xx) increments.
- Printing a fax report counts as a job and increments the F: counter (SP 8073).
- Interrupted jobs (paper jam, etc.) are counted, even though they do not finish.
- If a job is paused and re-started, it counts as one job.
- If the finisher runs out of staples during a print and staple job, then the job is counted at the time the error occurs.
- For copy jobs (SP 8072) and scan jobs (SP 8075), the total is calculated by multiplying the number of sets of copies by the number of pages scanned. (One duplex page counts as 2.)
- The first test print and subsequent test prints to adjust settings are added to the number of pages of the copy job (SP 8072).
- When printing the first page of a job from within the document server screen, the page is counted.

8 111	T:FAX TX Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of jobs (color or black-and-white) sent by fax, either directly or using a file stored on the document server, on a telephone line. **Note**: Color fax sending is not available at this time.		
8 113	F: FAX TX Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of jobs (color or black-and-white) sent by fax directly on a telephone line. **Note**: Color fax sending is not available at this time.		
8 11x 1	B/W		
8 11x 2	Color		

- These counters count jobs, not pages.
- This SP counts fax jobs sent over a telephone line with a fax application, including documents stored on the document server.
- If the mode is changed during the job, the job will count with the mode set when the job started.
- If the same document is faxed to both a public fax line and an I-Fax at a destination where both are available, then this counter increments, and the I-Fax counter (8 12x) also increments.
- The fax job is counted when the job is scanned for sending, not when the job is sent.

8 121	T:IFAX TX Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of jobs (color or black-and-white) sent, either directly or using a file stored on the document server, as fax images using I-Fax. **Note**: Color fax sending is not available at this time.		
8 123	F: IFAX TX Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of jobs (color or black-and-white) sent (not stored on the document server), as fax images using I-Fax. **Note**: Color fax sending is not available at this time.		

8 12x 1	B/W
8 12x 2	Color

- These counters count jobs, not pages.
- The counters for color are provided for future use; the color fax feature is not available at this time.
- The fax job is counted when the job is scanned for sending, not when the job is sent.

8 131	T:S-to-Email Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of jobs (color or black-and-white) scanned and attached to an e-mail, regardless of whether the document server was used or not.		
8 135	S: S-to-Email Jobs	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of jobs (color or black-and-white) scanned and attached to e-mail, without storing the original on the document server.		
8 13x 1	B/W		
8 13x 2	Color		
8 13x 3	ACS		

- These counters count jobs, not pages.
- If the job is stored on the document server, after the job is stored it is determined to be color or black-and-white then counted.
- If the job is cancelled during scanning, or if the job is cancelled while the document is waiting to be sent, the job is not counted.
- If the job is cancelled during sending, it may or may not be counted, depending on what stage of the process had been reached when the job was cancelled.
- If several jobs are combined for sending to the Scan Router, Scan-to-Email, or Scan-to-PC, or if one job is sent to more than one destination. each send is counted separately. For example, if the same document is sent by Scan-to-Email as well as Scan-to-PC, then it is counted twice (once for Scan-to-Email and once for Scan-to-PC).

8 141	T:Deliv Jobs/Svr	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of jobs (color or black-and-white) scanned and sent to a Scan Router server.		
8 145	S: Deliv Jobs/Svr	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of jobs (color or black-and-white) scanned in scanner mode and sent to a Scan Router server.		
8 14x 1	B/W		
8 14x 2	Color		
8 14x 3	ACS		

- These counters count jobs, not pages.
- The jobs are counted even though the arrival and reception of the jobs at the Scan Router server cannot be confirmed.
- If even one color image is mixed with black-and-white images, then the job is counted as a "Color" job.
- If the job is cancelled during scanning, or if the job is cancelled while the document is waiting to be delivered, the job is not counted.
- If the job is cancelled during sending, it may or may not be counted, depending on what stage of the process had been reached when the job was cancelled.
- Even if several files are combined for sending, the transmission counts as one job.

8 151	T:Deliv Jobs/PC	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of jobs (color or black-and-white) scanned and sent to a folder on a PC (Scan-to-PC). **Note**: At the present time, 8 151 and 8 155 perform identical counts.		
8 155	S:Deliv Jobs/PC	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of jobs (color or black-and-white) scanned and sent with Scan-to-PC.		
8 15x 1	B/W		
8 15x 2	Color		
8 15x 3	ACS		

- These counters count jobs, not pages.
- If the job is cancelled during scanning, it is not counted.
- If the job is cancelled while it is waiting to be sent, the job is not counted.
- If the job is cancelled during sending, it may or may not be counted, depending on what stage of the process had been reached when the job was cancelled.
- Even if several files are combined for sending, the transmission counts as one job.

8 161	T:PCFAX TX Jobs	*CTL	These SPs count the number of PC Fax transmission jobs. A job is counted from when it is registered for sending, not when it is sent. [0 to 9999999/ **0** / 1] **Note**: At the present time, these counters perform identical counts.
8 163	F:PCFAX TX Jobs	*CTL	

- This counts fax jobs started from a PC using a PC fax application, and sending the data out to the destination from the PC through the copier.

8 171	T:Deliv Jobs/WSD	*CTL	These SPs count the pages scanned by WS. [0 to 9999999/ **0** / 1]
8 175	S:Deliv Jobs/WSD	*CTL	
-001	B/W		
-002	Color		
-003	ACS		

8 181	T:Scan to Media Jobs	*CTL	These SPs count the scanned pages in a media by the scanner application. [0 to 9999999/ **0** / 1]
8 185	S:Scan to Media Jobs	*CTL	
-001	B/W		
-002	Color		
-003	ACS		

8 191	T:Total Scan PGS	*CTL	These SPs count the pages scanned by each application that uses the scanner to scan images. [0 to 9999999/ **0** / 1]
8 192	C:Total Scan PGS	*CTL	
8 193	F:Total Scan PGS	*CTL	
8 195	S:Total Scan PGS	*CTL	
8 196	L:Total Scan PGS	*CTL	

- SP 8 191 to 8 196 count the number of scanned sides of pages, not the number of physical pages.
- These counters do not count reading user stamp data, or reading color charts to adjust color.
- Previews done with a scanner driver are not counted.
- A count is done only after all images of a job have been scanned.
- Scans made in SP mode are not counted.

Examples

- If both sides of 3 A4 sheets are copied and stored to the document server using the Store File button in the Copy mode window, the C: count is 6 and the L: count is 6.
- If both sides of 3 A4 sheets are copied but not stored, the C: count is 6.
- If you enter document server mode then scan 6 pages, the L: count is 6.

8 201	T:LSize Scan PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of large pages input with the scanner for scan and copy jobs. Large size paper (A3/DLT) scanned for fax transmission are not counted. **Note**: These counters are displayed in the SMC Report, and in the User Tools display.		
8 203	F: LSize Scan PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of large pages input with the scanner for fax transmission. **Note**: These counters are displayed in the SMC Report, and in the User Tools display.		
8 205	S:LSize Scan PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of large pages input with the scanner for scan jobs only. Large size paper (A3/DLT) scanned for fax transmission are not counted. **Note**: These counters are displayed in the SMC Report, and in the User Tools display.		

8 211	T:Scan PGS/LS	*CTL	These SPs count the number of pages scanned into the document server . [0 to 9999999/ **0** / 1] The L: counter counts the number of pages stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen
8 212	C:Scan PGS/LS	*CTL	
8 213	F:Scan PGS/LS	*CTL	
8 215	S:Scan PGS/LS	*CTL	
8 216	L:Scan PGS/LS	*CTL	

- Reading user stamp data is not counted.
- If a job is cancelled, the pages output as far as the cancellation are counted.
- If the scanner application scans and stores 3 B5 sheets and 1 A4 sheet, the S: count is 4.
- If pages are copied but not stored on the document server, these counters do not change.
- If both sides of 3 A4 sheets are copied and stored to the document server, the C: count is 6 and the L: count is 6.
- If you enter document server mode then scan 6 pages, the L: count is 6.

8 221	ADF Org Feeds	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of pages fed through the ADF for front and back side scanning.		
8 221 1	Front	Number of front sides fed for scanning: With an ADF that can scan both sides simultaneously, the Front side count is the same as the number of pages fed for either simplex or duplex scanning. With an ADF that cannot scan both sides simultaneously, the Front side count is the same as the number of pages fed for duplex front side scanning. (The front side is determined by which side the user loads face up.)	
8 221 2	Back	Number of rear sides fed for scanning: With an ADF that can scan both sides simultaneously, the Back count is the same as the number of pages fed for duplex scanning. With an ADF that cannot scan both sides simultaneously, the Back count is the same as the number of pages fed for duplex rear-side scanning.	

- When 1 sheet is fed for duplex scanning the Front count is 1 and the Back count is 1.
- If a jam occurs during the job, recovery processing is not counted to avoid double counting. Also, the pages are not counted if the jam occurs before the first sheet is output.

8 231	Scan PGS/Mode	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of pages scanned by each ADF mode to		

	determine the work load on the ADF.	
8 231 1	Large Volume	Selectable. Large copy jobs that cannot be loaded in the ADF at one time.
8 231 2	SADF	Selectable. Feeding pages one by one through the ADF.
8 231 3	Mixed Size	Selectable. Select "Mixed Sizes" on the operation panel.
8 231 4	Custom Size	Selectable. Originals of non-standard size.
8 231 5	Platen	Book mode. Raising the ADF and placing the original directly on the platen.
8 231 6	Mixed 1side/ 2side	Simplex and Duplex mode.

- If the scan mode is changed during the job, for example, if the user switches from ADF to Platen mode, the count is done for the last selected mode.
- The user cannot select mixed sizes or non-standard sizes with the fax application so if the original's page sizes are mixed or non-standard, these are not counted.
- If the user selects "Mixed Sizes" for copying in the platen mode, the Mixed Size count is enabled.
- In the SADF mode if the user copies 1 page in platen mode and then copies 2 pages with SADF, the Platen count is 1 and the SADF count is 3.

8 241	T:Scan PGS/Org	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of scanned pages by original type for all jobs, regardless of which application was used.		
8 242	C:Scan PGS/Org	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of pages scanned by original type for Copy jobs.		
8 243	F:Scan PGS/Org	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of pages scanned by original type for Fax jobs.		

8 245	S:Scan PGS/Org	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of pages scanned by original type for Scan jobs.		
8 246	L:Scan PGS/Org	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen		

	8 241		**8 242**	**8 243**	**8 245**	**8 246**
8 24x 1: Text		Yes	Yes	Yes	Yes	Yes
8 24x 2: Text/Photo		Yes	Yes	Yes	Yes	Yes
8 24x 3: Photo		Yes	Yes	Yes	Yes	Yes
8 24x 4: GenCopy, Pale		Yes	Yes	No	Yes	Yes
8 24x 5: Map		Yes	Yes	No	Yes	Yes
8 24x 6: Normal/Detail		Yes	No	Yes	No	No
8 24x 7: Fine/Super Fine		Yes	No	Yes	No	No
8 24x 8: Binary		Yes	No	No	Yes	No
8 24x 9: Grayscale		Yes	No	No	Yes	No
8 24x 10: Color		Yes	No	No	Yes	No
8 24x 11: Other		Yes	Yes	Yes	Yes	Yes

- If the scan mode is changed during the job, for example, if the user switches from ADF to Platen mode, the count is done for the last selected mode.

8 251	T:Scan PGS/ImgEdt	*CTL	These SPs show how many times Image Edit features have been selected at the operation panel for each application. Some examples of these editing features are: ▪ Erase> Border ▪ Erase> Center ▪ Image Repeat ▪ Centering ▪ Positive/Negative [0 to 9999999/ **0** / 1] Note: The count totals the number of times the edit features have been used. A detailed breakdown of exactly which features have been used is not given.
8 252	C:Scan PGS/ImgEdt	*CTL	
8 254	P:Scan PGS/ImgEdt	*CTL	
8 255	S : Scan PGS/ImgEdr	*CTL	
8 256	L:Scan PGS/ImgEdt	*CTL	
8 257	O:Scan PGS/ImgEdt	*CTL	

The L: counter counts the number of pages stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen.

8 261	T:Scan PGS/ColCr	*CTL	-
8 262	C:Scan PGS/ ColCr	*CTL	-
8 265	S:Scn PGS/Color	*CTL	-
8 266	L:Scn PGS/ColCr	*CTL	-
8 26x 1	Color Conversion	These SPs show how many times color creation features have been selected at the operation panel.	
8 26x 2	Color Erase		
8 26x 3	Background		
8 26x 4	Other		

8 281	T:Scan PGS/TWAIN	*CTL	These SPs count the number of pages scanned using a TWAIN driver. These counters reveal how the TWAIN driver is used for delivery functions. [0 to 9999999/ **0** / 1] **Note**: At the present time, these counters perform identical counts.
8 285	S:Scan PGS/TWAIN	*CTL	

8 291	T:Scan PGS/Stamp	*CTL	These SPs count the number of pages stamped with the stamp in the ADF unit. [0 to 9999999/ **0** / 1] The L: counter counts the number of pages stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen
8 293	F:Scan PGS/Stamp	*CTL	
8 295	S:Scan PGS/Stamp	*CTL	

8 301	T:Scan PGS/Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by size the total number of pages scanned by all applications. Use these totals to compare original page size (scanning) and output (printing) page size [SP 8-441].		
8 302	C:Scan PGS/Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by size the total number of pages scanned by the Copy application. Use these totals to compare original page size (scanning) and output (printing) page size [SP 8-442].		
8 303	F:Scan PGS/Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by size the total number of pages scanned by the Fax application. Use these totals to compare original page size (scanning) and output page size [SP 8-443].		
8 305	S:Scan PGS/Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by size the total number of pages scanned by the Scan		

	application. Use these totals to compare original page size (scanning) and output page size [SP 8-445].		
8 306	L:Scan PGS/Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by size the total number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen. Use these totals to compare original page size (scanning) and output page size [SP 8-446].		
8 30x 1	A3	-	
8 30x 2	A4		
8 30x 3	A5		
8 30x 4	B4		
8 30x 5	B5		
8 30x 6	DLT		
8 30x 7	LG		
8 30x 8	LT		
8 30x 9	HLT		
8 30x 10	Full Bleed		
8 30x 254	Other (Standard)		
8 30x 255	Other (Custom)		

8 311	T:Scan PGS/Rez	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by resolution setting the total number of pages scanned by applications that can specify resolution settings.		
8 315	S: Scan PGS/Rez	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by resolution setting the total number of pages scanned by applications that can specify resolution settings. **Note**: At the present time, SP8-311 and SP8-315 perform identical counts.		
8 31x 1	1200dpi <		
8 31x 2	600dpi to 1199dpi		
8 31x 3	400dpi to 599dpi		
8 31x 4	200dpi to 399dpi		
8 31x 5	< 199dpi		

- Copy resolution settings are fixed so they are not counted.
- The Fax application does not allow finely-adjusted resolution settings so no count is done for the Fax application.

8 381	T:Total PrtPGS	*CTL	These SPs count the number of pages printed by the customer. The counter for the application used for storing the pages increments. [0 to 9999999/ **0** / 1] The L: counter counts the number of pages stored from within the document server mode screen at the operation panel. Pages stored with the Store File button from within the Copy mode screen go to the C: counter.
8 382	C:Total PrtPGS	*CTL	
8 383	F:Total PrtPGS	*CTL	
8 384	P:Total PrtPGS	*CTL	
8 385	S:Total PrtPGS	*CTL	
8 386	L:Total PrtPGS	*CTL	
8 387	O:Total PrtPGS	*CTL	

- When several documents are merged for a print job, the number of pages stored are counted for the application that stored them.
- These counters are used primarily to calculate charges on use of the machine, so the

following pages are not counted as printed pages:

- Blank pages in a duplex printing job.
- Blank pages inserted as document covers, chapter title sheets, and slip sheets.
- Reports printed to confirm counts.
- All reports done in the service mode (service summaries, engine maintenance reports, etc.)
- Test prints for machine image adjustment.
- Error notification reports.
- Partially printed pages as the result of a copier jam.

8 391	LSize PrtPGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count pages printed on paper sizes A3/DLT and larger. **Note**: In addition to being displayed in the SMC Report, these counters are also displayed in the User Tools display on the copy machine.		

8 401	T:PrtPGS/LS	*CTL	These SPs count the number of pages printed from the document server. The counter for the application used to print the pages is incremented. The L: counter counts the number of jobs stored from within the document server mode screen at the operation panel. [0 to 9999999/ **0** / 1]
8 402	C:PrtPGS/LS	*CTL	
8 403	F:PrtPGS/LS	*CTL	
8 404	P:PrtPGS/LS	*CTL	
8 405	S:PrtPGS/LS	*CTL	
8 406	L:PrtPGS/LS	*CTL	

- Print jobs done with Web Image Monitor and Desk Top Binder are added to the L: count.
- Fax jobs done with Web Image Monitor and Desk Top Binder are added to the F: count.

8 411	Prints/Duplex	*CTL	This SP counts the amount of paper (front/back counted as 1 page) used for duplex printing. Last pages printed only on one side are not counted. [0 to 9999999/ **0** / 1]

8 421	T:PrtPGS/Dup Comb	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing. This is the total for all applications.		
8 422	C:PrtPGS/Dup Comb	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the copier application.		
8 423	F:PrtPGS/Dup Comb	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the fax application.		
8 424	P:PrtPGS/Dup Comb	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the printer application.		
8 425	S:PrtPGS/Dup Comb	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the scanner application.		
8 426	L:PrtPGS/Dup Comb	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing from within the document server mode window at the operation panel.		
8 427	O:PrtPGS/Dup Comb	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by Other applications		

8 42x 1	Simplex> Duplex			
8 42x 2	Duplex> Duplex			
8 42x 3	Book> Duplex			
8 42x 4	Simplex Combine			
8 42x 5	Duplex Combine			
8 42x 6	2>	2 pages on 1 side (2-Up)		
8 42x 7	4>	4 pages on 1 side (4-Up)		
8 42x 8	6>	6 pages on 1 side (6-Up)		
8 42x 9	8>	8 pages on 1 side (8-Up)		
8 42x 10	9>	9 pages on 1 side (9-Up)		
8 42x 11	16>	16 pages on 1 side (16-Up)		
8 42x 12	Booklet			
8 42x 13	Magazine			

- These counts (SP8 421 to SP8 427) are especially useful for customers who need to improve their compliance with ISO standards for the reduction of paper consumption.
- Pages that are only partially printed with the n-Up functions are counted as 1 page.
- Here is a summary of how the counters work for Booklet and Magazine modes:

Booklet			Magazine	
Original Pages	**Count**		**Original Pages**	**Count**
1	1		1	1
2	2		2	2
3	2		3	2
4	2		4	2
5	3		5	4
6	4		6	4
7	4		7	4
8	4		8	4

8 431	T:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of pages output with the three features below, regardless of which application was used.		
8 432	C:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of pages output with the three features below with the copy application.		
8 434	P:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of pages output with the three features below with the print application.		
8 436	L:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of pages output from within the document server mode window at the operation panel with the three features below.		
8 437	O:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total number of pages output with the three features		

	below with Other applications.	
8 43x 1	Cover/Slip Sheet	Total number of covers or slip sheets inserted. The count for a cover printed on both sides counts 2.
8 43x 2	Series/Book	The number of pages printed in series (one side) or printed as a book with booklet right/left pagination.
8 43x 3	User Stamp	The number of pages printed where stamps were applied, including page numbering and date stamping.

8 441	T:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by print paper size the number of pages printed by all applications.		
8 442	C:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by print paper size the number of pages printed by the copy application.		
8 443	F:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by print paper size the number of pages printed by the fax application.		
8 444	P:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by print paper size the number of pages printed by the printer application.		
8 445	S:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by print paper size the number of pages printed by the scanner application.		

8 446	L:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by print paper size the number of pages printed from within the document server mode window at the operation panel.		
8 447	O:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by print paper size the number of pages printed by Other applications.		
8 44x 1	A3		
8 44x 2	A4		
8 44x 3	A5		
8 44x 4	B4		
8 44x 5	B5		
8 44x 6	DLT		
8 44x 7	LG		
8 44x 8	LT		
8 44x 9	HLT		
8 44x 10	Full Bleed		
8 44x 254	Other (Standard)		
8 44x 255	Other (Custom)		

- These counters do not distinguish between LEF and SEF.

8 451	PrtPGS/Ppr Tray	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of sheets fed from each paper feed station.		
8 451 1	Bypass Tray	Bypass Tray	
8 451 2	Tray 1	Machine	
8 451 3	Tray 2	Paper Tray Unit (Option)	
8 451 4	Tray 3	Paper Tray Unit (Option)	
8 451 5	Tray 4	Paper Tray Unit (Option)	
8 451 6	Tray 5	Not used	
8 451 7	Tray 6	Not used	
8 451 8	Tray 7	Not used	
8 451 9	Tray 8	Not used	
8 451 10	Tray 9	Not used	
8 451 11	Tray10	Not used	
8 451 12	Tray11	Not used	
8 451 13	Tray12	Not used	
8 451 14	Tray13	Not used	
8 451 15	Tray14	Not used	
8 451 16	Tray15	Not used	

8 461	T:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by paper type the number pages printed by all applications. ▪ These counters are not the same as the PM counter. The PM counter is based on feed timing to accurately measure the service life of the feed rollers. However, these counts are based on output timing. ▪ Blank sheets (covers, chapter covers, slip sheets) are also counted. ▪ During duplex printing, pages printed on both sides count as 1, and a page printed on one side counts as 1.		
8 462	C:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by paper type the number pages printed by the copy application.		
8 463	F:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by paper type the number pages printed by the fax application.		
8 464	P:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by paper type the number pages printed by the printer application.		
8 466	L:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by paper type the number pages printed from within the document server mode window at the operation panel.		
8 46x 1	Normal		
8 46x 2	Recycled		
8 46x 3	Special		
8 46x 4	Thick		
8 46x 5	Normal (Back)		
8 46x 6	Thick (Back)		

8 46x 7	OHP
8 46x 8	Other

8 471	PrtPGS/Mag	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by magnification rate the number of pages printed.		
8 471 1	< 49%		
8 471 2	50% to 99%		
8 471 3	100%		
8 471 4	101% to 200%		
8 471 5	201% <		

- Counts are done for magnification adjusted for pages, not only on the operation panel but performed remotely with an external network application capable of performing magnification adjustment as well.
- Magnification adjustments done with printer drivers with PC applications such as Excel are also counted.
- Magnification adjustments done for adjustments after they have been stored on the document server are not counted.
- Magnification adjustments performed automatically during Auto Reduce/Enlarge copying are counted.
- The magnification rates of blank cover sheets, slip sheets, etc. are automatically assigned a rate of 100%.

8 481	T:PrtPGS/TonSave	*CTL	
8 484	P:PrtPGS/TonSave	*CTL	
	These SPs count the number of pages printed with the Toner Save feature switched on. **Note**: These SPs return the same results as this SP is limited to the Print application. [0 to 9999999/ **0** / 1]		

8 491	T:PrtPGS/Col Mode	*CTL	These SPs count the number of pages printed in the Color Mode by each application.
8 492	C:PrtPGS/Col Mode	*CTL	
8 493	F:PrtPGS/Col Mode	*CTL	
8 496	L:PrtPGS/Col Mode	*CTL	
8 497	O:PrtPGS/Col Mode	*CTL	
8 49x 1	B/W		
8 49x 2	Single Color		
8 49x 3	Two Color		
8 49x 4	Full Color		

8 501	T:PrtPGS/Col Mode	*CTL	These SPs count the number of pages printed in the Color Mode by the print application.
8 504	P:PrtPGS/Col Mode	*CTL	
8 507	O:PrtPGS/Col Mode	*CTL	
8 50x 1	B/W		
8 50x 2	Mono Color		
8 50x 3	Full Color		
8 50x 4	Single Color		
8 50x 5	Two Color		

8 511	T:PrtPGS/Emul		*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by printer emulation mode the total number of pages printed.			
8 514	P:PrtPGS/Emul		*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by printer emulation mode the total number of pages printed.			
8 514 1	RPCS			
8 514 2	RPDL			
8 514 3	PS3			
8 514 4	R98			
8 514 5	R16			
8 514 6	GL/GL2			
8 514 7	R55			
8 514 8	RTIFF			

8 514 9	PDF			
8 514 10	PCL5e/5c			
8 514 11	PCL XL			
8 514 12	IPDL-C			
8 514 13	BM-Links	Japan Only		
8 514 14	Other			
8 514 15	IPDS			

- SP8 511 and SP8 514 return the same results as they are both limited to the Print application.
- Print jobs output to the document server are not counted.

8 521	T:PrtPGS/FIN	*CTL	[0 to 9999999 / **0** / 1]
	These SPs count by finishing mode the total number of pages printed by all applications.		
8 522	C:PrtPGS/FIN	*CTL	[0 to 9999999 / **0** / 1]
	These SPs count by finishing mode the total number of pages printed by the Copy application.		
8 523	F:PrtPGS/FIN	*CTL	[0 to 9999999 / **0** / 1]
	These SPs count by finishing mode the total number of pages printed by the Fax application. **NOTE**: Print finishing options for received faxes are currently not available.		
8 524	P:PrtPGS/FIN	*CTL	[0 to 9999999 / **0** / 1]
	These SPs count by finishing mode the total number of pages printed by the Print application.		
8 525	S:PrtPGS/FIN	*CTL	[0 to 9999999 / **0** / 1]
	These SPs count by finishing mode the total number of pages printed by the Scanner application.		

8 526	L:PrtPGS/FIN	*CTL	[0 to 9999999 / **0** / 1]
	These SPs count by finishing mode the total number of pages printed from within the document server mode window at the operation panel.		
8 52x 1	Sort		
8 52x 2	Stack		
8 52x 3	Staple		
8 52x 4	Booklet		
8 52x 5	Z-Fold		
8 52x 6	Punch		
8 52x 7	Other		
8 52x 8	Inside-Fold		
8 52x 9	Three-IN-Fold		
8 52x 10	Three-OUT-Fold		
8 52x 11	Four-Fold		
8 52x 12	KANNON-Fold		
8 52x 13	Perfect-Bind		
8 52x 14	Ring-Bind		

Note

- If stapling is selected for finishing and the stack is too large for stapling, the unstapled pages are still counted.
- The counts for staple finishing are based on output to the staple tray, so jam recoveries are counted.

8 531	Staples	*CTL	This SP counts the amount of staples used by the machine. [0 to 9999999 / **0** / 1]

8 551	T:FIN Books	*CTL	Not used
8 551 1	Perfect-Bind		
8 551 2	Ring-Bind		

8 552	C:Prt Books/ FIN	*CTL	Not used
8 552 1	Perfect-Bind		
8 552 2	Ring-Bind		

8 554	T:FIN Books	*CTL	Not used
8 554 1	Perfect-Bind		
8 554 2	Ring-Bind		

8 556	L:Prt Books/ FIN	*CTL	Not used
8 552 6	Perfect-Bind		
8 552 6	Ring-Bind		

8 581	T:Counter	*CTL	[0 to 9999999 / **0** / 1]
	These SPs count the total output broken down by color output, regardless of the application used. In addition to being displayed in the SMC Report, these counters are also displayed in the User Tools display on the copy machine.		
8 581 1	Total		
8 581 2	Total: Full Color		

8 581 3	B&W/Single Color
8 581 4	Development: CMY
8 581 5	Development: K
8 581 6	Copy: Color
8 581 7	Copy: B/W
8 581 8	Print: Color
8 581 9	Print: B/W
8 581 10	Total: Color
8 581 11	Total: B/W
8 581 12	Full Color: A3
8 581 13	Full Color: B4 JIS or Smaller
8 581 14	Full Color Print
8 581 15	Mono Color Print
8 581 16	Full Color GPC
8 581 17	Twin Colour Mode Print
8 581 18	Full Colour Print (Twin)
8 581 19	Mono Colour Print (Twin)
8 581 20	Full Colour Total (CV)
8 581 21	Mono Colour Total (CV)
8 581 22	Full Colour Print (CV)

8 582	C:Counter	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total output of the copy application broken down by color output.		
8 582 1	B/W		
8 582 2	Single Color		
8 582 3	Two Color		
8 582 4	Full Color		

8 583	F:Counter	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total output of the fax application broken down by color output.		
8 583 1	B/W		
8 583 2	Single Color		

8 584	P:Counter	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total output of the print application broken down by color output.		
8 584 1	B/W		
8 584 2	Mono Color		
8 584 3	Full Color		
8 584 4	Single Color		
8 584 5	Two Color		

8 586	L:Counter	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total output of the local storage broken down by color output.		
8 582 1	B/W		
8 582 2	Single Color		
8 582 3	Two Color		
8 582 4	Full Color		

8 591	O:Counter	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the totals for A3/DLT paper use, number of duplex pages printed, and the number of staples used. These totals are for Other (O:) applications only.		
8 591 1	A3/DLT	-	
8 591 2	Duplex		

8 601	Coverage Counter	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total coverage for each color and the total printout pages for each printing mode.		
8 601 1	B/W	-	
8 601 2	Color		
8 601 11	B/W Printing Pages		
8 601 12	Color Printing Pages		
8 601 21	Coverage Counter 1		
8 601 22	Coverage Counter 2		
8 601 23	Coverage Counter 3		

8 617	SDK Apli Counter	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the total printout pages for each SDK applicaion.		
8 617 1	SDK-1	-	
8 617 2	SDK-2		
8 617 3	SDK-3		
8 617 4	SDK-4		
8 617 5	SDK-5		
8 617 6	SDK-6		

8 621	Func Use Counter	*CTL	-
001 to 064	Function-001 to Function-064		

8 631	T:FAX TX PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the number of pages sent by fax to a telephone number.		
8 633	F:FAX TX PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the number of pages sent by fax to a telephone number.		
8 63x 1	B/W		
8 63x 2	Color		

- If a document has color and black-and-white pages mixed, the pages are counted separately as B/W or Color.
- At the present time, this feature is provided for the Fax application only so SP8631 and SP8633 are the same.
- The counts include error pages.
- If a document is sent to more than one destination with a Group transmission, the count is done for each destination.
- Polling transmissions are counted but polling RX are not.
- Relay, memory, and confidential mailbox transmissions and are counted for each destination.

8 641	T:IFAX TX PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the number of pages sent by fax to as fax images using I-Fax.		
8 643	F:IFAX TX PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the number of pages sent by Fax as fax images using I-Fax.		
8 64x 1	B/W		
8 64x 2	Color		

- If a document has color and black-and-white pages mixed, the pages are counted separately as B/W or Color.
- At the present time, this feature is provided for the Fax application only so SP8641 and SP8643 are the same.
- The counts include error pages.
- If a document is sent to more than one destination with a Group transmission, the count is done for each destination.
- Polling transmissions are counted but polling RX are not.
- Relay, memory, and confidential mailbox transmissions and are counted for each destination.

8 651	T:S-to-Email PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the total number of pages attached to an e-mail for both the Scan and document server applications.		
8 655	S:S-to-Email PGS	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the total number of pages attached to an e-mail for the Scan application only.		
8 65x 1	B/W		
8 65x 2	Color		

Note

- The count for B/W and Color pages is done after the document is stored on the HDD. If the job is cancelled before it is stored, the pages are not counted.
- If Scan-to-Email is used to send a 10-page document to 5 addresses, the count is 10 (the pages are sent to the same SMTP server together).
- If Scan-to-PC is used to send a 10-page document to 5 folders, the count is 50 (the document is sent to each destination of the SMB/FTP server).
- Due to restrictions on some devices, if Scan-to-Email is used to send a 10-page document to a large number of destinations, the count may be divided and counted separately. For example, if a 10-page document is sent to 200 addresses, the count is 10 for the first 100 destinations and the count is also 10 for the second 100 destinations, for a total of 20.).

8 661	T:Deliv PGS/Svr	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the total number of pages sent to a Scan Router server by both Scan and LS applications.		
8 665	S:Deliv PGS/Svr	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the total number of pages sent to a Scan Router server by the Scan application.		
8 66x 1	B/W		
8 66x 2	Color		

Note

- The B/W and Color counts are done after the document is stored on the HDD of the Scan Router server.
- If the job is canceled before storage on the Scan Router server finishes, the counts are not done.
- The count is executed even if regardless of confirmation of the arrival at the Scan Router server.

8 671	T:Deliv PGS/PC	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the total number of pages sent to a folder on a PC (Scan-to-PC) with the Scan and LS applications.		
8 675	S: Deliv PGS/PC	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count by color mode the total number of pages sent with Scan-to-PC with the Scan application.		
8 67x 1	B/W		
8 67x 2	Color		

8 681	T:PCFAX TXPGS	*CTL	These SPs count the number of pages sent by PC Fax. These SPs are provided for the Fax application only, so the counts for SP8 681 and SP8 683 are the same. [0 to 9999999/ **0** / 1]
8 683	F:PCFAX TXPGS	*CTL	

- This counts pages sent from a PC using a PC fax application, from the PC through the copier to the destination.
- When sending the same message to more than one place using broadcasting, the pages are only counted once. (For example, a 10-page fax is sent to location A and location B. The counter goes up by 10, not 20.)

8 691	T:TX PGS/LS	*CTL	These SPs count the number of pages sent from the document server. The counter for the application that was used to store the pages is incremented. [0 to 9999999/ **0** / 1] The L: counter counts the number of pages stored from within the document server mode screen at the operation panel. Pages stored with the Store File button from within the Copy mode screen go to the C: counter.
8 692	C:TX PGS/LS	*CTL	
8 693	F:TX PGS/LS	*CTL	
8 694	P:TX PGS/LS	*CTL	
8 695	S:TX PGS/LS	*CTL	
8 696	L:TX PGS/LS	*CTL	

Note

- Print jobs done with Web Image Monitor and Desk Top Binder are added to the count.
- If several documents are merged for sending, the number of pages stored are counted for the application that stored them.
- When several documents are sent by a Fax broadcast, the F: count is done for the number of pages sent to each destination.

8 701	TX PGS/Port	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of pages sent by the physical port used to send them. For example, if a 3-page original is sent to 4 destinations via ISDN G4, the count for ISDN (G3, G4) is 12.		
8 701 1	PSTN-1		
8 701 2	PSTN-2		
8 701 3	PSTN-3		
8 701 4	ISDN (G3,G4)		
8 701 5	Network		

8 711	T:Scan PGS/Comp	*CTL	[0 to 9999999/ **0** / 1]
8 715	S:Scan PGS/Comp	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of pages sent by each compression mode.		
8 715 1	JPEG/JPEG2000		
8 715 2	TIFF(Multi/Single)		
8 715 3	PDF		
8 715 4	Other		
8 715 5	PDF/Comp		

8 721	T:Deliv PGS/WSD	*CTL	[0 to 9999999/ **0** / 1]
8 725	S: Deliv PGS/WSD	*CTL	
	These SPs count the number of pages scanned by each scanner mode.		
x 1	B/W	-	
x 2	Color	-	

8 731	T:Scan PGS/Media	*CTL	[0 to 9999999/ **0** / 1]
8 735	S:Scan PGS/Media	*CTL	
	These SPs count the number of pages scanned and saved in a meia by each scanner mode.		
x 1	B/W	-	
x 2	Color	-	

8 741	RX PGS/Port	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the number of pages received by the physical port used to receive them.		
8 741 1	PSTN-1	-	
8 741 2	PSTN-2	-	
8 741 3	PSTN-3	-	
8 741 4	ISDN (G3,G4)	-	
8 741 5	Network	-	

8 771	Dev Counter	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the frequency of use (number of rotations of the development rollers) for black and other color toners.		
8 771 1	Total		
8 771 2	K		
8 771 3	Y		
8 771 4	M		
8 771 5	C		

8 781	Toner_Bottle_Info.	*ENG	[0 to 9999999/ **0** / 1]
	These SPs display the number of already replaced toner bottles. **NOTE:** Currently, the data in SP7-833-011 through 014 and the data in SP8-781-001 through 004 are the same.		
8 781 1	Toner: BK	The number of black-toner bottles	
8 781 2	Toner: Y	The number of yellow-toner bottles	
8 781 3	Toner: M	The number of magenta-toner bottles	
8 781 4	Toner: C	The number of cyan-toner bottles	

8 791	LS Memory Remain	*CTL	This SP displays the percent of space available on the document server for storing documents. [0 to 100 / **0** / 1]

8 801	Toner Remain	*CTL	[0 to 100/ **0** / 1]
	These SPs display the percent of toner remaining for each color. This SP allows the user to check the toner supply at any time. **Note:** This precise method of measuring remaining toner supply (1% steps) is better than other machines in the market that can only measure in increments of 10 (10% steps).		
8 801 1	K		
8 801 2	Y		
8 801 3	M		
8 801 4	C		

8 851	CVr Cnt: 0-10%	*ENG	[0 to 9999999/ **0** / 1]
	These SPs display the number of scanned sheets on which the coverage of each color is from 0% to 10%.		
8 851 11	0 to 2%: BK	8 851 31	5 to 7%: BK
8 851 12	0 to 2%: Y	8 851 32	5 to 7%: Y
8 851 13	0 to 2%: M	8 851 33	5 to 7%: M
8 851 14	0 to 2%: C	8 851 34	5 to 7%: C
8 851 21	3 to 4%: BK	8 851 41	8 to 10%: BK
8 851 22	3 to 4%: Y	8 851 42	8 to 10%: Y
8 851 23	3 to 4%: M	8 851 43	8 to 10%: M
8 851 24	3 to 4%: C	8 851 44	8 to 10%: C

8 861	CVr Cnt: 11-20%	*ENG	[0 to 9999999/ **0** / 1]
	These SPs display the number of scanned sheets on which the coverage of each color is from 11% to 20%.		
8 861 1	BK		
8 861 2	Y		
8 861 3	M		
8 861 4	C		

8 871	CVr Cnt: 21-30%	*ENG	[0 to 9999999/ **0** / 1]
	These SPs display the number of scanned sheets on which the coverage of each color is from 21% to 30%.		
8 871 1	BK		
8 871 2	Y		
8 871 3	M		
8 871 4	C		

8 881	CVr Cnt: 31%-	*ENG	[0 to 9999999/ **0** / 1]
	These SPs display the number of scanned sheets on which the coverage of each color is 31% or higher.		
8 881 1	BK		
8 881 2	Y		
8 881 3	M		
8 881 4	C		

8 891	Page/Toner Bottle	*ENG	[0 to 9999999/ **0** / 1]
	These SPs display the amount of the remaining current toner for each color.		
8 891 1	BK		
8 891 2	Y		
8 891 3	M		
8 891 4	C		

8 901	Page/Toner_Prev1	*ENG	[0 to 9999999/ **0** / 1]
	These SPs display the amount of the remaining previous toner for each color.		
8 901 1	BK		
8 901 2	Y		
8 901 3	M		
8 901 4	C		

8 911	Page/Toner_Prev2	*ENG	[0 to 9999999/ **0** / 1]
	These SPs display the amount of the remaining 2nd previous toner for each color.		
8 911 1	BK		
8 911 2	Y		
8 911 3	M		
8 911 4	C		

8 921	Cvr Cnt/Total	*CTL	[0 to 9999999/ **0** / 1]
	Displays the total coverage and total printout number for each color.		
8 921 1	Coverage (%) Bk		
8 921 2	Coverage (%) Y		
8 921 3	Coverage (%) M		
8 921 4	Coverage (%) C		
8 921 11	Coverage /P: Bk		
8 921 12	Coverage /P: Y		
8 921 13	Coverage /P: M		
8 921 14	Coverage /P: C		

8 941	Machine Status	*CTL	[0 to 9999999/ **0** / 1]
	These SPs count the amount of time the machine spends in each operation mode. These SPs are useful for customers who need to investigate machine operation for improvement in their compliance with ISO Standards.		
8 941 1	Operation Time	Engine operation time. Does not include time while controller is saving data to HDD (while engine is not operating).	
8 941 2	Standby Time	Engine not operating. Includes time while controller saves data to HDD. Does not include time spent in Energy Save, Low Power, or Off modes.	
8 941 3	Energy Save Time	Includes time while the machine is performing background printing.	

8 941 4	Low Power Time	Includes time in Energy Save mode with Engine on. Includes time while machine is performing background printing.
8 941 5	Off Mode Time	Includes time while machine is performing background printing. Does not include time machine remains powered off with the power switches.
8 941 6	SC	Total time when SC errors have been staying.
8 941 7	PrtJam	Total time when paper jams have been staying during printing.
8 941 8	OrgJam	Total time when original jams have been staying during scanning.
8 941 9	Supply PM Unit End	Total time when toner end has been staying

8 951	AddBook Register	*CTL		
	These SPs count the number of events when the machine manages data registration.			
8 951 1	User Code/User ID	User code registrations.		[0 to 9999999/ **0** / 1]
8 951 2	Mail Address	Mail address registrations.		
8 951 3	Fax Destination	Fax destination registrations.		
8 951 4	Group	Group destination registrations.		
8 951 5	Transfer Request	Fax relay destination registrations for relay TX.		
8 951 6	F-Code	F-Code box registrations.		
8 951 7	Copy Program	Copy application registrations with the Program (job settings) feature.		[0 to 255 / **0** / 255]

8 951 8	Fax Program	Fax application registrations with the Program (job settings) feature.	
8 951 9	Printer Program	Printer application registrations with the Program (job settings) feature.	
8 951 10	Scanner Program	Scanner application registrations with the Program (job settings) feature.	

8 999	Admin. Counter List	*CTL	[0 to 9999999/ **0** / 1]
	Displays the total coverage and total printout number for each color.		
8 999 1	Total		
8 999 2	Copy: Full Color		
8 999 3	Copy: BW		
8 999 4	Copy: Single Color		
8 999 5	Copy: Two Color		
8 999 6	Printer Full Color		
8 999 7	Printer BW		
8 999 8	Printer Single Color		
8 999 9	Printer Two Color		
8 999 10	Fax Print: BW		
8 999 11	Fax Print: Single Color		
8 999 12	A3/DLT		
8 999 13	Duplex		
8 999 14	Coverage: Color (%)		
8 999 15	Coverage: BW (%)		

8 999 16	Coverage: Color Print Page (%)	
8 999 17	Coverage: BW Print Page (%)	
8 999 101	Transmission Total: Color	
8 999 102	Transmission Total: BW	
8 999 103	FAX Transmission	
8 999 104	Scanner Transmission: Color	
8 999 105	Scanner Transmission: BW	

3.9 INPUT AND OUTPUT CHECK

3.9.1 INPUT CHECK TABLE

When entering the Input Check mode, 8 digits display the result for a section. Each digit corresponds to a different device as shown in the table.

Bit No.	7	6	5	4	3	2	1	0
Result	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1

Printer

5803	Description	Reading	
		0	1
5803 1	1 Tray Size	See table 1 following this table.	
5803 2	1 Tray Paper Height Sensor 1	See table 2 following this table.	
5803 3	1 Tray Paper Height Sensor 2	See table 2 following this table.	
5803 4	1 Tray Paper End Sensor	No paper	Paper remaining
5803 5	1 Tray Paper Lift Sensor	Not upper limit	Upper limit
5803 6	Bypass Paper End Sensor	No paper	Paper remaining
5803 7	Paper Feed Sensor	Paper detected	Paper not detected
5803 8	Paper Exit Sensor	Paper detected	Paper not detected
5803 9	Paper Exit Full Sensor	Paper not full	Paper full
5803 10	Fusing Exit Sensor	Paper not detected	Paper detected
5803 11	Fusing Entrance Sensor	Paper detected	Paper not detected
5803 12	Inverter Sensor	Paper detected	Paper not detected

5803 13	Duplex Entrance Sensor	Paper detected	Paper not detected
5803 14	Duplex Exit Sensor	Paper detected	Paper not detected
5803 15	Registration Sensor	Paper detected	Paper not detected
5803 16	Vertical Transport Sensor	Paper detected	Paper not detected
5803 17	Bypass Paper Size Sensor	Paper detected	Paper not detected
5803 18	Toner End Sensor: Y	Toner end	Toner remaining
5803 19	Toner End Sensor: C	Toner end	Toner remaining
5803 20	Toner End Sensor: M	Toner end	Toner remaining
5803 21	Toner End Sensor: K	Toner end	Toner remaining
5803 22	Drum Phase Sensor: K	Actuator not detected	Actuator detected
5803 23	Drum Phase Sensor: CMY	Actuator not detected	Actuator detected
5803 24	Interlock SW 1	Front door open	Front door closed
5803 25	Interlock SW 2	Front door open	Front door closed
5803 26	Right Door Sensor	Closed	Open
5803 30	Duplex Cover Sensor	Closed	Open
5803 31	LDU Shutter Sensor	Closed	Open
5803 32	Waste Toner Bottle Set Sensor	Set	Not set
5803 33	Waste Toner Bottle Full Sensor	Not full	Full
5803 34	ITB Unit: New	Not new	New
5803 35	Fusing Fan: Lock	Normal	Lock
5803 36	Fusing Fan 1: Lock	Normal	Lock
5803 37	Fusing Fan 2: Lock	Normal	Lock
5803 38	Fusing Front Fan: Lock	Normal	Lock

5803 40	Toner Supply Fan: Lock	Normal	Lock
5803 41	Drive Unit Fan: Lock	Normal	Lock
5803 43	Ventilation Fan 1: Lock	Normal	Lock
5803 44	Ventilation Fan 2: Lock	Normal	Lock
5803 45	Development Fan: Lock	Normal	Lock
5803 46	Laser Unit Fan: Lock	Normal	Lock
5803 47	Feed Fan: Lock	Normal	Lock
5803 48	Transfer Belt Contact Sensor	Not contact	Contact
5803 49	Paper Transfer Roller Contact Sensor	Not contact	Contact
5803 50	Drum Motor: K: Lock	Normal	Lock
5803 51	Fusing Motor: Lock	Normal	Lock
5803 52	Development Motor:CMY: Lock	Normal	Lock
5803 53	Drum Motor:CMY: Lock	Normal	Lock
5803 54	PP: D: SC	SC detected	No SC
5803 55	PP: CB: SC	SC detected	No SC
5803 56	PP: T1T2: SC	SC detected	No SC
5803 57	Fusing: Generation	Not detected	Detected
5803 58	Fusing: New	New	Not new
5803 59	Fusing: Destination	Set	Not set
5803 60	Fusing: Set	Set	Not set
5803 61	Zero-cross Signal	Not detected	Detected
5803 62	Fusing: Temperature	Detected	Not detected
5803 63	1-Bin: Set	Set	Not set
5803 64	1-Bin: Paper Sensor	Paper detected	Paper not detected

5803 65	1-Bin: Exit Sensor	Paper detected	Paper not detected
5803 66	Side Tray: Set	Set	Not set
5803 67	Upper Cover Sensor	Closed	Open
5803 68	Key Card: Set	Set	Not set
5803 69	Mechanical Counter: K: Set	Set	Not set
5803 70	Mechanical Counter: CMY: Set	Set	Not set
5803 71	Key Counter: Set	Set	Not set
5803 72	BCU Version	-	-
5803 77	Bank Feed Sensor 1	Paper detected	Paper not detected
5803 78	Bank Feed Sensor 2	Paper detected	Paper not detected
5803 79	Bank Feed Sensor 3	Paper detected	Paper not detected
5803 80	Bank Vertical Feed Sensor 1	Paper detected	Paper not detected
5803 81	Bank Vertical Feed Sensor 2	Paper detected	Paper not detected
5803 82	Bank Vertical Feed Sensor 3	Paper detected	Paper not detected
5803 83	Bank Cover Sensor 1		
5803 84	Bank Cover Sensor 2		
5803 94	GAVD Open/Close Detection	-	-
5803 200	Scanner HP Sensor	Not HP	HP
5803 201	Platen Cover Sensor	Open	Close

Table 1: Paper Size Switch (Tray 1)

Switch 1 is used for tray set detection.

0: Pushed, 1: Not pushed

Models		Paper size sensor		
North America	**Europe/Asia**	**1**	**2**	**3**
A4	A4	0	1	1
LT	LT	1	1	1
Exe	Exe	1	1	0
HLT	A5	0	0	0
-	A6	1	0	0

Table 2: Paper Size Switch (Tray 2)

Switch 1 is used for tray set detection.

0: Pushed, 1: Not pushed

Models		Paper size sensor		
North America	**Europe/Asia**	**1**	**2**	**3**
LG	LG	0	0	0
A4	A4	0	1	1
HLT	A5	0	1	0
LT	LT	1	1	1
Exe	Exe	1	1	0
A6	A6	0	0	1
B6, B5	B6, B5	1	0	0

Table 3: Paper Size Switch (Tray 3 and 4)

Switch 1 is used for tray set detection.

0: Pushed, 1: Not pushed

Models		Paper size sensor		
North America	**Europe/Asia**	**1**	**2**	**3**
LG	LG	0	0	0
A4	A4	0	1	1
HLT	A5	0	1	0
LT	LT	1	1	1
Exe	Exe	1	1	0
A6	A6	0	0	1
B6, B5	B6, B5	1	0	0

ARDF

6007	**Description**	**Reading**	
		0	**1**
6007 9	Original Set Sensor	Paper not detected	Paper detected
6007 13	Registration Sensor	Paper not detected	Paper detected
6007 15	Feed Cover	ADF cover close	ADF cover open
6007 17	Inverter Sensor	Paper not detected	Paper detected

Internal Finisher

6145	Description	Reading	
		0	1
6145 1	Entrance Sensor	Paper not detected	Paper detected
6145 2	Paper Exit Sensor	Paper not detected	Paper detected
6145 3	Jogger Fence HP Sensor	Paper not detected	Paper detected
6145 4	Shift Roller HP Sensor	Paper not detected	Paper detected
6145 5	Gathering Roller Sensor	Paper not detected	Paper detected
6145 6	Exit Guide Plate Sensor	Paper not detected	Paper detected
6145 7	Staple Tray Paper Sensor	Paper not detected	Paper detected
6145 8	Shift Tray Paper Sensor	Paper not detected	Paper detected
6145 9	Shift Tray Full Sensor	Paper not detected	Paper detected
6145 10	Stapler HP Sensor	Paper not detected	Paper detected
6145 11	Staple Near End Sensor	Paper not detected	Paper detected
6145 12	Staple Self Priming Sensor	Paper not detected	Paper detected
6145 13	Front Door SW	Front door closed	Front door open

3.9.2 OUTPUT CHECK TABLE

Copier

5804	Display	Description
5804 3	Drum Motor: K: 260mm/s	-
5804 4	Drum Motor: K: 182mm/s	-
5804 5	Drum Motor: K: 85mm/s	-
5804 10	Fusing Motor: 260mm/s	-
5804 11	Fusing Motor: 182mm/s	-
5804 12	Fusing Motor: 85mm/s	-
5804 17	Development Motor: CMY: 260mm/s	-
5804 18	Development Motor: CMY: 182mm/s	-
5804 19	Development Motor: CMY: 85mm/s	-
5804 24	Drum Motor: CMY: 260mm/s	-
5804 25	Drum Motor: CMY: 182mm/s	-
5804 26	Drum Motor: CMY: 85mm/s	-
5804 31	Feed Motor: 364mm/s	-
5804 32	Feed Motor: 260mm/s	-
5804 33	Feed Motor: 182mm/s	-
5804 34	Feed Motor: 85mm/s	-
5804 39	Registration Motor: 260mm/s	-
5804 40	Registration Motor: 182mm/s	-
5804 41	Registration Motor: 85mm/s	-
5804 46	Inverter Motor: CW: 468mm/s	-

5804 47	Inverter Motor: CW: 260mm/s	-
5804 48	Inverter Motor: CW: 182mm/s	-
5804 49	Inverter Motor: CW: 85mm/s	-
5804 54	Inverter Motor: CCW: 468mm/s	-
5804 55	Inverter Motor: CCW: 260mm/s	-
5804 56	Inverter Motor: CCW: 182mm/s	-
5804 57	Inverter Motor: CCW: 85mm/s	-
5804 62	Duplex Motor: CW: 260mm/s	-
5804 63	Duplex Motor: CW: 182mm/s	-
5804 64	Duplex Motor: CW: 85mm/s	-
5804 69	Duplex Motor: CCW: 468mm/s	-
5804 70	Duplex Motor: CCW: 260mm/s	-
5804 71	Duplex Motor: CCW: 182mm/s	-
5804 72	Duplex Motor: CCW: 85mm/s	-
5804 77	Vertical Feed Motor: 364mm/s	-
5804 78	Vertical Feed Motor: 260mm/s	-
5804 79	Vertical Feed Motor: 182mm/s	-
5804 80	Vertical Feed Motor: 85mm/s	-
5804 83	Transfer Belt Contact Motor: CW	-
5804 84	Transfer Belt Contact Motor: CCW	-
5804 85	Paper Transfer Roller Contact Motor: CW	-
5804 86	Paper Transfer Roller Contact Motor: CCW	-
5804 87	Toner Collection Motor: CW	-

5804 88	Toner Collection Motor: CCW	-
5804 89	1 Tray Lift Motor: CW	-
5804 90	1 Tray Lift Motor: CCW	-
5804 91	Toner Supply Motor: K	-
5804 92	Toner Supply Motor: M	-
5804 93	Toner Supply Motor: C	-
5804 94	Toner Supply Motor: Y	-
5804 95	LDU Shutter Motor: CW	-
5804 96	LDU Shutter Motor: CCW	-
5804 100	Fusing Fan: H	-
5804 101	Fusing Fan: L	-
5804 102	Fusing Fan 1: H	-
5804 103	Fusing Fan 1: L	-
5804 104	Polygon Motor: Standard Speed	-
5804 105	Polygon Motor: Middle Speed	-
5804 106	Polygon Motor: Low Speed	-
5804 107	Fusing Fan 2: H	-
5804 108	Fusing Fan 2: L	-
5804 109	Fusing Front Fan: H	-
5804 110	Fusing Front Fan: L	-
5804 111	Toner Supply Fan	-
5804 112	Drive Unit Fan	-
5804 113	Development Fan 1	
5804 114	Development Fan 2	-

5804 115	Development Fan	-
5804 116	Laser Unit Fan	-
5804 117	Feed Fan	-
5804 118	PSU Fan	-
5804 120	Development Clutch	-
5804 121	By-pass Solenoid	-
5804 122	1 Tray Lock Solenoid	-
5804 123	1 Tray Feed Solenoid	-
5804 124	Junction Gate Solenoid 1	-
5804 125	Junction Gate Solenoid 2	-
5804 130	PP: Charge DC: Y	-
5804 131	PP: Charge DC: M	-
5804 132	PP: Charge DC: C	-
5804 133	PP: Charge DC: K	-
5804 134	PP: Development: Y	-
5804 135	PP: Development: M	-
5804 136	PP: Development: C	-
5804 137	PP: Development: K	-
5804 138	PP: D	-
5804 139	PP: T1: Y	-
5804 140	PP: T1: M	-
5804 141	PP: T1: C	-
5804 142	PP: T1: K	-
5804 143	PP: T2: +	-

5804 144	PP: T2: -	-
5804 147	PP: Charge AC: Y: 260mm/s	-
5804 148	PP: Charge AC: Y: 182mm/s	-
5804 149	PP: Charge AC: Y: 85mm/s	-
5804 154	PP: Charge AC: M: 260mm/s	-
5804 155	PP: Charge AC: M: 182mm/s	-
5804 156	PP: Charge AC: M: 85mm/s	-
5804 161	PP: Charge AC: C: 260mm/s	-
5804 162	PP: Charge AC: C: 182mm/s	-
5804 163	PP: Charge AC: C: 85mm/s	-
5804 168	PP: Charge AC: K: 260mm/s	-
5804 169	PP: Charge AC: K: 182mm/s	-
5804 170	PP: Charge AC: K: 85mm/s	-
5804 181	HST Sensor: Y	-
5804 182	HST Sensor: M	-
5804 183	HST Sensor: C	-
5804 184	HST Sensor: K	-
5804 185	TM/P Sensor: Front/Y	-
5804 186	P Sensor: M	-
5804 187	TM/P Sensor: Center/C	-
5804 188	TM/P Sensor: Rear/K	-
5804 189	PCL: FC	-
5804 190	PCL: BK	-
5804 191	Toner End Sensor 5V CTL	-

5804 192	RFID ON/OFF: K	-
5804 193	RFID ON/OFF: C	-
5804 194	RFID ON/OFF: M	-
5804 195	RFID ON/OFF: Y	-
5804 196	RFID COM ON: K	-
5804 197	RFID COM ON: C	-
5804 198	RFID COM ON: M	-
5804 199	RFID COM ON: Y	-
5804 202	Scanner Lamp	-
5804 216	LD1: K	-
5804 217	LD2: K	-
5804 218	LD1: C	-
5804 219	LD2: C	-
5804 220	LD1: M	-
5804 221	LD2: M	-
5804 222	LD1: Y	-
5804 223	LD2: Y	-
5804 224	Bank Motor 1: 364mm/s	-
5804 225	Bank Motor 1: 260mm/s	-
5804 226	Bank Motor 1: 182mm/s	-
5804 227	Bank Motor 1: 136mm/s	-
5804 228	Bank Motor 1: 85mm/s	-
5804 229	Bank Motor 2: 364mm/s	-
5804 230	Bank Motor 2: 260mm/s	-

5804 231	Bank Motor 2: 182mm/s	-
5804 232	Bank Motor 2: 136mm/s	-
5804 233	Bank Motor 2: 85mm/s	-
5804 234	Bank Motor 3: 364mm/s	-
5804 235	Bank Motor 3: 260mm/s	-
5804 236	Bank Motor 3: 182mm/s	-
5804 237	Bank Motor 3: 136mm/s	-
5804 238	Bank Motor 3: 85mm/s	-
5804 239	Bank Feed Clutch 1	-
5804 240	Bank Feed Clutch 2	-
5804 241	Bank Feed Clutch 3	-
5804 242	Bank Pick-up Solenoid 1	-
5804 243	Bank Pick-up Solenoid 2	-
5804 244	Bank Pick-up Solenoid 3	-
5804 245	Bank Tray Lock Solenoid 1	-
5804 246	Bank Tray Lock Solenoid 2	-

ARDF

6008	Display	Description
6008 3	Feed Motor: Forward	-
6008 4	Feed Motor: Reverse	-
6008 5	Relay Motor: Forward	-
6008 9	Feed Clutch	-
6008 11	Junction Gate Solenoid	-

Internal Finisher

6146	Display	Description
6146 001	Carry Motor	Transport Motor
6146 002	Exit Motor	-
6146 003	Jogger Motor	-
6146 004	Sft Motor	Shift Roller Motor
6146 005	Hitroll Motor	Gathering Roller Motor
6146 006	Exit Guide Plate Motor	-
6146 007	Tray Motor	Tray Lift Motor
6146 008	Staple Motor	-
6146 009	Stopper Solenoid	Pick-up Solenoid

3.10 PRINTER SERVICE MODE

3.10.1 SP1-XXX (SERVICE MODE)

1001	Bit Switch			
001	Bit Switch 1		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	**No I/O Timeout**	0: Disable	1: Enable
		Enable: The machine I/O Timeout setting will have no effect. I/O Timeouts will never occur.		
	bit 4	**SD Card Save Mode**	0: Disable	1: Enable
		Enable: Print jobs will be saved to an SD Card in the GW SD slot.		
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	**[RPCS,PCL]: Printable area frame border**	0: Disable	1: Enable
		Prints all RPCS and PCL jobs with a border around the printable area.		

1001	**Bit Switch**			
002	Bit Switch 2		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	**Applying a Collate Type**	0: Shift Collate	1: Normal Collate
		A collate type (shift or normal) will be applied to all jobs that do not explicitely define a collate type. **Note:** If BitSwitch 5-0 is enabled, this BitSwitch has no effect.		
	bit 3	**[PCL5e/c,PS]: PDL Auto Switching**	0: Enable	1: Disable
		Disable: The machine ability to change the PDL processor mid-job. Some host systems submit jobs that contain both PS and PCL5e/c. If Auto PDL switching is disabled, these jobs will not be printed properly.		
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	Bit Switch			
003	Bit Switch 3		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	**[PCL5e/c]: Legacy HP compatibility**	0: Disable	1: Enable
		Enable: Uses the same left margin as older HP models such as HP4000/HP8000. In other words, the left margin defined in the job (usually "<ESC>*r0A") will be changed to "<ESC>*r1A"		
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	Bit Switch		
004	Bit Switch 4 DFU	-	-

1001	Bit Switch			
005	Bit Switch 5		0	1
	bit 0	**Show "Collate Type", "Staple Type" and "Punch Type" buttons on the operation panel.**	0: Disable	1: Enable
		If enabled, users will be able to configure a Collate Type, Staple Type, and Punch Type from the operation panel. The available Types will depend on the device and configured options. After enabling this BitSw, the settings will appear under: "User Tools > Printer Features > System"		
	bit 1	**Multiple copies if a paper size or type mismatch occurs**	0: Disable (Single copy)	1: Enable (Multiple copy)
		If a paper size or type mismatch occurs during the printing of multiple copies, only a single copy is output by default. Using this BitSw, the device can be configured to print all copies even if a paper mismatch occurs.		
	bit 2	**Prevent SDK applications from altering the contents of a job.**	0: Disable	1: Enable
		If this BitSw is enabled, SDK applications will not be able to alter print data. This is achieved by preventing SDK applications from accessing a module called the "GPS Filter". **Note:** The main purpose of this BitSw is for troubleshooting the effects of SDK applications on data.		
	bit 3	**[PS] PS Criteria**	0: Pattern3	1: Pattern1
		Change the number of PS criterion used by the PS interpreter to determine whether a job is PS data or not. Pattern3: includes most PS commands. Pattern1: A small number of PS tags and headers		

	bit 4	**Increase max number of the stored jobs to 1000 jobs.**	0: Disable (100)	1: Enable (1000)
		Enable: Changes the maximum number of jobs that can be stored on the HDD via Job Type settings to 1000. The default is 100.		
	bit 5	DFU	-	-
	bit 6	**Method for determining the image rotation for the edge to bind on.**	0: Disable	1: Enable
		If enabled, the image rotation will be performed as they were in the specifications of older models for the binding of pages of mixed orientation jobs. The old models are below: - PCL: Pre-04A models - PS/PDF/RPCS:Pre-05S models		
	bit 7	**Letterhead mode printing**	0: Disable	1: Enable (Duplex)
		Routes all pages through the duplex unit. If this is disabled, simplex pages or the last page of an odd-paged duplex job are not routed through the duplex unit. This could result in problems with letterhead/pre-printed pages. Only affects pages specified as Letterhead paper.		

1001	**Bit Switch**		
006	Bit Switch 6 DFU	-	-

1001	Bit Switch			
007	Bit Switch 7		0	1
	bit 0	**Print path**	0: Disable	1: Enable
		If enabled, simplex pages (in mixed simplex/duplex PS/PCL5 jobs only) and the last page of an odd paged duplex job (PS, PCL5, PCL6) are always routed through the duplex unit. Not having to switch paper paths increases the print speed slightly.		
	bit 1 to 7	DFU	-	-

1001	Bit Switch			
008	Bit Switch 8		0	1
	bit 0 to 2	DFU	-	-
	bit 3	**[PCL,PS]: Allow BW jobs to print without requiring User Code**	0: Disable	1: Enable (allow BW jobs to print without a user code)
		BW jobs submitted without a user code will be printed even if user code authentication is enabled. **Note:** Color jobs will not be printed without a valid user code.		
	bit 4 to 7	DFU	-	-

1001	Bit Switch			
009	Bit Switch 9		0	1
	bit 0	PDL Auto Detection timeout of jobs submitted via USB or Parallel Port (IEEE 1284).	0: Disable (Immediately)	1: Enable (10 seconds)
		To be used if PDL auto-detection fails. A failure of PDL auto-detection does not necessarily mean that the job cannot be printed. This bit switch tells the device whether to time-out immediately (default) upon failure or to wait 10 seconds.		
	bit 1-2	DFU	-	-
	bit 4	Timing of the PJL Status ReadBack (JOB END) when printing multiple collated copies.	Disabled	Enabled
		This bitsw determines the timing of the PJL USTATUS JOB END sent when multiple collated copies are being printed. 0 (default): JOB END is sent by the device to the client after the first copy has completed printing. This causes the page counter to be incremented after the first copy and then again at the end of the job. 1: JOB END is sent by the device to the client after the last copy has finished printing. This causes the page counter to be incremented at the end of each job.		
	bit 5-7	DFU	-	-

1003	[Clear Setting]	
1003 001	Initialize System	Initializes settings in the System menu of the user mode.
1003 003	Delete Program	DFU

1004	[Print Summary]

1004 001	Service Summary	Prints the service summary sheet (a summary of all the controller settings).

1005	**[Display Version]**	
1005 001	Printer Version	Displays the version of the controller firmware.

1006	**[Sample/ Locked Print]**
1006 001	Enables and disables the document server. When you select "0," the document server is enabled or disabled in accordance with Copy Service Mode SP5-967. When you select "1," the document server is enabled regardless of Copy Service Mode SP5-967.

1101	**[Data Recall]**	
1101 001	Factory	Recalls a set of gamma settings. This can be either a) the factory setting, b) the previous setting, or c) the current setting.
1101 002	Previous	
1101 003	Current	
1101 004	ACC	
1102	**[Resolution Setting]**	
	Selects the printing mode (resolution) for the printer gamma adjustment.	
1102 001	**2400x600 Photo**, 1800x600 Photo, 600 x 600 Photo, 2400x600 Text, 1800x600, Text, 600x600 Text	
1103	**[Test Page]**	
	Prints the test page to check the color balance before and after the gamma adjustment.	
1103 001	Color Gray Scale	
1103 002	Color Pattern	

1104	**[Gamma Adjustment]**	
	Adjusts the printer gamma for the mode selected in the "Mode Selection" menu.	
1104 001	Black: Highlight	[0 to 30 / 15 / 1/step]
1104 002	Black: Shadow	
1104 003	Black: Middle	
1104 004	Black: IDmax	
1104 021	Cyan: Highlight	
1104 022	Cyan: Shadow	
1104 023	Cyan: Middle	
1104 024	Cyan: IDmax	
1104 041	Magenta: Highlight	[0 to 30 / 15 / 1/step]
1104 042	Magenta: Shadow	
1104 043	Magenta: Middle	
1104 044	Magenta: IDmax	
1104 061	Yellow: Highlight	
1104 062	Yellow: Shadow	
1104 063	Yellow: Middle	
1104 064	Yellow: IDmax	

1105	**[Save Tone Control Value]**	
	Stores the print gamma adjusted with the "Gamma Adj." menu item as the current setting. Before the machine stores the new "current setting", it moves the data currently stored as the "current setting" to the "previous setting" memory storage location.	
1105 001	Save Tone Control Value	

1106	**[Toner Limit Value]**	
	Adjusts the maximum toner amount for image development.	
1106 001	TonerLimitValue	[100 to 400 / **260** / 1%/step]

1110	**[Media Print Support]**	
	Enable or disable the media print support function.	
1110 001	-	[0 to 1 / **1** / 1/step]

3.11 SCANNER SERVICE MODE

3.11.1 SP1-XXX (SYSTEM AND OTHERS)

1001	**[Scan NV Version]**		
	Displays the scanner firmware version stored in NVRAM.		
1001 5	-	*CTL	-

1004	**[Compression Type]**		
	Selects the compression type for binary picture processing.		
1004 1	Compression Type	*CTL	[1 to 3 / **1** / 1/step] 1: MH, 2: MR, 3: MMR

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.		
1005 1	Range from 0 to 5 mm	*CTL	[0 to 5 / **0** / 1 mm/step]

1009	**[Remote scan disable]**	*CTL	[0 or 1 / **0** / -] 0: enable, 1: disable
1009 1	Enable or disable remote scan.		

1010	**[Non Display Clear Light PDF]**	*CTL	[0 or 1 / **0** / -] 0: Display, 1: No display
1010 1	Enable or disable remote scan.		

1011	**[Org Count Display]**	*CTL	[0 or 1 / **0** / -] 0: No display, 1: Display
1011 1	This SP codes switches the original count display on/off.		

1012	**[User Info Release]**	*CTL	[0 or 1 / **1** / -] 0: Do not release, 1: Release
1012 1	This SP code sets the machine to release or not release the following items at job end. ▪ Destination (E-mail/Folder/CS) ▪ Sender name ▪ Mail Text ▪ Subject line ▪ File name		

1013	**[Scan to Media Setting]**	*CTL	[0 or 1 / **1** / -] 0: Disable, 1: Enable
1013 1	This SP code enables/disables the multi-media function option (USB 2.0/SD Slot) mounted on the left rear corner of the machine. Operators can scan documents to either an SD card or a USB memory device inserted into this unit. This SP must be enabled (set to "1") in order for the device to function.		

3.11.2 SP2-XXX (SCANNING-IMAGE QUALITY)

2021	**[Compression Level (Gray-scale)]**		
	Selects the compression ratio for grayscale processing mode (JPEG) for the three settings that can be selected at the operation panel.		
2021 1	Comp1: 5-95	*CTL	[5 to 95 / **20** / 1 /step]
2021 2	Comp2: 5-95		[5 to 95 / **40** / 1 /step]
2021 3	Comp3: 5-95		[5 to 95 / **65** / 1 /step]
2021 4	Comp4: 5-95		[5 to 95 / **80** / 1 /step]
2021 5	Comp5: 5-95		[5 to 95 / **95** / 1 /step]

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.		
2024 1	Compression Ratio (Normal)	*CTL	[5 to 95 / **25** / 1 /step]
2024 2	Compression Ratio (High)		[5 to 95 / **20** / 1 /step]

2025	**[Compression ratio of ClearLight PDF JPEG2000]**		
	Selects the compression ratio for clearlight PDF JPEG2000 for the two settings that can be selected at the operation panel.		
2025 1	Compression Ratio (Normal)	*CTL	[5 to 95 / **25** / 1 /step]
2025 2	Compression Ratio (High)		[5 to 95 / **20** / 1 /step]

3.12 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.

1. Enter the SP mode and select **SP2-109-003**.
2. Enter the number for the test pattern that you want to print and press [#].
3. When you want to select the single color of Magenta, Yellow or Cyan for printing a test pattern, select the color with SP2-109-005 (2: Magenta, 3: Yellow, 4: Cyan).
4. When you want to change the density of printing a test pattern, select the density with SP2-109-006 to -009 for each color.

   Note

   - If you select "0" with SP2-109-006 to -009, the color to be adjusted to "0" does not come up on a test pattern.
5. When you are prompted to confirm your selection, touch "Yes" to select the test pattern for printing.
6. Touch "Copy Window" to open the copy window, then select the settings for the test print (paper size etc.).

   Note

   - If you want to use black and white printing, touch "Black & White" on the LCD. If you want to use color printing, touch "Full Colour" on the LCD.
7. Press the "Start" key to start the test print.
8. After checking the test pattern, touch "SP Mode" on the LCD to return to the SP mode display.
9. Reset all settings to the default values.
10. Touch "Exit" twice to exit SP mode.

No.	Pattern	No.	Pattern
0	None	12	Independent Pattern (2-dot)
1	Vertial Line (1dot)	13	Independent Pattern (4-dot)
2	Vertial Line (2dot)	14	Triming Area
3	Horizontal Line (1dot)	15	Hound's Tooth Check (Vertical)
4	Horizontal Line (2dot)	16	Hound's Tooth Check (Horizontal)
5	Grid Vertical Line	17	Band (Horizontal)
6	Grid Horizontal Line	18	Band (Vertical)
7	Grid Pattern Small	19	Checker Flag Pattern
8	Grid Pattern Large	20	Grayscale (Vertical Margin)
9	Argyle Pattern Small	21	Grayscale (Horizontal Margin)
10	Argyle Pattern Large	22	Two Beam Density Pattern
11	Independent Pattern (1-dot)	23	Full Dot Pattern

D483

FAX OPTION TYPE C400

REVISION HISTORY		
Page	**Date**	**Added/Updated/New**
7	06/30/2011	Corrected Steps 22 (SP3-102) and 23 (SP2-103-001).

FAX OPTION TYPE C400 (D483)

TABLE OF CONTENTS

Read This First

Important Safety Notices

⚠WARNING

- Never install telephone wiring during a lightning storm.
- Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
- Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
- Use caution when installing or modifying telephone lines.
- Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
- Do not use a telephone or cellular phone to report a gas leak in the vicinity of the leak.

⚠CAUTION

- Before installing the fax unit, switch off the main switch, and disconnect the power cord.
- The fax unit contains a lithium battery. The danger of explosion exists if a battery of this type is incorrectly replaced. Replace only with the same or an equivalent type recommended by the manufacturer. Discard batteries in accordance with the manufacturer's instructions and local regulations.

Note

- **Note for Australia**:
- Unit must be connected to Telecommunication Network through a line cord that meets the requirements of ACA Technical Standard TS008.

Symbols and Abbreviations

Conventions Used in this Manual

This manual uses several symbols.

Symbol	What it means
	Refer to section number
	Screw
	Connector
	E-ring
	Clip ring
	Clamp

Cautions, Notes, etc.

The following headings provide special information:

⚠WARNING

- Failure to obey warning information could result in serious injury or death.

⚠CAUTION

- Obey these guidelines to ensure safe operation and prevent minor injuries.

Important

- Obey these guidelines to avoid problems such as misfeeds, damage to originals, loss of valuable data and to prevent damage to the machine.
- Always obey these guidelines to avoid serious problems such as misfeeds, damage to originals, loss of valuable data and to prevent damage to the machine. bold is added for emphasis.

Note

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

1. INSTALLATION PROCEDURE

1.1 FAX OPTION (D483) INSTALLATION

1.1.1 COMPONENT CHECK

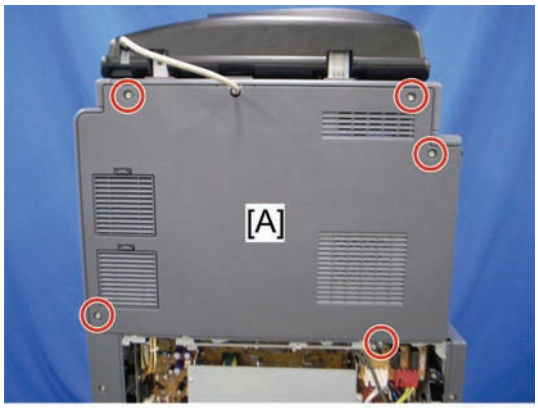
Check the quantity and condition of the components against the following list.

No.	Description	Q'ty
1	FCU	1
2	Harness: TEL and LINE	1
3	Bracket	1
4	Relay Board	1
5	Screw: M3x6	9
6	Clamp	7
7	Serial Number Decal	1
8	G3 Decal	1
9	Telephone Cord (NA only)	1
10	FCC Decal (NA only)	1
11	EMC Address Decal (EU only)	1
12	Multi-Language Decals (EU only)	1

1.1.2 FAX OPTION INSTALLATION PROCEDURE

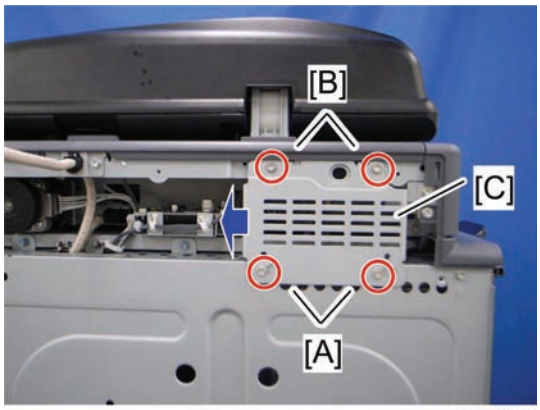
CAUTION

- Before installation, print out all data in the printer buffer.
- Push the operation switch to put the machine in standby mode. Make sure the power LED is off, turn the main switch off, and then disconnect the power cord and the network cable.
- The copier must be connected to a properly grounded socket outlet.



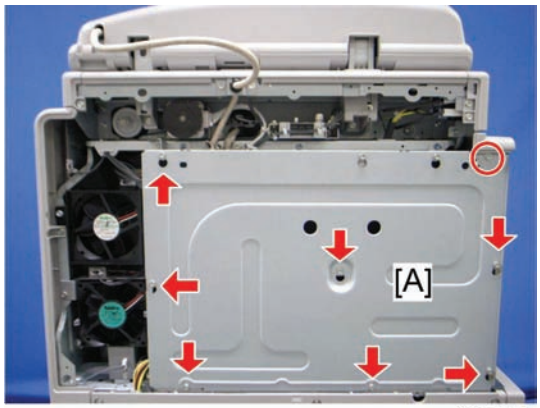
m022r505

1. Remove the rear upper cover [A] (x 5).



m022r506

2. Loosen the two screws, and remove the two screws.
3. Slide the scanner cable bracket [A] in the direction of the blue arrow, and then remove it.



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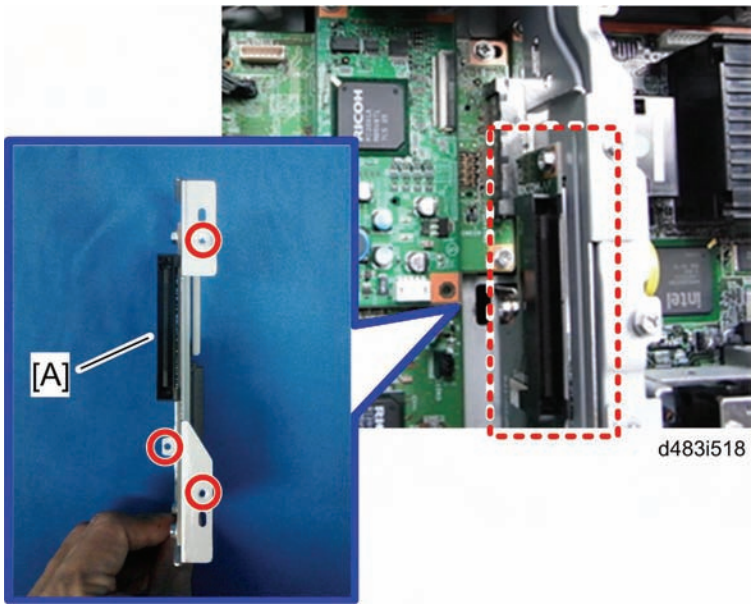
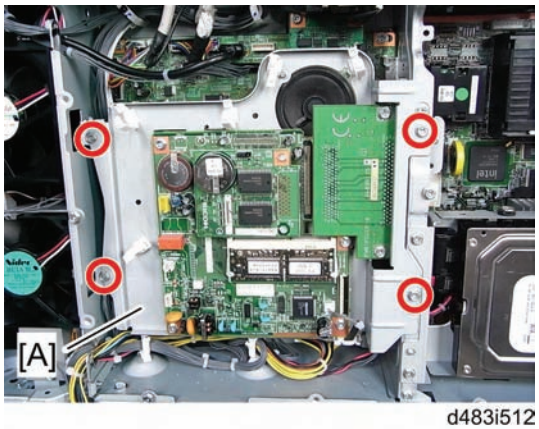
4. Loosen the seven screws, and remove the screw.
5. Slide up the controller box cover [A], and then remove it.



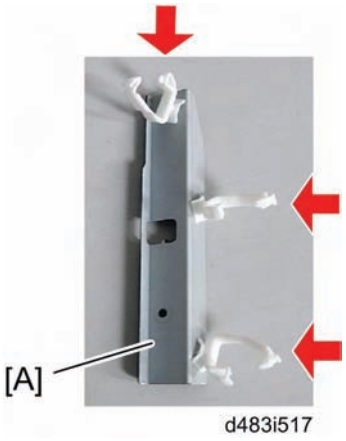
d483i518

6. Attach the relay board [A] (x 3).

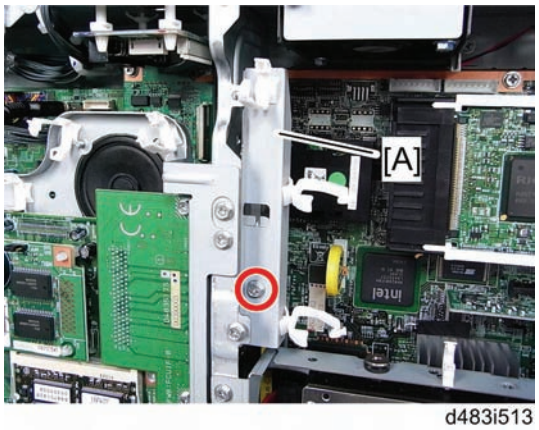


d483i512

7. Attach the FCU [A] (x 4).

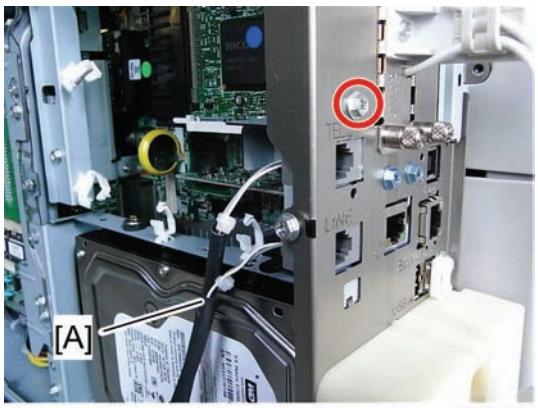


8. Attach the three clamps to the bracket [A].



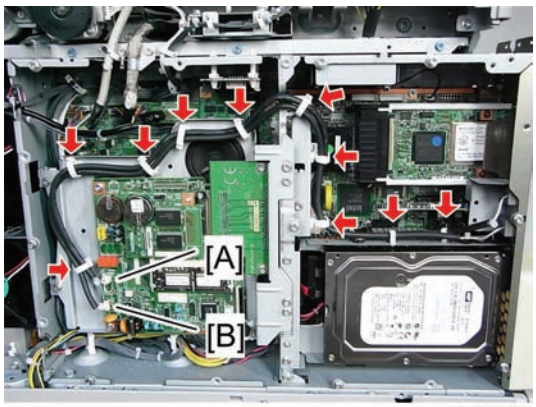
9. Attach the bracket [A] (x 1).

10. Attach the four clamps [A].



d483i515

11. Attach the harness: TEL and LINE [A] (x 1).



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12. Connect the two modular harnesses [A] [B] to the FCU (x 12).

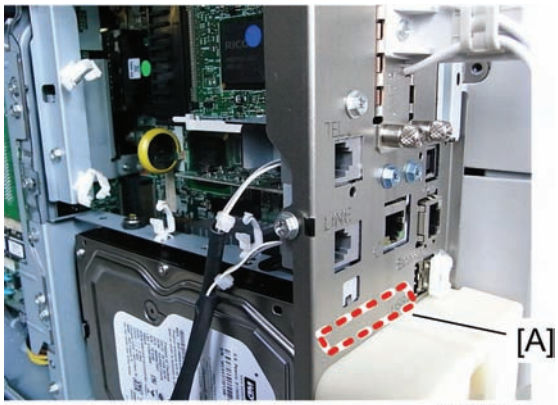
d483i519

13. Switch the MBU battery jumper switch [A] to "ON" position.

Note

- Make sure that the MBU board is firmly connected to the FCU.

14. Reassemble the machine.
15. Attach the Fax keytop.



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16. Write the serial number of the fax unit on the serial number decal, and then attach this decal to the controller box [A].
17. Connect the telephone cord to the "LINE" jack.

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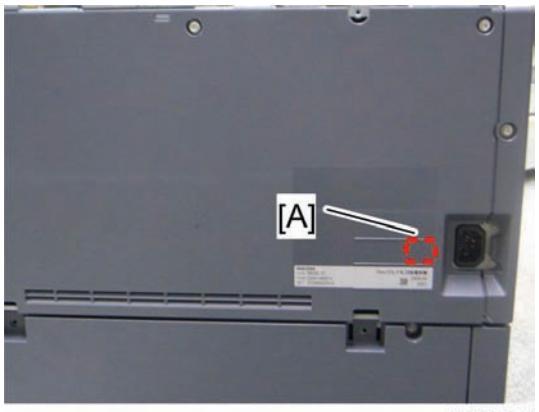
18. Attach the Super G3 decal [A].



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19. Attach FCC decal on the [A] of the rear lower cover (NA only).
20. Plug in the machine and turn on the main power switch.

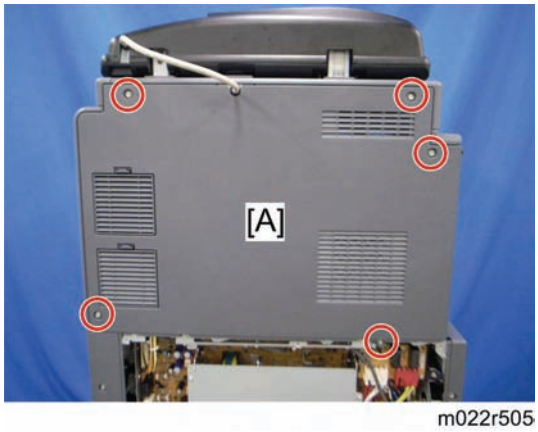
Important

- After you turn the machine ON, if you see a message that tells you the SRAM has been formatted due to a problem with SRAM, turn the machine OFF and ON again to clear the message.

21. Enter the "User Tools" mode and set date and time.
22. Do SP3-102 in the fax SP mode and enter the serial number for the fax unit.
23. Enter the correct country code with SP2-103-001 set to 17 (NCU Country/ Area Code Setting).
24. Exit the SP mode, and turn the machine OFF and ON.

1.2 FAX UNIT OPTIONS

1.2.1 MEMORY UNIT (G578)



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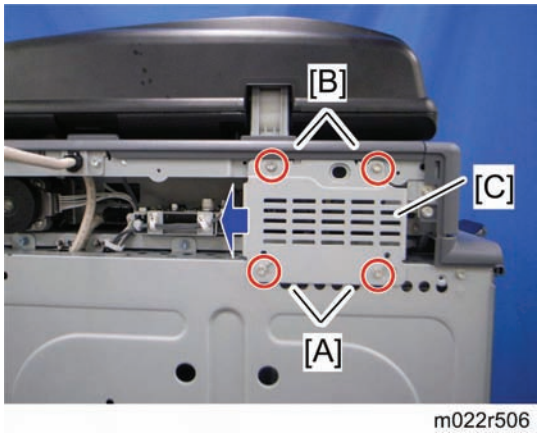
1. Rear cover [A] (x 5)



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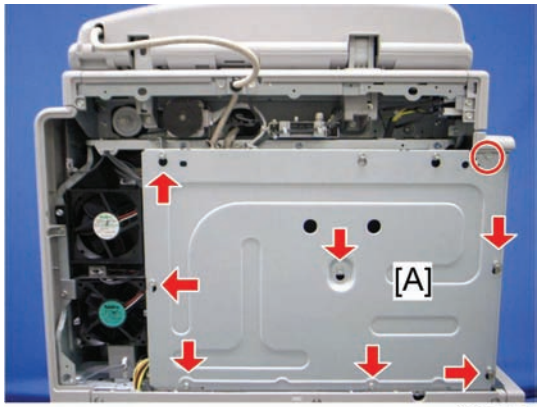
2. Loosen two screws [A], and remove two screws [B].

3. Slide the scanner cable bracket [C] in the direction of the blue arrow, and then remove it.



m022r507

4. Loosen five screws, and remove three screws.
5. Slide up the controller box cover [A], and then remove it.
6. Install the memory option on the FCU.
7. Re-assemble the machine.

2. REPLACEMENT AND ADJUSTMENT

2.1 FCU

1. When you replace the FCU board, remove the MBU board from the old FCU board and install it on the new FCU board.
2. Set the correct date and time with the User Tools: User Tools > System Settings > Timer Setting > Set Date/Time.

Note

- Do not turn off the battery switch (SW1).
- Do SP6101 to print the system parameters, and check the settings.

3. TROUBLESHOOTING

3.1 ERROR CODES

If an error code occurs, retry the communication. If the same problem occurs, try to fix the problem as suggested below. Note that some error codes appear only in the error code display and on the service report.

Code	Meaning	Suggested Cause/Action
0-00	DIS/NSF not detected within 40 s of Start being pressed	▪ Check the line connection. ▪ The machine at the other end may be incompatible. ▪ Replace the FCU. ▪ Check for DIS/NSF with an oscilloscope. ▪ If the rx signal is weak, there may be a bad line.
0-01	DCN received unexpectedly	▪ The other party is out of paper or has a jammed printer. ▪ The other party pressed Stop during communication.
0-03	Incompatible modem at the other end	The other terminal is incompatible.

Code	Meaning	Suggested Cause/Action
0-04	CFR or FTT not received after modem training	▪ Check the line connection. ▪ Try changing the tx level and/or cable equalizer settings. ▪ Replace the FCU. ▪ The other terminal may be faulty; try sending to another machine. ▪ If the rx signal is weak or defective, there may be a bad line. **Cross reference** Tx level - NCU Parameter 01 (PSTN) Cable equalizer - G3 Switch 07 (PSTN) Dedicated Tx parameters in Service Program Mode
0-05	Modem training fails even G3 shifts down to 2400 bps.	▪ Check the line connection. ▪ Try adjusting the tx level and/or cable equalizer. ▪ Replace the FCU. ▪ Check for line problems. **Cross reference** See error code 0-04.
0-06	The other terminal did not reply to DCS	▪ Check the line connection. ▪ Try adjusting the tx level and/or cable equalizer settings. ▪ Replace the FCU. ▪ The other end may be defective or incompatible; try sending to another machine. ▪ Check for line problems. **Cross reference** See error code 0-04.

Code	Meaning	Suggested Cause/Action
0-07	No post-message response from the other end after a page was sent	▪ Check the line connection. ▪ Replace the FCU. ▪ The other end may have jammed or run out of paper. ▪ The other end user may have disconnected the call. ▪ Check for a bad line. ▪ The other end may be defective; try sending to another machine.
0-08	The other end sent RTN or PIN after receiving a page, because there were too many errors	▪ Check the line connection. ▪ Replace the FCU. ▪ The other end may have jammed, or run out of paper or memory space. ▪ Try adjusting the tx level and/or cable equalizer settings. ▪ The other end may have a defective modem/FCU; try sending to another machine. ▪ Check for line problems and noise. **Cross reference** ▪ Tx level - NCU Parameter 01 (PSTN) ▪ Cable equalizer - G3 Switch 07 (PSTN) ▪ Dedicated Tx parameters in Service Program Mode
0-14	Non-standard post message response code received	▪ Incompatible or defective remote terminal; try sending to another machine. ▪ Noisy line: resend. ▪ Try adjusting the tx level and/or cable equalizer settings. ▪ Replace the FCU. **Cross reference** See error code 0-08.

Code	Meaning	Suggested Cause/Action
0-15	The other terminal is not capable of specific functions.	The other terminal is not capable of accepting the following functions, or the other terminal's memory is full. ▪ Confidential rx ▪ Transfer function ▪ SEP/SUB/PWD/SID
0-16	CFR or FTT not detected after modem training in confidential or transfer mode	▪ Check the line connection. ▪ Replace the FCU. ▪ Try adjusting the tx level and/or cable equalizer settings. ▪ The other end may have disconnected, or it may be defective; try calling another machine. ▪ If the rx signal level is too low, there may be a line problem. **Cross reference** See error code 0-08.
0-20	Facsimile data not received within 6 s of retraining	▪ Check the line connection. ▪ Replace the FCU. ▪ Check for line problems. ▪ Try calling another fax machine. ▪ Try adjusting the reconstruction time for the first line and/or rx cable equalizer setting. **Cross reference** Reconstruction time - G3 Switch 0A, bit 6 Rx cable equalizer - G3 Switch 07 (PSTN)

Code	Meaning	Suggested Cause/Action
0-21	EOL signal (end-of-line) from the other end not received within 5 s of the previous EOL signal	▪ Check the connections between the FCU and line. ▪ Check for line noise or other line problems. ▪ Replace the FCU. ▪ The remote machine may be defective or may have disconnected. **Cross reference** Maximum interval between EOLs and between ECM frames - G3 Bit Switch 0A, bit 4
0-22	The signal from the other end was interrupted for more than the acceptable modem carrier drop time (default: 200 ms)	▪ Check the line connection. ▪ Replace the FCU. ▪ Defective remote terminal. ▪ Check for line noise or other line problems. ▪ Try adjusting the acceptable modem carrier drop time. **Cross reference** Acceptable modem carrier drop time - G3 Switch 0A, bits 0 and 1
0-23	Too many errors during reception	▪ Check the line connection. ▪ Replace the FCU. ▪ Defective remote terminal ▪ Check for line noise or other line problems. ▪ Try asking the other end to adjust their tx level. ▪ Try adjusting the rx cable equalizer setting and/or rx error criteria. **Cross reference** Rx cable equalizer - G3 Switch 07 (PSTN) Rx error criteria - Communication Switch 02, bits 0 and 1

Code	Meaning	Suggested Cause/Action
0-30	The other terminal did not reply to NSS(A) in AI short protocol mode	▪ Check the line connection. ▪ Try adjusting the tx level and/or cable equalizer settings. ▪ The other terminal may not be compatible. **Cross reference** Dedicated tx parameters - Section 4
0-32	The other terminal sent a DCS, which contained functions that the receiving machine cannot handle.	▪ Check the protocol dump list. ▪ Ask the other party to contact the manufacturer.
0-33	The data reception (not ECM) is not completed within 10 minutes.	▪ Check the line connection. ▪ The other terminal may have a defective modem/FCU.
0-52	Polarity changed during communication	▪ Check the line connection. Retry communication.
0-55	FCU does not detect the SG3.	▪ FCU firmware or board defective. ▪ SG3 firmware or board defective.
0-56	The stored message data exceeds the capacity of the mailbox in the SG3.	▪ SG3 firmware or board defective.
0-70	The communication mode specified in CM/JM was not available (V.8 calling and called terminal)	▪ The other terminal did not have a compatible communication mode (e.g., the other terminal was a V.34 data modem and not a fax modem.) ▪ A polling tx file was not ready at the other terminal when polling rx was initiated from the calling terminal.

Code	Meaning	Suggested Cause/Action
0-74	The calling terminal fell back to T.30 mode, because it could not detect ANSam after sending CI.	▪ The calling terminal could not detect ANSam due to noise, etc. ▪ ANSam was too short to detect. ▪ Check the line connection and condition. ▪ Try making a call to another V.8/V.34 fax.
0-75	The called terminal fell back to T.30 mode, because it could not detect a CM in response to ANSam (ANSam timeout).	▪ The terminal could not detect ANSam. ▪ Check the line connection and condition. ▪ Try receiving a call from another V.8/V.34 fax.
0-76	The calling terminal fell back to T.30 mode, because it could not detect a JM in response to CM (CM timeout).	▪ The called terminal could not detect a CM due to noise, etc. ▪ Check the line connection and condition. ▪ Try making a call to another V.8/V.34 fax.
0-77	The called terminal fell back to T.30 mode, because it could not detect a CJ in response to JM (JM timeout).	▪ The calling terminal could not detect a JM due to noise, etc. ▪ A network that has narrow bandwidth cannot pass JM to the other end. ▪ Check the line connection and condition. ▪ Try receiving a call from another V.8/V.34 fax.
0-79	The called terminal detected CI while waiting for a V.21 signal.	▪ Check for line noise or other line problems. ▪ If this error occurs, the called terminal falls back to T.30 mode.
0-80	The line was disconnected due to a timeout in V.34 phase 2 – line probing.	▪ The guard timer expired while starting these phases. Serious noise, narrow bandwidth, or low signal level can cause these errors. If these errors happen at the transmitting terminal: ▪ Try making a call at a later time. ▪ Try using V.17 or a slower modem using dedicated tx parameters.
0-81	The line was disconnected due to a timeout in V.34 phase 3 – equalizer training.	

Code	Meaning	Suggested Cause/Action
0-82	The line was disconnected due to a timeout in the V.34 phase 4 – control channel start-up.	▪ Try increasing the tx level. ▪ Try adjusting the tx cable equalizer setting. If these errors happen at the receiving terminal: ▪ Try adjusting the rx cable equalizer setting. ▪ Try increasing the tx level. ▪ Try using V.17 or a slower modem if the same error is frequent when receiving from multiple senders.
0-83	The line was disconnected due to a timeout in the V.34 control channel restart sequence.	
0-84	The line was disconnected due to abnormal signaling in V.34 phase 4 – control channel start-up.	▪ The signal did not stop within 10 s. ▪ Turn off the machine, then turn it back on. ▪ If the same error is frequent, replace the FCU.
0-85	The line was disconnected due to abnormal signaling in V.34 control channel restart.	▪ The signal did not stop within 10 s. ▪ Turn off the machine, then turn it back on. ▪ If the same error is frequent, replace the FCU.
0-86	The line was disconnected because the other terminal requested a data rate using MPh that was not available in the currently selected symbol rate.	▪ The other terminal was incompatible. ▪ Ask the other party to contact the manufacturer.
0-87	The control channel started after an unsuccessful primary channel.	▪ The receiving terminal restarted the control channel because data reception in the primary channel was not successful. ▪ This does not result in an error communication.
0-88	The line was disconnected because PPR was transmitted/received 9 (default) times within the same ECM frame.	▪ Try using a lower data rate at the start. ▪ Try adjusting the cable equalizer setting.

Code	Meaning	Suggested Cause/Action
2-11	Only one V.21 connection flag was received	▪ Replace the FCU.
2-12	Modem clock irregularity	▪ Replace the FCU.
2-13	Modem initialization error	▪ Turn off the machine, then turn it back on. ▪ Update the modem ROM. ▪ Replace the FCU.
2-23	JBIG compression or reconstruction error	▪ Turn off the machine, then turn it back on.
2-24	JBIG ASIC error	▪ Turn off the machine, then turn it back on.
2-25	JBIG data reconstruction error (BIH error)	▪ JBIG data error ▪ Check the sender's JBIG function. ▪ Update the MBU ROM.
2-26	JBIG data reconstruction error (Float marker error)	
2-27	JBIG data reconstruction error (End marker error)	
2-28	JBIG data reconstruction error (Timeout)	
2-29	JBIG trailing edge maker error	▪ FCU defective ▪ Check the destination device.
2-50	The machine resets itself for a fatal FCU system error	▪ If this is frequent, update the ROM, or replace the FCU.
2-51	The machine resets itself because of a fatal communication error	▪ If this is frequent, update the ROM, or replace the FCU.
2-53	Snd msg() in the manual task is an error because the mailbox for the operation task is full.	▪ The user did the same operation many times, and this gave too much load to the machine.

Code	Meaning	Suggested Cause/Action
4-01	Line current was cut	▪ Check the line connector. ▪ Check for line problems. ▪ Replace the FCU.
4-10	Communication failed because of an ID Code mismatch (Closed Network) or Tel. No./CSI mismatch (Protection against Wrong Connections)	▪ Get the ID Codes the same and/or the CSIs programmed correctly, then resend. ▪ The machine at the other end may be defective.
5-10	DCR timer expired	▪ Replace the FCU.
5-20	Storage impossible because of a lack of memory	▪ Temporary memory shortage. ▪ Test the SAF memory.
5-21	Memory overflow	
5-23	Print data error when printing a substitute rx or confidential rx message	▪ Test the SAF memory. ▪ Ask the other end to resend the message.
5-25	SAF file access error	▪ Replace an SD card or HDD. ▪ Replace the FCU.
6-00	G3 ECM - T1 time out during reception of facsimile data	▪ Try adjusting the rx cable equalizer. ▪ Replace the FCU.
6-01	G3 ECM - no V.21 signal was received	
6-02	G3 ECM - EOR was received	
6-04	G3 ECM - RTC not detected	▪ Check the line connection. ▪ Check for a bad line or defective remote terminal.

Code	Meaning	Suggested Cause/Action
		▪ Replace the FCU.
6-05	G3 ECM - facsimile data frame not received within 18 s of CFR, but there was no line fail	▪ Check the line connection. ▪ Check for a bad line or defective remote terminal. ▪ Replace the FCU. ▪ Try adjusting the rx cable equalizer **Cross reference** ▪ Rx cable equalizer - G3 Switch 07 (PSTN)
6-06	G3 ECM - coding/decoding error	▪ Defective FCU. ▪ The other terminal may be defective.
6-08	G3 ECM - PIP/PIN received in reply to PPS.NULL	▪ The other end pressed Stop during communication. ▪ The other terminal may be defective.
6-09	G3 ECM - ERR received	▪ Check for a noisy line. ▪ Adjust the tx levels of the communicating machines. ▪ See code 6-05.
6-10	G3 ECM - error frames still received at the other end after all communication attempts at 2400 bps	▪ Check for line noise. ▪ Adjust the tx level (use NCU parameter 01 or the dedicated tx parameter for that address). ▪ Check the line connection. ▪ Defective remote terminal.
6-21	V.21 flag detected during high speed modem communication	▪ The other terminal may be defective or incompatible.
6-22	The machine resets the sequence because of an abnormal handshake in the V.34 control channel	▪ Check for line noise. ▪ If the same error occurs frequently, replace the FCU. ▪ Defective remote terminal.
6-99	V.21 signal not stopped within 6 s	▪ Replace the FCU.

Code	Meaning	Suggested Cause/Action
13-17	SIP user name registration error	▪ Double registration of the SIP user name. ▪ Capacity for user-name registration in the SIP server is not sufficient.
13-18	SIP server access error	▪ Incorrect initial setting for the SIP server. ▪ Defective SIP server.
13-24	SIP authentication error	▪ Registered password in the device does not match the password in the SIP server.
13-25	Network I/F setting error	▪ IPV4 is not active in the active protocol setting. ▪ IP address of the device is not registered.
13-26	Network I/F setting error at power on	▪ Active protocol setting does not match the I/F setting for SIP server. ▪ IP address of the device is not registered.
13-27	IP address setting error	▪ IP address of the device is not registered.
14-00	SMTP Send Error	▪ Error occurred during sending to the SMTP server. Occurs for any error other than 14-01 to 16. For example, the mail address of the system administrator is not registered.
14-01	SMTP Connection Failed	▪ Failed to connect to the SMTP server (timeout) because the server could not be found. ▪ The PC is not ready to transfer files. ▪ SMTP server not functioning correctly. ▪ The DNS IP address is not registered. ▪ Network not operating correctly. ▪ Destination folder selection not correct.

Code	Meaning	Suggested Cause/Action
14-02	No Service by SMTP Service (421)	▪ SMTP server operating incorrectly, or the destination for direct SMTP sending is not correct. ▪ Contact the system administrator and check that the SMTP server has the correct settings and operates correctly. ▪ Contact the system administrator for direct SMTP sending and check the sending destination.
14-03	Access to SMTP Server Denied (450)	▪ Failed to access the SMTP server because the access is denied. ▪ SMTP server operating incorrectly. Contact the system administrator to determine if there is a problem with the SMTP server and to check that the SMTP server settings are correct. ▪ Folder send destination is incorrect. Contact the system administrator to determine that the SMTP server settings and path to the server are correct. ▪ Device settings incorrect. Confirm that the user name and password settings are correct. ▪ Direct SMTP destination incorrect. Contact the system administrator to determine if there is a problem at the destination at that the settings at the destination are correct.
14-04	Access to SMTP Server Denied (550)	▪ SMTP server operating incorrectly ▪ Direct SMTP sending not operating correctly

Code	Meaning	Suggested Cause/Action
14-05	SMTP Server HDD Full (452)	▪ 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 and check the amount of space remaining on the target HDD.
14-06	User Not Found on SMTP Server (551)	▪ The designated user does not exist. ▪ The designated user does not exist on the SMTP server. ▪ The designated address is not for use with direct SMTP sending.
14-07	Data Send to SMTP Server Failed (4XX)	▪ Failed to access the SMTP server because the transmission failed. ▪ PC not operating correctly. ▪ SMTP server operating incorrectly ▪ Network not operating correctly. ▪ Destination folder setting incorrect. ▪ Direct SMTP sending not operating correctly.

Code	Meaning	Suggested Cause/Action
14-08	Data Send to SMTP Server Failed (5XX)	▪ Failed to access the SMTP server because the transmission failed. ▪ SMTP server operating incorrectly ▪ Destination folder setting incorrect. ▪ Direct SMTP sending not operating correctly. ▪ Software application error.
14-09	Authorization Failed for Sending to SMTP Server	▪ POP-Before-SMTP or SMTP authorization failed. ▪ Incorrect setting for file transfer
14-10	Addresses Exceeded	▪ Number of broadcast addresses exceeded the limit for the SMTP server.
14-11	Buffer Full	▪ The send buffer is full so the transmission could not be completed. Buffer is full due to using Scan-to-Email while the buffer is being used send mail at the same time.
14-12	Data Size Too Large	▪ Transmission was cancelled because the detected size of the file was too large.
14-13	Send Cancelled	▪ Processing is interrupted because the user pressed Stop.
14-14	Security Locked File Error	▪ Update the software because of the defective software.
14-15	Mail Data Error	▪ The transmitting a mail is interrupted via DCS due to the incorrect data. ▪ Update the software because of the defective software.

Code	Meaning	Suggested Cause/Action
14-16	Maximum Division Number Error	▪ When a mail is divided for the mail transmission and the division number of a mail are more than the specified number, the mail transmission is interrupted. ▪ Update the software because of the defective software.
14-17	Incorrect Ticket	▪ Update the software because of the defective software.
14-18	Access to MCS File Error	▪ The access to MCS file is denied due to the no permission of access. ▪ Update the software because of the defective software.
14-30	MCS File Creation Failed	Failed to create the MCS file because: ▪ The number of files created with other applications on the Document Server has exceeded the limit. ▪ HDD is full or not operating correctly. ▪ Software error.
14-31	UFS File Creation Failed	UFS file could not be created: ▪ Not enough space in UFS area to handle both Scan-to-Email and IFAX transmission. ▪ HDD full or not operating correctly. ▪ Software error.
14-32	Cancelled the Mail Due to Error Detected by NFAX	▪ Error detected with NFAX and send was cancelled due to a software error.
14-33	No Mail Address For the Machine	▪ Neither the mail address of the machine nor the mail address of the network administrator is registered.

Code	Meaning	Suggested Cause/Action
14-34	Address designated in the domain for SMTP sending does not exist	▪ Operational error in normal mail sending or direct SMTP sending. ▪ Check the address selected in the address book for SMTP sending. ▪ Check the domain selection.
14-50	Mail Job Task Error	Due to an FCU mail job task error, the send was cancelled: ▪ Address book was being edited during creation of the notification mail. ▪ Software error.
14-51	UCS Destination Download Error	Not even one return notification can be downloaded: ▪ The address book was being edited. ▪ The number for the specified destination does not exist (it was deleted or edited after the job was created).
14-60	Send Cancel Failed	▪ The cancel operation by the user failed to cancel the send operation.
14-61	Notification Mail Send Failed for All Destinations	▪ All addresses for return notification mail failed.
14-62	Transmission Error due to the existence of zero line page	▪ When the 0 line page exists in received pages with G3 communication, the transmission is interrupted.
15-01	POP3/IMAP4 Server Not Registered	▪ At startup, the system detected that the IP address of the POP3/IMAP4 server has not been registered in the machine.

Code	Meaning	Suggested Cause/Action
15-02	POP3/IMAP4 Mail Account Information Not Registered	▪ The POP3/IMAP4 mail account has not been registered.
15-03	Mail Address Not Registered	▪ The mail address has not been registered.
15-10	DCS Mail Receive Error	▪ Error other than 15-11 to 15-18.
15-11	Connection Error	The DNS or POP3/IMAP4 server could not be found: ▪ The IP address for DNS or POP3/IMAP4 server is not stored in the machine. ▪ The DNS IP address is not registered. ▪ Network not operating correctly.
15-12	Authorization Error	POP3/IMAP4 send authorization failed: ▪ Incorrect IFAX user name or password. ▪ Access was attempted by another device, such as the PC. ▪ POP3/IMAP4 settings incorrect.
15-13	Receive Buffer Full	▪ Occurs only during manual reception. Transmission cannot be received due to insufficient buffer space. The buffer is being used for mail send or Scan-to-Email.
15-14	Mail Header Format Error	▪ The mail header is not standard format. For example, the Date line description is incorrect.
15-15	Mail Divide Error	▪ The e-mail is not in standard format. There is no boundary between parts of the e-mail, including the header.
15-16	Mail Size Receive Error	▪ The mail cannot be received because it is too large.
15-17	Receive Timeout	▪ May occur during manual receiving only because the network is not operating correctly.

Code	Meaning	Suggested Cause/Action
15-18	Incomplete Mail Received	▪ Only one portion of the mail was received.
15-31	Final Destination for Transfer Request Reception Format Error	▪ The format of the final destination for the transfer request was incorrect.
15-39	Send/Delivery Destination Error	The transmission cannot be delivered to the final destination: ▪ Destination file format is incorrect. ▪ Could not create the destination for the file transmission.
15-41	SMTP Receive Error	▪ Reception rejected because the transaction exceeded the limit for the “Auth. E-mail RX” setting.
15-42	Off Ramp Gateway Error	▪ The delivery destination address was specified with Off Ramp Gateway OFF.
15-43	Address Format Error	▪ Format error in the address of the Off Ramp Gateway.
15-44	Addresses Over	▪ The number of addresses for the Off Ramp Gateway exceeded the limit of 30.
15-61	Attachment File Format Error	▪ The attached file is not TIFF format.
15-62	TIFF File Compatibility Error	Could not receive transmission due to: ▪ Resolution error ▪ Image of resolution greater than 200 dpi without extended memory. ▪ Resolution is not supported. ▪ Page size error ▪ The page size was larger than A3. ▪ Compression error ▪ File was compressed with other than MH, MR, or MMR.

Code	Meaning	Suggested Cause/Action
15-63	TIFF Parameter Error	The TIFF file sent as the attachment could not be received because the TIFF header is incorrect: ▪ The TIFF file attachment is a type not supported. ▪ The TIFF file attachment is corrupted. ▪ Software error.
15-64	TIFF Decompression Error	The file received as an attachment caused the TIFF decompression error: ▪ The TIFF format of the attachment is corrupted. ▪ Software error.
15-71	Not Binary Image Data	▪ The file could not be received because the attachment was not binary image data.
15-73	MDN Status Error	▪ Could not find the Disposition line in the header of the Return Receipt, or there is a problem with the firmware.
15-74	MDN Message ID Error	▪ Could not find the Original Message ID line in the header of the Return Receipt, or there is a problem with the firmware.
15-80	Mail Job Task Read Error	▪ Could not receive the transmission because the destination buffer is full and the destination could not be created (this error may occur when receiving a transfer request or a request for notification of reception).

Code	Meaning	Suggested Cause/Action
15-81	Repeated Destination Registration Error	▪ Could not repeat receive the transmission because the destination buffer is full and the destination could not be created (this error may occur when receiving a transfer request or a request for notification of reception).
15-91	Send Registration Error	Could not receive the file for transfer to the final destination: ▪ The format of the final destination or the transfer destination is incorrect. ▪ Destinations are full so the final and transfer destinations could not be created.
15-92	Memory Overflow	▪ Transmission could not be received because memory overflowed during the transaction.
15-93	Memory Access Error	▪ Transaction could not complete due to a malfunction of SAF memory.
15-94	Incorrect ID Code	▪ The machine rejected an incoming e-mail for transfer request, because the ID code in the incoming e-mail did not match the ID code registered in the machine.
15-95	Transfer Station Function	▪ The machine rejected an incoming e-mail for transfer because the transfer function was unavailable.
22-00	Original length exceeded the maximum scan length	▪ Divide the original into more than one page. ▪ Check the resolution used for scanning. Lower the scan resolution if possible. ▪ Add optional page memory.

Code	Meaning	Suggested Cause/Action
22-01	Memory overflow while receiving	▪ Wait for the files in the queue to be sent. ▪ Delete unnecessary files from memory. ▪ Transfer the substitute reception files to an another fax machine, if the machine's printer is busy or out of order. ▪ Add an optional SAF memory card or hard disk.
22-02	Tx or rx job stalled due to line disconnection at the other end	▪ The job started normally but did not finish normally; data may or may not have been received fully. ▪ Restart the machine.
22-04	The machine cannot store received data in the SAF	▪ Update the ROM ▪ Replace the FCU.
22-05	No G3 parameter confirmation answer	▪ Defective FCU board or firmware.
23-00	Data read timeout during construction	▪ Restart the machine. ▪ Replace the FCU.
25-00	The machine software resets itself after a fatal transmission error occurred	▪ Update the ROM ▪ Replace the FCU.
F0-xx	V.34 modem error	▪ Replace the FCU.
F6-xx	SG3 modem error	▪ Update the SG3 modem ROM. ▪ Replace the SG3 board. ▪ Check for line noise or other line problems. ▪ Try communicating another V.8/V.34 fax.

3.2 IFAX TROUBLESHOOTING

Use the following procedures to determine whether the machine or another part of the network is causing the problem.

Communication Route	Item	Action [Remarks]
General LAN	1. Connection with the LAN	▪ Check that the LAN cable is connected to the machine. ▪ Check that the LEDs on the hub are lit.
	2. LAN activity	Check that other devices connected to the LAN can communicate through the LAN.
Between IFAX and PC	1. Network settings on the PC	▪ Check the network settings on the PC. [Is the IP address registered in the TCP/IP properties in the network setup correct? Check the IP address with the administrator of the network.]
	2. Check that PC can connect with the machine	▪ Use the "ping" command on the PC to contact the machine. [At the MS-DOS prompt, type ping then the IP address of the machine, then press Enter.]
	3. LAN settings in the machine	▪ Check the LAN parameters ▪ Check if there is an IP address conflict with other PCs. [Use the "Network" function in the User Tools. If there is an IP address conflict, inform the administrator.]

Communication Route	Item	Action [Remarks]
Between machine and e-mail server	1. LAN settings in the machine	▪ Check the LAN parameters ▪ Check if there is an IP address conflict with other PCs. [Use the "Network" function in the User Tools. If there is an IP address conflict, inform the administrator.]
	2. E-mail account on the server	▪ Make sure that the machine can log into the e-mail server. ▪ Check that the account and password stored in the server are the same as in the machine. [Ask the administrator to check.]
	3. E-mail server	▪ Make sure that the client devices which have an account in the server can send/receive e-mail. [Ask the administrator to check. Send a test e-mail with the machine's own number as the destination. The machine receives the returned e-mail if the communication is performed successfully.]

Communication Route	Item	Action [Remarks]
Between e-mail server and internet	1. E-mail account on the Server	▪ Make sure that the PC can log into the e-mail server. ▪ Check that the account and password stored in the server are the same as in the machine. [Ask the administrator to check.]
	2. E-mail server	▪ Make sure that the client devices which have an account in the server can send/receive e-mail. [Ask the administrator to check. Send a test e-mail with the machine's own number as the destination. The machine receives the returned e-mail if the communication is performed successfully.]
	3. Destination e-mail address	▪ Make sure that the e-mail address is actually used. ▪ Check that the e-mail address contains no incorrect characters such as spaces.
	4. Router settings	▪ Use the "ping" command to contact the router. ▪ Check that other devices connected to the router can sent data over the router. [Ask the administrator of the server to check.]
	5. Error message by e-mail from the network of the destination.	▪ Check whether e-mail can be sent to another address on the same network, using the application e-mail software. ▪ Check the error e-mail message. [Inform the administrator of the LAN.]

3.3 IP-FAX TROUBLESHOOTING

3.3.1 IP-FAX TRANSMISSION

Cannot send by IP Address/Host Name

Check Point		Action
1	LAN cable connected?	Check the LAN cable connection.
2	Specified IP address/host name correct?	Check the IP address/host name.
3	Firewall/NAT is installed?	Cannot breach the firewall. Send by using another method (Fax, Internet Fax)
4	Transmission sent manually?	Manual sending not supported.
5	IP address of local machine registered?	Register the IP address.
6	Remote terminal port number setting other than 1720?	Send by specifying the port number.
7	Specified port number correct?	Confirm the port number of the remote fax.
8	DNS server registered when host name specified?	Contact the network administrator.
9	Remote fax a T.38 terminal?	Check whether the remote fax is a T38 terminal.
10	Remote fax switched off or busy?	Check that the remote fax is switched on.

11	Network bandwidth too narrow?	Request the network administrator to increase the bandwidth.
		Raise the delay level. IPFAX SW 01 Bit 0 to 3
		IP-Fax bandwidth is the same as the DCS speed. Set IP-Fax SW00 Bit 6 to 1.
12	Remote fax cancelled transmission?	Check whether the remote fax cancelled the transmission.

Cannot send via VoIP Gateway

Check Point		Action
1	LAN cable connected?	Check the LAN cable connection.
2	VoIP Gateway T.38 standard?	Contact the network administrator.
3	VoIP Gateway installed correctly?	Contact the network administrator.
4	VoIP Gateway power switched on?	Contact the network administrator.
5	Is the IP address/host name of the specified Gateway correct?	Check the IP address/host name.
6	Number of the specified fax correct?	Check the remote fax number.
7	Firewall/NAT is installed?	Cannot breach the firewall. Send by using another method (Fax, Internet Fax)
8	Transmission sent manually?	Manual sending not supported.
9	IP address of local fax registered?	Register the IP address.
10	DNS registered when host name specified?	Contact the network administrator.
11	Remote fax a G3 fax?	Check that the remote fax is a G3 fax.
12	G3 fax is connected to VoIP gateway?	Check that G3 fax is connected.
13	Remote G3 fax turned on?	Check that G3 fax is switched on.
14	Network bandwidth too narrow?	Request the network administrator to increase the bandwidth.
		Raise the network delay level. IPFAX SW 01 Bit 0 to 3
		IP-Fax bandwidth is the same as the DCS speed. Set IP-Fax SW00 Bit 6 to 1.

Cannot send by Alias Fax number.

Check Point		Action
1	LAN cable connected?	Check the LAN cable connection.
2	Number of specified Alias fax correct?	Confirm the Alias of the remote fax. Error Code: 13-14
3	Firewall/NAT installed?	Cannot breach the firewall. Send by using another method (Fax, Internet Fax)
4	Transmission sent manually?	Manual sending not supported.
5	Gatekeeper installed correctly?	Contact the network administrator.
6	Gatekeeper power switched on?	Contact the network administrator.
7	IP address/host name of Gatekeeper correct?	Check the IP address/host name.
8	DNS server registered when Gatekeeper host name specified?	Contact the network administrator.
9	Enable H.323 SW is set to on?	Check the settings. See User Parameter SW 34 Bit 0
10	IP address of local fax registered?	Register the IP address of the local fax.
11	Alias number of local fax registered?	Register the Alias number of the local fax.
12	Remote fax registered in Gatekeeper?	Contact the network administrator.
13	Remote fax a T.38 terminal?	Check whether the remote fax is a T38 terminal.
14	Remote fax switched off or busy?	Contact the network administrator.

15	Network bandwidth too narrow?	Request the system administrator to increase the bandwidth.
		Raise the delay level. IPFAX SW 01 Bit 0 to 3
		Lower the modem transmission baud rate. IPFAX SW 05
16	Remote fax cancelled transmission?	Check whether the remote fax cancelled the transmission.

3.3.2 IP-FAX RECEPTION

Cannot receive via IP Address/Host Name.

Check Point		Action
1	LAN cable connected?	Check the LAN cable connection.
2	Firewall/NAT is installed?	Cannot breach the firewall. Send by using another method (Fax, Internet Fax)
3	IP address of local fax registered?	Register the IP address.
4	Port number specified at remote sender fax (if required)?	Request the sender to specify the port number.
5	Specified port number correct (if required)?	Request the sender to check the port number.

6	DNS server registered when host name specified on sender side?	Contact the network administrator. Note ▪ The sender machine displays this error code if the sender fax is a Ricoh model.
7	Network bandwidth too narrow?	Request the system administrator to increase the bandwidth.
		Lower the start modem reception baud rate on the receiving side. IPFAX SW06
8	Remote fax cancelled transmission?	Check whether the remote fax cancelled the transmission.

Cannot receive by VoIP Gateway.

Check Point		Action
1	LAN cable connected?	Check the LAN cable connection.
2	Firewall/NAT is installed?	Cannot breach the firewall. Request the remote fax to send by using another method (Fax, Internet Fax)
3	VoIP Gateway installed correctly?	Contact the network administrator.
4	VoIP Gateway power switched on?	Contact the network administrator.
5	IP address/host name of specified VoIP Gateway correct on sender's side?	Request the remote fax to check the IP address/host name.
6	DNS server registered when host name specified on sender side?	Contact the network administrator.
7	Network bandwidth too narrow?	Request the network administrator to increase the bandwidth.
8	G3 fax connected?	Check that G3 fax is connected.
9	G3 fax power switched on?	Check that G3 fax is switched on.

Cannot receive by Alias Fax number.

Check Point		Action
1	LAN cable connected?	Check the LAN cable connection.
2	Firewall/NAT is installed?	Cannot the breach firewall. Request the remote fax to send by using another method (Fax, Internet Fax)
3	Gatekeeper installed correctly?	Contact the network administrator. Note ▪ The sender machine displays this error code when the sender fax is a Ricoh model.
4	Power to Gatekeeper switched on?	Contact the network administrator. Note ▪ The sender machine displays this error code when the sender fax is a Ricoh model.
5	IP address/host name of Gatekeeper correct on the sender's side?	Request the sender to check the IP address/host name. Note ▪ The sender machine displays this error code when the sender fax is a Ricoh model.
6	DNS server registered when Gatekeeper host name specified on sender's side?	Contact the network administrator. Note ▪ The sender machine displays this error code when the sender fax is a Ricoh model.

7	Enable H.323 SW is set to on?	Request the sender to check the settings. User Parameter SW 34 Bit 0 Note ▪ Only if the remote sender fax is a Ricoh fax.
8	Local fax IP address registered?	Register the IP address.
9	Local fax Alias number registered?	Register the Alias number.
10	Network bandwidth too narrow?	Request the system administrator to increase the bandwidth.
		Lower the start modem reception baud rate on the receiving side. IPFAX SW06
11	Remote fax cancelled transmission?	Check whether the remote fax cancelled the transmission.
12	Local fax registered in Gatekeeper?	Contact the network administrator. Note ▪ The sender machine displays this error code when the sender fax is a Ricoh model.

4. SERVICE TABLE

4.1 BEFOREHAND

⚠CAUTION

- Never turn off the main power switch when the power LED is lit or flashing. To avoid damaging the hard disk or memory, press the operation power switch to switch the power off, wait for the power LED to go off, and then switch the main power switch off.

Note

- The main power LED (⏻) lights or flashes while the platen cover or ARDF is open, while the main machine is communicating with a facsimile or the network server, or while the machine is accessing the hard disk or memory for reading or writing data.

4.2 SERVICE TABLES

4.2.1 SP1-XXX (BIT SWITCHES)

☛ Bit Switches

1	Mode No.		Function
101	System Switch		
	001 – 032	00 – 1F	Change the bit switches for system settings for the fax option ☛ "Bit Switches"
102	Ifax Switch		
	001 – 016	00 – 0F	Change the bit switches for internet fax settings for the fax option ☛ "Bit Switches"
103	Printer Switch		
	001 – 016	00 – 0F	Change the bit switches for printer settings for the fax option ☛ "Bit Switches"
104	Communication Switch		
	001 – 032	00 – 1F	Change the bit switches for communication settings for the fax option ☛ "Bit Switches"
105	G3-1 Switch		
	001 – 016	00 – 0F	Change the bit switches for the protocol settings of the standard G3 board ☛ "Bit Switches"

111	IP fax Switch		
	001 – 016	00 – 0F	Change the bit switches for optional IP fax parameters ☛ "Bit Switches"

4.2.2 SP2-XXX (RAM DATA)

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"

4.2.3 SP3-XXX (TEL LINE SETTINGS)

3	Mode No.		Function
101	Service Station		
	001	Fax Number	Enter the fax number of the service station.
102	Serial Number		
	000		Enter the fax unit's serial number.
103	PSTN-1 Port Settings		
	001	Select Line	Select the line type setting for the G3-1 line. If the machine is installed on a PABX line, select "PABX", "PABX(GND)" or "PABX(FLASH)".
	002	PSTN Access Number	Enter the PSTN access number for the G3-1 line.
	003	Memory Lock Disabled	Not used
107	IPFAX Port Settings		
	001	H323 Port	Sets the H323 port number.
	002	SIP Port	Sets the SIP port number.
	003	RAS Port	Sets the RAS port number.
	004	Gatekeeper port	Sets the Gatekeeper port number.
	005	T.38 Port	Sets the T.38 port number.
	006	SIP Server Port	Sets the SIP port number.
	007	IPFAX Protocol Priority	Select "H323" or "SIP".
201	FAX SW		
	001 – 032	00 – 1F	

4.2.4 SP4-XXX (ROM VERSIONS)

4	Mode No.		Function
101	001	FCU ROM Version	Displays the FCU ROM version.
102	001	Error Codes	Displays the latest 64 fax error codes.
103	001	G3-1 ROM Version	Displays the G3-1 modem version.

4.2.5 SP5-XXX (INITIALIZING)

5	Mode No.	Function
101	Initialize SRAM	
	000	Initializes the bit switches and user parameters, user data in the SRAM, files in the SAF memory, and clock.
102	Erase All Files	
	000	Erases all files stored in the SAF memory.
103	Reset Bit Switches	
	000	Resets the bit switches and user parameters.
104	Factory setting	
	000	Resets the bit switches and user parameters, user data in the SRAM and files in the SAF memory.
105	Initialize All Bit Switches	
	000	Initializes all the current bit switch settings.
106	Initialize Security Bit Switches	
	000	Initializes only the security bit switches. If you select automatic output/display for the user parameter switches, the security settings are initialized.

4.2.6 SP6-XXX (REPORTS)

6	Mode No.		Function
101	System Parameter List		
	000	-	Touch the “ON” button to print the system parameter list.
102	Service Monitor Report		
	000	-	Touch the “ON” button to print the service monitor report.
103	G3 Protocol Dump List		
	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		
	000	-	Prints out all the user files in the SAF memory, including confidential messages. Note ▪ Do not use this function, unless the customer is having trouble printing confidential messages or recovering files stored using the memory lock feature.

106	Journal Print out		
	001	All Journals	The machine prints all the communication records on the report.
	002	Specified Date	The machine prints all communication records after the specified date.
107	Log List Print out		
	001	All log files	These log print out functions are for designer use only.
	002	Printer	
	003	SC/TRAP Stored	
	004	Decompression	
	005	Scanner	
	006	JOB/SAF	
	007	Reconstruction	
	008	JBIG	
	009	Fax Driver	
	010	G3CCU	
	011	Fax Job	
	012	CCU	
	013	Scanner Condition	
108	IP Protocol Dump List		
	001	All Communications	Prints the protocol dump list of all communications for the IP fax line.
	002	1 Communication	Prints the protocol dump list of the last communication for the IP fax line.

4.2.7 SP7-XXX (TEST MODES)

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

4.3 BIT SWITCHES

Note

- 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.

4.3.1 SYSTEM SWITCHES

System Switch 00 (SP No. 1-101-001)		
No	**Function**	**Comments**
0	Dedicated transmission parameter programming 0: Disabled 1: Enabled	Set this bit to 1 before changing any dedicated transmission parameters. This setting is automatically reset to "0" after turning off and on.
1	Not used	Do not change
2	Technical data printout on the Journal 0: Disabled 1: Enabled	1: Instead of the personal name, the following data are listed on the Journal for each G3 communication.
	Example: **0000 32V34 288/264 L0100 03 04** (1) (2)(3) (4) (5) (6) (7) (8) (1): EQM value (Line quality data). A larger number means more errors. (2): Symbol rate (V.34 only) (3): Final modem type used (4): Starting data rate (for example, 288 means 28.8 kbps) (5): Final data rate (6): Rx revel (see below for how to read the rx level) (7): Total number of error lines that occurred during non-ECM reception. (8): Total number of burst error lines that occurred during non-ECM reception.	

	Note ▪ EQM and rx level are fixed at "FFFF" in tx mode. ▪ The seventh and eighth numbers are fixed at "00" for transmission records and ECM reception records.	
	Rx level calculation Example: **0000 32V34 288/264 L0100 03 04** (1) (2)(3) (4) (5) (6) (7) (8) The four-digit hexadecimal value (N) after "L" indicates the rx level. The **high** byte is given first, followed by the **low** byte. Divide the decimal value of N by -16 to get the rx level. In the above example, the decimal value of N (= 0100 [H]) is 256. So, the actual rx level is 256/-16 = -16 dB	
3	Not used	Do not change this setting.
4	Line error mark print 0: OFF, 1: ON (print)	When "1" is selected, a line error mark is printed on the printout if a line error occurs during reception. This shows an error position in ECM off mode.
5	G3/G4 communication parameter display 0: Disabled 1: Enabled	This is a fault-finding aid. The LCD shows the key parameters (see "G3 Communication Parameters" below this table). This is normally disabled because it cancels the CSI display for the user. Be sure to reset this bit to "0" after testing.
6	Protocol dump list output after each communication 0: Off 1: On	This is only used for communication troubleshooting. It shows the content of the transmitted facsimile protocol signals. Always reset this bit to 0 after finishing testing. If system switch 09 bit 6 is at "1", the list is only printed if there was an error during the communication.
7	Not used	Do not change the setting.

G3 Communication Parameters

Modem rate	336: 33600 bps 312: 31200 bps 288: 28800 bps 264: 26400 bps 240: 24000 bps 216: 21600 bps 192: 19200 bps 168: 16800 bps 144: 14400 bps 120: 12000 bps 96: 9600 bps 72: 7200 bps 48: 4800 bps 24: 2400 bps
Resolution	S: Standard (8 x 3.85 dots/mm) D: Detail (8 x 7.7 dots/mm) F: Fine (8 x 15.4 dots/mm) SF: Superfine (16 x 15.4 dots/mm) 21: Standard (200 x 100 dpi) 22: Detail (200 x 200 dpi) 44: Superfine (400 x 400 dpi)
Compression mode	MMR: MMR compression MR: MR compression MH: MH compression JBO: JBIG compression (Optional mode) JBB: JBIG compression (Basic mode)
Communication mode	ECM: With ECM NML: With no ECM
Width and reduction	A4: A4 (8.3"), no reduction B4: B4 (10.1"), no reduction A3: A3 (11.7"), no reduction
I/O rate	0: 0 ms/line 5: 5 ms/line 10: 10 ms/line 20: 20 ms/line 25: 2.5 ms/line 40: 40 ms/line Note ▪ "40" is displayed while receiving a fax message using AI

	short protocol.

System Switch 01 - Not used (Do not change the factory settings.)

System Switch 02 (SP No. 1-101-003)				
No	**Function**			**Comments**
0	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	Not used			Do not change this setting.
6-7	Memory read/write by RDS			(0,0): All RDS systems are always locked out. (0,1), (1,0): Normally, RDS systems are locked out, but the user can temporarily switch RDS on to allow RDS operations to take place. RDS will automatically be locked out again after a certain time, which is stored in System Switch 03. Note that if an RDS operation takes place, RDS will not switch off until this time limit has expired. (1,1): At any time, an RDS system can access the machine.
	Bit 7	Bit 6	Setting	
	0	0	Always disabled	
	0	1	User selectable	
	1	0	User selectable	
	1	1	Always enabled	

System Switch 03 (SP No. 1-101-004)		
No	**Function**	**Comments**
0 to 7	Length of time that RDS is temporarily switched on when bits 6 and 7 of System Switch 02 are set to "User selectable"	00 - 99 hours (BCD). This setting is only valid if bits 6 and 7 of System Switch 02 are set to "User selectable". The default setting is 24 hours.

System Switch 04 (SP No. 1-101-005)		
No	**Function**	**Comments**
0-2	Not used	Do not change these settings.
3	Printing dedicated tx parameters on Quick/Speed Dial Lists 0: Disabled 1: Enabled	1: Each Quick/Speed dial number on the list is printed with the dedicated tx parameters (10 bytes each). The first 10 bytes of data are the programmed dedicated tx parameters; 34 bytes of data are printed (the other 24 bytes have no use for service technicians).
4-7	Not used	Do not change these settings.

System Switch 05 - Not used (Do not change the factory settings.)
System Switch 06 - Not used (Do not change the factory settings.)
System Switch 07 - Not used (Do not change the factory settings.)
System Switch 08 - Not used (Do not change the factory settings.)

System Switch 09 (SP No. 1-101-010)		
No	**Function**	**Comments**
0	Addition of image data from confidential transmissions on the transmission result report 0: Disabled 1: Enabled	If this feature is enabled, the top half of the first page of confidential messages will be printed on transmission result reports.
1	Print timing of communication reports on the Journal when no image data was exchanged. 0: After DCS/NSS communication (default), 1: After polling	0: Journal is printed only when image data is sent. 1: Journal is printed when any data is sent.
2	Automatic error report printout 0: Disabled 1: Enabled	0: Error reports will not be printed. 1: Error reports will be printed automatically after failed communications.
3	Printing of the error code on the error report 0: No 1: Yes	1: Error codes are printed on the error reports. This can be used for detecting an error which rarely occurs.
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 switched 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	Priority given to various types of remote terminal ID when printing reports 0: RTI > CSI > Dial label > Tel. number 1: Dial label > Tel. number > RTI > CSI	This bit determines which set of priorities the machine uses when listing remote terminal names on reports. Dial Label: The name stored, by the user, for the Quick/Speed Dial number.

System Switch 0A (SP No. 1-101-011)		
No	**Function**	**Comments**
0	Automatic port selection 0: Disabled, 1: Enabled	When "1" is selected, a suitable port is automatically selected if the selected port is not used. **NOTE:** This bit is useful if all communication lines at a customer site are not same quality.
1-3	Not used	Do not change these settings.
4	Dialing on the ten-key pad when the external telephone is off-hook 0: Disabled 1: Enabled	0: Prevents dialing from the ten-key pad while the external telephone is off-hook. Use this setting when the external telephone is not by the machine, or if a wireless telephone is connected as an external telephone. 1: The user can dial on the machine's ten-key pad when the handset is off-hook.
5	On hook dial 0: Disabled 1: Enabled	0: On hook dial is disabled.
6-7	Not used	Do not change the factory settings

System Switch 0B - Not used (Do not change the factory settings.)
System Switch 0C - Not used (Do not change the factory settings.)

System Switch 0D - Not used (Do not change the factory settings.)

System Switch 0E (SP No. 1-101-015)		
No	**Function**	**Comments**
0-1	Not used	Do not change the settings.
2	Enable/disable for direct sending selection 0: Direct sending off 1: Direct sending on	Direct sending cannot operate when the capture function is on during sending. Setting this switch to "1" enables direct sending without capture. Setting this switch to "0" masks the direct sending function on the operation panel so direct sending with ScanRouter cannot be selected.
3	Action when the external handset goes off-hook 0: Manual tx and rx operation 1: Memory tx and rx operation (the display remains the same)	0: Manual tx is possible while the external handset is off-hook. However, manual tx during handset off-hook may not be sent to a correct direction. Manual tx is not possible. 1: The display stays in standby mode even when the external handset is used, so that other people can use the machine for memory tx operation. Note that manual tx and rx are not possible with this setting.
4-7	Not used	Do not change these settings.

<table>
<tr><th colspan="4">System Switch 0F (SP No. 1-101-016)</th></tr>
<tr><th>No</th><th colspan="2">Function</th><th>Comments</th></tr>
<tr><td rowspan="16">0
to
7</td><td colspan="2">Country/area code for functional settings (Hex)</td><td rowspan="15">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</td></tr>
<tr><td>00: France</td><td>11: USA</td></tr>
<tr><td>01: Germany</td><td>12: Asia</td></tr>
<tr><td>02: UK</td><td>13: Japan</td></tr>
<tr><td>03: Italy</td><td>14: Hong Kong</td></tr>
<tr><td>04: Austria</td><td>15: South Africa</td></tr>
<tr><td>05: Belgium</td><td>16: Australia</td></tr>
<tr><td>06: Denmark</td><td>17: New Zealand</td></tr>
<tr><td>07: Finland</td><td>18: Singapore</td></tr>
<tr><td>08: Ireland</td><td>19: Malaysia</td></tr>
<tr><td>09: Norway</td><td>1A: China</td></tr>
<tr><td>0A: Sweden</td><td>1B: Taiwan</td></tr>
<tr><td>0B: Switz.</td><td>1C: Korea</td></tr>
<tr><td>0C: Portugal</td><td>20: Turkey</td></tr>
<tr><td>0D: Holland</td><td>21: Greece</td></tr>
<tr><td>0E: Spain</td><td>22: Hungary</td></tr>
<tr><td>0F: Israel</td><td>23: Czech</td></tr>
<tr><td>10: ---</td><td>24: Poland</td><td></td></tr>
</table>

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 the factory 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 the factory settings.

System Switch 12 (SP No. 1-101-019)		
No	**Function**	**Comments**
0-7	TTI printing position in the main scan direction	TTI: 08 to 92 (BCD) mm Input even numbers only. This setting determines the print start position for the TTI from the left edge of the paper. If the TTI is moved too far to the right, it may overwrite the file number which is on the top right of the page. On an A4 page, if the TTI is moved over by more than 50 mm, it may overwrite the page number.

System Switch 13 - Not used (do not change these settings)
System Switch 14 - Not used (do not change these settings)

System Switch 15 (SP No. 1-101-022)		
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	If there is a file waiting for transmission, the machine does not go to Energy Saver mode during the selected period.

<table>
<tr><td rowspan="6"></td><td colspan="3">transmission file.</td><td rowspan="6">After transmitting the file, if there is no file waiting for transmission, the machine goes to the Energy Saver mode.</td></tr>
<tr><td>Bit 5</td><td>Bit 4</td><td>Setting</td></tr>
<tr><td>0</td><td>0</td><td>1 min</td></tr>
<tr><td>0</td><td>1</td><td>30 min</td></tr>
<tr><td>1</td><td>0</td><td>1 hour</td></tr>
<tr><td>1</td><td>1</td><td>24 hours</td></tr>
<tr><td>6-7</td><td colspan="3">Not used</td><td>Do not change</td></tr>
</table>

System Switch 16 (SP No. 1-101-023)		
No	**Function**	**Comments**
0	Parallel Broadcasting 0: Disabled 1: Enabled	1: The machine sends messages simultaneously using all available ports during broadcasting. **NOTE:** If a customer wants to keep a line available for fax reception or other reasons, select "0" (Disable).
1-7	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 (SP No. 1-101-026)		
No	**Function**	**Comments**
0-5	Not used	Do not change the settings.
6	Extended scanner page memory after memory option is installed 0: Disabled 1: Enabled	0: After installing the memory expansion option, the scanner page memory is extended to 4 MB from 2 MB. 1: If this bit is set to 1 after installing the memory expansion option, the scanner page memory is extended to 12 MB. But the SAF memory decreases to 18 MB.
7	Special Original mode 0: Disabled 1: Enabled	1: If the customer frequently wishes to transmit a form or letterhead which has a colored or printed background, change this bit to "1". "Original 1" and "Original 2" can be selected in addition to the "Text", "Text/Photo" and "Photo" modes.

System Switch 1A (SP No. 1-101-027)		
No	**Function**	**Comments**
0 to 7	LS RX memory capacity threshold setting 00-FF (0-1020 Kbyte: Hex)	Sets the value to x4KB. When the amount of available memory drops below this setting, RX documents are printed to conserve memory. Initial setting 0x80 (512 KB) **NOTE:** If a customer wants available memory size larger, decrease this threshold.

System Switch 1B - Not used (do not change these settings)
System Switch 1C - Not used (do not change these settings)

System Switch 1D (SP No. 1-101-030)		
No	**Function**	**Comments**
0	RTI/CSI/CPS code display 0: Enable 1: Disable	0: RTI, CSI, CPS codes are displayed on the top line of the LCD panel during communication. 1: Codes are switched off (no display)
1-7	Not used	Do not change these settings.

System Switch 1E (SP No. 1-101-031)		
No	**Function**	**Comments**
0	Communication after the Journal data storage area has become full 0: Impossible 1: Possible	0: When this switch is on and the journal history becomes full, the next report prints. If the journal history is not deleted, the next transmission cannot be received. This prevents overwriting communication records before the machine can print them. 1: If the buffer memory of the communication records for the Journal is full, fax communications are still possible. But the machine will overwrite the oldest communication records. Note ▪ This setting is effective only when Automatic Journal printout is enabled but the machine cannot print the report (e.g., no paper).

1	Action when the SAF memory has become full during scanning 0: The current page is erased. 1: The entire file is erased.	0: If the SAF memory becomes full during scanning at the memory transmission, the successfully scanned pages are transmitted. 1: If the SAF memory becomes full during scanning at the memory transmission, the file is erased and no pages are transmitted. Note ▪ This setting is effective only when Automatic Journal printout is enabled but the machine cannot print the report (e.g., no paper).
2	RTI/CSI display priority 0: RTI 1: CSI	This bit determines which identifier, RTI or CSI, is displayed on the LCD while the machine is communicating in G3 non-standard mode.
3	File No. printing 0: Enabled 1: Disabled	1: File numbers are not printed on any reports. **NOTE:** The file numbers may not be printed in the sequential order. If a customer does not like this numbering, select "0".
4	Action when authorized reception is enabled but authorized RTIs/CSIs are not yet programmed 0: All fax reception is disabled 1: Faxes can be received if the sender has an RTI or CSI	If authorized reception is enabled but the user has stored no acceptable sender RTIs or CSIs, the machine will not be able to receive any fax messages. If the customer wishes to receive messages from any sender that includes an RTI or CSI, and to block messages from senders that do not include an RTI or CSI, change this bit to "1", then enable Authorized Reception. Otherwise, keep this bit at "0 (default setting)".
5-7	Not used	Do not change the settings

System Switch 1F (SP No. 1-101-032)		
No	**Function**	**Comments**
0	Not used	Do not change the settings.
1	Report printout after an original jam during SAF storage or if the SAF memory fills up 0: Enabled 1: Disabled	0: When an original jams, or the SAF memory overflows during scanning, a report will be printed. Change this bit to "1" if the customer does not want to have a report in these cases. Memory tx – Memory storage report Parallel memory tx – Transmission result report
2	Not used	Do not change the settings.
3	Received fax print start timing (G3 reception) 0: After receiving each page 1: After receiving all pages	0: The machine prints each page immediately after the machine receives it. 1: The machine prints the complete message after the machine receives all the pages in the memory.
4-6	Not used	Do not change the factory settings.
7	Action when a fax SC has occurred 0: Automatic reset 1: Fax unit stops	0: When the fax unit detects a fax SC code other than SC1201 and SC1207, the fax unit automatically resets itself. 1: When the fax unit detects any fax SC code, the fax unit stops. **Cross Reference** Fax SC codes - See "Troubleshooting"

4.3.2 I-FAX SWITCHES

I-fax Switch 00 (SP No. 1-102-001)		
No	**Function**	**Comments**
Original Width of TX Attachment File		This setting sets the maximum size of the original that the destination can receive. (Bits 3~7 are reserved for future use or not used.)
0	A4	-
1	B4	
2	A3	
3-6	Reserved	
7	Not used	
	0: Off (not selected), 1: On (selected) If more than one of these three bits is set to "1", the larger size has priority. For example, if both Bit 2 and Bit 1 are set to "1" then the maximum size is "A3" (Bit 2). When mail is sent, there is no negotiation with the receiving machine at the destination, so the sending machine cannot make a selection for the receiving capabilities (original width setting) of the receiving machine. The original width selected with this switch is used as the RX machine's original width setting, and the original is reduced to this size before sending. The default is A4. If the width selected with this switch is higher than the receiving machine can accept, the machine detects this and this causes an error.	

<table>
<tr><th colspan="3">I-fax Switch 01 (SP No. 1-102-002)</th></tr>
<tr><th>No</th><th>Function</th><th>Comments</th></tr>
<tr><td colspan="2">Original Line Resolution of TX Attachment File</td><td>These settings set the maximum resolution of the original that the destination can receive.</td></tr>
<tr><td>0</td><td>200x100 Standard</td><td rowspan="7">0: Not selected
1: Selected
If more than one of these three bits is set to "1", the higher resolution has priority. For example, if both Bit 0 and Bit 2 are set to "1" Then The Resolution is set for "Bit 2 200 x 400.</td></tr>
<tr><td>1</td><td>200x200 Detail</td></tr>
<tr><td>2</td><td>200x400 Fine</td></tr>
<tr><td>3</td><td>300 x 300 Reserve</td></tr>
<tr><td>4</td><td>400 x 400 Super Fine</td></tr>
<tr><td>5</td><td>600 x 600 Reserve</td></tr>
<tr><td>6</td><td>Reserve</td></tr>
<tr><td>7</td><td colspan="2">mm/inch</td></tr>
<tr><td></td><td colspan="2">This setting selects mm/inch conversion for mail transmission.
0: Off (No conversion), 1: On (Conversion)
When on (set to "1"), the machine converts millimeters to inches for sending mail. There is no switch for converting inches to millimeters.
Unlike G3 fax transmissions which can negotiate between sender and receiver to determine the setting, mail cannot negotiate between terminals; the mm/inch selection is determined by the sender fax.
When this switch is Off (0):
▪ Images scanned in inches are sent in inches.
▪ Images scanned in mm are sent in mm.
▪ Images received in inches are transmitted in inches.
▪ Images received in mm are transmitted in mm.
When this switch is On (1):
▪ Images scanned in inches are sent in inches.
▪ Images scanned in mm are converted to inches.
▪ Images received in inches are transmitted in inches.
▪ Images received in mm are converted to inches.</td></tr>
</table>

I-fax Switch 02 (SP No. 1-102-003)		
No	**Function**	**Comments**
0	RX Text Mail Header Processing	
	This setting determines whether the header information is printed with text e-mails when they are received. 0: Prints only text mail. 1: Prints mail header information attached to text mail. When a text mail is received with this switch On (1), the "From" address and "Subject" address are printed as header information. When a mail with only binary data is received (a TIFF-F file, for example), this setting is ignored and no header is printed.	
1	Output from Attached Document at E-mail TX Error	
	This setting determines whether only the first page or all pages of an e-mail attachment are printed at the sending station when a transmission error occurs. This allows the customer to see which documents have not reached their intended destinations if sent to the wrong e-mail addresses, for example. 0: Prints 1st page only. 1: Prints all pages.	
2-3	Text String for Return Receipt	
	This setting determines the text string output for the Return Receipt that confirms the transmission was received normally at the destination.	
	00: "Dispatched" Sends from PC mail a request for a Return Receipt. Receives the Return Receipt with "dispatched" in the 2nd part: Disposition: Automatic-action/MDN-send automatically; dispatched The "dispatched" string is included in the Subject string. 01: "Displayed" Sends from PC mail a request for a Return Receipt. Receives the Return Receipt with "displayed" in the 2nd part: Disposition: Automatic-action/MDN-send automatically; displayed The "displayed" string is included in the Subject string. 10: Reserved 11: Reserved	

	A mail requesting a Return Receipt sent from an IFAX with this switch set to "00" (for "dispatched") received by Microsoft Outlook 2000 may cause an error. If any setting other than "displayed" (01) causes a problem, change the setting to "01" to enable normal sending of the Return Receipt.
4	Media accept feature
	This setting adds or does not add the media accept feature to the answer mail to confirm a reception. 0: Does not add the media accept feature to the answer mail 1: Adds the media accept feature to the answer mail. Use this bit switch if a problem occurs when the machine receives an answer mail, which contains the media accept feature field.
5-6	Not Used
7	Image Resolution of RX Text Mail
	This setting determines the image resolution of the received mail. 0: 200 x 200 1: 400 x 400 The "1" setting requires installation of the Function Upgrade Card in order to have enough SAF (Store and Forward) memory to receive images at 400 x 400 resolution.

I-fax Switch 03 - Not used (do not change these settings)

I-fax Switch 04 (SP No. 1-102-005)		
No	**Function**	**Comments**
0	Subject for Delivery TX/Memory Transfer	
	This setting determines whether the RTI/CSI registered on this machine or the RTI/CSI of the originator is used in the subject lines of transferred documents. 0: Puts the RTI/CSI of the originator in the Subject line. If this is used, either the RTI or CSI is used. Only one of these can be received for use in the subject line. 1: Puts the RTI/CSI registered on this machine in the Subject line. When this switch is used to transfer and deliver mail to a PC, the information in the Subject line that indicates where the transmission originated can be used to determine automatically the destination folder for each e-mail.	
1	Subject corresponding to mail post database 0: Standard subject 1: Mail post database subject The standard subject is replaced by the mail post database subject in the following three cases: 1) When the service technician sets the service (software) switch. 2) When memory sending or delivery specified by F code is applied by the SMTP server 3) With relay broadcasting (1st stage without the Schmidt 4 function). Note ▪ This switch does not apply for condition 3) when the RX system is set up for memory sending, delivery by F-code, sending with SMTP RX and when operators are using FOL (to prevent problems when receiving transmissions).	
2-7	Not Used	

I-fax Switch 05 (SP No. 1-102-006)		
No	**Function**	**Comments**
0	Mail Addresses of SMTP Broadcast Recipients	
	Determines whether the e-mail addresses of the destinations that receive transmissions broadcasted using SMTP protocol are recorded in the Journal. For example: "1st destination + Total number of destinations: 9" in the Journal indicates a broadcast to 9 destinations. 0: Not recorded 1: Recorded	
1	I-Fax Automatic Re-dial Setting 0: OFF 1: ON	Determines whether the I-fax automatically redials when an error occurs.
2-7	Not Used	

I-fax Switch 06 - Not used (do not change the settings)
I-fax Switch 07 - Not used (do not change the settings)

I-fax Switch 08 (SP No. 1-102-009)		
No	**Function**	**Comments**
0-7	Memory Threshold for POP Mail Reception	
	This setting determines the amount of SAF (Store and Forward) memory. (SAF stores fax messages to send later for transmission to more than one location, and also holds incoming messages if they cannot be printed.) When the amount of SAF memory available falls below this setting, mail can no longer be received; received mail is then stored on the mail server. 00-FF (0 to 1024 KB: HEX) The hexadecimal number you enter is multiplied by 4 KB to determine the amount of memory.	

I-fax Switch 09 (SP No. 1-102-010)		
No	**Function**	**Comments**
0-3	Not used	Do not change the settings
4-7	Restrict TX Retries	This setting determines the number of retries when connection and transmission fails due to errors. 01-F (1-15 Hex)

I-fax Switch 0A - Not used (do not change the settings)
I-fax Switch 0B - Not used (do not change the settings)
I-fax Switch 0C - Not used (do not change the settings)
I-fax Switch 0D - Not used (do not change the settings)
I-fax Switch 0E - Not used (do not change the settings)

I-fax Switch 0F (SP No. 1-102-016)		
No	**Function**	**Comments**
0	Delivery Method for SMTP RX Files	
	This setting determines whether files received with SMTP protocol are delivered or output immediately. 0: Off. Files received via SMTP are output immediately without delivery. 1: On. Files received via SMTP are delivered immediately to their destinations.	
1	Signature for the SMTP	
	This setting determines whether a signature is put on an e-mail via SMTP. 0: No signature 1: Signature	
2	Encryption for the SMTP	
	This setting determines whether an e-mail via SMTP is encrypted. 0: Not encrypted 1: Encrypted	
3-7	Not used	

4.3.3 PRINTER SWITCHES

Printer Switch 00 (SP No. 1-103-001)		
No	**Function**	**Comments**
0	Select page separation marks 0: Off 1: On	0: If a 2 page RX transmission is split, [*] is printed in the bottom right corner of the 1st page and only a [2] is printed in the upper right corner of the 2nd page. 1: If a 2 page RX transmission is split into two pages, for example, [*] [2] is printed in the bottom right corner of the 1st page and only a [2] is printed in the upper right corner of the 2nd page. Note ▪ This helps the user to identify pages that have been split because the size of the paper is smaller than the size of the document received. (When A5 is used to print an A4 size document, for example.)
1	Repetition of data when the received page is longer than the printer paper 0: Off 1: 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	Prints the date and time on received fax messages 0: Disabled 1: Enabled	This switch is only effective when user parameter 02 - bit 2 (printing the received date and time on received fax messages) is enabled. 1: The machine prints the received and printed date and time at the bottom of each received page.
3-7	Not used	Do not change the settings.

Printer Switch 01 - Not used (do not change the settings)

Relationship between available paper sizes and printer width used in the setup protocol

Available Paper Size	Printer width used in the Protocol (NSF/DIS)
A4 or 8.5" x 11"	297 mm width
B5	256 mm width
A5 or 8.5" x 5.5"	216 mm width
No paper available (Paper end)	216 mm width

Printer Switch 02 (SP No. 1-103-003)		
No	**Function**	**Comments**
0	1st paper feed station usage for fax printing 0: Enabled 1: Disabled	0: Enabled The paper feed station can be used to print fax messages and reports. 1: Disabled The specified paper feed station will not be used for printing fax messages and reports. Note ▪ Do not disable usage for a paper feed station which has been specified by User Parameter Switch 0F (15), or which is used for the Specified Cassette Selection feature.
1	2nd paper feed station usage for fax printing	
2	3rd paper feed station usage for fax printing	
3	4th paper feed station usage for fax printing	
4	LCT usage for fax printing	
5-7	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.

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

<table>
<tr><td rowspan="3"></td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td><td>20 mm</td></tr>
<tr><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>155 mm</td></tr>
<tr><td colspan="6">For A5 sideways and B5 sideways paper
[Maximum reducible length] = [Paper length] + 0.75 x (N x 5mm)</td></tr>
<tr><td rowspan="6">5
6</td><td colspan="6">Length of the duplicated image on the next page, when page separation has taken place.</td></tr>
<tr><td colspan="2">Bit 6</td><td colspan="2">Bit 5</td><td colspan="2">Setting</td></tr>
<tr><td colspan="2">0</td><td colspan="2">0</td><td colspan="2">4 mm</td></tr>
<tr><td colspan="2">0</td><td colspan="2">1</td><td colspan="2">10 mm</td></tr>
<tr><td colspan="2">1</td><td colspan="2">0</td><td colspan="2">15 mm</td></tr>
<tr><td colspan="2">1</td><td colspan="2">1</td><td colspan="2">Not used</td></tr>
<tr><td>7</td><td colspan="3">Not used.</td><td colspan="3">Do not change the setting.</td></tr>
</table>

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.	Cross reference Just size printing on/off – User switch 05, bit 5
1-7	Not used.	Do not change the settings.

Printer Switch 07 (SP No. 1-103-008)		
No	**Function**	**Comments**
0-3	Not used.	Do not change the settings.
4	List of destinations in the Communication Failure Report for broadcasting 0: All destinations 1: Only destinations where communication failure occurred	1: Only destinations where communication failure occurred are printed on the Communication Failure Report.
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 0D - 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	This switch determines which paper size is selected for printing A4 width fax data, when the machine has both A4 and 8.5" x

<table>
<tr><td></td><td colspan="3">1: A4 size</td><td>11" size paper.</td></tr>
<tr><td>2</td><td colspan="3">Page separation
0: Enabled
1: Disabled</td><td>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.</td></tr>
<tr><td rowspan="6">3-4</td><td colspan="3">Printing the sample image on reports</td><td rowspan="6">"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 Section Descriptions for more on this feature.</td></tr>
<tr><td>Bit 4</td><td>Bit 3</td><td>Setting</td></tr>
<tr><td>0</td><td>0</td><td>The upper half only</td></tr>
<tr><td>0</td><td>1</td><td>50% reduction
(sub-scan only)</td></tr>
<tr><td>1</td><td>0</td><td>Same size</td></tr>
<tr><td>1</td><td>1</td><td>Not used</td></tr>
<tr><td>5-6</td><td colspan="3">Not used</td><td>Do not change the settings.</td></tr>
<tr><td>7</td><td colspan="3">Equalizing the reduction ratio among separated pages
(Page Separation)
0: Enabled
1: Disabled</td><td>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.</td></tr>
</table>

<table>
<tr><th colspan="5">Printer Switch 0F (SP No. 1-103-016)</th></tr>
<tr><th>No</th><th colspan="3">Function</th><th>Comments</th></tr>
<tr><td rowspan="6">0-1</td><td colspan="3">Smoothing feature</td><td rowspan="6">(0, 0) (0, 1): Disable smoothing if the machine receives halftone images from other manufacturers fax machines frequently.</td></tr>
<tr><td>Bit 1</td><td>Bit 0</td><td>Setting</td></tr>
<tr><td>0</td><td>0</td><td>Disabled</td></tr>
<tr><td>0</td><td>1</td><td>Disabled</td></tr>
<tr><td>1</td><td>0</td><td>Enabled</td></tr>
<tr><td>1</td><td>1</td><td>Not used</td></tr>
<tr><td>2</td><td colspan="3">Duplex printing
0: Disabled
1: Enabled</td><td>1: The machine always prints received fax messages in duplex printing mode:</td></tr>
<tr><td>3</td><td colspan="3">Binding direction for Duplex printing
0: Left binding
1: Top binding</td><td>0: Sets the binding for the left edge of the stack.
1: Sets the binding for the top of the stack.</td></tr>
<tr><td>4-7</td><td colspan="3">Not used</td><td>Do not change the settings.</td></tr>
</table>

4.3.4 COMMUNICATION SWITCHES

<table>
<tr><th colspan="5">Communication Switch 00 (SP No. 1-104-001)</th></tr>
<tr><th>No</th><th colspan="3">Function</th><th>Comments</th></tr>
<tr><td rowspan="6">0-1</td><td colspan="3">Compression modes available in receive mode</td><td rowspan="6">These bits determine the compression capabilities to be declared in phase B (handshaking) of the T.30 protocol.</td></tr>
<tr><td>Bit 1</td><td>Bit 0</td><td>Modes</td></tr>
<tr><td>0</td><td>0</td><td>MH only</td></tr>
<tr><td>0</td><td>1</td><td>MH/MR</td></tr>
<tr><td>1</td><td>0</td><td>MH/MR/MMR</td></tr>
<tr><td>1</td><td>1</td><td>MH/MR/MMR/JBIG</td></tr>
<tr><td rowspan="6">2-3</td><td colspan="3">Compression modes available in transmit mode</td><td rowspan="6">These bits determine the compression capabilities to be used in the transmission and to be declared in phase B (handshaking) of the T.30 protocol.</td></tr>
<tr><td>Bit 3</td><td>Bit 2</td><td>Modes</td></tr>
<tr><td>0</td><td>0</td><td>MH only</td></tr>
<tr><td>0</td><td>1</td><td>MH/MR</td></tr>
<tr><td>1</td><td>0</td><td>MH/MR/MMR</td></tr>
<tr><td>1</td><td>1</td><td>MH/MR/MMR/JBIG</td></tr>
<tr><td>4</td><td colspan="3">Not used</td><td>Do not change the settings.</td></tr>
<tr><td>5</td><td colspan="3">JBIG compression method: Reception
0: Only basic supported
1: Basic and optional both supported</td><td>Change the setting when communication problems occur using JBIG compression.</td></tr>
</table>

6	JBIG compression method: Transmission 0: Basic mode priority 1: Optional mode priority	Change the setting when communication problems occur using JBIG compression.
7	Closed network (reception) 0: Disabled 1: Enabled	1: Reception will not go ahead if the polling ID code of the remote terminal does not match the polling ID code of the local terminal. This function is only available in NSF/NSS mode.

Communication Switch 01 (SP No. 1-104-002)

No	Function	Comments
0	ECM 0: Off 1: On	If this bit is set to 0, ECM is switched off for all communications. In addition, V.8 protocol and JBIG compression are switched off automatically.
1	Not used	Do not change the setting.
2-3	Wrong connection prevention method Bit 3 / Bit 2 / Setting 0 / 0 / None 0 / 1 / 8 digit CSI 1 / 0 / 4 digit CSI 1 / 1 / CSI/RTI	(0,1): The machine will disconnect the line without sending a fax message, if the last 8 digits of the received CSI do not match the last 8 digits of the dialed telephone number. This does not work when manually dialed. (1,0): The same as above, except that only the last 4 digits are compared. (1,1): The machine will disconnect the line without sending a fax message, if the other end does not identify itself with an RTI or CSI. (0,0): Nothing is checked; transmission will always go ahead. Note ▪ This function does not work when dialing is done from the external telephone.

<table>
<tr><td>4-5</td><td colspan="3">Not used</td><td>Do not change the setting.</td></tr>
<tr><td rowspan="6">6-7</td><td colspan="3">Maximum printable page length available</td><td rowspan="6">The setting determined by these bits is informed to the transmitting terminal in the pre-message protocol exchange (in the DIS/NSF frames).</td></tr>
<tr><td>Bit 7</td><td>Bit 6</td><td>Setting</td></tr>
<tr><td>0</td><td>0</td><td>No limit</td></tr>
<tr><td>0</td><td>1</td><td>B4 (364 mm)</td></tr>
<tr><td>1</td><td>0</td><td>A4 (297 mm)</td></tr>
<tr><td>1</td><td>1</td><td>Not used</td></tr>
</table>

<table>
<tr><th colspan="4">Communication Switch 02 (SP No. 1-104-003)</th></tr>
<tr><th>No</th><th>Function</th><th colspan="2">Comments</th></tr>
<tr><td rowspan="5">0</td><td rowspan="5">G3 Burst error threshold
0: Low 1: High</td><td colspan="2">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.</td></tr>
<tr><td>100 dpi</td><td>6(L) → 12(H)</td></tr>
<tr><td>200 dpi</td><td>12(L) → 24(H)</td></tr>
<tr><td>300 dpi</td><td>18(L) → 36(H)</td></tr>
<tr><td>400 dpi</td><td>24(L) → 48(H)</td></tr>
<tr><td>1</td><td>Acceptable total error line ratio
0: 5% 1: 10%</td><td colspan="2">If the error line ratio for a page exceeds the acceptable ratio, RTN will be sent to the other end.</td></tr>
<tr><td>2</td><td>Treatment of pages received with errors during G3 reception
0: Deleted from memory without printing
1: Printed</td><td colspan="2">0: Pages received with errors are not printed.</td></tr>
</table>

3	Hang-up decision when a negative code (RTN or PIN) is received during G3 immediate transmission 0: No hang-up, 1: Hang-up	0: The next page will be sent even if RTN or PIN is received. 1: The machine will send DCN and hang up if it receives RTN or PIN. This bit is ignored for memory transmissions or if ECM is being used.
4-7	Not used	Do not change the 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 (SP No. 1-104-010)		
No	**Function**	**Comments**
0-7	IP-Fax dial interval setting	Adjusts the interval of the I-fax dialing. The interval of I-fax dialing is calculated by following formula. [Interval time = specified value with this switch x 0.2 msec]

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 the settings.

Communication Switch 0B (SP No. 1-104-012)		
No	**Function**	**Comments**
0-3	Not used	Do not change the settings.
4	Printout of the message when acting as a Transfer Station 0: Disabled, 1: Enabled	When the machine is acting as a Transfer Station, this bit determines whether the machine prints the fax message coming in from the Requesting Terminal.
5-7	Not used	Do not change the settings.

Communication Switch 0C - Not used (do not change the settings)

Communication Switch 0D (SP No. 1-104-014)		
No	**Function**	**Comments**
0-7	The available memory threshold, below which ringing detection (and therefore reception into memory) is disabled	00 to FF (Hex), unit = 4 kbytes (e.g., 06(H) = 24 kbytes) One page is about 24 kbytes. The machine refers to this setting before each fax reception. If the amount of remaining memory is below this threshold, the machine cannot receive any fax messages. If this setting is kept at 0, the machine will detect ringing signals and go into receive mode even if there is no memory available. This will result in communication failure.

Communication Switch 0E (SP No. 1-104-015)		
No	**Function**	**Comments**
0-7	Minimum interval between automatic dialing attempts	06 to FF (Hex), unit = 2 s (e.g., 06(H) = 12 s) This value is the minimum time that the machine waits before it dials the next destination.

Communication Switch 0F – Not used (do not change the settings.)

Communication Switch 10 (SP No. 1-104-017)		
No	**Function**	**Comments**
0-7	Memory transmission: Maximum number of dialing attempts to the same destination	01 – FE (Hex) times

Communication Switch 11 – Not used (do not change the settings.)

Communication Switch 12 (SP No. 1-104-019)		
No	**Function**	**Comments**
0-7	Memory transmission: Interval between dialing attempts to the same destination	01 – FF (Hex) minutes

Communication Switch 13 – Not used (do not change the settings.)

<table>
<tr><th colspan="5">Communication Switch 14 (SP No. 1-104-021)</th></tr>
<tr><th>No</th><th colspan="3">Function</th><th>Comments</th></tr>
<tr><td>0</td><td colspan="3">Inch-to-mm conversion during transmission
0: Disabled, 1: Enabled</td><td>0: In immediate transmission, data scanned in inch format are transmitted without conversion.
In memory transmission, data stored in the SAF memory in mm format are transmitted without conversion.
Note: When storing the scanned data into SAF memory, the fax unit always converts the data into mm format.
1: The machine converts the scanned data or stored data in the SAF memory to the format which was specified in the set-up protocol (DIS/NSF) before transmission.</td></tr>
<tr><td>1-5</td><td colspan="3">Not used</td><td>Do not change the factory settings.</td></tr>
<tr><td rowspan="5">6-7</td><td colspan="3">Available unit of resolution in which fax messages are received</td><td rowspan="5">For the best performance, do not change the factory settings.
The setting determined by these bits is informed to the transmitting terminal in the pre-message protocol exchange (in the DIS/NSF frames).</td></tr>
<tr><td>Bit 7</td><td>Bit 6</td><td>Unit</td></tr>
<tr><td>0</td><td>0</td><td>mm</td></tr>
<tr><td>0</td><td>1</td><td>inch</td></tr>
<tr><td>1</td><td>0</td><td>mm and inch</td></tr>
<tr><td>1</td><td>1</td><td>Not used</td></tr>
</table>

Communication Switch 15 – Not used (do not change the settings)
Communication Switch 16 – Not used (do not change the settings)

Communication Switch 17 (SP No. 1-104-024)		
No	**Function**	**Comments**
0	SEP reception 0: Disabled 1: Enabled	0: Polling transmission to another maker's machine using the SEP (Selective Polling) signal is disabled.
1	SUB reception 0: Disabled 1: Enabled	0: Confidential reception to another maker's machine using the SUB (Sub-address) signal is disabled.
2	PWD reception 0: Disabled 1: Enabled	0: Disables features that require PWD (Password) signal reception.
3-4	Not used	Do not change the settings.
5	PSTN dial-in routing setting 0: OFF 1: ON	1: The machine sets multiple PSTN dial-in number in the PSTN dial-in lien and transfers received data of each PSTN dial-in number to each address.
6	Not used	Do not change the settings.
7	Action when there is no box with an F-code that matches the received SUB code 0: Disconnect the line 1: Receive the message (using normal reception mode)	Change this setting when the customer requires.

Communication Switch 18 (SP No. 1-104-025)		
No	**Function**	**Comments**
0-4	Not used	Do not change the settings.
5	IP-Fax dial-in routing selection 0: Off 1: On	1: Transfers receiving data to each IP-Fax dial-in number. IP-Fax dial-in number is 4 digit-number.
6-7	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)

4.3.5 G3 SWITCHES

<table>
<tr><th colspan="5">G3 Switch 00 (SP No. 1-105-001)</th></tr>
<tr><th>No</th><th colspan="3">Function</th><th>Comments</th></tr>
<tr><td rowspan="8">0
1</td><td colspan="3">Monitor speaker during communication (tx and rx)</td><td rowspan="8">(0, 0): The monitor speaker is disabled all through the communication.
(0, 1): The monitor speaker is on up to phase B in the T.30 protocol.
(1, 0): Used for testing. The monitor speaker is on all through the communication. Make sure that you reset these bits after testing.</td></tr>
<tr><td>Bit 1</td><td>Bit 0</td><td>Setting</td></tr>
<tr><td>0</td><td>0</td><td>Disabled</td></tr>
<tr><td>0</td><td>1</td><td>Up to Phase B</td></tr>
<tr><td>1</td><td>0</td><td>All the time</td></tr>
<tr><td>1</td><td>1</td><td>Not used</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>2</td><td colspan="3">Monitor speaker during memory transmission
0: Disabled 1: Enabled</td><td>1: The monitor speaker is enabled during memory transmission.</td></tr>
<tr><td>3-5</td><td colspan="3">Not used</td><td>Do not change the settings.</td></tr>
<tr><td>6</td><td colspan="3">G3 mode selection for direct line
0: Off
1:On</td><td>1: G3 communication through the direct line is enabled.</td></tr>
<tr><td>7</td><td colspan="3">Not used</td><td>Do not change the settings.</td></tr>
</table>

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/AMsam 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 the setting.

G3 Switch 02 (SP No. 1-105-003)		
No	**Function**	**Comments**
0	G3 protocol mode used 0: Standard and non-standard 1: Standard only	Change this bit to 1 only when the other end can only communicate with machines that send T.30-standard frames only. 1: Disables NSF/NSS signals (these are used in non-standard mode communication)
1-6	Not used	Do not change the settings.
7	Short preamble 0: Disabled 1: Enabled	Refer to Appendix B in the Group 3 Facsimile Manual for details about Short Preamble.

G3 Switch 03 (SP No. 1-105-004)		
No	**Function**	**Comments**
0	DIS detection number (Echo countermeasure) 0: 1 1: 2	0: The machine will hang up if it receives the same DIS frame twice. 1: Before sending DCS, the machine will wait for the second DIS which is caused by echo on the line.
1	Not Used	Do not change the settings.
2	V.8 protocol 0: Disabled 1: Enabled	0: V.8/V.34 communications will not be possible. Note ▪ Do not set to 0 unless the line condition is always bad enough to slow down the data rate to 14.4 kbps or lower.
3	ECM frame size 0: 256 bytes 1: 64 bytes	Keep this bit at "0" in most cases.
4	CTC transmission conditions 0: After one PPR signal received 1: After four PPR signals received (ITU-T standard)	0: When using ECM in non-standard (NSF/NSS) mode, the machine sends a CTC to drop back the modem rate after receiving a PPR, if the following condition is met in communications at 14.4, 12.0, 9.6, and 7.2 kbps. $\sqrt{NTransmit \leq NResend}$ NTransmit- Number of transmitted frames NResend- Number of frames to be retransmitted 1: When using ECM, the machine sends a CTC to drop back the modem rate after receiving four PPRs. PPR, CTC: These are ECM protocol signals. This bit is not effective in V.34 communications.
5	Modem rate used for the next page after receiving a negative	1: The machine's tx modem rate will fall back before sending the next page if a negative code is

	code (RTN or PIN) 0: No change 1: Fallback	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 (Outside Japan) 1: Detection (Inside Japan 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.

<table>
<tr><th colspan="8">G3 Switch 05 (SP No. 1-105-006)</th></tr>
<tr><th>No</th><th colspan="5">Function</th><th>Comments</th></tr>
<tr><td rowspan="19">0-3</td><td colspan="5">Initial Tx modem rate (kbps)</td><td rowspan="19">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</td></tr>
<tr><td>Bit 3</td><td>Bit 2</td><td>Bit 1</td><td>Bit 0</td><td>kbps</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td>1</td><td>2.4</td></tr>
<tr><td>0</td><td>0</td><td>1</td><td>0</td><td>4.8</td></tr>
<tr><td>0</td><td>0</td><td>1</td><td>1</td><td>7.2</td></tr>
<tr><td>0</td><td>1</td><td>0</td><td>0</td><td>9.6</td></tr>
<tr><td>0</td><td>1</td><td>0</td><td>1</td><td>12.0</td></tr>
<tr><td>0</td><td>1</td><td>1</td><td>0</td><td>14.4</td></tr>
<tr><td>0</td><td>1</td><td>1</td><td>1</td><td>16.8</td></tr>
<tr><td>1</td><td>0</td><td>0</td><td>0</td><td>19.2</td></tr>
<tr><td>1</td><td>0</td><td>0</td><td>1</td><td>21.6</td></tr>
<tr><td>1</td><td>0</td><td>1</td><td>0</td><td>24.0</td></tr>
<tr><td>1</td><td>0</td><td>1</td><td>1</td><td>26.4</td></tr>
<tr><td>1</td><td>1</td><td>0</td><td>0</td><td>28.8</td></tr>
<tr><td>1</td><td>1</td><td>0</td><td>1</td><td>31.2</td></tr>
<tr><td>0</td><td>0</td><td>1</td><td>1</td><td>33.6</td></tr>
<tr><td colspan="5">Other settings - Not used</td></tr>
<tr><td rowspan="5">4-5</td><td colspan="5">Initial modem type for 9.6 k or 7.2 kbps.</td><td rowspan="5">These bits set the initial modem type for 9.6 and 7.2 kbps, if the initial modem rate is set at these speeds.</td></tr>
<tr><td>Bit 5</td><td>Bit 4</td><td colspan="3">Setting</td></tr>
<tr><td>0</td><td>0</td><td colspan="3">V.29</td></tr>
<tr><td>0</td><td>1</td><td colspan="3">V.17</td></tr>
<tr><td>1</td><td>0</td><td colspan="3">V.34</td></tr>
</table>

	1	1	Not used	
6-7	Not used			Do not change the settings.

G3 Switch 06 (SP No. 1-105-007)

No	Function					Comments
0-3	Initial Rx modem rate(kbps)					These bits set the initial starting modem rate for reception. Use a lower setting if high speeds pose problems during reception. If a modem rate 14.4 kbps or slower is selected, V.8 protocol should be disabled manually. Cross reference V.8 protocol on/off - G3 switch 03, bit2
	Bit 3	Bit 2	Bit 1	Bit 0	kbps	
	0	0	0	1	2.4	
	0	0	1	0	4.8	
	0	0	1	1	7.2	
	0	1	0	0	9.6	
	0	1	0	1	12.0	
	0	1	1	0	14.4	
	0	1	1	1	16.8	
	1	0	0	0	19.2	
	1	0	0	1	21.6	
	1	0	1	0	24.0	
	1	0	1	1	26.4	
	1	1	0	0	28.8	
	1	1	0	1	31.2	
	Other settings - Not used					

<table>
<tr><td rowspan="8">4-7</td><td colspan="5">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</td></tr>
<tr><td>Bit 7</td><td>Bit 6</td><td>Bit 5</td><td>Bit 4</td><td>Types</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td>1</td><td>V.27ter</td></tr>
<tr><td>0</td><td>0</td><td>1</td><td>0</td><td>V.27ter, V.29</td></tr>
<tr><td>0</td><td>0</td><td>1</td><td>1</td><td>V.27ter, V.29, V.33</td></tr>
<tr><td>0</td><td>1</td><td>0</td><td>0</td><td>V.27ter, V.29, V.17/V.33</td></tr>
<tr><td>0</td><td>1</td><td>0</td><td>1</td><td>V.27ter, V.29, V.17/V33, V.34</td></tr>
<tr><td colspan="5">Other settings - Not used</td></tr>
</table>

<table>
<tr><th colspan="4">G3 Switch 07 (SP No. 1-105-008)</th></tr>
<tr><th>No</th><th colspan="2">Function</th><th>Comments</th></tr>
<tr><td rowspan="7">0-1</td><td colspan="2">PSTN cable equalizer
(tx mode: Internal)</td><td rowspan="7">Use a higher setting if there is signal loss at higher frequencies because of the length of wire between the modem and the telephone exchange.
Use the dedicated transmission parameters for specific receivers.
Also, try using the cable equalizer if one or more of the following symptoms occurs.
Communication error
Modem rate fallback occurs frequently.
Note
▪ This setting is not effective in V.34 communications.</td></tr>
<tr><td>Bit 1 / Bit 0</td><td>Setting</td></tr>
<tr><td>0 / 0</td><td>None</td></tr>
<tr><td>0 / 1</td><td>Low</td></tr>
<tr><td>1 / 0</td><td>Medium</td></tr>
<tr><td>1 / 1</td><td>High</td></tr>
<tr><td colspan="2"></td></tr>
</table>

<table>
<tr><td rowspan="7">2-3</td><td colspan="3">PSTN cable equalizer
(rx mode: Internal)</td><td rowspan="7">Use a higher setting if there is signal loss at higher frequencies because of the length of wire between the modem and the telephone exchange.
Also, try using the cable equalizer if one or more of the following symptoms occurs.
Communication error with error codes such as 0-20, 0-23, etc.
Modem rate fallback occurs frequently.
Note
▪ This setting is not effective in V.34 communications.</td></tr>
<tr><td>Bit 3</td><td>Bit 2</td><td>Setting</td></tr>
<tr><td>0</td><td>0</td><td>None</td></tr>
<tr><td>0</td><td>1</td><td>Low</td></tr>
<tr><td>1</td><td>0</td><td>Medium</td></tr>
<tr><td>1</td><td>1</td><td>High</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>4</td><td>PSTN cable equalizer
(V.8/V.17 rx mode: External)
0: Disabled
1: Enabled</td><td>Keep this bit at "1".</td></tr>
<tr><td>5</td><td>Not used</td><td>Do not change the settings.</td></tr>
<tr><td>6</td><td>Parameter selection for dial tone detection
0: Normal parameter
1: Specific parameter</td><td>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.</td></tr>
<tr><td>7</td><td>Not used</td><td>Do not change the settings.</td></tr>
</table>

G3 Switch 08 - Not used (do not change the settings)
G3 Switch 09 - Not used (do not change the settings)

<table>
<tr><th colspan="5">G3 Switch 0A (SP No. 1-105-011)</th></tr>
<tr><th>No</th><th colspan="3">Function</th><th>Comments</th></tr>
<tr><td rowspan="6">0-1</td><td colspan="3">Maximum allowable carrier drop during image data reception</td><td rowspan="6">These bits set the acceptable modem carrier drop time.
Try a longer setting if error code 0-22 is frequent.</td></tr>
<tr><td>Bit 1</td><td>Bit 0</td><td>Value (ms)</td></tr>
<tr><td>0</td><td>0</td><td>200</td></tr>
<tr><td>0</td><td>1</td><td>400</td></tr>
<tr><td>1</td><td>0</td><td>800</td></tr>
<tr><td>1</td><td>1</td><td>Not used</td></tr>
<tr><td>2</td><td colspan="3">Select cancellation of high-speed RX if carrier signal lost while receiving
0: Off
1: On</td><td>This switch setting determines if high-speed receiving ends if the carrier signal is lost when receiving during non-ECM mode</td></tr>
<tr><td>3</td><td colspan="3">Not used</td><td>Do not change the settings</td></tr>
<tr><td>4</td><td colspan="3">Maximum allowable frame interval during image data reception.
0: 5 s 1: 13 s</td><td>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.</td></tr>
<tr><td>5</td><td colspan="3">Not used</td><td>Do not change the settings.</td></tr>
</table>

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	Alarm when an error occurred in Phase C or later 0: Disabled 1: Enabled	If the customer wants to hear an alarm after each error communication, change this bit to "1".
1	Alarm when the handset is off-hook at the end of communication 0: Disabled 1: Enabled	If the customer wants to hear an alarm if the handset is off-hook at the end of fax communication, change this bit to "1".
2-3	Not used	Do not change the settings.
4	Sidaa 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.

4.3.6 IP FAX SWITCHES

IP Fax Switch 00 (SP No. 1-111-001)		
No.	**Function**	**Comments**
0	Not used	Do not change this setting.
1	IP Fax Transport 0: TCP, 1: UDP	Selects TCP or UDP protocol for IP-Fax
2	IP Fax single port selection 0: OFF, 1: ON (enable)	Selects single data port.
3	IP Fax double ports (single data port) selection 0: OFF, 1: ON (enable)	Selects whether IP-Fax uses a double port.
4	IP Fax Gatekeeper 0: OFF, 1: ON (enable)	Enables/disables the gatekeeper for IP-Fax.
5	IP Fax T30 bit signal reverse 0: LSB first, 1: MSB first	Reverses the T30 bit signal.
6	IP Fax max bit rate setting 0: Not affected, 1: Affected	When "0" is selected, the max bit rate does not affect the value of the DIS/DCS. When "1" is selected, the max bit rate affects the value of the DIS/DCS.
7	IP Fax received telephone number confirmation 0: No confirmation, 1: Confirmation	When "0" is selected, fax data is received without checking the telephone number. When "1" is selected, fax data is received only when confirming that the telephone number from the sender matches the registered telephone number in this machine. If this confirmation fails, the line is disconnected.

<table>
<tr><th colspan="6">IP Fax Switch 01 (SP No. 1-111-002)</th></tr>
<tr><th>No.</th><th colspan="3">Function</th><th colspan="2">Comments</th></tr>
<tr><td rowspan="6">0-3</td><td colspan="5">IP Fax delay level setting
Selects the acceptable delay level.
Level 0 is the highest quality
Default is "0000" (level 0).</td></tr>
<tr><td>Bit 3</td><td>Bit 2</td><td>Bit 1</td><td>Bit 0</td><td></td></tr>
<tr><td>0</td><td>0</td><td>0</td><td>0</td><td>Level 0</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td>1</td><td>Level 1</td></tr>
<tr><td>0</td><td>0</td><td>1</td><td>0</td><td>Level 2</td></tr>
<tr><td>0</td><td>0</td><td>1</td><td>1</td><td>Level 3</td></tr>
<tr><td>4-7</td><td colspan="3">IP Fax preamble wait time setting</td><td colspan="2">Selects the preamble wait time.
[00 to 0f]
There are 16 values in this 4-bit binary switch combination.
Waiting time: set value level x 100 ms
Max: 0f (1500 ms) Min: 00 (No wait time)
The default is "0000" (00H).</td></tr>
</table>

IP Fax Switch 02 (SP No. 1-111-003)		
No.	**Function**	**Comments**
0	IP Fax bit signal reverse setting 0: Maker code setting 1: Internal bit switch setting	When "0" is selected, the bit signal reverse method is decided by the maker code. When "1" is selected, the bit signal reverse method is decided by the internal bit switch. When communicating between IP Fax devices, LSB first is selected.)
1	IP Fax transmission speed setting 0: Modem speed 1: No limitation	Selects the transmit speed for IP Fax communication.

2	SIP transport setting 0: TCP 1: UDP	This bit switch sets the transport that has priority for receiving IP Fax data. This function is activated only when the sender has both TCP and UDP.
3	CCM connection 0: No CCM connection 1: CCM connection	When "1" is selected, only the connection call message with H.323 or no tunneled H.245 is transmitted via CCM.
4	Message reception selection from non-registered SIP server 0: Answer 1: Not answer	0: This answers the INVITE message from the SIP server not registered for the machine. 1: This does not receive the INVITE message from the SIP server not registered for the machine and send a refusal message.
5	ECM communication setting 0: No limit for image compression 1: Limit for image compression	0: This does not limit the type of the image compression with ECM communication. 1: When the other end machine is Ciscco, this permits the image compression other than JBIG or MMR with ECM communication.
6-7	Not used	Do not change these settings.

IP Fax Switch 03 (SP No. 1-111-004)		
No.	**Function**	**Comments**
0	Effective field limitation for G3 standard function information 0: OFF, 1: 4byte (DIS)	Limits the effective field for standard G3 function information.
1	Switching between G3 standard and G3 non standard 0: Enable switching 1: G3 standard only	Enables/disables switching between G3 standard and G3 non-standard.
2	AI modem rate function 0: OFF, 1: ON (enable)	Enables/disables the AI modem rate.
3	ECM frame size selection at transmitting 0: 256byte, 1: 64byte	Selects the ECM frame size for sending.
4	DIS detection times for echo prevention 0: 1 time, 1: 2 times	Sets the number of times for DIS to detect echoes.
5	CTC transmission selection 0: PPRx1 1: PPRx4	When "0" is selected, the transmission condition is decided by error frame numbers. When "1" is selected, the transmission condition is based on the ITU-T method.
6	Shift down setting at receiving negative code 0: OFF, 1: ON	Selects whether to shift down when negative codes are received.
7	Not used	Do not change this setting.

IP Fax Switch 04 (SP No. 1-111-005)		
No.	**Function**	**Comments**
0-3	TCF error threshold	Sets the TCF error threshold level. [00 to 0f] The default is "1111" (0fH).
4-7	Not used	Do not change these settings.

IP Fax Switch 05 (SP No. 1-111-006)

No.	Function					Comments
0-3	Modem bit rate setting for transmission (kbps)					Sets the modem bit rate for transmission. The default is "0110" (14.4K bps).
	Bit 3	Bit 2	Bit 1	Bit 0	kbps	
	0	0	0	1	2.4	
	0	0	1	1	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	
4-5	Modem setting for transmission					Sets the modem type for transmission. The default is "00" (V29).
	Bit 5	Bit 4	Types			
	0	0	V29			
	0	1	V17			
	1	0	Not used			
	1	1	Not used			
6-7	Not used					Do not change these settings.

<table>
<tr><th colspan="7">IP Fax Switch 06 (SP No. 1-111-007)</th></tr>
<tr><th>No.</th><th colspan="5">Function</th><th>Comments</th></tr>
<tr><td>0-3</td><td colspan="6">Modem bit rate setting for reception
Sets the modem bit rate for reception. The default is "0110" (14.4K bps).</td></tr>
<tr><td rowspan="7">4-7</td><td colspan="6">Modem setting for reception
Sets the modem type for reception. The default is "0100" (V27ter, V29, V17).</td></tr>
<tr><td>Bit 7</td><td>Bit 6</td><td>Bit 5</td><td>Bit 4</td><td colspan="2">Types</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td>1</td><td colspan="2">V.27ter</td></tr>
<tr><td>0</td><td>0</td><td>1</td><td>0</td><td colspan="2">V.27ter, V.29</td></tr>
<tr><td>0</td><td>0</td><td>1</td><td>1</td><td colspan="2">V.27ter, V.29, V.33</td></tr>
<tr><td>0</td><td>1</td><td>0</td><td>0</td><td colspan="2">V.27ter, V.29, V.17/V.33</td></tr>
<tr><td colspan="6">Other settings - Not used</td></tr>
</table>

IP Fax Switch 07 (SP No. 1-111-008)		
No.	**Function**	**Comments**
0	TSI information 0: Not added, 1: Added	Adds or does not add TSI information to NSS(S).
1	DCN transmission setting at T1 timeout 0: Not transmitted 1: Transmitted	Transmits or does not transmit DCN at T1 timeout.
2	Not used	Do not change this setting.
3	Hang up setting at DIS reception disabled 0: No hang up 1: Hang up after transmitting DCN	Sets whether the machine disconnects after DIS reception.
4	Number of times for training	Selects the number of times training is done

	0: 1 time, 1: 2 times	at the same bit rate.
5	Space CSI transmission setting at no CSI registration 0: Not transmitted 1: Transmitted	When "0" is selected, frame data is enabled. When "1" is selected, the transmitted data is all spaces.
6-7	Not used	Do not change these settings.

IP Fax Switch 08 (SP No. 1-111-009)

No.	Function			Comments
0-1	T1 timer adjustment			Adjusts the T1 timer. The default is "00" (35 seconds).
	Bit 1	Bit 0		
	0	0	35 s	
	0	1	40 s	
	1	0	50 s	
	1	1	60 s	
2-3	T4 timer adjustment			Adjust the T4 timer. The default is "00" (3 seconds).
	Bit 3	Bit 2		
	0	0	3 s	
	0	1	3.5 s	
	1	0	4 s	
	1	1	5 s	

<table>
<tr><td rowspan="6">4-5</td><td colspan="3">T0 timer adjustment</td><td rowspan="6">Adjusts the fail safe timer. This timer sets the interval between "setup" data transmission and T.38 phase decision. If your destination return is late on the network or G3 fax return is late, adjust the longer interval timer.
The default is "00" (75 seconds).</td></tr>
<tr><td>Bit 5</td><td>Bit 4</td><td></td></tr>
<tr><td>0</td><td>0</td><td>75 s</td></tr>
<tr><td>0</td><td>1</td><td>120 s</td></tr>
<tr><td>1</td><td>0</td><td>180 s</td></tr>
<tr><td>1</td><td>1</td><td>240 s</td></tr>
<tr><td>6-7</td><td colspan="3">Not used</td><td>Do not change these settings.</td></tr>
</table>

IP Fax Switch 09 (SP No. 1-111-010)				
No.	**Function**			**Comments**
0	Network I/F setting for SIP connection 0: IPv4 1: IPv6.			Selects the connection type (IPV4 or IPV6) to connect to the SIP server.
1	Network I/F setting for Fax communication 0: Same setting as SIP server connection 1: Automatic setting			0: The I/F setting for fax communication follows the setting for SIP server connection. 1: The negotiation between the SIP server and the device decides whether IPv4 or IPv6 is used for the I/F setting for fax communication.
2	Record-route setting 0: Disable 1: Enable			0: Disables the record-route function of the SIP server. 1: Enables the record-route function of the SIP server.
3-4	re-INVITE transmission delay timer setting			This changes the interval for transmit re-INVITE after receiving the ACK message transmitted by T.38 device.
	Bit 4	Bit 3		
	0	0	No delay	
	0	1	1 sec	
	1	0	2 sec	
	1	1	3 sec	
5-7	Not used.			Do not change these settings.

4.4 NCU PARAMETERS

The following tables give the RAM addresses and the parameter calculation units that the machine uses for ringing signal detection and automatic dialing. The factory settings for each country are also given. Most of these must be changed by RAM read/write (SP2-102), but some can be changed using NCU Parameter programming (SP2-103, 104 and 105); if SP2-103, 104 and 105 can be used, this will be indicated in the Remarks column. The RAM is programmed in hex code unless (BCD) is included in the Unit column.

Note

- The following addresses describe settings for the standard NCU.
- Change the fourth digit from “5” to “6” (e.g. 680500 to 680600) for the settings for the first optional G3 interface unit and from “5” to “7” (e.g. 680700) for the settings for the second optional G3 interface unit.

Address	Function					
680500	Country/Area code for NCU parameters					
	Use the Hex value to program the country/area code directly into this address, or use the decimal value to program it using SP2-103-001					
	Country /Area	**Decimal**	**Hex**	**Country /Area**	**Decimal**	**Hex**
	France	00	00	USA	17	11
	Germany	01	01	Asia	18	12
	UK	02	02	Hong Kong	20	14
	Italy	03	03	South Africa	21	15
	Austria	04	04	Australia	22	16
	Belgium	05	05	New Zealand	26	17
	Denmark	06	06	Singapore	24	18
	Finland	07	07	Malaysia	25	19
	Ireland	08	08	China	26	1A

Address	Function					
	Norway	09	09	Taiwan	27	1B
	Sweden	10	0A	Korea	28	1C
	Switzerland	11	0B	Turkey	32	20
	Portugal	12	0C	Greece	33	21
	Holland	13	0D	Hungary	34	22
	Spain	14	0E	Czech	35	23
	Israel	15	0F	Poland	36	24

Address	Function	Unit	Remarks
680501	Line current detection time	20 ms	Line current detection is disabled. Line current is not detected if 680501 contains FF.
680502	Line current wait time		
680503	Line current drop detect time		
680504	PSTN dial tone frequency upper limit (high byte)	Hz (BCD)	If both addresses contain FF(H), tone detection is disabled.
680505	PSTN dial tone frequency upper limit (low byte)		
680506	PSTN dial tone frequency lower limit (high byte)	Hz (BCD)	If both addresses contain FF(H), tone detection is disabled.
680507	PSTN dial tone frequency lower limit (low byte)		
680508	PSTN dial tone detection time	20 ms	If 680508 contains FF(H), the machine pauses for the pause time (address 68050D / 68050E). Italy: See Note 2.
680509	PSTN dial tone reset time (LOW)		
68050A	PSTN dial tone reset time (HIGH)		
68050B	PSTN dial tone continuous tone time		

Address	Function	Unit	Remarks
68050C	PSTN dial tone permissible drop time		
68050D	PSTN wait interval (LOW)		-
68050E	PSTN wait interval (HIGH)		
68050F	PSTN ring-back tone detection time	20 ms	Detection is disabled if this contains FF.
680510	PSTN ring-back tone off detection time	20 ms	-
680511	PSTN detection time for silent period after ring-back tone detected (LOW)	20 ms	-
680512	PSTN detection time for silent period after ring-back tone detected (HIGH)	20 ms	-
680513	PSTN busy tone frequency upper limit (high byte)	Hz (BCD)	If both addresses contain FF(H), tone detection is disabled.
680514	PSTN busy tone frequency upper limit (low byte)		
680515	PSTN busy tone frequency lower limit (high byte)	Hz (BCD)	If both addresses contain FF(H), tone detection is disabled.
680516	PSTN busy tone frequency lower limit (low byte)		
680517	PABX dial tone frequency upper limit (high byte)	Hz (BCD)	If both addresses contain FF(H), tone detection is disabled.
680518	PABX dial tone frequency upper limit (low byte)		
680519	PABX dial tone frequency lower limit (high byte)	Hz (BCD)	If both addresses contain FF(H), tone

Address	Function	Unit	Remarks
68051A	PABX dial tone frequency lower limit (low byte)		detection is disabled.
68051B	PABX dial tone detection time	20 ms	If 68051B contains FF, the machine pauses for the pause time (680520 / 680521).
68051C	PABX dial tone reset time (LOW)		
68051D	PABX dial tone reset time (HIGH)		
68051E	PABX dial tone continuous tone time		
68051F	PABX dial tone permissible drop time		
680520	PABX wait interval (LOW)		-
680521	PABX wait interval (HIGH)		
680522	PABX ringback tone detection time	20 ms	If both addresses contain FF(H), tone detection is disabled.
680523	PABX ringback tone off detection time	20 ms	
680524	PABX detection time for silent period after ringback tone detected (LOW)	20 ms	If both addresses contain FF(H), tone detection is disabled.
680525	PABX detection time for silent period after ringback tone detected (HIGH)	20 ms	
680526	PABX busy tone frequency upper limit (high byte)	Hz (BCD)	If both addresses contain FF(H), tone detection is disabled.
680527	PABX busy tone frequency upper limit (low byte)		
680528	PABX busy tone frequency lower limit (high byte)	Hz (BCD)	If both addresses contain FF(H), tone detection is disabled.

Address	Function	Unit	Remarks
680529	PABX busy tone frequency lower limit (low byte)		
68052A	Busy tone ON time: range 1	20 ms	-
68052B	Busy tone OFF time: range 1		
68052C	Busy tone ON time: range 2		
68052D	Busy tone OFF time: range 2		
68052E	Busy tone ON time: range 3		
68052F	Busy tone OFF time: range 3	20 ms	
680530	Busy tone ON time: range 4		
680531	Busy tone OFF time: range 4		
680532	Busy tone continuous tone detection time		
680533	Busy tone signal state time tolerance for all ranges, and number of cycles required for detection (a setting of 4 cycles means that ON-OFF-ON or OFF-ON-OFF must be detected twice). Tolerance (±) Bit 1: 0, Bit 0: 0 = 75% Bits 2 and 3 must always be kept at 0. Bit 1: 0, Bit 0: 0 = 50% Bits 2 and 3 must always be kept at 0. Bit 1: 0, Bit 0: 0 = 25% Bit 1: 0, Bit 0: 0 = 12.5% Bits 7, 6, 5, 4 - number of cycles required for cadence detection		
680534	International dial tone frequency upper limit (high byte)	Hz (BCD)	If both addresses contain FF(H), tone detection is disabled.
680535	International dial tone frequency upper limit (low byte)		
680536	International dial tone frequency lower limit (high byte)	Hz (BCD)	If both addresses contain FF(H), tone

Address	Function	Unit	Remarks
680537	International dial tone frequency lower limit (low byte)		detection is disabled.
680538	International dial tone detection time	20 ms	If 680538 contains FF, the machine pauses for the pause time (68053D / 68053E). Belgium: See Note 2.
680539	International dial tone reset time (LOW)		
68053A	International dial tone reset time (HIGH)		
68053B	International dial tone continuous tone time		
68053C	International dial tone permissible drop time		
68053D	International dial wait interval (LOW)		-
68053E	International dial wait interval (HIGH)		
68053F	Country dial tone upper frequency limit (HIGH)	Hz (BCD)	If both addresses contain FF(H), tone detection is disabled.
680540	Country dial tone upper frequency limit (LOW)		
680541	Country dial tone lower frequency limit (HIGH)		If both addresses contain FF(H), tone detection is disabled.
680542	Country dial tone lower frequency limit (LOW)		
680543	Country dial tone detection time	20 ms	If 680543 contains FF, the machine pauses for the pause time (680548 / 680549).
680544	Country dial tone reset time (LOW)		
680545	Country dial tone reset time (HIGH)		

Address	Function	Unit	Remarks
680546	Country dial tone continuous tone time	-	-
680547	Country dial tone permissible drop time	20 ms	-
680548	Country dial wait interval (LOW)		
680549	Country dial wait interval (HIGH)		
68054A	Time between opening or closing the DO relay and opening the OHDI relay	1 ms	See Notes 3, 6 and 8. SP2-103-012 (parameter 11).
68054B	Break time for pulse dialing	1 ms	See Note 3. SP2-103-013 (parameter 12).
68054C	Make time for pulse dialing	1 ms	See Note 3. SP2-103-014 (parameter 13).
68054D	Time between final OHDI relay closure and DO relay opening or closing	1 ms	See Notes 3, 6 and 8. SP2-103-015 (parameter 14). This parameter is only valid in Europe.
68054E	Minimum pause between dialed digits (pulse dial mode)	20 ms	See Note 3 and 8. SP2-103-016 (parameter 15).
68054F	Time waited when a pause is entered at the operation panel		SP2-103-017 (parameter 16). See Note 3.
680550	DTMF tone on time	1 ms	SP2-103-018 (parameter 17).
680551	DTMF tone off time		SP2-103-019 (parameter 18).

Address	Function	Unit	Remarks
680552	Tone attenuation level of DTMF signals while dialing	-N x 0.5 –3.5 dBm	SP2-103-020 (parameter 19). See Note 5.
680553	Tone attenuation value difference between high frequency tone and low frequency tone in DTMF signals	-dBm x 0.5	SP2-103-021 (parameter 20). The setting must be less than –5dBm, and should not exceed the setting at 680552h above. See Note 5.
680554	PSTN: DTMF tone attenuation level after dialling	-N x 0.5 –3.5 dBm	SP2-103-022 (parameter 21). See Note 5.
680555	ISDN: DTMF tone attenuation level after dialling	-dBm x 0.5	See Note 5
680556	Not used	-	Do not change the settings.
680557	Time between 68054Dh (NCU parameter 14) and 68054Eh (NCU parameter 15)	1 ms	This parameter takes effect when the country code is set to France.
680558	Not used	-	Do not change the setting.
680559	Grounding time (ground start mode)	20 ms	The Gs relay is closed for this interval.
68055A	Break time (flash start mode)	1 ms	The OHDI relay is open for this interval.
68055B	International dial access code (High)	BCD	For a code of 100: 68055B - F1 68055C - 00
68055C	International dial access code (Low)		

Address	Function	Unit	Remarks
68055D	PSTN access pause time	20 ms	This time is waited for each pause input after the PSTN access code. If this address contains FF[H], the pause time stored in address 68054F is used. Do not set a number more than 7 in the UK.
68055E	Progress tone detection level, and cadence detection enable flags	Bit 7: 0, Bit 6: 0, Bit 5: 0 = -25.0 dBm Bit 7: 0, Bit 6: 0, Bit 5: 1 = -35.0 dBm Bit 7: 0, Bit 6: 1, Bit 5: 0 = -30.0 dBm Bit 7: 1, Bit 6: 0, Bit 5: 0 = -40.0 dBm Bit 7: 1, Bit 6: 1, Bit 5: 0 = -49.0 dBm Bits 2, 0 - See Note 2.	
68055F To 680564	**Not used**	-	Do not change the settings.
680565	Long distance call prefix (HIGH)	BCD	For a code of 0: 680565 – FF 680566 - FF
680566	Long distance call prefix (LOW)	BCD	
680567 to 680571	**Not used**	-	Do not change the settings.
680572	Acceptable ringing signal frequency: range 1, upper limit	1000/ N (Hz).	SP2-103-003 (parameter 02).
680573	Acceptable ringing signal frequency: range 1, lower limit		SP2-103-004 (parameter 03).
680574	Acceptable ringing signal frequency: range 2, upper limit		SP2-103-005 (parameter 04).

Address	Function	Unit	Remarks
680575	Acceptable ringing signal frequency: range 2, lower limit		SP2-103-006 (parameter 05).
680576	Number of rings until a call is detected	1	SP2-103-007 (parameter 06). The setting must not be zero.
680577	Minimum required length of the first ring	20 ms	See Note 4. SP2-103-008 (parameter 07).
680578	Minimum required length of the second and subsequent rings	20 ms	SP2-103-009 (parameter 08).
680579	Ringing signal detection reset time (LOW)	20 ms	SP2-103-010 (parameter 09).
68057A	Ringing signal detection reset time (HIGH)		SP2-103-011 (parameter 10).
68057B to 680580	**Not used**	-	Do not change the settings.
680581	Interval between dialing the last digit and switching the Oh relay over to the external telephone when dialing from the operation panel in handset mode.	20 ms	Factory setting: 500 ms

Address	Function	Unit	Remarks
680582	Bits 0 and 1 - Handset off-hook detection time Bit 1:0, Bit 0: 0 = 200 ms Bit 1:0, Bit 0: 1 = 800 ms Other Not used Bits 2 and 3 - Handset on-hook detection time Bit 3: 0, Bit 2: 0 = 200 ms Bit 3: 0, Bit 2: 1 = 800 ms Other Not used Bits 4 to 7 - **Not used**		-
680583 To 6805A0	**Not used**	-	Do not change the settings.
6805A1	Acceptable CED detection frequency upper limit (high byte)	BCD (Hz)	If both addresses contain FF(H), tone detection is disabled.
6805A2	Acceptable CED detection frequency upper limit (low byte)		
6805A3	Acceptable CED detection frequency lower limit (high byte)	BCD (Hz)	If both addresses contain FF(H), tone detection is disabled.
6805A4	Acceptable CED detection frequency lower limit (low byte)		
6805A5	CED detection time	20 ms ± 20 ms	Factory setting: 200 ms
6805A6	Acceptable CNG detection frequency upper limit (high byte)	BCD (Hz)	If both addresses contain FF(H), tone detection is disabled.
6805A7	Acceptable CNG detection frequency upper limit (low byte)		
6805A8	Acceptable CNG detection frequency lower limit (high byte)	BCD (Hz)	If both addresses contain FF(H), tone detection is disabled.
6805A9	Acceptable CNG detection		

Address	Function	Unit	Remarks
	frequency lower limit (low byte)		
6805AA	**Not used**	-	Do not change the setting.
6805AB	CNG on time	20 ms	Factory setting: 500 ms
6805AC	CNG off time	20 ms	Factory setting: 3000 ms
6805AD	Number of CNG cycles required for detection	-	The data is coded in the same way as address 680533.
6805AE	**Not used**	-	Do not change the settings.
6805AF	Acceptable AI short protocol tone (800Hz) detection frequency upper limit (high byte)	Hz (BCD)	If both addresses contain FF(H), tone detection is disabled.
6805B0	Acceptable AI short protocol tone (800Hz) detection frequency upper limit (low byte)		
6805B1	Acceptable AI short protocol tone (800Hz) detection frequency lower limit (high byte)	Hz(BCD)	If both addresses contain FF(H), tone detection is disabled.
6805B2	Acceptable AI short protocol tone (800Hz) detection frequency lower limit (low byte)		
6805B3	Detection time for 800 Hz AI short protocol tone	20 ms	Factory setting: 360 ms
6805B4	PSTN: Tx level from the modem	-N – 3 dBm	SP2-103-002 (parameter 01).

Address	Function	Unit	Remarks
6805B5	PSTN: 1100 Hz tone transmission level	- N 6805B4 - 0.5N 6805B5 –3.5 (dB) See Note 7.	
6805B6	PSTN: 2100 Hz tone transmission level	- N6805B4 - 0.5N 6805B6 –3 (dB) See Note 7.	
6805B7	PABX: Tx level from the modem	- dBm	
6805B8	PABX: 1100 Hz tone transmission level	- N 6805B7 - 0.5N 6805B8 (dB)	
6805B9	PABX: 2100 Hz tone transmission level	- N 6805B7 - 0.5N 6805B9 (dB)	
6805BD	Modem turn-on level (incoming signal detection level)	-37-0.5N (dBm)	
6805BE to 6805C6	**Not used**	-	Do not change the settings.
6805C7	Bits 0 to 3 – **Not used** Bit 4 = V.34 protocol dump 0: Simple, 1: Detailed (default) Bits 5 to 7 – **Not used.**		
6805C8 to 6805D9	**Not used**	-	Do not change the settings.
6805DA	T.30 T1 timer	1 s	
6805E0 bit 3	Maximum wait time for post message	0: 12 s 1: 30 s	1: Maximum wait time for post message (EOP/EOM/MPS) can be changed to 30 s. Change this bit to “1” if communication errors occur frequently during V.17 reception.

<table>
<tr><th>Address</th><th colspan="7">Function</th><th>Unit</th><th>Remarks</th></tr>
<tr><td rowspan="9">6805E3</td><td colspan="6">Voltage setting to detect off-hook for voltage/DP detection for an externally connected line.</td><td>0: Auto
1: Fixed V</td><td rowspan="9">Do not change these settings</td></tr>
<tr><td colspan="6">Here is a summary of the fixed voltage settings (1: Fixed) for an externally connected line.</td><td></td></tr>
<tr><td>Bit 7</td><td>Bit 6</td><td>Bit 5</td><td>Bit 4</td><td colspan="2">-</td><td></td></tr>
<tr><td>0</td><td>0</td><td>0</td><td>0</td><td colspan="2">Not used</td><td></td></tr>
<tr><td>0</td><td>0</td><td>0</td><td>1</td><td colspan="2">2.75 V</td><td></td></tr>
<tr><td>0</td><td>0</td><td>1</td><td>0</td><td colspan="2">5.5 V</td><td></td></tr>
<tr><td>1</td><td>0</td><td>0</td><td>0</td><td colspan="2">22 V</td><td></td></tr>
<tr><td>1</td><td>1</td><td>1</td><td>1</td><td colspan="2">41.25 V</td><td></td></tr>
<tr><td rowspan="4">6805E4</td><td colspan="3" rowspan="4">Bit 1 sets the level of the call signal, Bit 3 sets the call signal impedance</td><td rowspan="2">Bit 1</td><td>0</td><td>RT=0 (Low)</td><td rowspan="4">-</td></tr>
<tr><td>1</td><td>RT=1 (High)</td></tr>
<tr><td rowspan="2">Bit 3</td><td>0</td><td>RZ=0 (High)</td></tr>
<tr><td>1</td><td>RZ=1 (Composite)</td></tr>
</table>

<table>
<tr><th>Address</th><th colspan="7">Function</th><th>Unit</th><th>Remarks</th></tr>
<tr><td rowspan="11">6805E5</td><td colspan="4" rowspan="3">Bit 0 sets the ring detection method, Bit 1 sets the ring detection method when fixed.</td><td rowspan="2">Bit 0</td><td>0</td><td>Auto</td><td rowspan="11">If any setting is changed, select a setting that is higher than the default setting.</td></tr>
<tr><td>1</td><td>Fixed</td></tr>
<tr><td rowspan="2">Bit 1</td><td>0</td><td>Use RDTP</td></tr>
<tr><td colspan="3">1</td><td>Use RDTN</td></tr>
<tr><td colspan="7">Here is a summary of the voltages for the detection of off-hook for DP detection.</td></tr>
<tr><td>Bit 7</td><td>Bit 6</td><td>Bit 5</td><td>Bit 4</td><td colspan="3">-</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td>0</td><td colspan="3">Not used</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td>1</td><td colspan="3">2.75 V</td></tr>
<tr><td>0</td><td>0</td><td>1</td><td>0</td><td colspan="3">5.5 V</td></tr>
<tr><td>1</td><td>0</td><td>0</td><td>0</td><td colspan="3">22 V</td></tr>
<tr><td>1</td><td>1</td><td>1</td><td>1</td><td colspan="3">41.25 V</td></tr>
</table>

NOTES

1. If a setting is not required, store FF in the address.
2. Italy and Belgium only

   RAM address 68055E: the lower four bits have the following meaning.

   Bit 2 - 1: International dial tone cadence detection enabled (Belgium)

   Bit 1 - Not used

   Bit 0 - 1: PSTN dial tone cadence detection enabled (Italy)

   If bit 0 or bit 2 is set to 1, the functions of the following RAM addresses are changed.

   680508 (if bit 0 = 1) or 680538 (if bit 2 = 1): tolerance for on or off state duration (%), and number of cycles required for detection, coded as in address 680533.

   68050B (if bit 0 = 1) or 68053B (if bit 2 = 1): on time, hex code (unit = 20 ms)

   68050C (if bit 0 = 1) or 68053C (if bit 2 = 1): off time, hex code (unit = 20 ms)

3. Pulse dial parameters (addresses 68054A to 68054F) are the values for 10 pps. If 20 pps is used, the machine automatically compensates.
4. The first ring may not be detected until 1 to 2.5 wavelengths after the time specified by this parameter.
5. The calculated level must be between 0 and 10.
   The attenuation levels calculated from RAM data are:
   High frequency tone:
   - $-0.5 \times N_{680552}/_{680554} - 3.5$ dBm
   - $-0.5 \times N_{680555}$ dBm

   Low frequency tone:
   - $-0.5 \times (N_{680552}/_{680554} + N_{680553}) - 3.5$ dBm
   - $-0.5 \times (N_{680555} + N_{680553})$ dBm

   Note
   - N_{680552}, for example, means the value stored in address 680552(H)
6. 68054A: Europe - Between Ds opening and Di opening, France - Between Ds closing and Di opening
   68054D: Europe - Between Ds closing and Di closing, France - Between Ds opening and Di closing
7. Tone signals which frequency is lower than 1500Hz (e.g., 800Hz tone for AI short protocol) refer to the setting at 6805B5h. Tones which frequency is higher than 1500Hz refer to the setting at 6805B6h.
8. 68054A, 68054D, 68054E: The actual inter-digit pause (pulse dial mode) is the sum of the period specified by the RAM addresses 68054A, 68054D, and 68054E.

4.5 DEDICATED TRANSMISSION PARAMETERS

There are two sets of transmission parameters: Fax and E-mail
Each Quick Dial Key and Speed Dial Code has eight bytes of programmable parameters allocated to it. If transmissions to a particular machine often experience problems, store that terminal's fax number as a Quick Dial or Speed Dial, and adjust the parameters allocated to that number.
The programming procedure will be explained first. Then, the eight bytes will be described.

4.5.1 PROGRAMMING PROCEDURE

1. Set the bit 0 of System Bit Switch 00 to 1.
2. Enter Address Book Management mode ([User Tools]> System Settings> Key Operator> Address Book Management).
3. Select the address book that you want to program.
4. For the fax parameter, select "Fax Dest.", for the E-mail parameter, select "E-mail", then press "Start". Make sure that the LED of the Start button lights green.
5. The settings for the switch 00 are now displayed. Press the bit number that you wish to change.
6. To scroll through the parameter switches, either:
7. Select the next switch: press "Next" or Select the previous switch: "Prev." until the correct switch is displayed. Then go back to step 6.
8. After the setting is changed, press "OK".
9. After finishing, reset bit 0 of System Bit Switch 00 to 0.

4.5.2 PARAMETERS

Fax Parameters

The initial settings of the following fax parameters are all FF(H) - all the parameters are disabled.

Switch 00
FUNCTION AND COMMENTS
ITU-T T1 time (for PSTN G3 mode) If the connection time to a particular terminal is longer than the NCU parameter setting, adjust this byte. The T1 time is the value stored in this byte (in hex code), multiplied by 1 second. **Range:** 0 to 120 s (00h to 78h) FFh - The local NCU parameter factory setting is used. Do not program a value between 79h and FEh.

Switch 01

No	FUNCTION						COMMENTS
0-4	Tx level						If communication with a particular remote terminal often contains errors, the signal level may be inappropriate. Adjust the Tx level for communications with that terminal until the results are better. If the setting is "Disabled", the NCU parameter 01 setting is used. Note ▪ Do not use settings other than listed on the left.
	Bit4	Bit3	Bit2	Bit1	Bit0		
	0	0	0	0	0	0	
	0	0	0	0	1	–1	
	0	0	0	1	0	–2	
	0	0	0	1	1	–3	
	0	0	1	0	0	–4	
	↓	↓	↓	↓	↓	↓	
	0	1	1	1	1	–15	
	1	1	1	1	1	Disabled	

5-7	Cable equalizer Bit 7: 0, Bit 6: 0, Bit 5: 0 = None Bit 7: 0, Bit 6: 0, Bit 5: 1 = Low Bit 7: 0, Bit 6: 1, Bit 5: 0 = Medium Bit 7: 0, Bit 6: 1, Bit 5: 1 = High Bit 7: 1, Bit 6: 1, Bit 5: 1 = Disabled	Use a higher setting if there is signal loss at higher frequencies because of the length of wire between the modem and the telephone exchange when calling the number stored in this Quick/Speed Dial. Also, try using the cable equalizer if one or more of the following symptoms occurs. Communication error with error codes such as 0-20, 0-23, etc. Modem rate fallback occurs frequently. Note ▪ Do not use settings other than listed on the left. If the setting is "Disabled", the bit switch setting is used.

Switch 02

No	FUNCTION	COMMENTS
0-3	Initial Tx modem rate	If training with a particular remote terminal always takes too long, the initial modem rate may be too high. Reduce the initial Tx modem rate using these bits. For the settings 14.4 or kbps slower, Switch 04 bit 4 must be changed to 0. Note ▪ Do not use settings other than listed on the left. If the setting is "Disabled", the bit switch setting is used.
4-7	**Not used**	Do not change the settings.

Initial Tx modem rate

Bit3	Bit2	Bit1	Bit0	bps
0	0	0	0	Not used
0	0	0	1	2400
0	0	1	0	4800
0	0	1	1	7200
0	1	0	0	9600
0	1	0	1	12000
0	1	1	0	14400
0	1	1	1	16800
1	0	0	0	19200
1	0	0	1	21600
1	0	1	0	24000
1	0	1	1	26400
1	1	0	0	28800
1	1	0	1	31200
1	1	1	0	33600
1	1	1	1	Disabled

Other settings: **Not used**

Switch 03		
No	**FUNCTION**	**COMMENTS**
0-1	Inch-mm conversion before tx Bit 1: 0, Bit 0: 0 = Inch-mm conversion available Bit 1: 0, Bit 0: 1 = Inch only Bit 1: 1, Bit 0: 0 = Not used Bit 1: 1, Bit 0: 1 = Disabled	The machine uses inch-based resolutions for scanning. If "inch only" is selected, the printed copy may be slightly distorted at the other end if that machine uses mm-based resolutions. If the setting is "Disabled", the bit switch setting is used.
2-3	DIS/NSF detection method Bit 3: 0, Bit 2: 0 = First DIS or NSF Bit 3: 0, Bit 2: 1 = Second DIS or NSF Bit 3: 1, Bit 2: 0 = Not used Bit 3: 1, Bit 2: 1 = Disabled	(0, 1): Use this setting if echoes on the line are interfering with the set-up protocol at the start of transmission. The machine will then wait for the second DIS or NSF before sending DCS or NSS. If the setting is "Disabled", the bit switch setting is used.
4	V.8 protocol 0: Off 1: Disabled	If transmissions to a specific destination always end at a lower modem rate (14,400 bps or lower), disable V.8 protocol so as not to use V.34 protocol. 0: V.34 communication will not be possible. If the setting is "Disabled", the bit switch setting is used.
5	Compression modes available in transmit mode 0: MH only 1: Disabled	This bit determines the capabilities that are informed to the other terminal during transmission. If the setting is "Disabled", the bit switch setting is used.

6-7	ECM during transmission Bit 7: 0, Bit 6: 0 = Off Bit 7: 0, Bit 6: 1 = On Bit 7: 1, Bit 6: 0 = Not used Bit 7: 1, Bit 6: 1 = Disabled	For example, if ECM is switched on but is not wanted when sending to a particular terminal, use the (0, 0) setting. Note ▪ V.8/V.34 protocol and JBIG compression are automatically disabled if ECM is disabled. ▪ If the setting is "Disabled", the bit switch setting is used.

Switch 04 - Not used (do not change the settings)
Switch 05 - Not used (do not change the settings)
Switch 06 - Not used (do not change the settings)
Switch 07 - Not used (do not change the settings)
Switch 08 - Not used (do not change the settings)
Switch 09 - Not used (do not change the settings)

E-mail Parameters

The initial settings of the following e-mail parameters are all "0" (all parameters disabled).

Switch 00		
No	**FUNCTION**	**COMMENTS**
0	MH Compression mode for e-mail attachments **0**: Off 1: On	Switches MH compression on and off for files attached to e-mails for sending.
1	MR Compression mode for e-mail attachments **0**: Off 1: On	Switches MR compression on and off for files attached to e-mails for sending.
2	MMR Compression mode for e-mail attachments **0**: Off 1: On	Switches MMR compression on and off for files attached to e-mails for sending.
3-6	**Not used**	Do not change these settings.
7	Designates the bits to reference for compression method of e-mail attachments **0**: Registered (Bit 0 to 6) 1: No registration.	The "0" selection (default) references the settings for Bits 00, 01, 02 above. The "1" selection ignores the selections of Bits 00, 01, 02.

Switch 01		
No	**FUNCTION**	**COMMENTS**
0	Original width of e-mail attachment: A4 **0**: Off 1: On	Sets the original width of the e-mail attachment as A4.
1	Original width of e-mail attachment: B4 **0**: Off 1: On	Sets the original width of the e-mail attachment as B4.
2	Original width of e-mail attachment: A3 **0**: Off 1: On	Sets the original width of the e-mail attachment as A3.
3-6	**Not used**	Do not change these settings.
7	Designates the bits to reference for original size of e-mail attachments **0**: Registered (Bit 0 to 6) 1: No registration.	The "0" selection (default) references the settings for Bits 00, 01, 02 above. The "1" selection ignores the selections of Bits 00, 01, 02.

Switch 02		
No	**FUNCTION**	**COMMENTS**
0	Line resolution of e-mail attachment: 200 x 100 **0**: Off 1: On	Sets the line resolution of the e-mail attachment as 200 x100.
1	Line resolution of e-mail attachment: 200 x 200 **0**: Off 1: On	Sets the line resolution of the e-mail attachment as 200 x 200.
2	Line resolution of e-mail attachment: 200 x 400 **0**: Off 1: On	Sets the line resolution of the e-mail attachment as 200 x 400.
3	Not used	Do not change these settings.
4	Line resolution of e-mail attachment: 400 x 400 **0**: Off 1: On	Sets the line resolution of the e-mail attachment as 400 x 400.
5-6	**Not used**	Do not change these settings.
7	Designates the bits to reference for original size of e-mail attachments **0**: Registered (Bit 0 to 6) 1: No registration.	The "0" selection (default) references the settings for Bits 00, 01, 02, 04 above. The "1" selection ignores the selections of Bits 00, 01, 02, 04.

Switch 03 - Not used (do not change the settings)

Switch 04		
No	**FUNCTION**	**COMMENTS**
0	Full mode address selection 0: Full mode address 1: No full mode (simple mode)	If the other ends have the addresses, which have the full mode function flag ("0"), this machine determines them as full mode standard machines. ▪ This machine attaches the "demand of reception confirmation" to a message when transmitting. ▪ This machine updates the reception capability to the address book when receiving.
1-7	**Not used**	Do not change these settings.

Switch 05		
No	**FUNCTION**	**COMMENTS**
0	Directr transmission selection to SMTP server 0: ON 1: OFF	Allows or does not allow the direct transmission to SMTP server.
1-7	Not used	Do not change these settings.

Switch 06 - Not used (do not change the settings)
Switch 07 - Not used (do not change the settings)
Switch 08 - Not used (do not change the settings)
Switch 09 - Not used (do not change the settings)

4.6 SERVICE RAM ADDRESSES

⚠CAUTION

- Do not change the settings which are marked as “Not used” or “Read only.”

680001 to 680004(H) - ROM version (Read only)

680001(H) - Revision number (BCD)

680002(H) - Year (BCD)

680003(H) - Month (BCD)

680004(H) - Day (BCD)

680006 to 680015(H) - Machine’s serial number (16 digits - ASCII)

680018(H) - Total program checksum (low)

680019(H) - Total program checksum (high)

680020 to 68003F(H) - System bit switches

680050 to 68005F(H) - Printer bit switches

680060 to 68007F(H) - Communication bit switches

680080 to 68008F(H) - G3 bit switches

680090 to 68009F(H) - G3-2 bit switches: Not used

6800A0 to 6800AF(H) - G3-3 bit switches: Not used

6800D0(H) - User parameter switch 00 (SWUER_00) : Not used

6800D1(H) - User parameter switch 01 (SWUSR_01) : Not used

6800D2(H) - User parameter switch 02 (SWUSR_02)

Bit 0: Forwarding mark printing on forwarded messages 0: Disabled, 1: Enabled

Bit 1: Center mark printing on received copies

(This switch is not printed on the user parameter list.)

0: Disabled, 1: Enabled

Bit 2: Reception time printing

(This switch is not printed on the user parameter list.)

0: Disabled, 1: Enabled

Bit 3: TSI print on received messages 0: Disabled, 1: Enabled

Bit 4: Checkered mark printing

(This switch is not printed on the user parameter list.)

0: Disabled, 1: Enabled

Bit 5: Not used

Bit 6: Not used

Bit 7: Not used

6800D3(H) - User parameter switch 03 (SWUSR_03: Automatic report printout)

Bit 0: Transmission result report (memory transmissions) 0: Off, 1: On

Bit 1: Not used

Bit 2: Memory storage report 0: Off, 1: On

Bit 3: Polling reserve report (polling reception) 0: Off, 1: On

Bit 4: Polling result report (polling reception) 0: Off, 1: On

Bit 5: Transmission result report (immediate transmissions) 0: Off, 1: On

Bit 6: Not used

Bit 7: Journal 0: Off, 1: On

6800D4(H) - User parameter switch 04 (SWUSR_04: Automatic report printout)

Bit 0: Not used

Bit 1: Automatic communication failure report and transfer result report output 0: Off, 1: On

Bits 2 to 3: Not used

Bit 4: Indicates the parties 0: Not indicated, 1: Indicated

Bit 5: Include sender's name on reports 0: Off, 1: On

Bit 6: Not used

Bit 7: Inclusion of a sample image on reports 0: Off, 1: On

6800D5(H) - User parameter switch 05 (SWUSR_05)

Bit 0: Substitute reception when the base copier is in an SC condition

0: Enabled, 1: Disabled

Bits 1 and 2: Condition for substitute rx when the machine cannot print messages (Paper end, toner end, jam, and during night mode)

Bit 2: 0, Bit 1: 0 = The machine receives all the fax messages.

Bit 2: 0, Bit 1: 1 = The machine receives the fax messages with RTI or CSI.

Bit 2: 1, Bit 1: 0 = The machine receives the fax messages with the same ID code.

Bit 2: 1, Bit 1: 1 = The machine does not receive anything.

Bit 3: Not used

Bit 4: Not used

Bit 5: Just size printing 0: Off, 1: On

Bit 6: Not used

Bit 7: Add paper display when a cassette is empty 0: Off, 1: On

6800D6(H) - User parameter switch 06 (SWUSR_06): Not used

6800D7(H) - User parameter switch 07 (SWUSR_07)

Bit 0 Ringing 0: Off, 1: On

Bit1: Automatic answering message 0: Off, 1: On

Bit 2: Parallel memory transmission 0: Off, 1: On

Bits 3 and 4: Not used

Bit 5: Remote control 0: Off, 1: On

Bits 6 and 7: Not used

6800D8(H) - User parameter switch 08 (SWUSR_08)

Bits 0 and 1: Not used.

Bit 2: Authorized reception

0: Only faxes from senders whose RTIs/CSIs are specified for this feature are accepted.

1: Only faxes from senders whose RTIs/CSIs are not specified for this feature are accepted.

Bits 3 to 7: Not used.

6800D9(H) - User parameter switch 09 (SWUSR_09): Not used

6800DA(H) - User parameter switch 10 (SWUSR_0A)

Bits 0 to 2: Not used

Bit 3: Page reduction 0: Off, 1: On

Bits 4 and 5: Not used

Bit 6: Use both e-mail notification and printed reports to confirm the transmission results 0: Off, 1: On

Bit 7: Not used

6800DB(H) - User parameter switch 11 (SWUSR_0B)

Bits 0 and 1: Not used

Bit 2: White original detection 0: Off, 1: On (alarm and alert message on the LCD)

Bit 3: Receive rejection for 1300 Hz transmission 0: Off (receive), 1: On (not receive)

Bit 5: Not used

Bit 6: Printout of messages received while acting as a forwarding station 0: Off, 1: On

Bit 7: Not used

6800DC(H) - User parameter switch 12 (SWUSR_0C): Not used

6800DD(H) - User parameter switch 13 (SWUSR_0D): Not used

6800DE(H) - User parameter switch 14 (SWUSR_0E)

Bit 0: Message printout while the machine is in Night Printing mode 0: On, 1: Off

Bit 1: Maximum document length detection 0: Double letter, 1: Longer than double-letter (well log) – up to 1,200 mm

Bit 2: Not used

Bit 3: Fax mode settings, such as resolution, before a mode key (Copy/Fax/Printer/Scanner) is pressed 0: Not cleared, 1: Cleared

Bits 4 to 6: Not used

Bit 7: Not used

6800DF(H) - User parameter switch 15 (SWUSR_0F)

(This switch is not printed on the user parameter list.)

Bits 0, 1 and 2: Cassette for fax printout

Bit 2: 0, Bit 1: 0, Bit 0: 1 = 1st paper feed station

Bit 2: 0, Bit 1: 1, Bit 0: 0 = 2nd paper feed station

Bit 2: 0, Bit 1: 1, Bit 0: 1 = 3rd paper feed station

Bit 2: 1, Bit 1: 0, Bit 0: 0 = 4th paper feed station

Bit 2: 1, Bit 1: 0, Bit 0: 1 = LCT

Other settings Not used

Bits 3 and 4: Not used

Bit 5: Using the cassette specified by bits 0, 1 and 2 above only 0: On, 1: Off

Bits 6 and 7: Not used

6800E0(H) – User parameter switch 16 (SWUSR_10)

(This switch is not printed on the user parameter list.)

Bits 0 and 1: Not used

Bit 2: Paper size selection priority for an A4 size fax message when A4/LT size paper is not available. 0: A3 has priority, 1: B4 has priority

Bits 3 to 7: Not used

6800E1(H) – User parameter switch 17 (SWUSR_11)

Bit 0: Not used

Bit 1: Not used

Bit 2: Inclusion of the “Add” button when a sequence of Quick/Speed dials is selected for broadcasting 0:Not needed, 1: Needed

Bits 3 to 6: Not used

Bit 7: Press “Start” key without an original when using the on hook dial or the external telephone,

0: displays “Cannot detect original size”. 1: Receives fax messages.

6800E2(H) - User parameter switch 18 (SWUSR_12)

Bit 0: TTI date 0: Off, 1: On

Bit 1: TTI sender 0: Off, 1: On

Bit 2: TTI file number 0: Off, 1: On

Bit 3: TTI page number 0: Off, 1: On

Bits 4 to 6: Not used

Bit 7: Japan only

6800E3(H) - User parameter switch 19 (SWUSR_13)

Bit 0: Not used

Bit 1: Journal format

0: The Journal is separated into transmissions and receptions

1: The Journal is separated into G3-1, G3-2, and G3-3 communications

Bit 2: Not used

Bit 3: 90° image rotation during B5 portrait Tx (This switch is not printed on the user parameter list.) 0: Off, 1: On

Bit 4: Reduction of sample images on reports to 50% in the main scan and sub-scan directions. (This switch is not printed on the user parameter list.) 0: Technician adjustment (printer switch 0E bits 3 and 4), 1: 50% reduction

Bit 5: Use of A5 size paper for reports (This switch is not printed on the user parameter list.) 0: Off, 1: On

Bits 6 and 7: Not used

6800E4(H) - User parameter switch 20 (SWUSR_14)

Bit 0: Automatic printing of the LAN fax result report 0: Off, 1: On

Bit 1: Not used.

Bits 2 to 5: Store documents in memory which could not be printed from PC fax (LAN fax) driver

Bit 5	Bit 4	Bit 3	Bit 2	Setting
0	0	0	0	0 min.
0	0	0	1	1 min.
↓	↓	↓	↓	↓
1	1	1	0	14 min.
1	1	1	1	15 min.

Bits 6 and 7: Not used.

6800E5(H) - User parameter switch 21 (SWUSR_15)

Bit 0: Print results of sending reception notice request message 0: Disabled (print only when error occurs), 1: Enabled

Bit 1: Respond to e-mail reception acknowledgment request 0: Disabled, 1: Enabled

Bit 2: Not used

Bit 3: File format for forwarded folders 0: TIFF, 1:PDF

Bit 4: Transmit Journal by E-mail 0: Disabled, 1: Enabled

Bit 5: Not used

Bit 6: Network error display 0: Displayed, 1: Not displayed

Bit 7: Transmit error mail notification 0: Enabled, 1: Disabled

6800E6(H) - User parameter switch 22 (SWUSR_16)

(This switch is not printed on the user parameter list.)

Bit 0: Dial tone detection (PSTN 1) 0: Disabled, 1: Enabled

Bits 1 to 7: Not used

6800E7(H) – User parameter switch 23 (SWUSR_17): Not used

6800E8(H) - User parameter switch 24 (SWUSR_18): Not used

6800E9(H) - User parameter switch 25 (SWUSR_19)

Bit 0: Not used

Bit 1: Reception mode switch timer 0: Off, 1: On (switching Fax or Fax/Tel)

Bit 2: Mode priority switch 0: Fax first, 1: Tel first

Bit 3: Dial in function (Japan Only)

Bit 4: RDS operation 0: Not acceptable, 1: Acceptable for the limit specified by system switch 03

Note

- This bit is only effective when RDS operation can be selected by the user (see system switch 02).

Bits 5 to 7: Not used

6800EA(H) and 6800EB(H) - User parameter switches 26 and 27 (SWUSR_1A and 1B): Not used

6800EC(H) - User parameter switch 28(SWUSR_1C)

Xxxxx

6800ED(H) - User parameter switch 29(SWUSR_1D)

xxxxxx

6800EE(H) and 6800EF(H) - User parameter switches 30 and 31 (SWUSR_1E and 1F): Not used

6800F0(H) - User parameter switch 32 (SWUSR_20)

Bit 0: Quotation priority for a destination when there is no destination of the specified type

0: Paper output priority = Priority order: 1. IP-fax destination, 2. Fax Number, 3. E-mail address, 4. Folder

1: Electric putout order = Priority order: 1. E-mail address, 2. Folder, 3. IP-fax destination, 4. Fax number

Bits 1 to 7: Not used

6800F1(H) - User parameter switch 33 (SWUSR_21): Not used

6800F2(H) - User parameter switch 34 (SWUSR_22)

Bit 0: Gatekeeper server used with IP-Fax 0: Disabled, 1: Enabled

Bit 1: SIP server used with IP-Fax 0: Disabled, 1: Enabled

Bits 2 to 7: Not used

680100 to 68010F(H) - G4 Parameter Switches – Not used

680110 to 68012F(H) - G4 Internal Switches – Not used

680130 to 68016F(H) - Service Switches

680170 to 68017F(H) - IFAX Switches

680180 to 68018F(H) - IP-FAX Switches

680190 to 6801AF(H) - Service station's fax number (SP3-101)

6801B0 to 6801B9(H) - Own fax PABX extension number

6801BA to 6801C3(H) - Own fax number (PSTN) – Not used

6801C4 to 6801D7(H) - Own fax number (ISDN G4) – Not used

6801D8 to 6801E3(H) - The first subscriber number (ISDN G3) – Not used

6801E4 to 6801EF(H) - The second subscriber number (ISDN G3) – Not used

6801F0 to 6801FB(H) - The first subscriber number (ISDN G4) – Not used

6801FC to 680207(H) - The second subscriber number (ISDN G4) – Not used

680208 to 68021B(H) - PSTN-1 RTI (Max. 20 characters - ASCII) - See the following note.

68021C to 68022F(H) - PSTN-2 RTI (Max. 20 characters - ASCII) - Not used

680230 to 680246(H) - PSTN-3 RTI (Max. 20 characters - ASCII) - Not used

680247 to 680286(H) - TTI 1 (Max. 64 characters - ASCII) - See the following note.

680287 to 6802C6(H) - TTI 2 (Max. 64 characters - ASCII) - Not used

6802C7 to 680306(H) - TTI 3 (Max. 64 characters - ASCII) - Not used

680307 to 68031A(H) - PSTN-1 CSI (Max. 20 characters - ASCII)

68031B to 68032E(H) - PSTN-2 CSI (Max.20 characters - ASCII) - Not used

68032F to 680342(H) - PSTN-3 CSI (Max.20 characters - ASCII) - Not used

680343(H) - Number of PSTN-1 CSI characters (Hex)

680344(H) - Number of PSTN-2 CSI characters (Hex) - Not used

680345(H) Number of PSTN-3 CSI characters (Hex) - Not used

Note

- If the number of characters is less than the maximum (20 for RTI, 32 for TTI), add a stop code (00[H]) after the last character.

680380 to 680387(H) - Last power off time (Read only)

680380(H) - 01(H) - 24-hour clock, 00(H) - 12-hour clock (AM), 02(H) - 12-hour clock (PM)

680381(H) - Year (BCD)

680382(H) - Month (BCD)

680383(H) - Day (BCD)

680384(H) – Hour

680385(H) – Minute

680386(H) – Second

680387(H) - 00: Monday, 01: Tuesday, 02: Wednesday, /// , 06: Sunday

680394(H) - Optional equipment (Read only – Do not change the settings)

Bit 0: Page Memory 0: Not installed, 1: Installed

Bit 1: SAF Memory 0: Not installed, 1: Installed

Bits 2 to 7; Not used

680395(H) - Optional equipment (Read only – Do not change the settings)

Bits 0 to 3: Not used

Bit 4: G3-2 0: Not installed, 1: Installed

Bit 5: G3-3 0: Not installed, 1: Installed

Bit 6 and 7: Not used

680406 to 68040A – Option G3 board (G3-2) ROM information (Read only)

680406(H) - Suffix (BCD)

680407(H) - Version (BCD)

680408(H) - Year (BCD)

680409(H) - Month (BCD)

68040A(H) - Day (BCD)

68040B to 68040F – Option G3 board (G3-3) ROM information (Read only)

68040B(H) - Suffix (BCD)

68040C(H) - Version (BCD)

68040D(H) - Year (BCD)

68040E(H) - Month (BCD)

68040F(H) - Day (BCD)

680410(H) - G3-1 Modem ROM version (Read only)
680412(H) - G3-2 Modem ROM version (Read only)
680414(H) - G3-3 Modem ROM version (Read only)
680420(H) - Number of multiple sets print (Read only)
680476(H) - Time for economy transmission (hour in 24h clock format - BCD)
680477(H) - Time for economy transmission (minute - BCD)
680492(H) - Transmission monitor volume 00 - 07(H)
680493(H) - Reception monitor volume 00 - 07(H)
680494(H) - On-hook monitor volume 00 - 07(H)
680495(H) - Dialing monitor volume 00 - 07(H)
680496(H) - Buzzer volume 00 - 07(H)
680497(H) - Beeper volume 00 - 07(H)
6804A8(H) - Machine code (Check ram 4)
68918E(H) - Gatekeeper server address - Main (Max. 128 characters - ASCII)
68920E(H) - Gatekeeper server address - Sub (Max. 128 characters - ASCII)
68928E(H) - Arias Number (Max. 128 characters - ASCII)
68930E(H) - SIP user name (Max. 128 characters - ASCII)
68938E(H) - SIP digest authentication password (Max. 128 characters - ASCII)
68940E(H) - Gateway address information (Max. 7100 characters - ASCII)
68AFCA(H) - Stand-by port number for H.232 connection
68AFCCH) - Stand-by port number for SIP connection
68AFCE(H) - RAS port number
68AFD0(H) - Gatekeeper port number
68AFD2(H) - Port number of data waiting for T.38
68AFD4(H) - Port number of SIP server
68AFD6(H) - Priority for SIP and H.323 0: H.323, 1: SIP
68AFD7(H) - SIP function 0: Disabled, 1: Enabled
68AFD8(H) - H.323 function 0: Disabled, 1: Enabled
68AFD9(H) - SIP digest authentication function 0: Disabled, 1: Enabled
68AFDA(H) - IP-Fax backup data 00 - 600 (H) - Not used
69ED6A(H) to 69ED92(H) - SIP server address (Read only)
69ED6A(H) - Proxy server - Main (Max. 128 characters - ASCII)
69ED72(H) - Proxy server - Sub (Max. 128 characters - ASCII)
69ED7A(H) - Redirect server - Main (Max. 128 characters - ASCII)
69ED82(H) - Redirect server - Sub (Max. 128 characters - ASCII)
69ED8A(H) - Registrar server - Main (Max. 128 characters - ASCII)
69ED92(H) - Registrar server - Sub (Max. 128 characters - ASCII)

6BEBFE(H) - 6BEC1E (H) - Dial tone detection parameter (Max. 11 x 3 lines)

This initializes following order. [0x04, 0x40, 0x03, 0x60, 0x64, 0xf4, 0x01,0x64, 0x04, 0xc8, 0x00]

6BEBFE(H) – Dial tone detection frequency – Upper limit (High)

Defaults: NA: 06, EU: 06, ASIA: 06

6BEBFF(H) – Dial tone detection frequency – Upper Limit (Low)

Defaults: NA: 50, EU: 50, ASIA: 50

6BEC00(H) – Dial tone detection frequency – Lower Limit (High)

Defaults: NA: 03, EU: 02, ASIA: 02

6BEC01(H) – Dial tone detection frequency – Lower Limit (Low)

Defaults: NA: 60, EU: 90, ASIA: 90

6BEC02(H) –Dial tone detection waiting time (20 ms)

Defaults: NA: 64, EU 64, ASIA: 64

6BEC03 to 6BEC04 – Dial tone detection monitoring time (20 ms)

Defaults

Area	6BEC03	6BEC04
NA	F4	01
EU	F4	01
ASIA	F4	01

6BEC05(H) – Dial tone detect judge time (20 ms)

Defaults: NA: 64, EU: 1B, ASIA: 32

6BEC06(H) – Dial tone disconnect permission time (20 ms)

Defaults: NA: 11, EU: 0F, ASIA: 11

5. SPECIFICATIONS

5.1 GENERAL SPECIFICATIONS

5.1.1 FCU

Type:	Desktop type transceiver
Circuit:	PSTN PABX
Connection:	Direct couple
Original Size:	Book (Face down): Maximum Width: 216 mm [8.5 inch] ARDF (Face up): (Single-sided document) Length: 139 - 1200 mm [5.5 - 47.2 inch] Width: 139 - 216 mm [5.5 - 8.5 inch] (Double-sided document) Length: 160 - 356 mm [6.3 - 14.0 inch] Width: 139 - 216 mm [5.5 - 8.5 inch]
Scanning Method:	Flat bed, with CCD
Resolution:	G3: 8 x 3.85 lines/mm, 200 x 100 dpi (Standard character), 8 x 7.7 lines/mm, 200 x 200 dpi (Detail character), 8 x 15.4 lines/mm (Fine character: optional), 16 x 15.4 lines/mm, 400 x 400 dpi (Super Fine character: optional)
Transmission Time:	G3: 3 s at 28800 bps; Measured with G3 ECM using memory for an ITU-T #1 test document (Slerexe letter) at standard resolution
Data Compression:	MH, MR, MMR, JBIG
Protocol:	Group 3 with ECM

Modulation:	V.34, V.17 (TCM), V.29, V.17 (QAM), V.27ter (PHM), V.8, V.21 (FSK)
Data Rate:	G3: 33600/31200/28800/26400/24000/21600/ 19200/16800/14400/12000/9600/7200/4800/2400 bps Automatic fallback
I/O Rate:	With ECM: 0 ms/line Without ECM: 2.5, 5, 10, 20, or 40 ms/line
Memory Capacity:	ECM: 128 KB SAF Standard: 4 MB With optional Expansion Memory: 28 MB (4 MB+ 24 MB) Page Memory Standard: 4 MB (Print: 2 MB + Scanner: 2 MB) With optional Expansion Memory: 8 MB (4 MB + 4 MB) (Print 4 MB + Scanner: 4 MB)

5.1.2 CAPABILITIES OF PROGRAMMABLE ITEMS

The following table shows the capabilities of each programmable items.

Item	Standard
Quick Dial	2000
Groups	100
Destination per Group	500
Destinations dialed from the ten-key pad overall	500
Programs	100
Auto Document	6
Communication records for Journal stored in the memory	200
Specific Senders	30

The following table shows how the capabilities of the document memory will change after the Expansion Memory are installed.

	Without the Expansion Memory	With the Expansion Memory
Memory Transmission file	400	400
Maximum number of page for memory transmission	1000	1000
Memory capacity for memory transmission (Note1)	320	2240

Note

- Measured using an ITU-T #1 test document (Slerexe letter) at the standard resolution, the auto image density mode and the Text mode.

5.2 IFAX SPECIFICATIONS

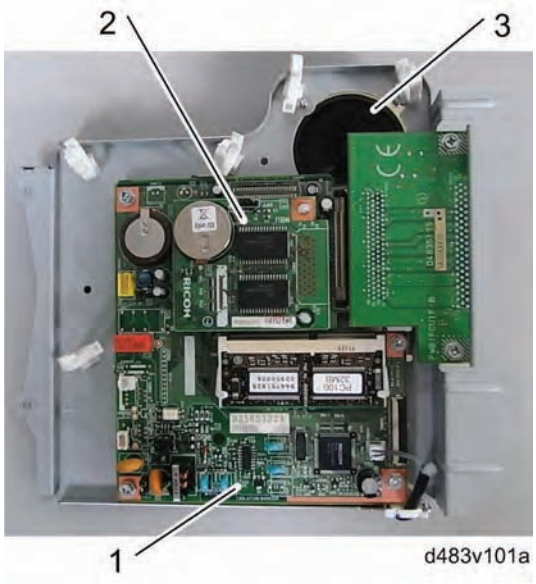
Connectivity:	Local area network Ethernet 100base-Tx/10base-T IEEE802.11a/g (wireless LAN), 1000 Base-T
Resolution:	Main scan: 400 dpi, 200 dpi Sub scan: 400 dpi, 200 dpi, 100 dpi Note ▪ To use 400 dpi, IFAX SW01 Bit 4 must be set to “1”.
Transmission Time:	1 s (through a LAN to the server) Condition: ITU-T #1 test document (Selerexe Letter) MTF correction: OFF TTI: None Resolution: 200 x 100 dpi Communication speed: 10 Mbps Correspondent device: E-mail server Line conditions: No terminal access
Document Size:	Maximum message width is A4/LT.
E-mail File Format:	Single/multi-part MIME conversion Image: TIFF-F (MH, MR, MMR)
Protocol:	**Transmission:** SMTP, TCP/IP **Reception:** POP3, SMTP, IMAP4, TCP/IP
Data Rate:	100 Mbps(100base-Tx) 10 Mbps (10base-T)

Authentication Method:	SMTP-AUTH POP before SMTP A-POP
Remark:	The machine must be set up as an e-mail client before installation. Any client PCs connected to the machine through a LAN must also be e-mail clients, or some features will not work (e.g. Autorouting).

5.3 IP-FAX SPECIFICATIONS

Network:	Local Area Network Ethernet/10base-T, 100base-TX IEEE802.11a/g (wireless LAN), 1000 Base-T
Scan line density:	8 x 3.85 lines/mm, 200x100dpi (standard character), 8 x 7.7lines/mm, 200x200dpi (detail character), 8 x 15.4lines/mm (fine character: optional expansion memory required), 16 x 15.4lines/mm, 400x400dpi (super fine character: optional expansion memory required)
Original size:	A4
Maximum scanning size:	A4, 216 x 356 mm, Irregular, 216 x 1200 mm
Transmission protocol:	Recommendation: T.38, TCP, UDP/IP communication, SIP (RFC 3261 compliant), H.323 v2
Compatible machines:	IP-Fax compatible machines
IP-Fax transmission function:	Specify IP address and send fax to an IP-Fax compatible fax through a network. Also capable of sending fax from a G3 fax connected to the public telephone lines via a VoIP gateway.
IP-Fax reception function:	Receive a fax sent from an IP-Fax compatible fax through a network. Also capable of receiving fax from a G3 fax connected the public telephone lines via a VoIP gateway.

5.4 FAX UNIT CONFIGURATION



Component	Code	No.	Remarks
FCU	D483	1	Included with the fax unit
MBU		2	
Speaker		3	
Memory Unit Type B 32MB	G278	-	Option

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PAPER FEED UNIT PB 1000

REVISION HISTORY		
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		None

PAPER FEED UNIT PB 1000 (M367)

TABLE OF CONTENTS

Read This First

Safety and Symbols

Replacement Procedure Safety

⚠CAUTION

- Turn off the main power switch and unplug the machine before beginning any of the replacement procedures in this manual.

Symbols Used in this Manual

This manual uses the following symbols.

☛: See or Refer to

: Screws

: Connector

: Clamp

: Clip ring

: E-ring

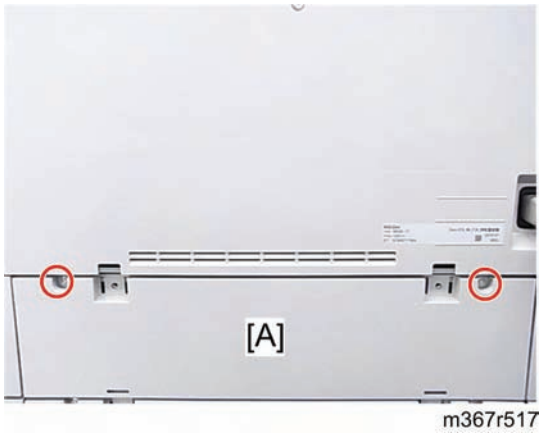
1. REPLACEMENT AND ADJUSTMENT

1.1 EXTERNAL COVERS

CAUTION

- Turn off the main power switch and unplug the machine before attempting any procedure in this section.

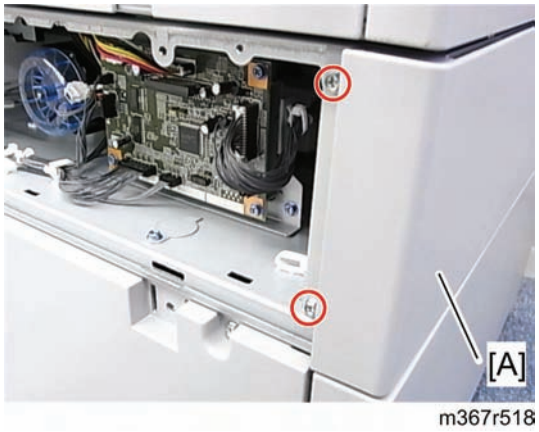
1.1.1 REAR COVER



1. Rear cover [A] (x 2)

1.1.2 LEFT COVER

1. Rear cover (p.1)



2. Left cover [A] (x 2)

1.1.3 RIGHT COVER

1. Rear cover (☛ p.1)

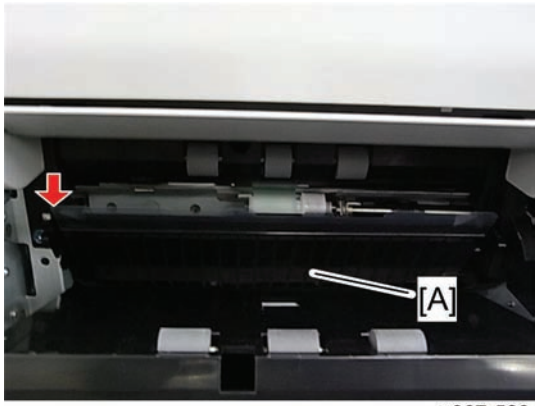
2. Right cover [A] (x 2)

1.2 PAPER FEED UNIT AND ROLLERS

1.2.1 SEPARATION ROLLER

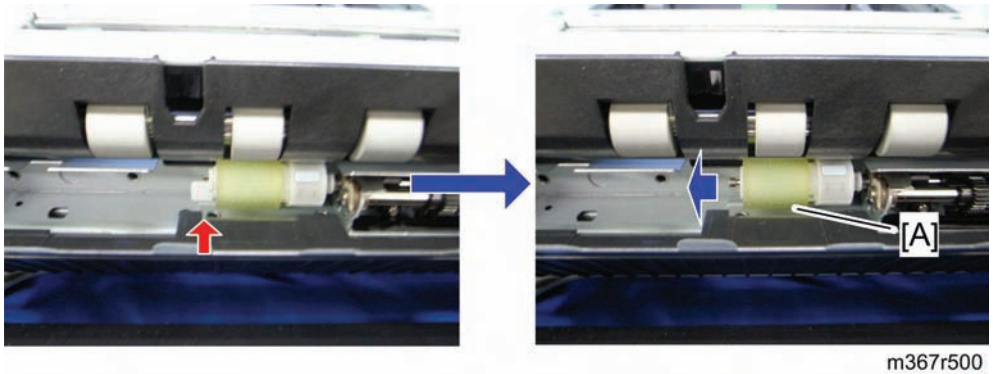
m367r519

1. Open the right middle cover [A].



m367r520

2. Release the hook, and then remove the guide plate [A].

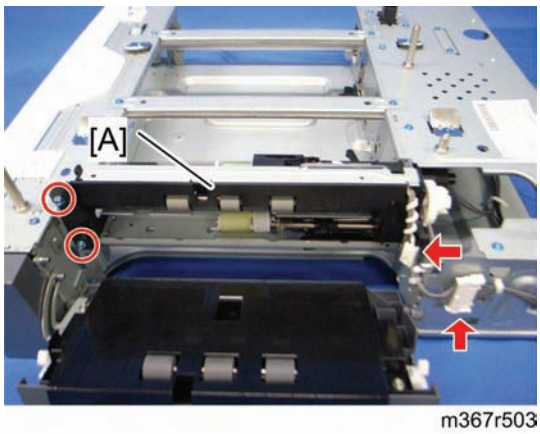


m367r500

3. Separation roller [A] (x 1)

1.2.2 PAPER FEED UNIT

1. Rear cover (☛ p.1)
2. Right cover (☛ p.2)

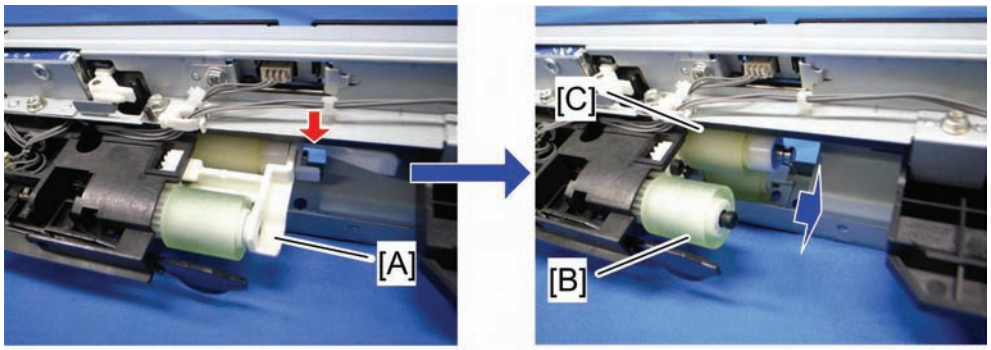


m367r503

3. Paper feed unit [A] (x 2, x 1, x 1)

1.2.3 PICK-UP AND PAPER FEED ROLLERS

1. Paper feed unit (☛ p.4)



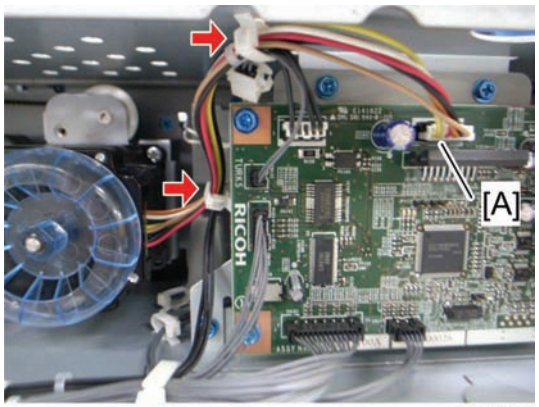
m367r504

2. Roller holder [A] (x 1)
3. Pick-up roller [B]
4. Paper feed roller [C]

1.3 ELECTRICAL COMPONENTS

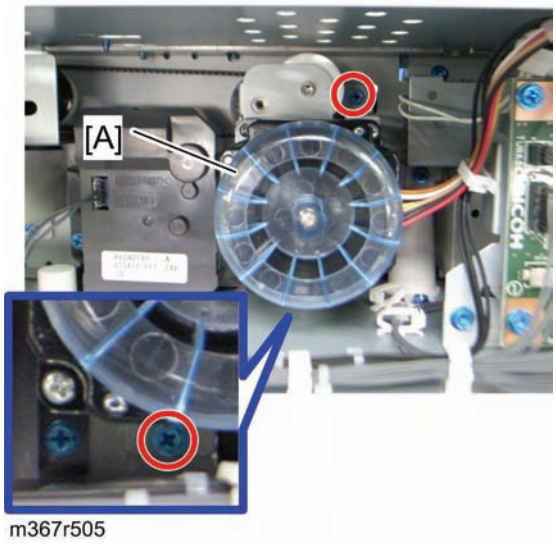
1.3.1 PAPER FEED MOTOR

1. Rear cover (☛ p.1)



m367r506

2. Disconnect the connector [A] (🔌 x 2).

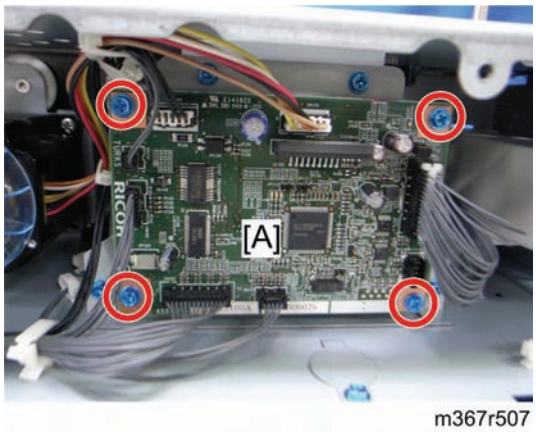


m367r505

3. Paper feed motor bracket [A] (🔩 x 2)
4. Paper feed motor (🔩 x 2)

1.3.2 DRIVE BOARD

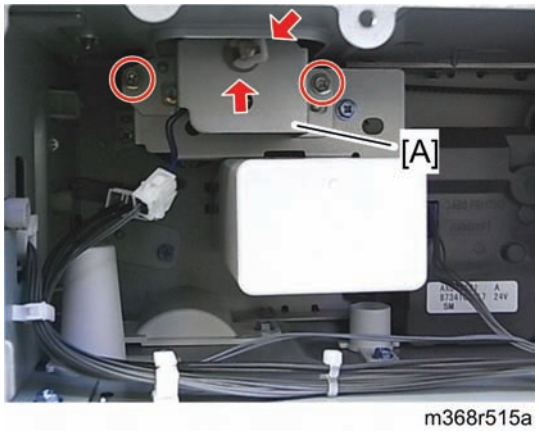
1. Rear cover (☛ p.1)



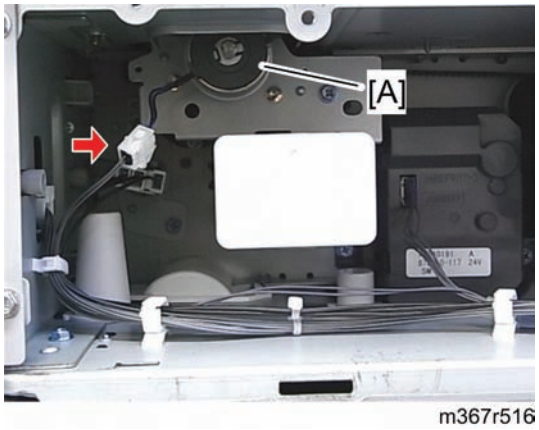
2. Drive board [A] (x 4, x all)

1.3.3 PAPER FEED CLUTCH

1. Rear cover (☛ p.1)



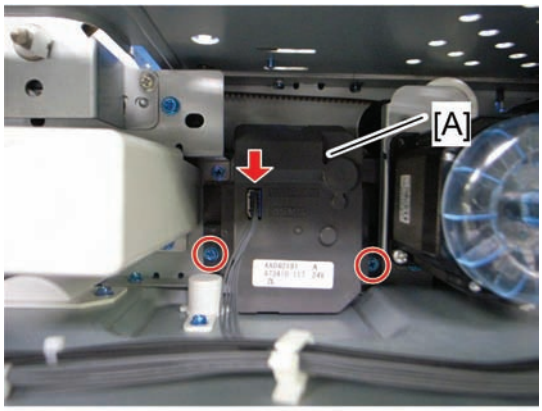
2. Bracket [A] (x 2, x 1, bushing x 1)



3. Paper feed clutch [A]

1.3.4 TRAY LIFT MOTOR

1. Rear cover (☛ p.1)

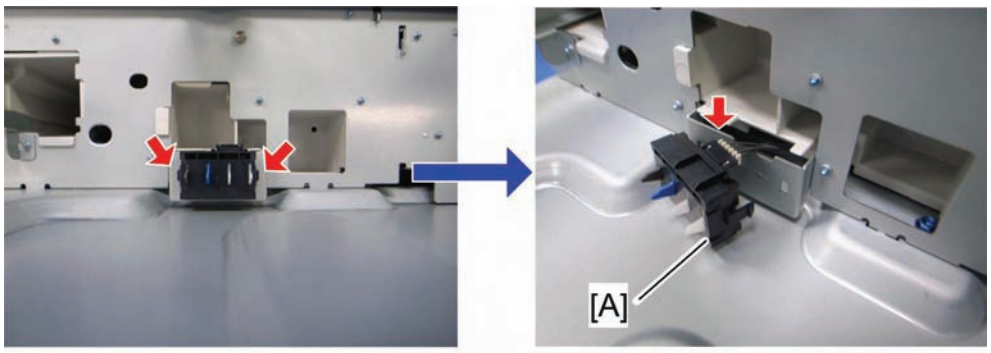


m367r508

2. Tray lift motor [A] (x 2, x 1)

1.3.5 PAPER SIZE SWITCH

1. Pull out the paper feed tray.

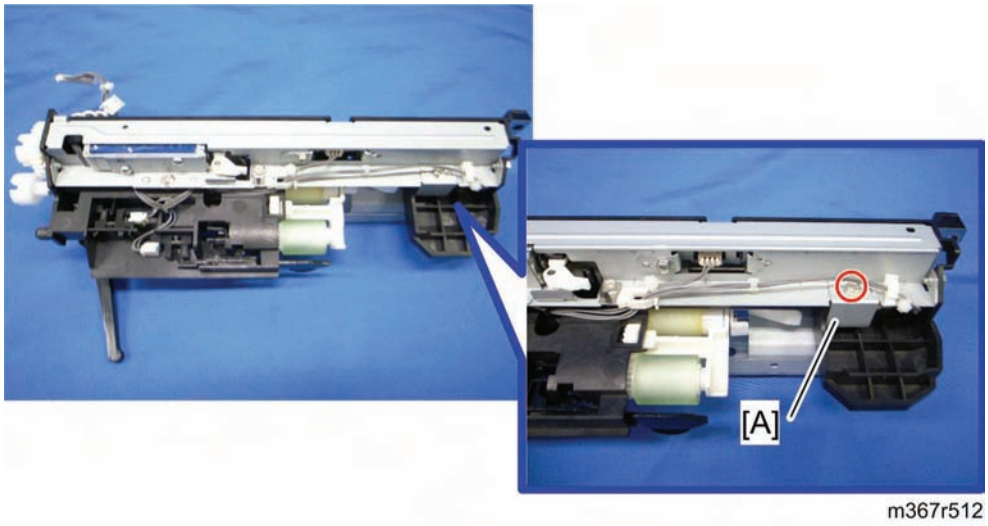


m367r509

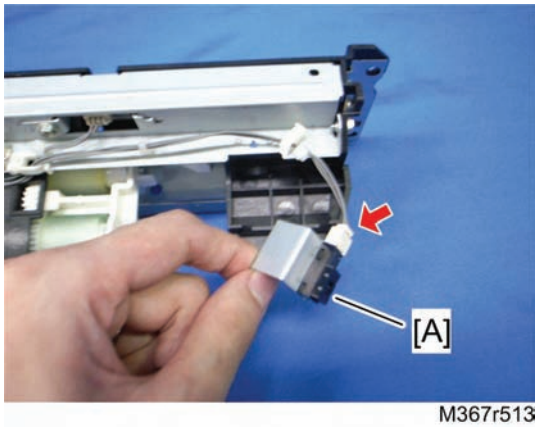
2. Paper size switch [A] (x 1, hooks)

1.3.6 PAPER FEED SENSOR

1. Paper feed unit (☛ p.4)



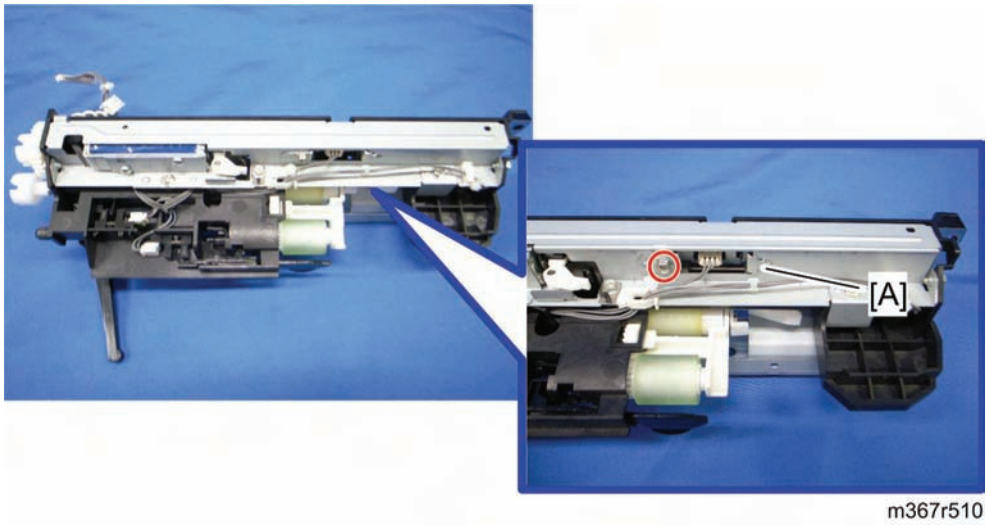
2. Paper feed sensor bracket [A] (x 1)



3. Paper feed sensor [A] (x 1, hooks)

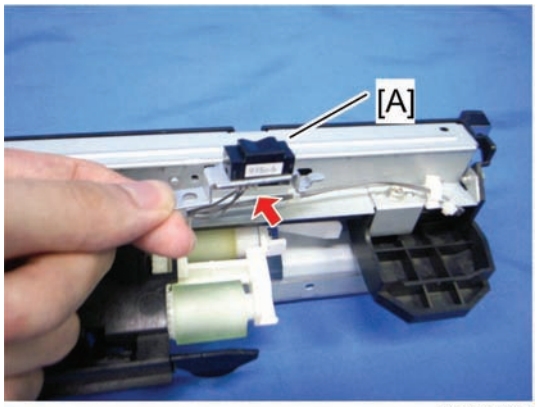
1.3.7 VERTICAL TRANSPORT SENSOR

1. Paper feed unit (☛ p.4)



m367r510

2. Vertical transport sensor bracket [A] (x 1)

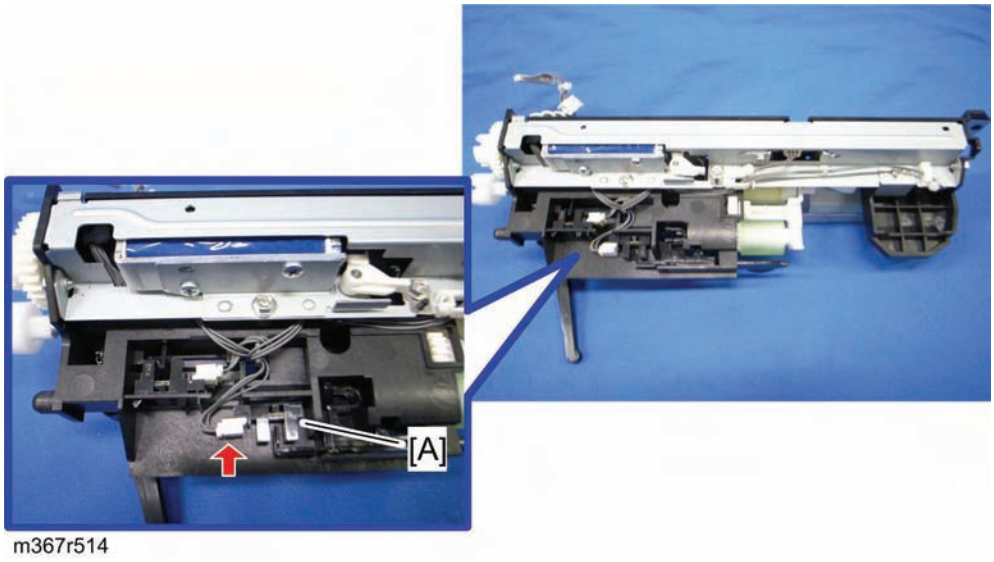


M367r511

3. Vertical transport sensor [A] (x 1, hooks)

1.3.8 PAPER END SENSOR

1. Paper feed unit (☛ p.4)

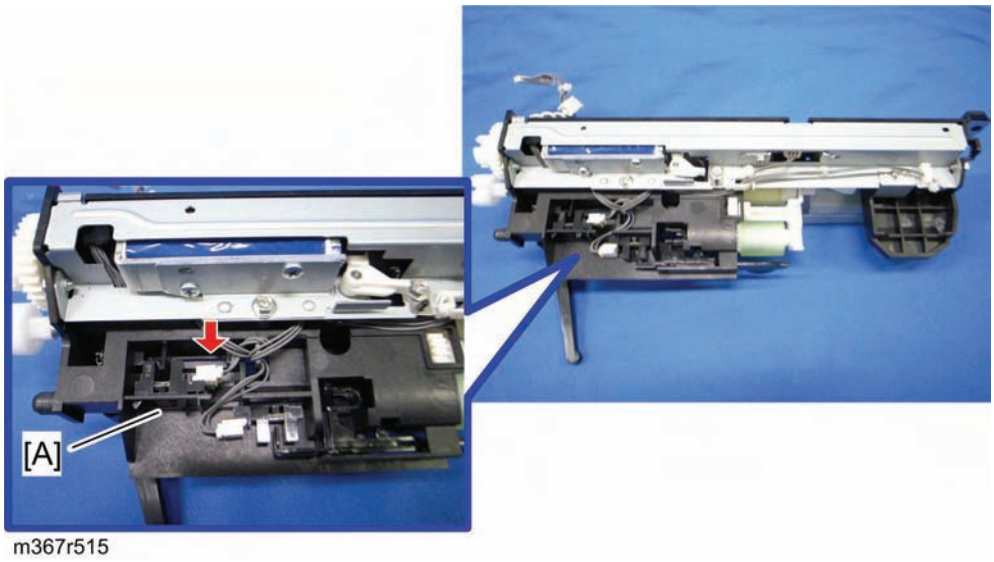


m367r514

2. Paper end sensor [A] (☞ x 1, hooks)

1.3.9 PAPER LIFT SENSOR

1. Paper feed unit (☛ p.4)



m367r515

2. Paper lift sensor [A] (☞ x 1, hooks)

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PAPER FEED UNIT PB 1010

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PAPER FEED UNIT PB 1010 (M368)

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Safety and Symbols

Replacement Procedure Safety

⚠CAUTION

- Turn off the main power switch and unplug the machine before beginning any of the replacement procedures in this manual.

Symbols Used in this Manual

This manual uses the following symbols.

☛: See or Refer to

: Screws

: Connector

: Clamp

: Clip ring

: E-ring

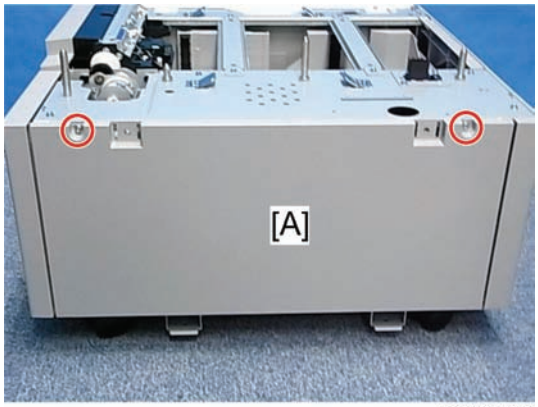
1. REPLACEMENT AND ADJUSTMENT

1.1 EXTERNAL COVERS

CAUTION

- Turn off the main power switch and unplug the machine before attempting any procedure in this section.

1.1.1 REAR COVER

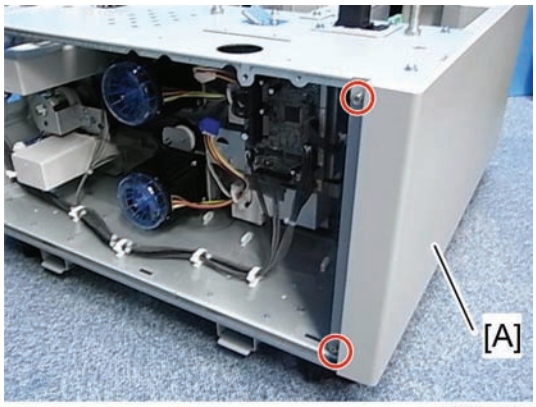


m368r517

1. Rear cover [A] (x 2)

1.1.2 LEFT COVER

1. Rear cover (p.1)

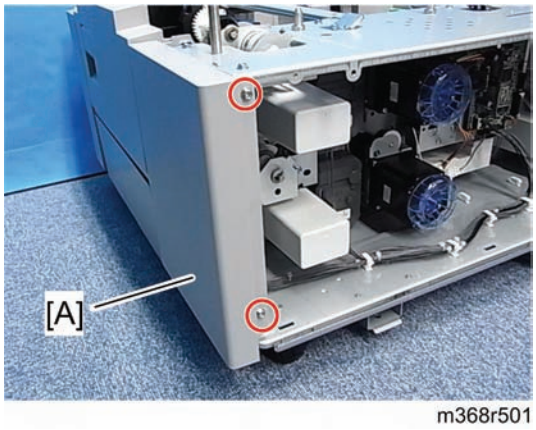


m368r518

2. Left cover [A] (x 2)

1.1.3 RIGHT COVER

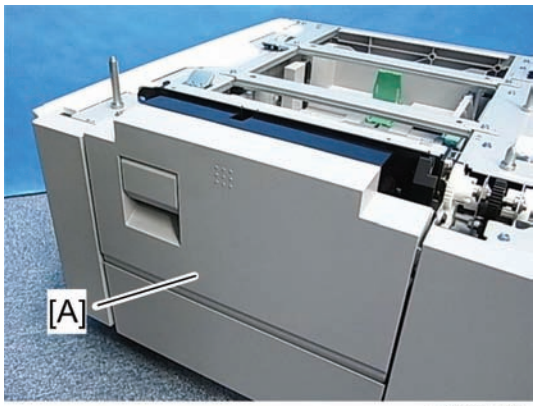
1. Rear cover (☛ p.1)



2. Right cover [A] (x 2)

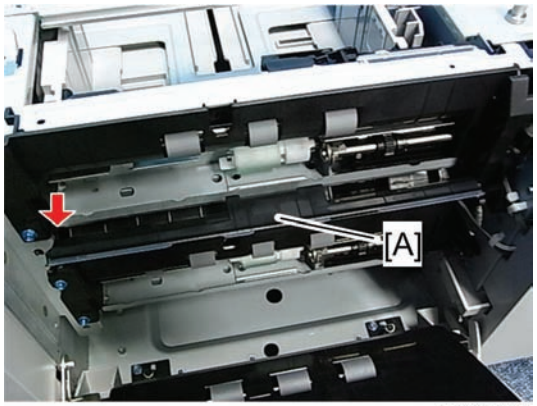
1.2 PAPER FEED UNIT AND ROLLERS

1.2.1 SEPARATION ROLLER



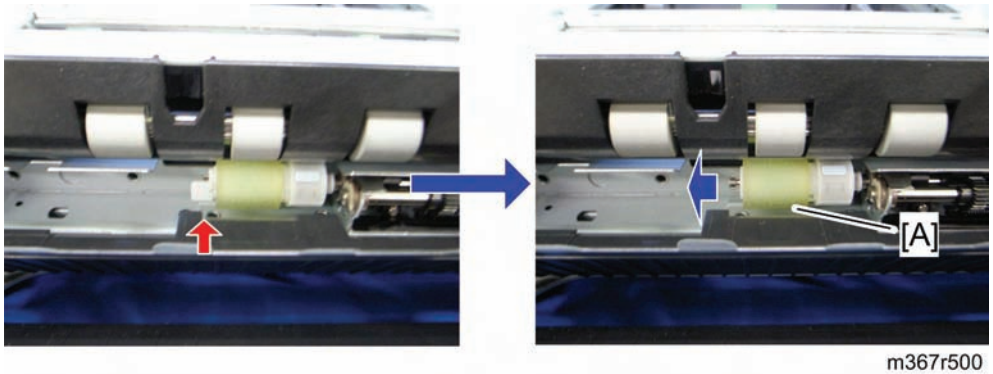
m368r519

1. Open the right middle cover [A].



m368r520

2. Release the hook, and then remove the guide plate [A].

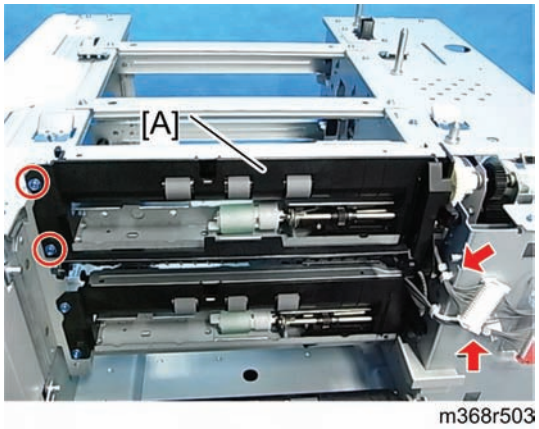


m367r500

3. Separation roller [A] (x 1)

1.2.2 PAPER FEED UNIT

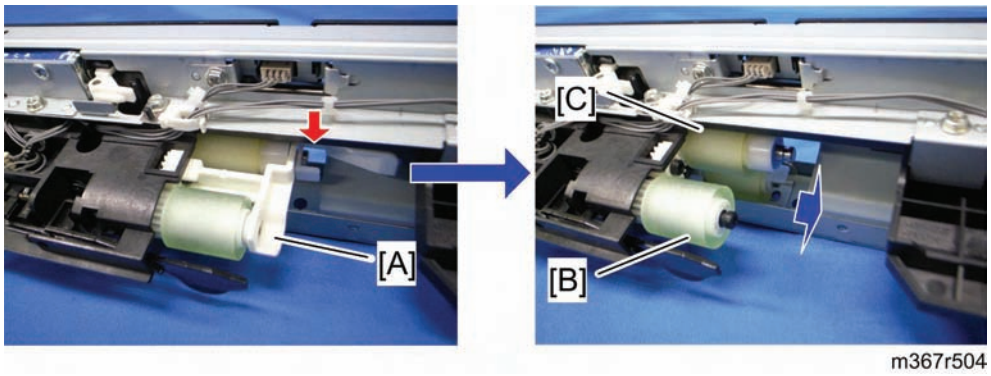
1. Rear cover (☛ p.1)
2. Right cover (☛ p.2)



3. Paper feed unit [A] (x 2, x 1, x 1)

1.2.3 PICK-UP AND PAPER FEED ROLLERS

1. Paper feed unit (☛ p.4)

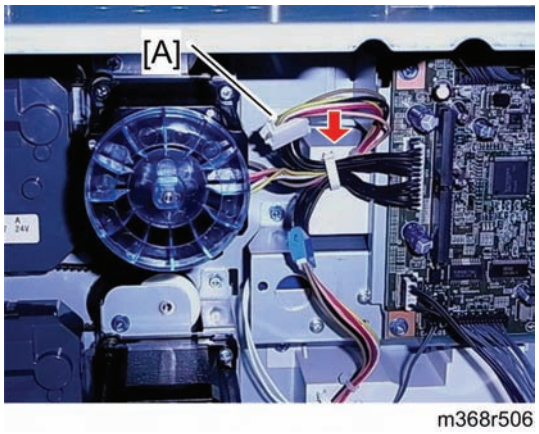


2. Roller holder [A] (x 1)
3. Pick-up roller [B]
4. Paper feed roller [C]

1.3 ELECTRICAL COMPONENTS

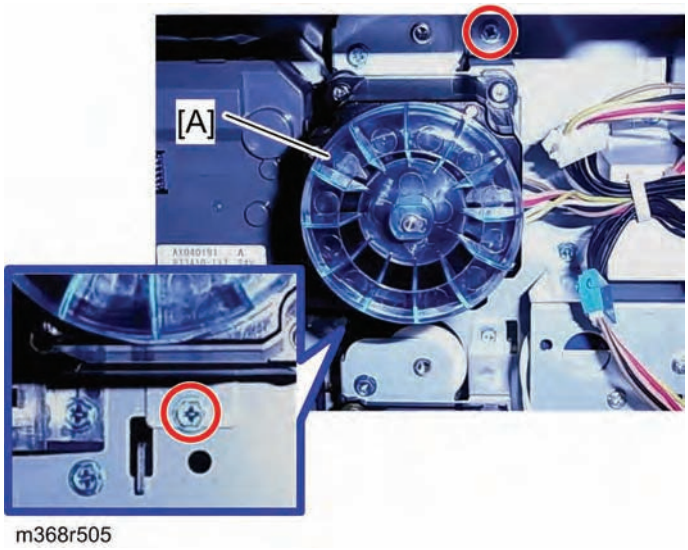
1.3.1 PAPER FEED MOTOR

1. Rear cover (☛ p.1)



m368r506

2. Disconnect the connector [A] (🔌 x 1).

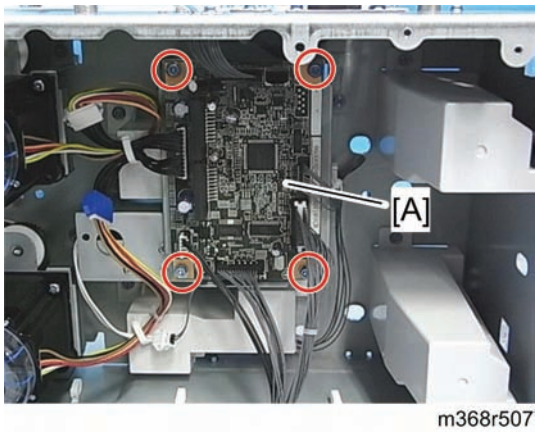


m368r505

3. Paper feed motor bracket [A] (🔩 x 2)
4. Paper feed motor (🔩 x 2)

1.3.2 DRIVE BOARD

1. Rear cover (☛ p.1)

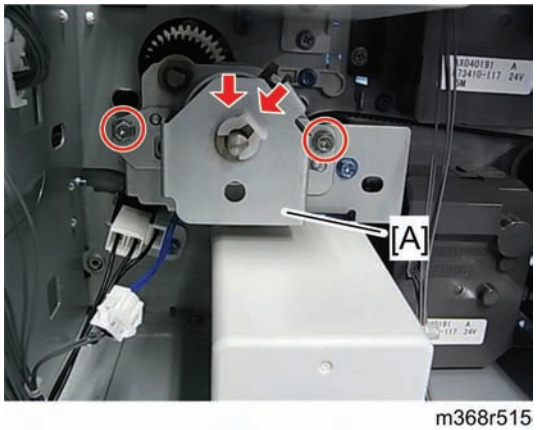


m368r507

2. Drive board [A] (x 4, x all)

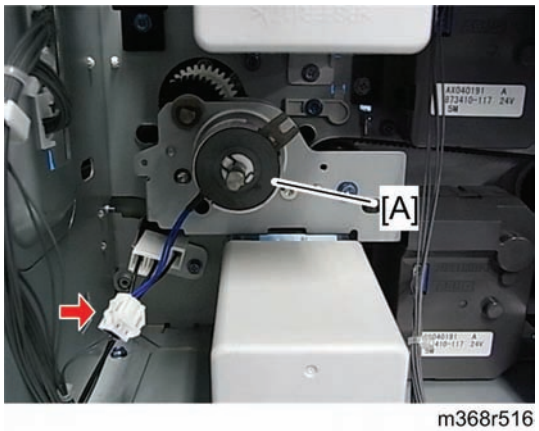
1.3.3 PAPER FEED CLUTCH

1. Rear cover (☛ p.1)



m368r515

2. Bracket [A] (x 2, x 1, bushing x 1)

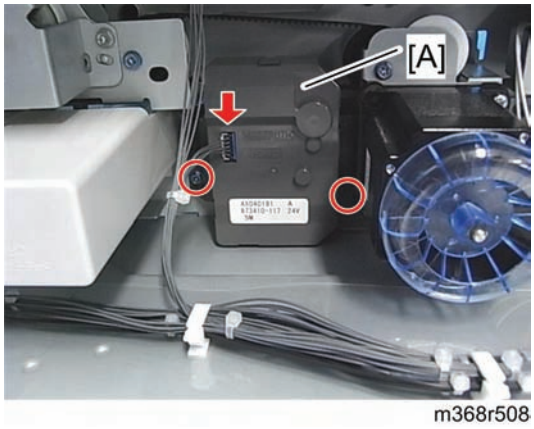


m368r516

3. Paper feed clutch [A]

1.3.4 TRAY LIFT MOTOR

1. Rear cover (☛ p.1)

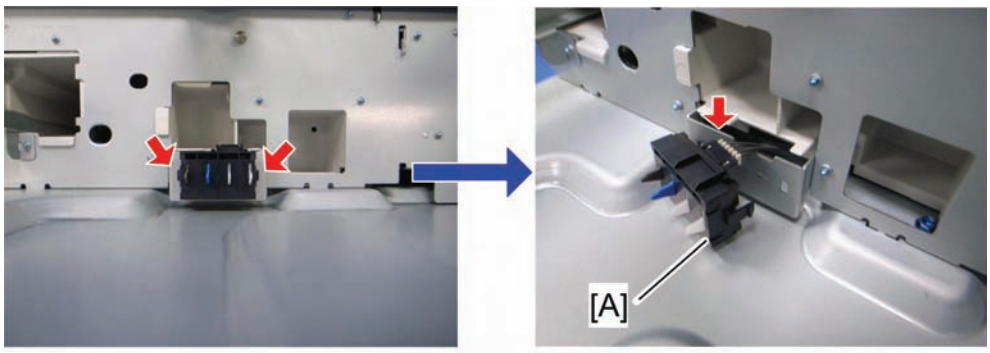


m368r508

2. Tray lift motor [A] (x 2, x 1)

1.3.5 PAPER SIZE SWITCH

1. Pull out the paper feed tray.

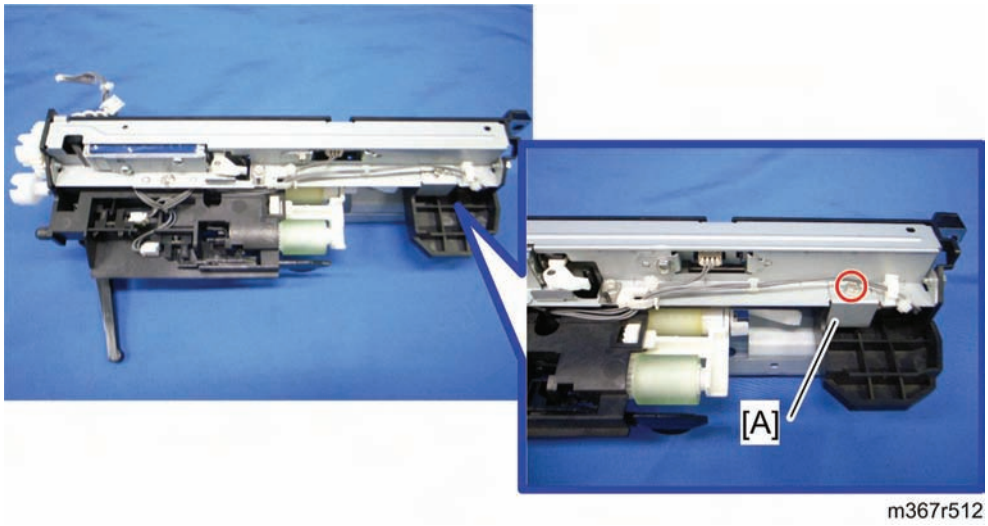


m367r509

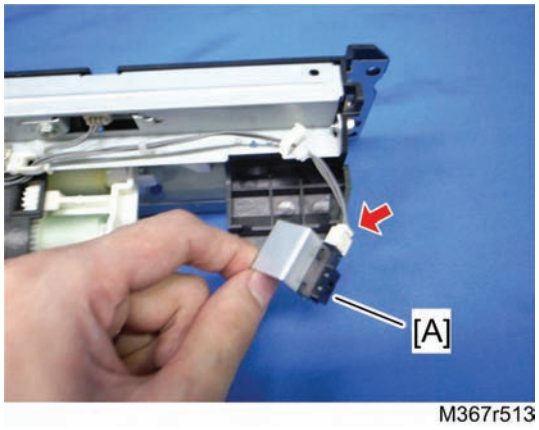
2. Paper size switch [A] (x 1, hooks)

1.3.6 PAPER FEED SENSOR

1. Paper feed unit (☛ p.4)



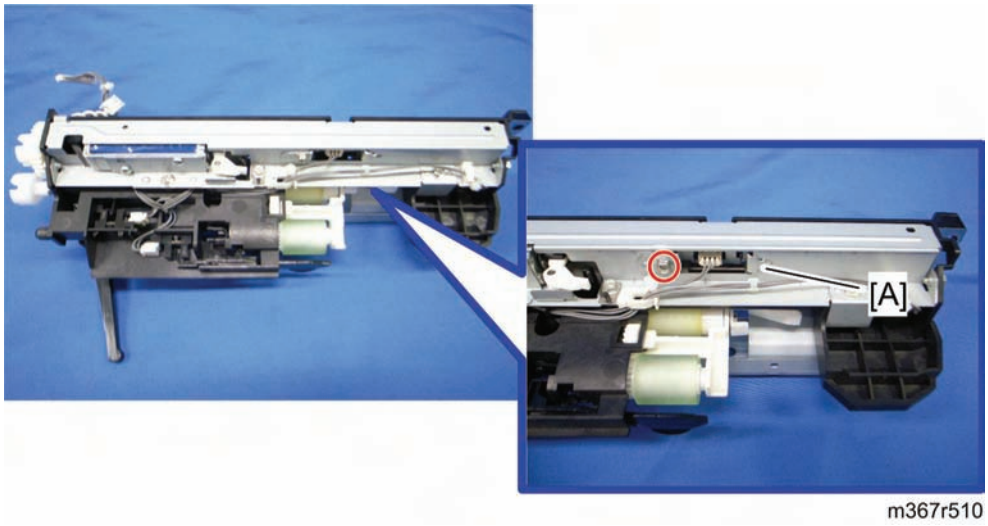
2. Paper feed sensor bracket [A] (x 1)



3. Paper feed sensor [A] (x 1, hooks)

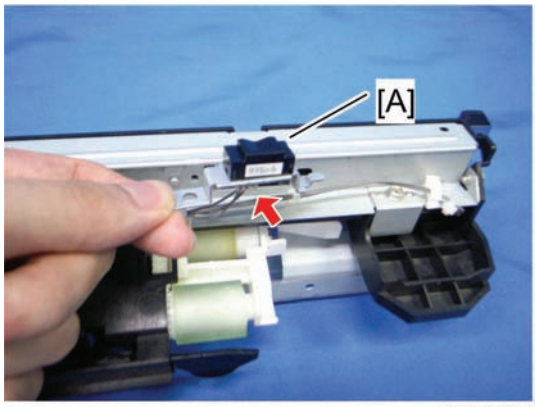
1.3.7 VERTICAL TRANSPORT SENSOR

1. Paper feed unit (☛ p.4)



m367r510

2. Vertical transport sensor bracket [A] (x 1)

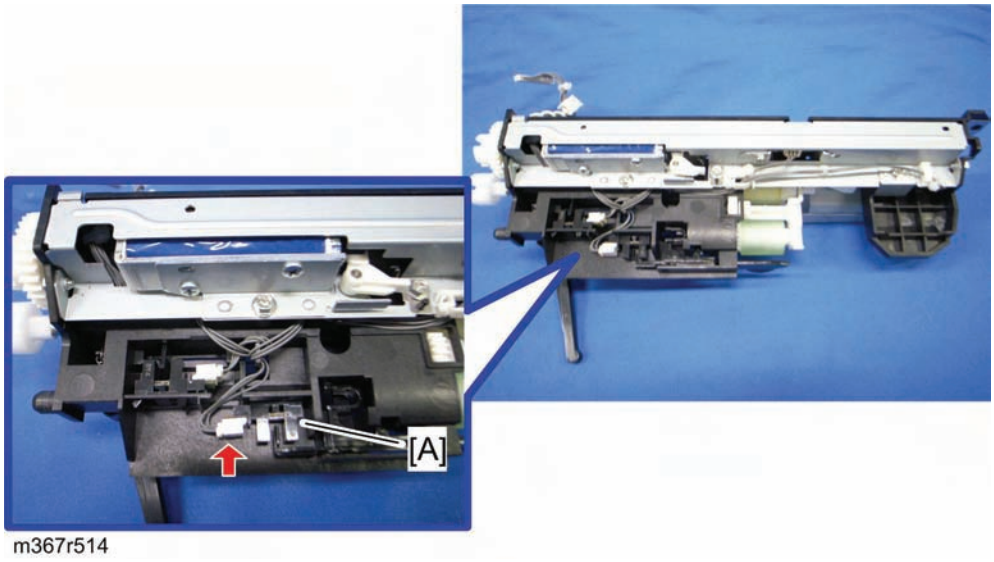


M367r511

3. Vertical transport sensor [A] (x 1, hooks)

1.3.8 PAPER END SENSOR

1. Paper feed unit (☛ p.4)

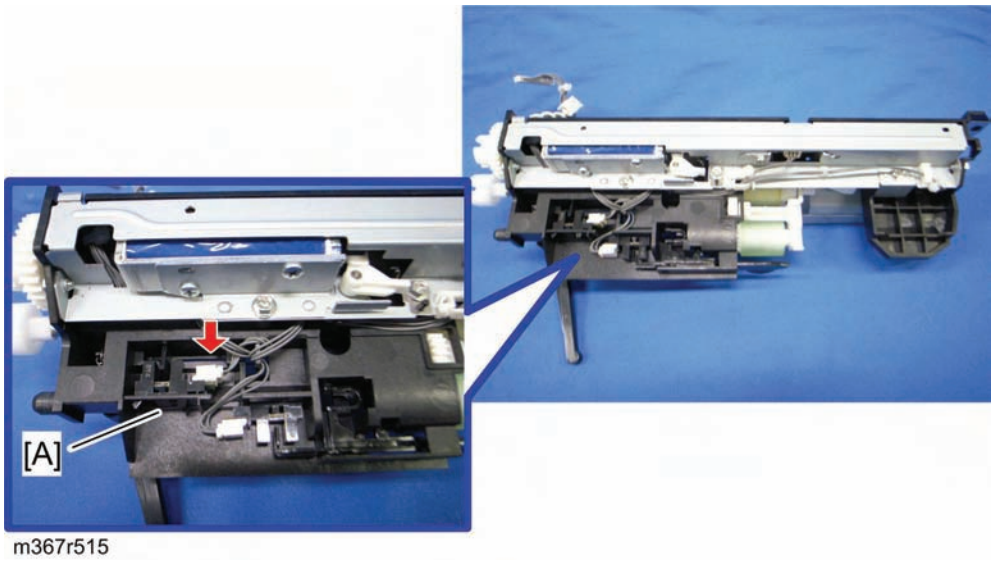


m367r514

2. Paper end sensor [A] (☞ x 1, hooks)

1.3.9 PAPER LIFT SENSOR

1. Paper feed unit (☛ p.4)



m367r515

2. Paper lift sensor [A] (☞ x 1, hooks)

M370

1 BIN TRAY BN1000

REVISION HISTORY		
Page	**Date**	**Added/Updated/New**
		None

1 BIN TRAY BN1000 (M370)

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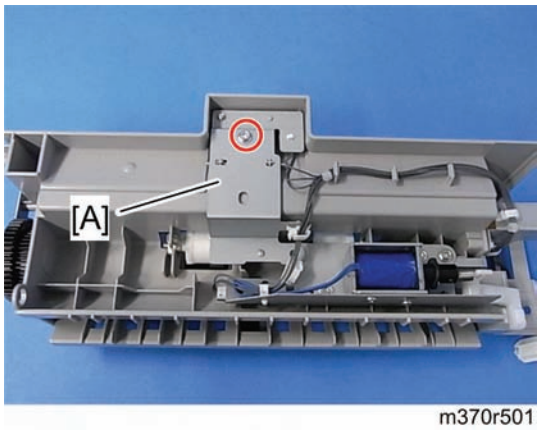
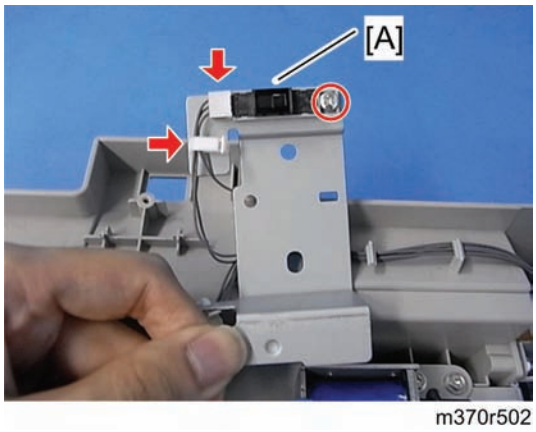
1. 1-Bin tray unit



m370r501

2. Paper sensor bracket [A] (x 1)

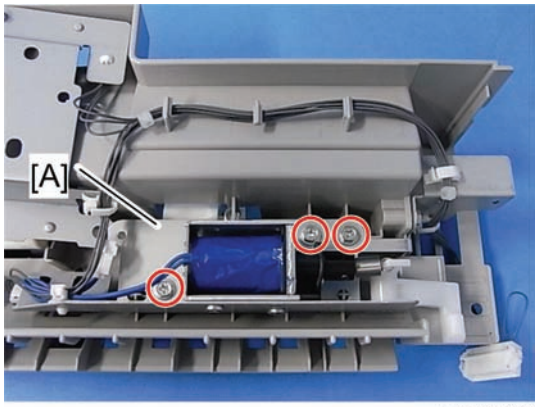


m370r502

3. Paper sensor [A] (x 1, x 1, x 1)

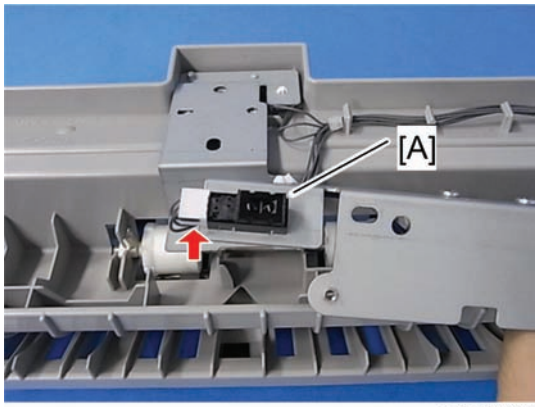
1.1.2 1-BIN TRAY EXIT SENSOR

1. 1-Bin tray unit
2. Paper sensor bracket (☛ p.1 "Paper Sensor
3. ")



m370r503

4. 1-Bin Tray Exit Sensor bracket [A] (x 3)

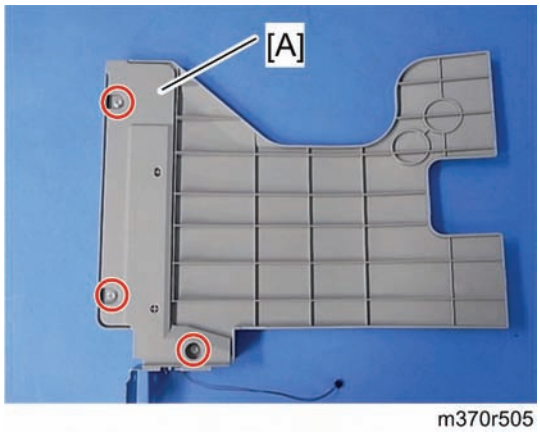


m370r504

5. 1-Bin Tray Exit Sensor [A] (x 1, hooks)

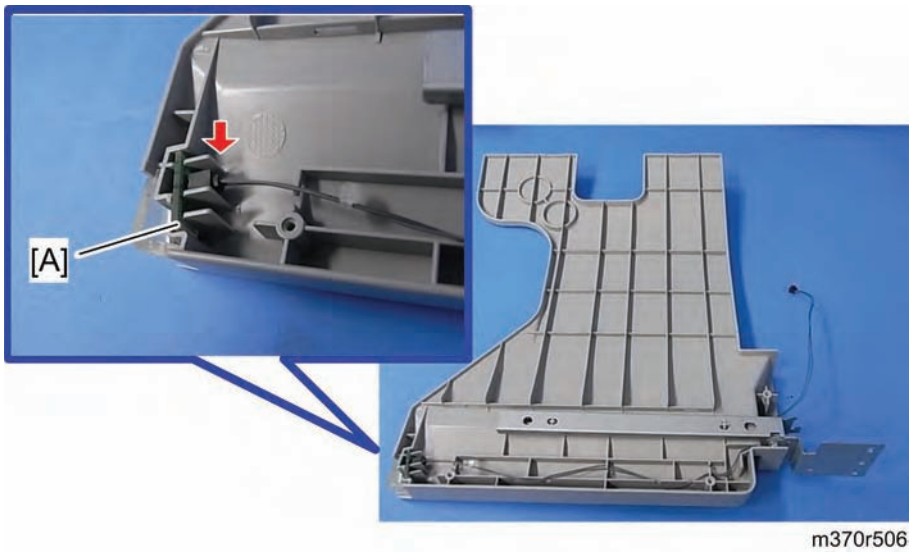
1.1.3 LED BOARD

1. 1-Bin tray unit



m370r505

2. 1-bin tray bottom cover [A] (x 3)



m370r506

3. LED board [A] (x 1)